

Carmen Díez Medina
Javier Monclús *Editors*

Urban Visions

From Planning Culture to Landscape Urbanism



 Springer

Urban Visions

Carmen Díez Medina
Javier Monclús
Editors

Urban Visions

From Planning Culture to Landscape
Urbanism



 Springer

Editors

Carmen Díez Medina
School of Engineering and Architecture
University of Zaragoza
Zaragoza
Spain

Javier Monclús
School of Engineering and Architecture
University of Zaragoza
Zaragoza
Spain

Translations: Trasluz SL (Foreword and Introduction); Caterina Fitzgerald (Chapters 1, 2, 3, 5, 24), Acantho (all other chapters); Hayden Salter (whole book review).

ISBN 978-3-319-59046-2 ISBN 978-3-319-59047-9 (eBook)
DOI 10.1007/978-3-319-59047-9

Library of Congress Control Number: 2017944206

Translation from the Spanish language edition: *Visiones urbanas. De la cultura del plan al urbanismo paisajístico* by Javier Monclús and Carmen Díez Medina, © Abada Editores 2017. All Rights Reserved.

© Springer International Publishing AG, part of Springer Nature 2018

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.

Cover: Barcelona, aerial view.

Photograph by Michael Dörfler, 2011 © Michael Dörfler

Printed on acid-free paper

This Springer imprint is published by the registered company Springer International Publishing AG
part of Springer Nature

The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

Contents

Acknowledgements	ix
About the Editors and Contributors	xi
Foreword	xv
Rafael Moneo	
Introduction	xvii
Carmen Díez Medina and Javier Monclús	
Part I Urban Cultures and Traditions	
1 City Beautiful and ‘Architectural Urbanism’ (1893–1940)	3
Javier Monclús and Carmen Díez Medina	
2 Garden Cities and Garden Suburbs (1898–1930)	13
Javier Monclús and Carmen Díez Medina	
3 Social Democracy and Housing Policies (1919–1934)	23
Carmen Díez Medina	
4 Modern Urban Planning and Modernist Urbanism (1930–1950)	33
Javier Monclús and Carmen Díez Medina	
5 Urban Planning and Ideology: Spain and Italy (1945–1960)	45
Carmen Díez Medina	
6 Welfare Planning and New Towns (1945–1970s)	57
Alejandro Dean	
7 Modernist Mass Housing in Europe: Comparative Perspectives in Western and Eastern Cities (1950s–1970s)	67
Javier Monclús, Carmen Díez Medina, and Sergio García-Pérez	
8 An Experiment in Freedom (1960–1975)	79
Raimundo Bambó	
Part II Other Urbanisms and Urban Projects	
9 Other Urbanisms	91
Javier Monclús and Carmen Díez Medina	
10 Urban Projects and Megastructures: Modernist Campuses	103
Basilio Tobías	

11	New Paradigms and Strategic Urban Projects	113
	Javier Monclús	
12	Urban Renewal and Urban Regeneration	123
	Javier Monclús	
13	Waterfronts and Riverfronts. Recovery of Urban Waterfronts	133
	Javier Monclús	
14	Housing Experimental Projects in the Netherlands	143
	Orsina Simona Pierini	
15	New Housing Projects in Latin European Cities	153
	Orsina Simona Pierini	
16	Citizen Participation. Urban Development for and by the People	165
	Pablo de la Cal	
Part III New Strategies and Urban Planning		
17	Urban Planning Models and Model Cities	177
	Javier Monclús	
18	Urban Transport and Technological Urbanism	187
	Javier Monclús	
19	New Productive Uses Areas. Central Business Districts (CBD), Business Parks, Technology Parks and Corporate Cities	197
	Andrés Fernández-Ges	
20	Innovative Uses of ICT Technologies in Recent Urban Developments and Urban Planning	207
	Andrés Fernández-Ges	
21	The Rise of Mixed-Use Urban Developments and Digital Districts	217
	Andrés Fernández-Ges	
22	Urban Resilience: Towards a Global Sustainability	227
	Pablo de la Cal and Miriam García	
23	Mapping Urbanism, Urban Mapping	237
	Raimundo Bambó and Miriam García	
24	Urban Voids and ‘in-between’ Landscapes	247
	Javier Monclús and Carmen Díez Medina	
Part IV Landscape Urbanism		
25	From Urban Planning to Landscape Urbanism	259
	Javier Monclús	
26	From Park Systems and Green Belts to Green Infrastructures	269
	Javier Monclús	

27 Landscape Projects: Scale and Place	279
Carlos Ávila	
28 New Urban Landscapes.	289
Carlos Ávila	
29 Greenfield/Brownfield: Two Sides of the Same Coin.	299
Pablo de la Cal	
30 New Landscapes Perspectives for Planning	309
Miriam García	
31 The Intangible Values of the Landscape.	319
Miriam García	
32 Urban Agriculture—Towards a Continuous Productive-Space System in the City	329
Pablo de la Cal	
Sources of the Figures.	339
Index	345

Acknowledgements

The editors, Carmen Díez Medina and Javier Monclús, thank the authors Carlos Ávila, Raimundo Bambó, Pablo de la Cal, Alejandro Dean, Andrés Fernández-Ges, Miriam García, Sergio García-Pérez, Orsina Simona Pierini and Basilio Tobías for contributing to this book.

The editors would like to express their gratitude to Sergio García-Pérez (scholarship holder FPI UR-HESP Project) for his time, insight and dedication to this book among which the preparation of the bibliographic review / index; and also a warm thanks to Isabel Ezquerra (scholarship holder FPU with the PUPC research group) for her invaluable collaboration in the review of this edition.

Thanks to Hayden Salter, Caterina Fitzgerald, Acantho and Trasluz SL for their help with the translation of the book. Special thanks to Hayden Salter for reviewing the chapters.

The editors are grateful to Maria Grazia Folli (coord. SEHUD/TEMPUS), Nora Lombardini, Sara Caspani, Anna Rita Ancora (Polytechnic University of Milan); Cristina Carriedo (Rafael Moneo's office); Michael Dörfler, photographer; Pablo Borraz, Beatriz Valiente (Universidad de Zaragoza); archives, institutions, architecture, urbanism and landscape offices, researchers, photographers, authors, etc., who have allowed the publication of their graphic materials in this book. Please see Sources of the Figures in the book back matter.

About the Editors and Contributors

Carmen Díez Medina, Madrid, 1962 obtained a degree in Architecture (1989) from the Madrid Polytechnic University (ETSAM, UPM) and Ph.D. (1996) from the Technische Universität Wien (TU Wien). She is Associate Professor of theory and architectural history at the School of Engineering and Architecture (EINA), University of Zaragoza (Spain), where she is in charge of the architectural history and theory disciplines and coordinator of the Ph.D. programme New Territories in Architecture. She was the director of the Department of Theory and Architectural and Urban Projects at the Polytechnic School from the CEU-San Pablo University of Madrid (2007–09). More than 60 contributions in books and scientific reviews. She has been responsible for following research projects: *Urban regeneration of housing estates in Spain* (UR-Hesp, Ministry of Economy and FEDER funds) and *Architecture and Sustainable Urban Development based on Eco-Humanistic Principles & Advanced Technologies Without Losing Identity SEHUD* (European Union), both with J. Monclús; *España en los CIAM* (Universidad CEU San Pablo). She has also collaborated in several research projects, among them *Espacios para la enseñanza*, CEU (2012–14); *Paisajes urbanos residenciales*, EINA (2010–11); *La construcción de la ciudad liberal*, UPM (2008–09). Currently, she is member of the reference research group *Paisajes Urbanos y Proyecto Contemporáneo* (PUPC) of the University of Zaragoza.

She has worked as a collaborating architect with Rafael Moneo in Madrid (1996–2001) and previously at Nigst, Hubmann&Vass in Vienna (1990–96).

Javier Monclús, Zaragoza, 1951 obtained a degree in Architecture (1977) and Ph.D. (1985) from the Catalonia Polytechnic University (ETSAB, UPC). He is Full Professor of urbanism at the School of Engineering and Architecture (EINA), University of Zaragoza (Spain), where he has been chair of the Department of Architecture (2009–2016) and is currently director of the Master's Degree in Architecture. He was Professor of urbanism at the Polytechnic University of Catalonia in Barcelona (1980–2005). He has published widely on planning, urban design and urban planning history. He is a member of the Editorial Board of *Planning Perspectives* and director of *ZARCH, Journal of Interdisciplinary Studies in Architecture and Urbanism*. Currently, he is responsible (with C. Díez Medina) for the research project *Urban regeneration of housing estates in Spain* (UR-Hesp, Ministerio de Economía y Competitividad and FEDER funds, BIA 2014-60059-R) and responsible for the research group *Paisajes Urbanos y Proyecto Contemporáneo* (PUPC) of the University of Zaragoza.

He has worked as a planner and as a consultant in Barcelona and Zaragoza and was head of the Expo Accompanying Plan of the Zaragoza Expo 2008 (2005–2009).

Carlos Ávila, Zaragoza, 1962 He completed his degree in Biology from Madrid Universidad Complutense (specialised in Botany). He did Higher Landscape Architectural Studies at the National School of Landscape Architecture, Versailles (France). He was a Chairman of the Spanish Association of Landscape Architects (06.2004–09.2006). He was a Landscape Architecture Manager in the international exhibition Expoagua Zaragoza 2008 project and

member of the coordination team of the Expo Accompanying Plan. He is an Adjunct Professor of Urbanism at the School of Engineering and Architecture (EINA), University of Zaragoza (Spain). He also teaches at the Master's Degree of Landscape Architecture at the University of Granada.

Currently, he runs his own Landscape Architecture Studio focusing on the design of green areas.

Raimundo Bambó, Huesca, 1975 Degree in Architecture from the Navarra University (ETSAUN), 2000. PhD. from the EINA University of Zaragoza (2016). Second Prize in Architecture Studies (Spanish Ministry of Education, 2001) and the Extraordinary End of Studies Award (ETSAUN, 2001). Adjunct Professor of History and Theory of Architecture and of Urbanism at the School of Engineering and Architecture (EINA), University of Zaragoza (Spain). Between 2000 and 2013 he has carried out his professional practice at IDOM-ACXT as a Partner Senior Architect of the firm. His work as an architect has been published in numerous times and has received various awards, among others, from the Spanish Biennial of Architecture and Urbanism, the Sao Paulo Architecture Biennial and the European Landscape Biennial.

Pablo de la Cal, Zaragoza, 1964 Degree in Architecture from Navarra University (ETSAUN), 1989, where he received the Extraordinary End of Studies Award. He graduated from Harvard University (MAUD-GSD 1992). Since 2009, he is Adjunct Professor of Urbanism at the School of Engineering and Architecture (EINA), University of Zaragoza (Spain). He has been closely involved in urban debates about Zaragoza as the transformation of central areas, AVE Station and Ebro river banks. He is Co-editor of *Ríos y Ciudades* (2002). He was Head of Projects Area at International Exhibition Expo Zaragoza 2008 (2004–2008). Since 1989, he practises in Zaragoza in his own office, CEROUNO ARQUITECTOS SCP, being awarded numerous prizes. He has developed a special emphasis on urban planning, from master plans to urban public space interventions.

Alejandro Dean, Valencia, 1974 Degree in Architecture from Navarra University (ETSAUN), 2001. Adjunct professor of History and Theory of Architecture (2013–14) and since 2014 in Architectural Design at the School of Engineering and Architecture (EINA), University of Zaragoza (Spain).

He practices in Zaragoza in his own office, “Dean Delso Arquitects”, having been awarded in national and international idea competitions. His work, spread across specialist publications and collective exhibitions, has received notable recognitions the most significant by the Fernando el Católico Institution (2008/2011/2017) and by Official Professional Association of Architects of Aragón (2011/2015/2017). He is currently involved in the research and investigation of 20th century architecture from Aragón, in the Registry of Docomomo Ibérico in Aragón (modern housing and social facilities I-II) and is a co-author of the book *Rationalist Architecture in Huesca*.

Andrés Fernández-Ges, Zaragoza, 1972 He completed his master's in Architecture and Urban Planning from Navarra University (ETSAUN). Since 2010, he works as an adjunct Professor of Urbanism at the School of Engineering and Architecture (EINA), University of Zaragoza (Spain). He is a Ph.D. candidate in Urban Studies by the Department of Urbanism and Spatial Planning, Madrid Polytechnic University.

Since 2006, he works as an architect and urban planner at Zaragoza Alta Velocidad 2002, S.A., a public company in charge of the regeneration of the railway land of Zaragoza. Previously, he was Head of Technical Section in the Urban Planning Department of the Zaragoza City Council, (2002–06) and founding partner of ZAZ Architects, Architecture and

Planning, (2001–2006). His fields of research are urban regeneration, strategic urban projects and digital districts.

Miriam García, Sama de Langreo (Asturias), 1971 She is an Architect, landscape architect and principal of LandLab, based in Barcelona. She has been visiting professor at The University of Pennsylvania and currently teaches at the Universities of Zaragoza and Barcelona in Spain. She is a lecturer at courses and workshops related to landscape urbanism and regional planning and is author of several publications.

Her practice focuses on urban development and landscape regeneration processes, with projects awarded both nationally and internationally like the First Prize in the XII Biennial of Spanish Architecture and Urbanism. Her professional expertise so far is a combination of the skills acquired while working in a regional government institution coupled with research and private practice. Her current motivation is to expand and share this knowledge to address pressing ecological and social challenges affecting fragile areas exposed to the effects of climate change.

Sergio García-Pérez, Zaragoza, 1990 Master Architect from Zaragoza University (2015). Since then, he is a predoctoral fellow at the School of Engineering and Architecture (EINA), University of Zaragoza (Spain). He develops his research activity within the framework of the research project “Urban regeneration of housing estates in Spain” (UR-Hesp, Ministerio de Economía y Competitividad and FEDER funds, BIA 2014-60059-R, <http://pupc.unizar.es/urhesp/>), as research team member. His interest areas are urbanism and urban regeneration. His research results have been submitted to national and international congresses. He has developed his educational stage in architecture offices and in public organisations (Zaragoza Vivienda and Tragsa, Madrid).

Orsina Simona Pierini, Milán, 1962 She completed her degree in Architecture from Milan Polytechnic. She obtained Ph.D. in Architectural Composition at IUAV, 1996. She is an Associate Professor in Architectural Composition in the Department of Architecture and Urban Studies of Milan Polytechnic. After working in Barcelona with Carlos Martí Arís, she published the books *Passaggio in Iberia*, (Milan 2008) and *Sulla facciata, tra architettura e città*, (Rimini, 2008).

Her research is based on an idea of architectural design that interprets the architecture of the city in its historical experience as material for contemporary design: the importance of the role of residence in the urban design of contemporary city has focused recently in the publication of the volume *Housing Primer, le forme della residenza nella città contemporanea* (Rimini 2012). www.taccuinourbano.net

Basilio Tobías, Zaragoza, 1954 Degree in Architecture from the Catalonia Polytechnic University (ETSAB, UPC), 1977. Professor of Architectural Projects in the Catalonia Polytechnic University, in the International University of Cataluña and in the Navarra University (ETSAUN). Adjunct Professor of Urbanism at the School of Engineering and Architecture (EINA), University of Zaragoza (Spain).

Some of his works like the University Sports Center, the Multipurpose hall of Zaragoza, the Ciudad de Zaragoza Hotel, the Economics Library, the Sports Pavilion of the University of Castellón or the Building Expo have been finalists or selected at different Biennials of Spanish Architecture. The Economics Library and the Sports Pavilion of the University of Castellón were selected for the Spanish Pavilion of the 9th Biennial of Venice.

Foreword

URBAN VISIONS. From Planning Culture to Landscape Urbanism, as clearly intended by the editors, “responds to an updated concept of the manual”. Aware that all our knowledge about the growth of cities and land development resists a systematic explanation, they offer us the collection of chapters gathered in this volume as a selection “as intentional as it is flexible ... from a transversal perspective, combining professional and academic views”. The editors, therefore, declare themselves responsible for the structure of the content of this book, as broad as it is diverse. It is a book that begins by offering us a historical overview of the development of urban thought since the end of the nineteenth century. After examining a diverse set of interventions in the city and territory, where the influence of the urban planning theory and principles behind them is carefully documented, it introduces us to the most pertinent issues in urbanism today.

Urban Visions is a valuable reminder of what the study of urbanism has been. It provides us with a compendium of singular episodes in the history of urbanism over the last century that should not be forgotten and, gradually and imperceptibly, bring us to today’s problems as faced by those responsible for the growth of our cities. The editors’ deliberate selection of arguments and authors renounces a uniform and homogeneous vision of what urbanism has been since its origin as a discipline, thus insinuating, with the structure itself of this book, its underlying thesis: that “the culture of the urban plan has been replaced by other forms of urbanism”. Other forms and perspectives that are, ultimately, those that most interest us today and that make manifest how much urbanists must engage strategies linked to resource management, political impact and respect for the physical environment—a respect that implies a broad understanding of geography and landscape—in order to achieve the desirable, and sustainable, conservation of the Earth.

And so, this collection of essays on current urbanism serves as a kind of manual that will be essential to students and professionals who want to make use of what is known about urban science. *Urban Visions* makes us see, once again, the value that reference books have in every learning process to provide us with an initiation to a discipline, without which it would be impossible to answer the questions facing us as urbanists. And this without imposing a narrow editorial authority, but rather trusting that in the multiple approaches and opinions that the different authors offer, we will find an alternative methodology better suited to engage the extensive and elusive discipline of urbanism. To renounce a conventionally systematised structure, and to assume the methodology of the simple juxtaposition of blended and interwoven arguments—pertinently, rigorously and carefully chosen—in order to reflect more precisely the urban problems of today is, in my opinion, one of the most valuable aspects of a publication like this. In this decision, we recognise the academic and professional trajectory of the editors, which translates into a vision of urbanism understood in the broadest sense, from theory, history and architectural culture at the urban scale.

In addition to the value of this book as an updated reference manual, I should add another observation to further confirm its virtues. *Urban Visions* is the result of team work, the documentation of the experience of teaching urbanism and the history of architecture at the School of Architecture in Zaragoza. This explains the emphasis that *Urban Visions* gives to

some of Zaragoza's recent urban development projects. Whenever possible, examples illustrating the various issues discussed in *Urban Visions* have been drawn from local episodes. Aligning the interests of a School of Architecture, and particularly a young school, with the challenges of its own city is always desirable, such as is the case with Zaragoza. For that reason, this book represents a goal achieved, in establishing the importance of the school for the city of Zaragoza.

And so I conclude by congratulating those who have been the promoters of this initiative and share my conviction that this book will interest anyone who has it in their hands, as much as it has interested me.

Madrid
March 2017

Rafael Moneo

Introduction

How can we relearn the forgotten art of urbanism? In his last book, Peter Hall, one of the most renowned figures in urban planning due to his theoretical and professional engagement in the discipline, suggested studying the best examples of European urbanism to address the decline in the ‘art of urbanism’. His comments were specifically directed at British urbanism, whose leadership and essential role in the ‘the golden age of planning’ (after the Second World War over half a century ago) is undisputed. In this book, he refers to the contrast between the French concept of *urbanisme* and *planification*,¹ in other words between the dominant paradigm in the culture of urban planning and the Latin European version, which also applies to the Spanish *urbanismo* or the Italian *urbanistica*. We should start, therefore, by recognising the diverse ways of understanding urbanism in each of the cultural and national traditions in which the discipline has arisen and evolved.²

Other authors have referred to the struggle between two paradigms, town planning and urbanism. The roots of the former are embedded in social reform as it emerged as a new discipline, independent from architecture, at the beginning of the twentieth century. The latter is more concerned with a wider understanding of urban forms, but without disassociating itself entirely from architectural culture. Following Giorgio Piccinato’s theories, Michael Hebbert emphasises the contrasts between the vision of planning, conceived as a different profession to architecture and engineering, and the vision of urbanism, as a ‘shared culture’ between these two professions.³ In fact, this dichotomy is rather forced, since both traditions deal with complex scales and processes. Other traditions and ‘urban planning cultures’, such as the *Städtebau* in Germany, contributed to our contemporary understanding of urbanism as a set of concepts, strategies and techniques for controlling urban growth and defining the urban forms of our cities.

We cannot absorb the wealth and diversity of urban planning traditions and experiences by applying just one strictly chronological criterion, although it is true that a diachronic view helps to understand how urbanism has evolved as a discipline with a scientific vocation. Planning history has provided novel interpretations in recent years, especially the contributions made by Anthony Sutcliffe, Stephen Ward, Michael Hebbert and Donatella Calabi.⁴ The coexistence of various paradigms and urban visions, understood in their broadest sense (as ‘urban knowledges’, to paraphrase Michael Foucault), has been the subject of other analyses that have paid greater attention to economic, sociopolitical and cultural fluctuations and cycles. They are dominated by ‘progressive’ or functionalist perspectives as opposed to ‘culturalist’

¹Hall, P.G. 2014. How can we all re-learn the lost art of urbanism? In *Good Cities, Better Lives. How Europe Discovered the Lost Art of Urbanism*, 277. Oxford: Routledge. Hall stresses once again this argument: “It is lamentable, but the truth, that British planners have lost the art of urbanism”, *ibidem*, 306. About differences between urbanism and planification: “(...) the French concept of *urbanisme* (as opposed to *planification*) is essentially about creating liveable places”, *ibidem*, 212.

²Monclús, J., and C. Díez Medina. 2017. Urbanisme, Urbanismo, Urbanistica. Latin European Urbanism: Italy and Spain. In *Planning History Handbook*, ed. C. Hein. London: Routledge.

³Hebbert, M. 2006. Town planning versus urbanismo. *Planning Perspectives* 21: 233–251. doi:10.1080/02665430600731153.

⁴See Editorial—Thirty Years On. 2015. *Planning Perspectives* 30: 1–10. doi:10.1080/02665433.2014.971856.

views or those stemming from architectural urbanism.⁵ Given these interpretations, combining chronological and thematic approaches is logical if your aim is to explore the complexity of the intellectual, technical and instrumental legacy that urbanism has provided since it was consolidated as a discipline. Consequently, this volume illustrates how planning-based urbanism has switched to ‘other urbanisms’. These include ‘urban design’ and ‘landscape urbanism’, understood as an updated version of the discipline’s initial paradigms, encompassing a variety of sensibilities and the desired integration to address new urban and territorial realities.

One of the subjects inciting intense debate in historical terms, but also in the broader sense of cultural or socioeconomic reflection with a historical perspective, has explored whether the principles of modern urbanism are still current or are now obsolete.⁶ Architectural historiography usually highlights attempts to control urban growth while emphasising the ‘canonical’ models and movements: from the Garden City to the City Beautiful movement, and from the latter to modern urbanism, the urbanism of the CIAMs and the Athens Charter. Also considered are successive legislative efforts, the systematisation of instruments to intervene in the existing or new city (from the tradition of urban reforms or *ensanches*—suburban developments—and new urban features).⁷ But most of the more specific contributions have focused on ‘internal’ developments in the professional community of architects and urbanists, of the successive CIAMs or planning professionals.⁸ Our approach here takes these contributions into account, but also shies away from ‘grand narratives’, in the style of Lewis Mumford in his monumental work *The City in History* (1961), and also from more endogamous and ‘heroic’ visions of urban planning, understood as a panacea and all-inclusive technique capable of controlling urban development when faced with resistance from reactionary agents—owners, speculators and technocrats—obstructing planning. Instead, we favour cross-cutting analyses that explore urban subjects and episodes in specific contexts, similar to the collective work published more than twenty years ago, the historical atlas of European cities.⁹

Why have we called them ‘urban visions’? Rather than traditional descriptions often made to sum up notional experiences or as a historical compendium, we believe a book offering a panoramic perspective that better mirrors the complex and fragmentary understanding we hold of the world today is more relevant. Our starting point is that urban planning and design result from a combination of discipline traditions, focuses and cultures. For that reason, we have pursued a historical and thematic approach to bring together the visions of an architect and an urbanist, and those of a historian and a theorist. This is the origin of these ‘urban visions’ that have shaped our cities and the variety of landscapes they entail supported by many discourses, strategies and techniques.

The book’s format is, therefore, a series of thematic chapters presented as a sum of fragments with a common denominator: throwing light on urbanist strategies. Despite the risks involved in bringing together the authors’ varied stances on the topic, the outcome—a collection of academic and professional opinions—benefits from this approach. All the chapters follow a strict script that lends them coherence, and they are ordered in an overall structure that gives meaning to the whole. Various plans, projects and interventions are contextualised within the framework of the most systematic interpretations of urbanism in the past 100 years, but they are not necessarily accepted or refuted. The mosaic of chapters resulting from coordinating the viewpoints of several authors is in keeping with the way the

⁵Choay, F. 1965. *L’urbanisme, utopies et réalités. Une anthologie*. Paris: Seuil; Sutcliffe, A. 1981. Why Planning History? *Built Environment* 7: 64–67; Kostof, S. 1992. *The city assembled: the elements of urban form through history*. Boston: Little Brown.

⁶Berman, M. 1982. *All that is Solid Melts into Air: The Experience of Modernity*. London: Verso.

⁷For instance, Sica, P. 1978. *Storia dell’urbanistica: Il Novecento*. Bari: Laterza.

⁸Mumford, E. 2000. *The CIAM Discourse on Urbanism, 1928-1960*. Cambridge: M.I.T. Press.

⁹Guardia, M., J. Monclús, and J.L. Oyón. 1994. *Atlas histórico de ciudades europeas: Península Ibérica*. Barcelona: CCCB Salvat; Guardia, M., J. Monclús, and J.L. Oyón. 1996. *Atlas histórico de ciudades europeas: Francia*. Barcelona - Paris: CCCB Hachette.

recent urbanist debate is evolving through specific specialised contributions that delve deeper into the issues raised. The increasing relevance of collective works is by no means casual. They contain an ample range of contributions, sometimes from quite diverse disciplines, other times resulting from specific works on urban planning episodes or different cultural and national approaches and traditions (such as exhibition catalogues or reports and sector studies).¹⁰ Combining and integrating the visions of historians, architects, urbanists and geographers is an absolute necessity. Even though this intense dialogue is already partly present in readings and interpretations of the past, it needs to intensify further if we are to understand more recent processes, particularly reconsidering the nature and role of contemporary urbanism given that traditional paradigms are in crisis. This is proved by accelerated development processes taking place in some countries and the radical redefinition of the actual concept of a city that has been around for some years (*Zwischenstadt*, *città diffusa*, urban sprawl, etc.).¹¹ Understanding recent developments and projects provides new clues for explaining the role of urban strategies implemented in the past decades, and analysing them with new perspectives can better illustrate the nature of current proposals and urban projects.¹²

In this type of approach, which covers such an extensive, almost infinite, field of study, the selection of subjects and case studies is especially relevant if we wish to make a global, yet fragmented picture coherent. The urban visions presented here stem from a selection process, the result of a balance between a critical, personal reading and an objective look at reality. However, we have also been forced to set space and time limits to our work. This book contains an implicit theme: it aims to demonstrate how the discipline of urbanism has evolved throughout the twentieth century from an initial ‘planning culture’, consolidated in the Anglo-Saxon world, to the far more cross-cutting and fragmentary experiences of current ‘landscape urbanism’ and including the recent Italian tradition that regenerates the city as a key component in architecture and urbanism. Understanding how and where these urban visions arose is another objective behind this work.

Our emphasis is on the past 50 years, although the main trends, movements and schools that contributed to consolidating what we can term a ‘culture of urbanism’, from the beginning of the twentieth century to the 1970s recession, are presented in the first part of chapters. Despite the fact that the diachronic discourse is as difficult today as it is misleading, particularly when applied to the second half of the twentieth century, it is still necessary to impart some sort of logical order. That is why we have proposed a relatively chronological structure (seen clearly in the first part of chapters, but less so in the three other parts), as we have already said, with a thematic approach that highlights some issues or episodes that have been, or are currently, hotly debated. This cross-cutting reading of architectural urbanism linking the historic view with contemporary debate is perhaps one of the most novel aspects of this publication. This book contains some references to the USA as well as in Asia and Latin America, although the episodes we have studied essentially focus on Europe. By choosing this option, we can limit contents and focus subjects and cases on those interventions that either come from Europe or have created real experimentation laboratories there, in order to prevent the extreme divergences and fragmentation that would result from an approach that was excessively broad.

¹⁰Dethier, J., and A. Guiheux. 1994. *Visiones urbanas. Europa 1870-1993. La ciudad del artista. La ciudad del arquitecto*. Barcelona: CCCB Electa; Bosma, K., and H. Hellinga. 1997. *Mastering the City: North-European City Planning, 1900-2000*. Rotterdam: NAI Publishers.

¹¹Sieverts, T. 2003. *Cities without cities: an interpretation of the Zwischenstadt [Zwischenstadt, 1998]*. London: Spon Press.

¹²As evidenced by the debates introduced in recent international congresses, such as the round table: “Exploring the links between history and conservation of modernist housing complexes: a EAHN Roundtable”, organized by European Architectural History Network within the frame of 14th International Docomomo Conference, *Adaptive Reuse. The Modern Movement Towards the Future*, Lisbon, 2016. Chairs: Gaia Caramellino and Filippo De Pieri.

This book, therefore, has a two pronged approach. On the one hand, it presents an overall picture putting forward an explanation for the evolution of the urbanism discipline in the twentieth century, but with no pretence of being complete and far less encyclopaedic. On the other, this evolution is defined by a series of episodes that are not only valuable in themselves, but as a whole contribute to defining this polysemic picture. Each of them also invites readers to immerse themselves in a small universe through the references and the select bibliography at the end of each chapter. Nearly 400 illustrations accompanying the chapters form a parallel graphic mosaic or collage.

This book was conceived during a Tempus programme within the framework of the European Union in which five Ukrainian universities—Kharkiv National University of Civil Engineering (KNUCEA), Kyiv National University of Construction and Architecture (KNUCA), Lviv Polytechnic National University (LPNU), Odessa State Academy of Civil Engineering and Architecture (ODABA) and Prydniprovsk State Academy of Civil Engineering and Architecture (PSACEA)—and seven universities of member countries of the European Union—Politecnico di Milano (POLIMI, programme coordinator), University of Cambridge (UCAM), Institut national des Sciences Appliquées de Lyon (INSA), Technological Educational Institute of Athens (TEIA), Escuela de Ingeniería y Arquitectura de la Universidad de Zaragoza (UZ), Varna Free University (VFU) and Instituto Politécnico da Guarda (IPG)—were involved. The programme was entitled: Architecture and Sustainable Development based on Eco-Humanistic Principles & Advanced Technologies without Losing Identity (SEHUD). Visits to the universities where meetings were held over a period lasting more than two years highlighted the contrasting visions between ‘the West and the East’ and between ‘the North and the South’ of Europe. The difficulty in standardising work methods, programmes and proposals and reconciling different viewpoints became a problem and, at the same time, a passionate challenge. The Soviet urbanism tradition can be felt in Kiev, Dnipropetrovsk, Odessa, Kharkov and so on; in Cambridge, planning was viewed quite differently to how it was approached in Lyon; and, at the same time, the architectural roots of urbanism flourished in the more southern or ‘Latin European’ countries.

That is when the idea arose of re-examining a series of concepts that could be broadly applied, not so much through definitions or analogies, but through the analysis of specific subjects and cases linked to particular cultures and traditions. And after that, we decided to publish a manual of urban visions and strategies illustrated with case studies that could be useful to students at the above-mentioned universities. Later, participation in international meetings and fora, such as the journal *Planning Perspectives*, or conferences organised by associations, such as the International Planning History Society (IPHS) or the International Seminar on Urban Form (ISUF), or even the activity of the journal *ZARCH*, enabled us to detect processes of convergence and differentiation so that we can speak of specific urban cultures along the lines already broached by other authors, for example Bishwapriya Sanyal.¹³ For these reasons, *Urban Visions* came as the result of these experiences.

This publication embodies a renewed concept of the manual, as intentional as it is flexible. Four parts help to organise these urban visions. The first of them, *Urban Cultures and Traditions*, is the most clearly arranged in historical sequence. This deliberately historical start to the book is essential for understanding more recent positions: it assembles and emphasises the main traditions, cultures, theories and discourses from the consolidation of the discipline to the 1970s recession. This first part forms the basis for the other three. Although they respect the historical sequence, their purpose is not ultimately to construct a diachronic discourse but rather to present a more thematic structure of parallel discourses and a variety of strategies focusing on the last 30 years of the twentieth century. The second part, *Other Urbanisms and Urban Projects*, covers the emergence of paradigm shifts and new strategies, which, through a series of specific projects with varying levels and forms of completion, have had a decisive impact on transforming cities in recent decades. The last two parts, *New Strategies and Urban*

¹³Sanyal, B., ed. 2005. *Comparative Planning Cultures*. New York: Routledge.

Planning and *Landscape Urbanism*, are grouped around two major themes that have led to a debate on the future of cities from a planning and landscape perspective.

Each of these four parts contains eight chapters (32 in total) expounding urban theories, proposals and projects illustrating relevant episodes in the history of urbanism. Each chapter includes a specific bibliography giving readers an opportunity to explore the subject in more depth and concludes by putting two carefully selected paradigmatic case studies in context (as an exception, three chapters have four examples). The 72 cases documented here provide in themselves a mosaic vision of the evolution of urbanism in the twentieth century, a huge legacy of theories, proposals and interventions that have shaped our cities and metropolitan landscapes in the last 10 to 12 decades. They help to reconstruct the overall picture from fragments and give us an opportunity to compare urban perspectives.

The first part, *Urban Cultures and Traditions*, presents urban cultures and paradigms that have played an important role from the beginning of the twentieth century to the turning point marked by the 1970s recession. The cultural dimension of urbanism and its relationship with the historical context are emphasised in an impressionist picture containing the main urban theories and strategies and how they have evolved in the ‘absorption of modernity’ to the 1970s recession.

The first two chapters, “City Beautiful and ‘Architectural Urbanism’” and “Garden Cities and Garden Suburbs” (Monclús and Díez), present the main ideas, contexts and means of dissemination of the first movements seeking to modernise major cities through either large-scale architectural interventions or alternative solutions to the city of the industrial era. They outline the beginnings and the type of considerations we could term the ‘first modern urban visions’, in other words those associated with the birth of the discipline and the emergence of specific terminology: urban and town planning, *urbanisme*, *urbanistica*, urbanism, *Städtebau*, etc. The housing policies implemented by European social democracy in the period between the two world wars are studied in the third chapter, “Social Democracy and Housing Policies” (Díez) based on the urban experience of the Red Vienna. The chapter highlights the importance of tradition in this city (specifically the *Hof* tradition linked to the Viennese renting culture from the eighteenth century onwards) when defining urban models and forms in the period between the two world wars. The fourth chapter, “Modern Urban Planning and Modernist Urbanism” (Monclús and Díez), is based on the interpretations that recent historiography has made of the nature and emergence of modern functionalist urbanism, virtually parallel to the birth of the urban planning discipline. After studying the principles laid out in the Athens Charter, applied to some paradigmatic cases, it goes on to consider the impact of functionalist urbanism after the Second World War. The compromise between ideology and design is not always univocal; sometimes, surprising situations prove how complex this relationship is. That is the aim of the chapter “Urban Planning and Ideology: Spain and Italy” (Díez), which presents some innovative proposals carried out within the “*Poblados dirigidos*” programme in Madrid during Franco’s dictatorship interpreted in parallel with some Italian neighbourhoods linked to the Neorealism movement developed during the first years of the Italian republic. The sixth chapter, “Welfare Planning and New Towns” (Dean), analyses experiences emanating from socioeconomic policies implemented for social welfare housing. It looks at the British model of new towns, followed by the Scandinavian forest-town model and concludes with the vertical town, the *unité d’habitation*, as a collective European housing prototype after the Second World War. The question posed in “Modernist Mass Housing in Western and Eastern European Cities” (Monclús, Díez and Pérez) is the extent to which the dissemination of an international modern urban culture was responsible for adopting similar urban forms in mass housing projects, with controversial results that deserve to be explored in more detail. The chapter compares these projects built in the 1950s and 1960s in Europe on both sides of the Iron Curtain. The first part concludes with the chapter “An Experiment in Freedom” (Bambó). It explains the new sensitivity to other lifestyles that arose in the 1960s and 1970s and in which residents’ decision-making capacity is essential. Its main ideas and best-known manifestations are expounded in three pairs of ‘genealogies’ based on their cultural origin, their reaction to the modern city and their attitudes towards technology.

The second part, *Other Urbanisms and Urban Projects*, begins with the complex situation European cities found themselves in after the Second World War and which led to the emergence of 'other urbanisms'. The renewal and updating of 'qualitative' urbanism that began in the 1980s stem from traditions focused on their architectural dimension and stimulate debates whose underlying current is the dilemma between planning and design. From then on, the experiences that stand out most are linked to city regeneration or reconstruction and the emergence of the urban project.

The chapter that starts this part, "Other Urbanisms" (Monclús and Diez), clarifies the main visions coexisting since the end of the Second World War to the 1980s. These include approaches most linked to internal debates similar to the CIAMs and others developed in parallel with functionalist urbanism, such as townscape, the new urban design subdiscipline and those that support the idea of the city as a cultural creation sensitive to the values of history, focused on urban forms. In this context, economic growth and the democratisation of higher education, a distinguishing feature of the welfare state, led to a significant increase in the planning of new universities. The chapter "Urban Projects and Megastructures: Modernist Campuses" (Tobías) explores this episode, centring the analysis on some 1960s paradigmatic university campus projects. The recession that began in 1973 marked the end of a long period in which the principles of functionalist urbanism had been adopted on a general scale and it questioned their validity. The chapter "New Paradigms and Strategic Urban Projects" (Monclús) explains how after the 'golden age of planning' new cultural and environmental sensitivities arose resulting in new strategic projects that tackle the changes cities were experiencing and also the emergence of an urban project culture. Along the same lines, the next chapter, "Urban Renewal and Urban Regeneration" (Monclús), centres on studying some specific episodes that have become paradigmatic and are still the subject of the urban renewal and regeneration debate today. It updates the classic debate that has been fluctuating for and against urban reform for over 150 years. The chapter "Waterfronts and Riverfronts. Recovery of Urban Waterfronts" (Monclús) talks about the transformation of these city waterfronts and riverfronts, one of the central episodes in recent urban processes, which began taking place in the 1980s and 1990s. Unlike the urban regeneration processes examined in the previous chapter, the landscape dimension of these interventions was highly important. The next two chapters in this part, "Experimental Housing Projects in the Netherlands" and "New Housing Projects in Latin European Cities" (Pierini), focus on new experimental housing projects with an urbanist dimension that have been rolled out in many European cities, especially in the last two decades. The first of the two chapters looks at the Netherlands, a country with an important tradition in this area that was consolidated in modern movement phases and improved in the 1990s with the figure of the landscape architect. The second, focusing on France, Italy and Spain, contrasts with the previous chapter by presenting some projects that return to and reinterpret these three countries' traditions linked to the urban morphology of the part and regular schemes of urban tissues. The second part concludes with the chapter entitled "Citizen Participation and Social Mobilisation" (De la Cal). This chapter returns to the discourse begun at the conclusion of the first part by transferring it to some specific experiences in recent decades that have led to the emergence of new terminologies and increasingly more generalised participation processes.

The third part, *New Strategies and Urban Planning*, brings together a significant sample of episodes seeking new urban planning references in a quickly changing society. New strategies and plans exploit the advances of the technological revolution and new information technologies by applying strategies that involve more use of infrastructures and developing new city models and innovative analysis and representation techniques. While the first two parts essentially centre on Europe, since the subjects they cover originated or evolved in this continent, the contents of the third introduce us to experiences in Brazil, Abu Dhabi, the USA, Japan, Korea and China.

The first of the chapters, "Urban Planning Models and Model Cities" (Monclús), addresses one of the recurring themes in the debate on international urbanist culture: city models. Rather

than considering abstract theoretical proposals, it explores action models based on specific cases to open a debate covering the theory, history and practice of urbanism. The increasing prominence of transport in cities and its impact on transforming them is the subject of “Urban Transport and Technological Urbanism” (Monclús). The chapter emphasises the key role transport plays in new urban strategies in a series of chapters, case studies and projects that bring to the debate the issues of pedestrianisation, mobility control, public transport improvement, densification and decentralisation problems and so on. The next three chapters, “New Productive uses Areas. Central Business Districts (CBD), Business parks”, “Innovative Uses of ICT Technologies in New Urban Development and Urban Planning” and “The Rise of Mixed-Use Developments and Digital Districts” (Fernández-Ges), addressed the emergence of new urban developments linked to the technological revolution that has been changing the configuration of our cities for some decades. The first chapter analyses the emergence of new districts for non-residential uses as offices, businesses and economic activities based on the zoning idea of functionalist urbanism. It describes the development of business districts and various types of new production areas. The second describes the development and influence of new information and communication technologies (ICTs), a revolution that is changing the economy, society and production processes. The use of these technologies in the design of urban development and planning strategies results in new approaches and provides new design tools. The third defines digital districts, describes their main components and types and identifies factors found in good designs. The concept of urban or regional resilience has often cropped up in recent international bibliographies and everything points towards it remaining an important aspect. The chapter “Urban Resilience. Towards a Global Sustainability” (De la Cal and García) explores the concept of resilience in a series of chapters and pioneering projects of varying scales, examples of a current of thought that can be understood as resilient to the global challenges of urban ecology. In design disciplines, a map is more than a tool representing reality; it is a means of responding to questions asked during the design process, and it is even an inherent part of that process. The chapter “Mapping Urbanism, Urban Mapping” (García and Bambó) explores how it is possible to conceive the city through mapping it and it also focuses on the evolution of urbanism and the city’s relationship with nature. The last chapter in this third part, “Urban Voids and Intermediate landscapes” (Monclús, Díez), addresses the issue of vacant urban lots that have appeared in the recent decades in the outskirts of cities as a result of unprecedented expansion and it explains the basis for the space syntax method as a basic tool for quantifying ‘spatial accessibility’.

The fourth part, *Landscape Urbanism*, places the role of urbanism in the context of major transformations determined by infrastructure and forms of metropolitan expansion, which has led to reconsidering the landscape tradition. This part concludes an account that shows how planning culture has been replaced by other forms of urbanism that have emerged in parallel with the changes that have affected cities, which include recent experiences linked to landscape urbanism.

The first chapter of this part, “From Urban Planning to Landscape Urbanism” (Monclús), paints an overview of the subject based on classic and recent texts and projects. It highlights how the ecological paradigm and landscape tradition in urbanist and architectural culture converge in landscape urbanism, in which discourses and integrating strategies come together and the landscape becomes the primary organising agent, above and beyond architecture. The chapter “From Park Systems and Green Belts to Green Infrastructures” (Monclús) introduces the genealogy of greenbelts and green infrastructures in the urbanism of the second half of the twentieth century, highlighting changes and continuities in the switch from original models to renewed concepts of green systems, environmental networks and green infrastructures linked to the most sophisticated recent systems. Some general considerations on landscape urbanism design are put forward in “Landscape Projects: Scale and Place” (Ávila). This chapter refers to issues such as understanding location, defining limits and the importance of scale in both time and place. All are essential factors for determining strategic project lines. The chapter “New Urban Landscapes” (Ávila) reflects on the need to implement new city models. In these models, green systems must play a fundamental role in the correct operation of urban ecosystems to promote more metropolitan biodiversity and foster greater balance in the natural

cycles taking place in our cities. The chapter “Brownfield vs Greenfield, Two Sides of the Same Coin” (De la Cal) considers the debate on the opportunity of building projects on brownfield sites compared with urban expansion into natural or agricultural areas (greenfield). Reference to relevant texts and projects demonstrates that economic, legal and social aspects are interconnected when implementing these proposals. The chapter establishes a comparison between how the two models are applied in the UK and Latin European countries and stresses the north–south dichotomy evident in other chapters in the book. Given that the planet has finite resources and is changing, the chapter “New Landscape Perspectives for Planning” (García) looks at the most current debates on the need to readdress the practice of modern urbanism to bring it into line with the limits involved in living on Earth. A series of recent texts, projects and initiatives emphasises the potential of landscape as a design instrument. The chapter “The Intangible Values of the Landscape” (García) begins with the need to pay attention to all landscape dimensions, including intangible ones, and to plan their transformations and promote future collective and private, global and local scenarios. The chapter vindicates the importance of cultural heritage; not only is it always dynamic and constantly being created, it can also provide each place with identity and continuity. The urban agriculture topic has enjoyed spectacular growth in the past 10 years by introducing farming in consolidated urban spaces and overcoming previous approaches that related the city to peri-urban spaces. The chapter “Urban Agriculture. Towards a Continuous Productive Spaces System in the City” (De la Cal) describes some of the most important current experiences related to this type of proposal and confirms the relevance of their implementation.

We began this introduction referring to Peter Hall’s reaction to what he considered ‘the lost art of urbanism’, a view shared by Richard Sennett in his proposals for the open city. Despite this generalised perception expressed by Hall, Sennett and other authors, who mention the decline of the discipline in the twentieth century, there were ‘exemplary’ projects and interventions at the beginning of the century and also in the recent decades. Many of them incorporate a temporal dimension, typical of the open city, in contrast to the over-determination characterising closed systems.¹⁴ Just as Hall recognises that there is much to learn from a European tour analysing recent policies, strategies and results in continental European cities, in this volume we expand the tour with some examples from outside Europe.

Our book is aimed at students and professionals interested in understanding how certain twentieth-century visions that have pervaded the twenty-first century have become decisive in shaping the contemporary city and landscape. This collection of chapters on diverse subjects and cases does not aim to establish universal interpretations, but rather to highlight some outstanding episodes that can help us understand why the planning culture has given way to other forms of urbanism, from urban design to strategic urbanism or landscape urbanism. Compared with global interpretations of urbanism based on socioeconomic history or architectural historiography, the purpose of the book *Urban Visions. From Planning Culture to Landscape Urbanism* is to help us understand the discipline couched in international contemporary debate and adopt a historic and compared perspective.

And, finally, we would like to conclude with a special thanks to Rafael Moneo for his thoughtful, pertinent criticism, and for the particular awareness, his architecture has always shown for the city and urban landscape. Over the course of his long, illustrious career, his relentless commitment to never settle for anything less than the very best is for us a great lesson.

Madrid–Zaragoza
January 2017

Carmen Díez Medina
Javier Monclús

¹⁴“(…) it is exactly this critical imagination of the city which is weak. This weakness is a particularly modern problem: the art of designing cities declined drastically in the middle of the 20th century”. Sennett, R. 2006. The open city. *LSE Cities*, November.

Part I

Urban Cultures and Traditions

“Storia della città e storia dell’urbanistica sono cose differenti, ma come la città anche il sapere dell’urbanista è l’esito di un processo di selezione cumulativa.”

(Urban history and urban planning history are not the same, since, as is the case in the city, the urbanist’s knowledge is the outcome of an accumulative selection process.)

Bernardo Secchi, *Prima lezione di urbanistica*, Roma-Bari: Laterza, 2000, 47.

City Beautiful and ‘Architectural Urbanism’ (1893–1940)

1

Javier Monclús and Carmen Díez Medina

Abstract

This chapter focusses on the first movements seeking to modernise major cities through large-scale architectural interventions as alternative solutions to the industrial era cities. It is in this context that the City Beautiful Movement emerged using the opportunity to present a renewed image of Chicago at the 1893 World’s Fair. The emergence of Civic Art in the USA and Public Art in England, Art Urbain in France and Belgium, or Stadtbaukunst in Germany and Austria, despite their notable differences, is encompassed in this context of shared reactions to the loss of urban quality in different countries. Parallel to those movements, after 1900 and through to 1914, there was a gradual emergence of what could be considered European urbanism, going beyond the formal, architectural dimensions. The numerous urban plans and projects, studies and publications that appeared at that time indicate a turning point concerning the work carried out over the previous century, such as the first world congress on town planning which was held in London in 1910.

Keywords

City Beautiful • World’s Columbian Exposition • Chicago Plan of 1909 • Civic Art • Stadtbaukunst • Art Urbain

The City Beautiful Movement, although consolidated in American cities, fundamentally due to the Chicago World’s Fair, had its origins in urban reforms of the nineteenth century, materialising in boulevards and walkways, in public spaces and civic buildings that some decades earlier had modified the image and structure of the European capitals (Olsen 1986). The renewal of Paris by Haussmann and the construction of the Ringstraße in Vienna were models that the urban elite at the start of the twentieth century tried to emulate, having overcome a certain sense of inferiority as a result of the pragmatism that had been employed during the rapid transformations of these commercial cities in the second half of the nineteenth century. In a broader sense, the aspirations of other cities, in Europe and in the rest of the

world, could be included in that urban beautification and monumentality movement that flourished from the turn of the century until the 1940s. As Peter Hall pointed out: “Despite the superficially very different contexts, there are strange similarities in the outcomes, with implications that perhaps should be disquieting” (Hall 2014, 203).

City Beautiful and the 1893 Chicago World’s Fair

Some specific factors present in North American cities, closely related to the scale and rate of urban growth in New York, Philadelphia, and above all, Chicago, allow us to call them the birthplaces of the City Beautiful movement. In its origins, it was driven by a wish to provide solutions to the lack of nature and infrastructure in urban development that characterised cities at the end of the nineteenth century. In particular, the Park Movement represented this desire to improve the modern city. The Municipal Improvement Associations attempted to direct and further these

J. Monclús (✉) · C. Díez Medina
School of Engineering and Architecture (EINA),
University of Zaragoza, Zaragoza, Spain
e-mail: jmonclus@unizar.es

C. Díez Medina
e-mail: cdiezme@unizar.es

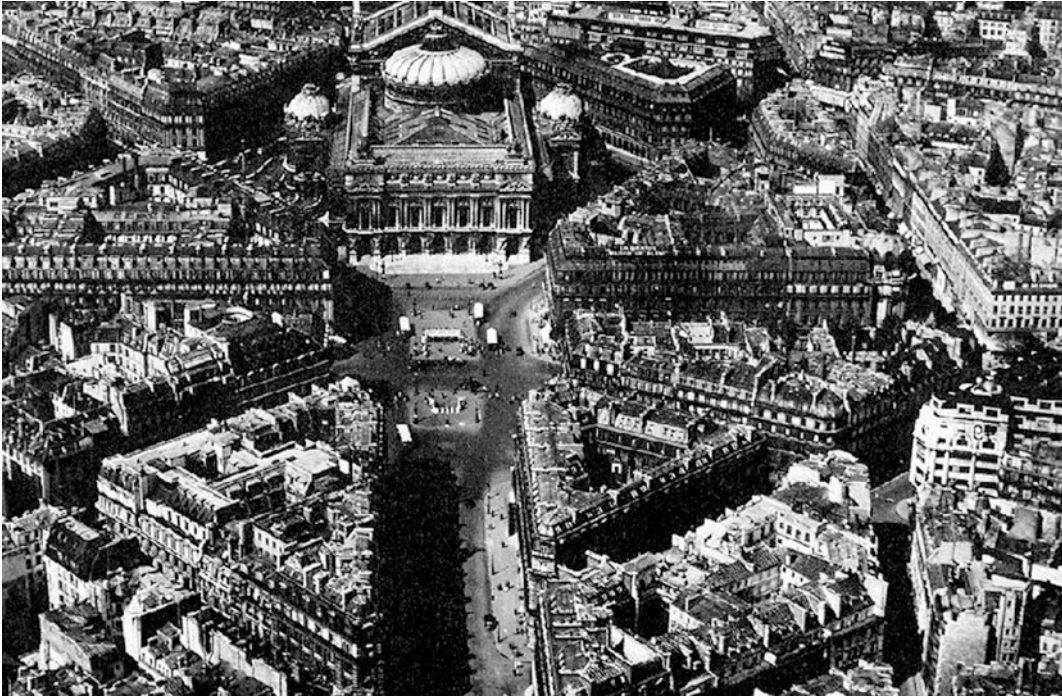


Fig. 1.1 The city as a work of art: Paris as a model



Fig. 1.2 Court of Honour of the administration building at the Chicago World's fair, 1893. Photographs: C. D. Arnold and H. D. Higinbotham

improvements, expressed in new building with interventions more in the line of Civic Art and landscaping, surpassing the small scale (trees, aesthetic control of streets, etc.) for more ambitious objectives (Ward 2002, 36). This search for a large-scale architectural language, i.e. an urbanistic scope, led to a growing interest in classicist urban forms, originating from the *École des Beaux Arts*, where many North American architects had trained. As was the case in Europe, it was during those years when the new public or semi-public buildings were designed, from city halls to libraries or universities, as well as museums and theatres.

The exceptional occasion to present a renewed image of the city, coherent with these new principles of 'enhancement', was presented at the Chicago World's Fair in 1893. It is important to point out that at the end of the nineteenth-century, international exhibitions began to change in concept, varying the layout of buildings and pavilions, from centralised models arranged around a monumental building (such as the case of Crystal Palace in London built for the 1851 Great Exhibition) to other decentralised layouts that included multiple, national or specialised pavilions. These changes meant the layout of these complexes, designed in unison, had to be rethought as a new urban component. The *Beaux Arts* approach utilized to design them permitted grouping the main buildings together, as well as structuring the hierarchy of axial perspectives and symmetrical compositions. The layouts of exhibition centres, structured around visual axes, represented the North American version of the Parisian World fairs. Similar to what had happened in Paris, the impact was decisive on North American town planning culture. The Chicago Colombian Exposition was not only a propagandistic and skillfully staged show of power and efficiency of the American industry, but it also served as a town planning model (Lampugnani 2011, 43). The most obvious example is the new 1909 Chicago Plan, which, after the successful exposition of 1893, employed the same strategy to monumentalise not only the specific areas but the entire city, with special emphasis on the centre and urban façade overlooking the lake. Local political forces worked at defining a joint Plan to convert industrial Chicago into the 'Paris on the Prairie'. The fundamental difference between Chicago and Paris or other European cities, where the central power took on the new reform strategies, is that in Chicago it was the Commercial Club and later the Merchant Club (like the Chamber of Commerce) that sponsored the effort to reform the city with the improvement of its appearance and general working conditions.

But the influence of the Chicago Exposition also reached other cities as mentioned previously. The architect Daniel H. Burnham, co-author with Edward H. Bennett of the Colombian Exposition and the Chicago Plan of 1909, also reformed the Washington Mall (1902), where the symbolic and commemorative aspects were relevant ever since the *L'Enfant*

Plan of 1791. And the reform of Cleveland, where he designed a Plan (1903) which served as the model for the city centre: big public buildings grouped together and a system of parks forming a promenade along the lake. In San Francisco (1905), the intervention linked to the exposition extended to a large territory with a series of radial boulevards emanating from the city centre (Monclús 2009, 16–44).

Werner Hegemann recognised the importance of the fairs for the City Beautiful movement and for Civic Design in his handbook *The American Vitruvius* in 1922 (Hegemann and Peets 1998, 98–107). The Chicago World's Fair, baptised as the 'White City' because of the contrast of its unitary image with the chaotic appearance of the city, was as short-lived in reality as it was permanent in the imagination of Chicagoans and urbanistic culture, thus considered an 'urban microcosmos' and a product of the movement led by Burnham. Although it was not the only episode that showed this type of approach, the Chicago World's Fair marked the definitive emergence of the City Beautiful Movement, with all its achievements and limitations (Ward 2002, 35–36, 69–70). Other international expositions organised over the following years, from Paris in 1900 to Barcelona in 1929, followed the same classicist schemes and geometrical principles, characterised by monumental axes, expansive avenues and symmetrical building groups (Monclús 2009, 24–44).

Civic Design, Civic Art, Urban Art, Urbanism

The urban enhancement and monumentalist movements that arose at the turn of the century can be understood as a reaction to the 'engineered' urban forms that had characterised the expansion plans of the nineteenth century. This occurred in many North American cities, but also in some European cities, such as Barcelona, with its singular *Ensanche* (city extension), designed by the engineer Ildefonso Cerdà (*Laboratorio de Urbanismo* 1992). Broad and vocal criticism of these interventions considered them to be excessively pragmatic and without urban qualities, responding to certain attitudes that were already ripe in the cultural environment at the time, as illustrated by Camilo Sitte, in his book *City Planning according to Artistic Principles* published in 1889.

The emergence of Civic Art in the USA and Public Art in England, *Art Urbain* in France and Belgium, or *Stadt-baukunst* in Germany and Austria, despite their notable differences, is encompassed in this context of shared reactions in different countries against the loss of urban quality. Indeed, although the term Civic Art was originally associated more with the idea of 'art in the city' than with the more disciplinary concept of 'the art of building cities', the more comprehensive meanings gradually took over, as in the case



Fig. 1.3 Aerial view of the Chicago World's Fair of 1893, Jackson Park, Chicago. Image originally published in F.A. Brockhaus, Berlin and Vienna, 1894



Fig. 1.4 Souvenir map of the Chicago World's Fair, held in Jackson Park and Midway Plaisance in 1893. Recovered and drawn with updated information by Hermann Heinze, Chief Draughtsman, Surveys and Grades Department, World's Columbian Exposition

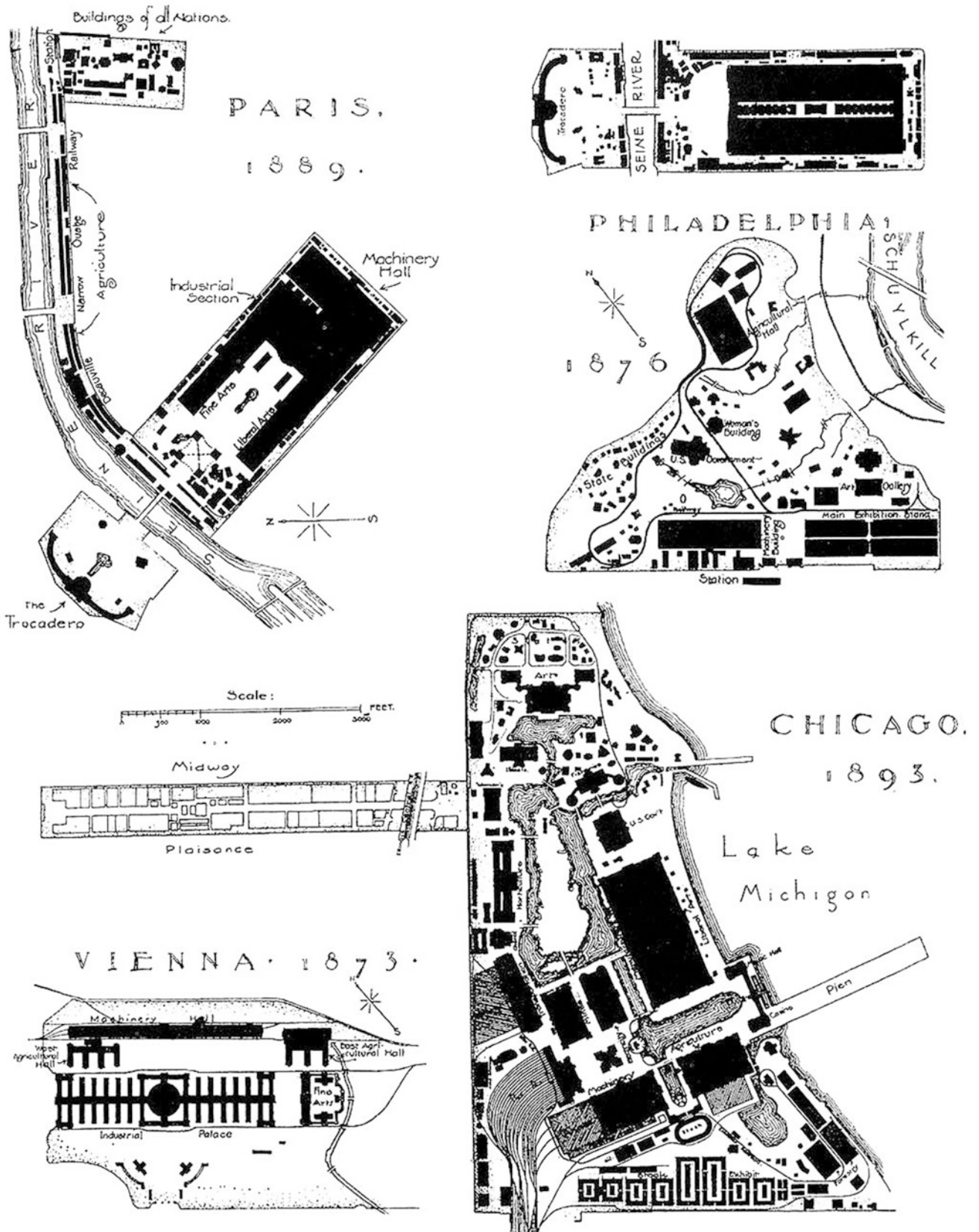


Fig. 1.5 Comparison of International Expositions of the nineteenth century: Paris 1889, Vienna 1873, Philadelphia 1876, Chicago 1893. Published in Hegemann and Peets 1998

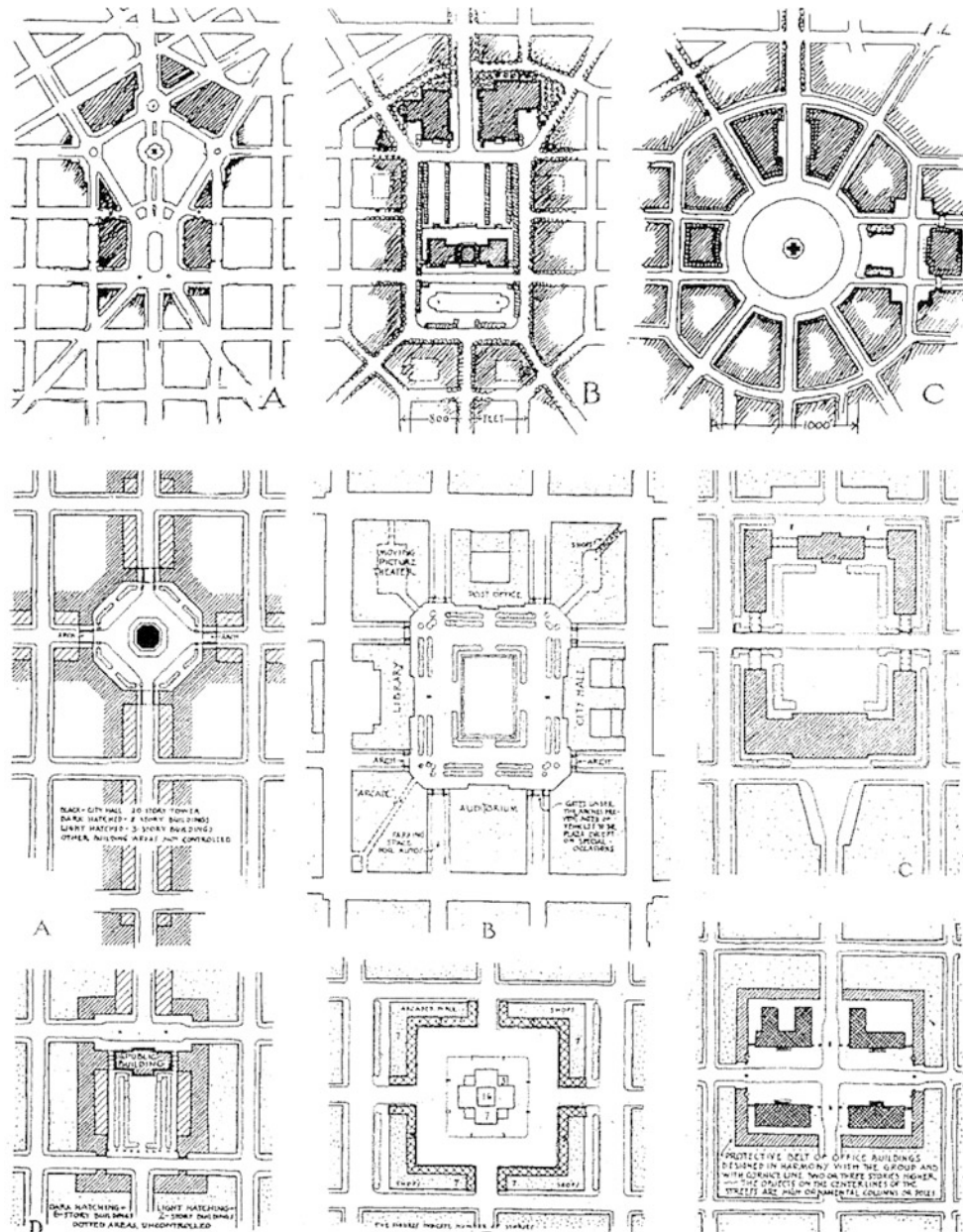


Fig. 1.6 Representative layouts of Civic Art. Published in Hegemann and Peets (1998)

of Raymond Unwin or Léon Jaussely, who identified *Art Urbain* as the modern discipline of urbanism (Toutcheff 1994, 169–170). Similarly, much of the work and urban projects from the first half of the twentieth century can be understood in this same tradition of architectural urbanism (Monclús 1995, 92–99).

Parallel to those movements, between 1900 and 1914, there was a gradual emergence of what could be considered European urbanism, going beyond the architectural formalities. It was in that period, “the richest in the evolution of

urbanism in Europe” (Stutcliffe 1994), when numerous technical questions were considered. The first major congresses were held, leading to the new discipline of Town Planning (with the versions of *Urbanisme* in France, *Urbanistica* in Italy or *Urbanismo* in Spain) (Monclús and Medina 2017). The numerous urban plans and projects, studies and publications that appeared at that time indicate a turning point concerning the work carried out over the previous century. In this context, the first town planning magazine was published, prior to the one founded by Sitte,

in Germany in 1904, *Der Städtebau* (Ward 2002, 55). In the institutional terrain, the Department of Rural and Urban Hygiene was created at the Paris Musée Social, the heart of the French School of *Urbanisme*. In 1910, the first world congress on town planning was held at the RIBA facilities. In the same year, a town planning contest, the most important during the pre-war period, was held in Berlin. The zoning strategy soon became a fundamental instrument for planning and was put into practice in Germany (particularly in Frankfurt) from the end of the nineteenth century and extended as of 1914 to become “the very foundation of European and world urbanism” (Sutcliffe 1994, 122).

Among the very different urban episodes in the first third of the twentieth century, certain residential expansion developments stand out, where a complex relationship between architecture and urban layouts was established. The development of Amsterdam during that period—in the words of Sigfried Giedion, “Amsterdam is one of the few

cities of our times that shows a continuous tradition in town planning, unbroken since 1900”—became a more than notable urban laboratory (Giedion 1941). Hendrick Petrus Berlage, urbanist and theorist, developed the Amsterdam South Plan (1900–1917) after having tested innovative solutions for residential expansion in The Hague Plan (1907). Berlage, who considered Haussmann’s Paris an ideal example of urbanism (Van Rossem 1994), presented the South Expansion Plan in 1915 after drafting several versions, the first of which were rejected for their similarity to a garden suburb. Meanwhile, some authors such as Giedion, recognised a strong commitment to ‘traditional’ town planning in the Plan, whereas others, such as Wolfgang Sonne, considered it a paradigmatic example of ‘another urbanism’ of high ‘urbanity’ (Giedion 1941, in the English version the page is 794; Sonne 2014). In any case, Amsterdam South represents a key episode that connects urban art with mass housing projects in Central Europe between the wars.



Fig. 1.7 Jaussely Plan, 1907, connection Plan for Barcelona and the suburbs, 1904–07: zoning

Case Studies

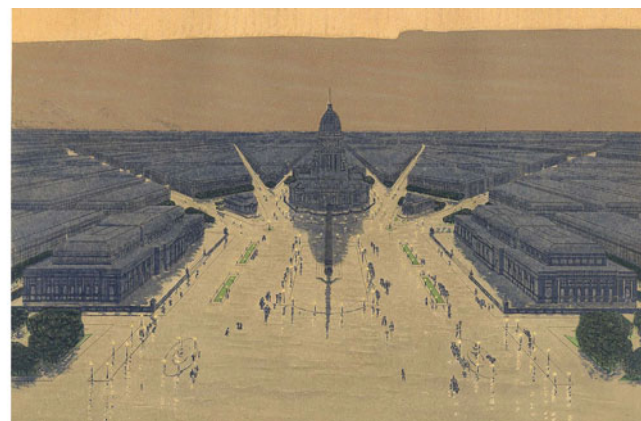
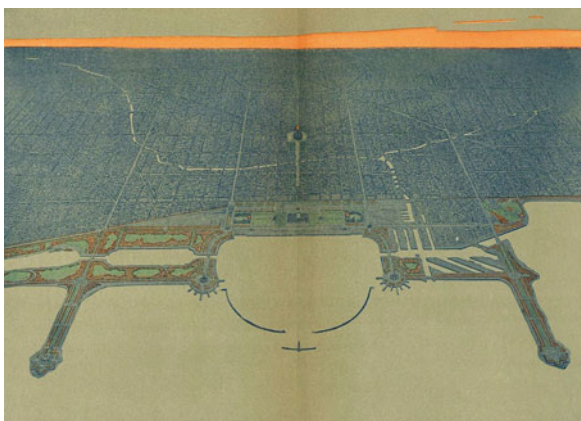
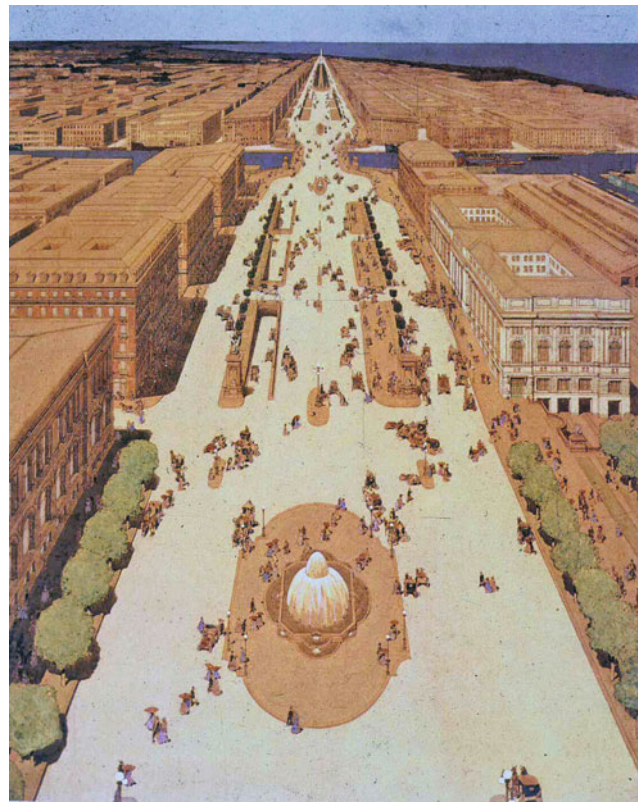
Chicago Plan (1909)

The Chicago Plan, by D. H. Burnham and E. H. Bennett, was a milestone in the history of town planning. Despite the protagonism of the formal aspects, the Plan tried to integrate very different questions and strategies, economic, functional and social, aimed at eradicating the slums and to provide more amenities and parks for the city.

The specific objectives of the Plan were much more varied than what the images suggest: to improve the lakeside area for public use; to extend the existing park and boulevard system and protect woodlands; to improve the railway transport system; to create a concentric highway system for

the city and metropolitan area; to organise a street system to facilitate transit; to dignify the business areas with civic and cultural administration centres giving coherence to the daily life in the city.

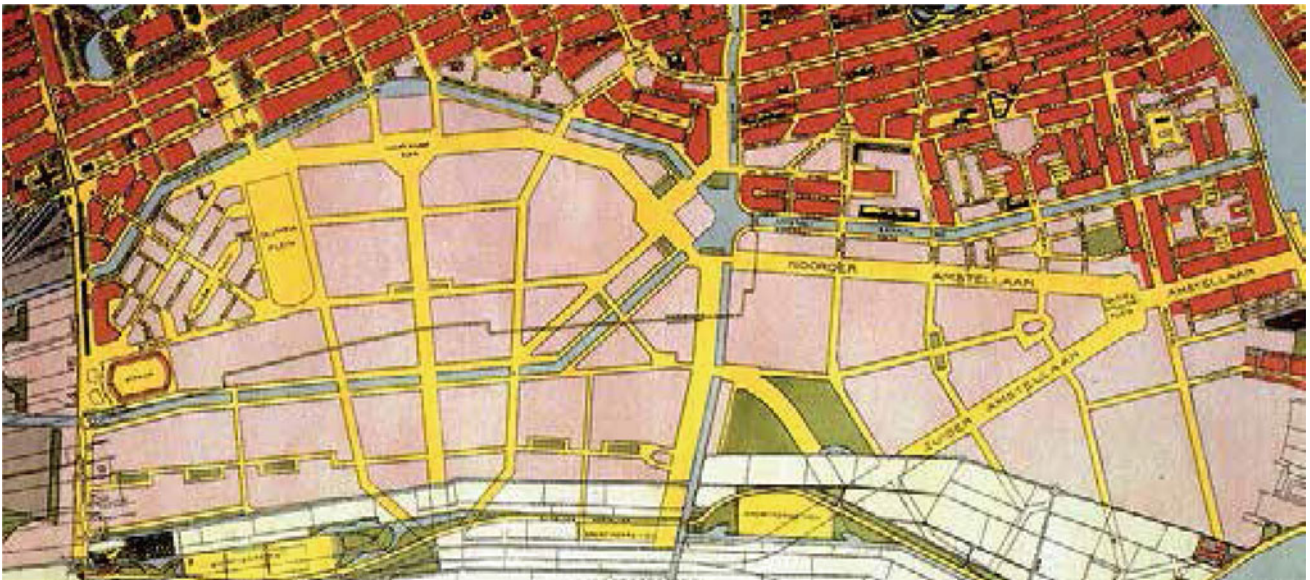
The most disseminated proposal for the Plan is among the very few that were not executed. It defined Congress St. as the main axis associating the new Civic Centre with Michigan Avenue, parallel to the Lake Michigan promenade. Instead, a highway junction was built. The efforts, however, focussed on the new urban façade overlooking the lake and renewing the main avenues. In any case, the limits of the Plan were highlighted by numerous critics. These included Lewis Mumford, who in 1922 qualified these strategies as ‘municipal cosmetics’, denouncing the scarce interest the Plan had in subjects related to housing, educational or healthcare facilities.



Plan Zuid (“South Plan”). Amsterdam (1905–17)

Plan Zuid, the new urban development plan of Amsterdam South designed by H. P. Berlage, is an essential episode in Twentieth-century town planning culture. The starting point was the unitary conception of a major complex (12,000 dwellings on 400 ha), based on an arrangement of blocks as architectural units. The bird’s-eye view depictions (as can also be seen in the Chicago Plan) shows that same interest for unitary control of the complex. The town planning scheme, with a layout of monumental axes with tridents and secondary roadways, is characterised by the importance of axial, symmetrical compositions with two superimposed highway networks. The existing urban structures influence the layout, where the main roads converge in a Y layout near the Amstel

and the station (not built until the 1970’s). However, within that classicist scheme, a certain urbanistic variety was introduced with inner avenues, streets and plazas that on some occasions worked as highway connectors and others as closed-off spaces, etc. The sensation of uniformity is likewise qualified through the contrast between the horizontality of the blocks and some vertical items or the singular treatment of corners, which underscore the symmetry or emphasize focal points. The project was not carried out in blocks, but rather ‘continuing corridor streets’ in a similar way to the Parisian boulevards, although here the streets are shorter. The architectural uniformity of the housing guarantees uniformity of the complex. The blocks are elongated, ranging between 100 and 200 m by 50 m, and are conceived as a continuing perimeter of 4-storey buildings surrounding an open, central area.



References

- Giedion, S. 1941. *Space, Time and Architecture: The Growth of a New Tradition*. Cambridge, Massachusetts: Harvard University Press.
- Hall, P.G. 2014. *Cities of Tomorrow. An Intellectual History of Urban Planning and Design in the Twentieth Century* [1988]. 4th ed. Oxford: Wiley-Blackwell.
- Hegemann, W., and E. Peets. 1998. *The American Vitruvius: An Architects' Handbook of Urban Design [1922]*. New York: Princeton Architectural Press.
- Laboratorio de Urbanismo (ed.). 1992. *Treballs sobre Cerdà i el seu Eixample a Barcelona/Readings on Cerdà and the Extension Plan of Barcelona*. Barcelona: Ayuntamiento de Barcelona y CEHOPU.
- Lampugnani, V.M. 2011. *Die Stadt im 20. Jahrhundert. Visionen, Entwürfe, Gebautes*. Berlin: Klaus Wagenbach.
- Monclús, J. 1995. Arte urbano y estudios histórico-urbanísticos. Tradiciones, ciclos y recuperaciones. *3ZU: revista d'arquitectura* 4. Escola Tècnica Superior d'Arquitectura de Barcelona: 92–99.
- Monclús, J. 2009. *International Exhibitions and Urbanism: The Zaragoza Expo 2008 Project*. Farnham: Ashgate.
- Monclús, J., and C. Díez Medina. 2017. Urbanisme, Urbanismo, Urbanistica. Latin European Urbanism: Italy and Spain. In *Planning history handbook*, ed. C. Hein. London: Routledge.
- Olsen, D.J. 1986. *The City as a Work of Art: London, Paris, Vienna*. Yale: Yale University Press.
- Sonne, W. 2014. *Urbanität und Dichte im Städtebau des 20. Jahrhunderts*. Berlin: DOM publishers.
- Sutcliffe, A. 1994. El nacimiento de una disciplina. In *Visiones Urbanas. Europa 1870–1993. La ciudad del artista. La ciudad del arquitecto*, ed. J. Dethier and A. Guiheux, 121–128. Barcelona: CCCB Electa.
- Toutcheff, N. 1994. Léon Jaussely (1875–1932). Los inicios del urbanismo científico en Francia. In *Visiones Urbanas. Europa 1870–1993. La ciudad del artista. La ciudad del arquitecto*, ed. J. Dethier and A. Guiheux, 169–171. Barcelona: CCCB Electa.
- Van Rossem, V. 1994. H.P. Berlage. In *Visiones Urbanas. Europa 1870–1993. La ciudad del artista. La ciudad del arquitecto*, ed. J. Dethier and A. Guiheux, 148–151. Barcelona: CCCB Electa.
- Ward, S.V. 2002. *Planning the Twentieth-Century City: The Advanced Capitalist World*. New York: Willey.

Further Readings

- García Espuche, A., M. Guardia, J. Monclús, and J.L. Oyón. 1991. Modernization and urban beautification: The 1888 Barcelona world's fair. *Planning Perspectives* 6: 139–159. doi:[10.1080/02665439108725724](https://doi.org/10.1080/02665439108725724).
- Gravagnuolo, B. 1991. *La Progettazione Urbana in Europa, 1750-1960: storia e teorie*. Bari: Laterza.
- Panerai, P., J. Castex, J.-C. Depaule, and I. Samuels. 2004. *Urban Forms: The Death and Life of the Urban Block [Formes urbaines, 1980]*. Oxford: Architectural Press.
- Polano, S. 1987. *Hendrik Petrus Berlage. Opera Completa*. Milan: Electa.
- Sica, P. 1978. *Storia Dell'urbanistica: Il Novecento*. Bari: Laterza.
- Sitte, C. 1965. *City Planning According to Artistic Principles [Der Städtebau nach seinen künstlerischen Grundsätzen, 1889]*. New York: Random House.
- Wilson, W.H. 1989. *The City Beautiful Movement*. Baltimore: Johns Hopkins University Press.

Garden Cities and Garden Suburbs (1898–1930)

2

Javier Monclús and Carmen Díez Medina

Abstract

Howard's concept of Garden City, one of the most powerful ideas that urbanism came up with in the early twentieth century, became crucial for the new, modern discipline of urban planning. Howard's abstract proposal was adapted in the most carefully designed 'Garden Suburbs' as a model for an ideal environment, and at the same time, it was understood as a territorial reform project. Its aspirations for radical social reform became controversial when they were indiscriminately adopted. Both the theoretical ideas and building projects following them have given rise to a large number of different interpretations. The debate is still open.

Keywords

Garden City • Garden Suburbs • Howard • Unwin • Letchworth • Hampstead

From the Garden City of Howard to the Garden Suburbs

The concept of the Garden City is one of the most powerful ideas to emerge from urbanism in the early twentieth century. The term was coined by Ebenezer Howard in 1898, in his book *To-morrow: A Peaceful Path to Real Reform*, a milestone in the Anglo-Saxon world and later in the international discourse on the new, modern discipline of urban planning. The diagram titled *The Three Magnets* is one of the most widely circulated and concise documents in which Howard expressed his ideas. The first magnet represents the town, signifying a job market, training possibilities as well as society but also polluted air, noise and the loss of nature. The second is the country, where the air is pure, and there are tranquillity and a natural environment on the doorstep, but

less work, few training possibilities and a lack of social life. The third magnet is the town-Country, bringing together the advantages of both while avoiding the disadvantages. At the centre are "The People" and the rhetorical question "Where will they go?". Howard, with the aim of finding a system that incorporated the virtues of both country and town, proposes a theoretical diagram based on circles, which he named *Central City—Garden City*, where he depicted settlements of around 30,000 inhabitants, grouped around a central nucleus of 50,000 to form a social city of 250,000 inhabitants. The nuclei are surrounded by a permanent community-owned green belt, home to farms, as well as all kinds of urban institutions, such as reformatories or rest homes, all in a rural environment (Sutcliffe 1994, 126). With his idea of a Garden City, he did not design any specific urban plans, insisting that these should be adapted to each site. His diagrams are therefore abstract, and more specifically, in *Central City—Garden City*, the city is drawn as a perfect circle, with a radius of approximately 1 Km.

In Howard's proposal, the Garden City is understood as a radical solution to the ills of industrial cities, therefore entailing two reformist concepts: that of new communities and that of decentralisation. These ideas had actually been the subject of debate in the nineteenth

J. Monclús (✉) · C. Díez Medina
School of Engineering and Architecture (EINA),
University of Zaragoza, Zaragoza, Spain
e-mail: jmonclus@unizar.es

C. Díez Medina
e-mail: cdiezme@unizar.es

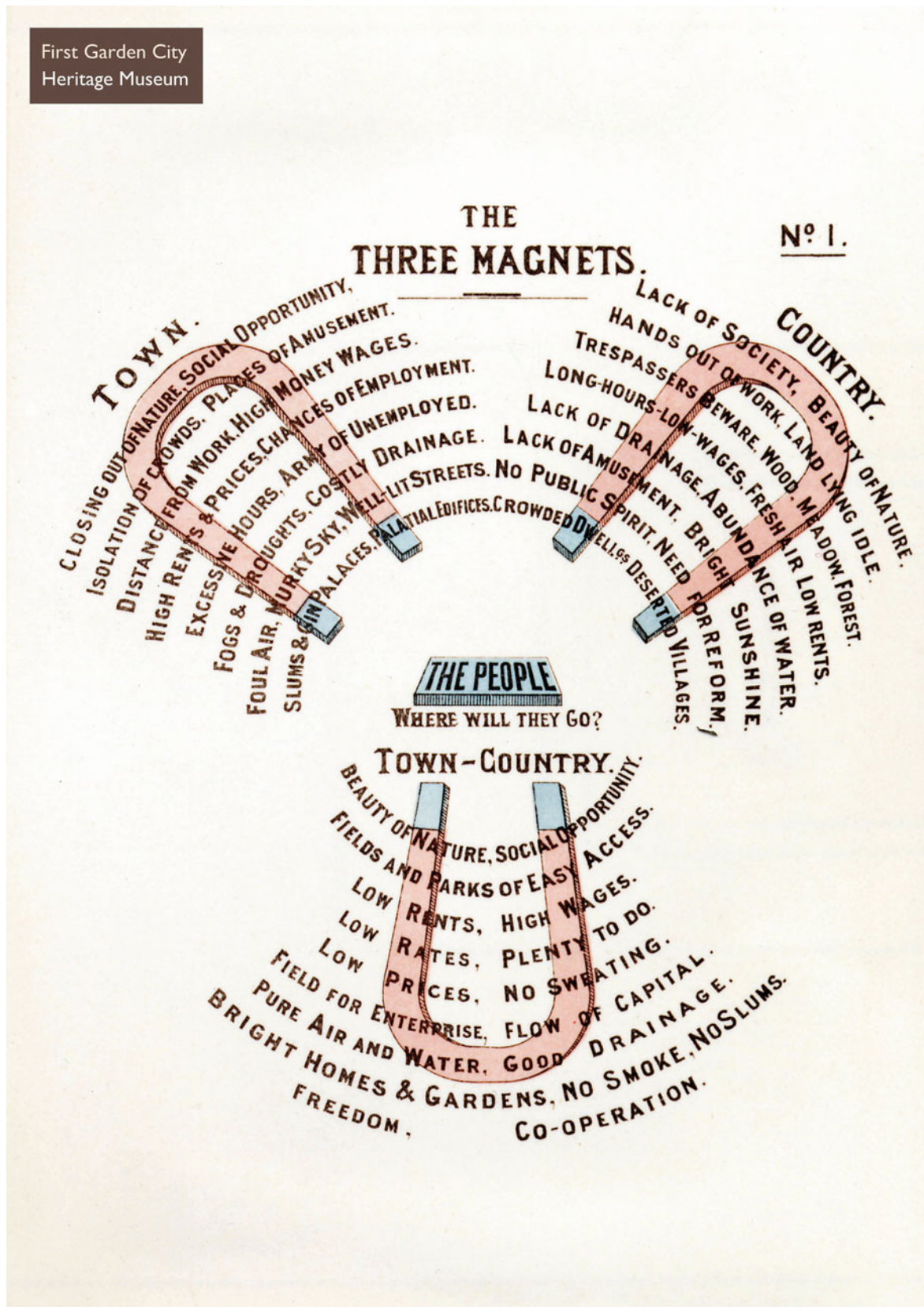


Fig. 2.1 Ebenezer Howard, drawing titled “The Three Magnets”, with their three poles: town, country and town-country. Published in *To-Morrow: A Peaceful Path to Real Reform*, (1898)

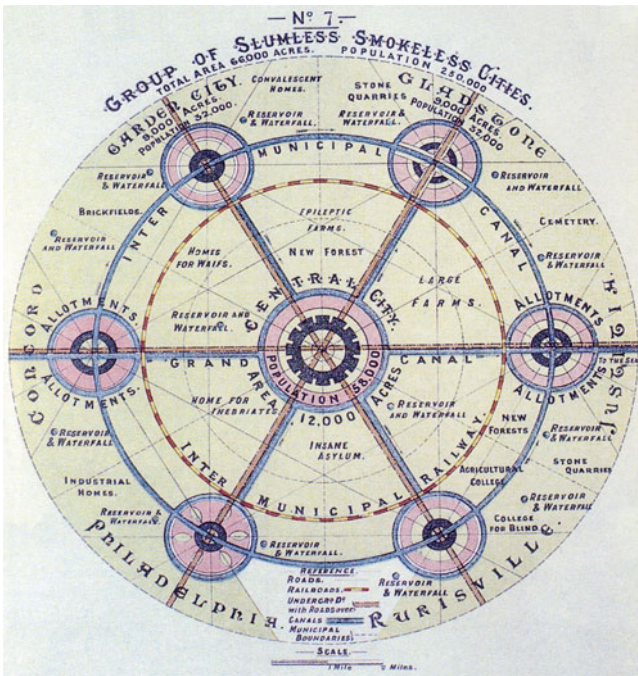


Fig. 2.2 Ebenezer Howard, drawing titled “Central City—Garden City”. Published in *To-Morrow: A Peaceful Path to Real Reform*, (1898)

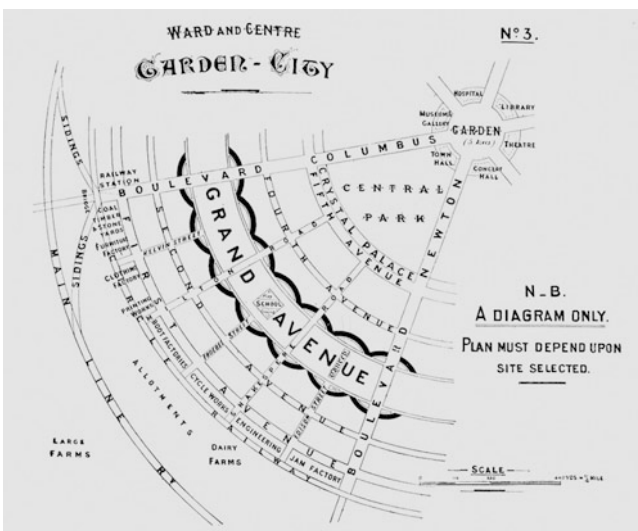


Fig. 2.3 Ebenezer Howard, drawing of the Garden City with an agricultural belt. Published in *To-Morrow: A Peaceful Path to Real Reform*, (1898)

century.¹ The proposal of alternative communities could be included in those that Robert Owen and other reformists had designed (discounted by Marx and Engels as Utopian socialists), or the communities that later arose out of the Arts and Crafts Movement or in the autonomous communities

based on anarchist thinking. The second concept comes from the model industrial colonies, which had already been successfully tested, such as Saltaire, not far from Bradford (1851–71), Port Sunlight (1887) and Bournville (1897) (Lampugnani 2011, 16–24).

Howard’s ideas gave rise to a large number of interpretations. On the one hand, his proposal was adapted in the most carefully designed suburbs, or ‘Garden Suburbs’ as a model for an ideal environment. On the other hand, it was understood as a territorial reform project that would end up with the nationalisation of land and a cooperative system or a socialist society. These aspirations for radical social reform gradually gave way, particularly after the foundation of the Garden City Association (1899) and the publication of the second edition of Howard’s book under the title of *Garden Cities of To-morrow* (1902), to liberal reformism in which the Garden City model would lose its schematic nature and become an increasingly physical entity, focussing interest on the urban and environmental features of the new settlements. As Robert Fishman pointed out, instead of a peaceful alternative to capitalism, the Garden City thus became a device for preserving it (Fishman 1977, 71–72).

From the urban and architectural design point of view, the Garden City can be included in the English tradition of protecting the environmental quality of small settlements and traditional architecture, reinterpreted in model villages of the nineteenth century, as mentioned and praised by the spokesmen of the Arts and Crafts. This circumstance partly explains why the construction of Letchworth (1903), the first Garden City meeting Howard’s tenets, was understood as an example that managed to fulfil his theoretical principles in an attractive residential environment, despite compromising his reformist ideals. Hence, the Garden Suburb, as a redefinition of Howard’s theory and fundamental landmark in British urbanism, was only a few steps away. It only meant applying the theories of the Garden City to existing cities and developing low-density urbanism in the suburbs.

That was how the ideal model of the Garden City proposed by Howard—understood as overcoming bourgeois Garden Suburbs and ‘by-law’ working-class landscape,² in keeping with ideas of decentralisation, joint ownership of land and self-sufficient communities—was gradually diluted in conventional town planning, giving way to the reality of Garden Suburbs. The result was low-density suburban growth that did not question the basis of urban growth as such, but contributed to residential suburbanisation.

¹“The ingredients, then, were far from original” (Hall 2014, 96).

²Namely, following the strict regulations for worker’s housing imposed in nineteenth century.

Garden Suburbs and Town Planning

The plan by Raymond Unwin and Barry Parker for Hampstead Garden Suburb (1905–1907), in the north of London, was conceived as a model, cross-class settlement, in accordance with the visions and interests of Henrietta O. Barnett's liberal, philanthropic reformism.³ Despite the fact that even the name, Hampstead Garden Suburb, intentionally referred to Howard's Garden City and the intentional choice of urban architects—Parker and Unwin had been responsible for the design of Letchworth in 1906—Hampstead soon became a suburb that was a far cry from the concept of a reforming Garden City. As had happened in Letchworth, or in Bedford Park, it became a small-scale elitist suburb, not far from the noisy, polluted, anonymous metropolis, functionally dependent upon it, but a charming refuge from it (Lampugnani 2011, 36). This went hand in hand with the progressive increase in land and housing prices in the area (Hall 2014, 110).

The publication of the manual *Town Planning in Practice. An introduction to the Art of Designing Towns and Suburbs* (1909), by Unwin, was another milestone in terms of the urbanistic technique focussing on site planning scale. Unwin based his work on criticism of industrial cities and the pragmatism of urban and suburban expansion. The titles of the first six chapters in this book are illustrative of the principles of that 'art of designing towns and suburbs': (1) Of Civil Art as the Expression of Civic Life; (2) Of the Individuality of Towns; (3) Of Formal and Informal Beauty; (4) Of the City Survey; (5) Of Boundaries and Approaches; (6) Of Centres and Enclosed Places. The following chapters are of a more practical nature, focussing on the arrangement of roads, streets and plots, buildings and the placing of buildings (Unwin 1984).

In the subsequent pamphlet *Nothing Gained by Overcrowding* (1912), Unwin put forward a proposal for creating quality environments, applying appropriate planning to achieve much more space without occupying more land. The premise was that the conventional layouts on which expansion of British cities between 1870 and 1910 was based were inefficient due to over-sizing of excessively wide roads. Instead of reserving 40% for the roadway, as was the usual standard, this would be reduced by 17%, thus leaving at least 55% for open spaces (Hall 2014, 111). Moreover, he proposed low density, more specifically 12 houses per acre—30 houses/ha, instead of the 75 or 100

³Social worker, philanthropist, puritan y co-founder of the National Trust, H. O. Barnett bought 100 ha in the idyllic Hampstead Heath in 1905 and announced in the magazine *Contemporary Review* her intention to build in that marvellous fragment of nature a Garden Suburb (Barnett in Lampugnani 2011, 33).

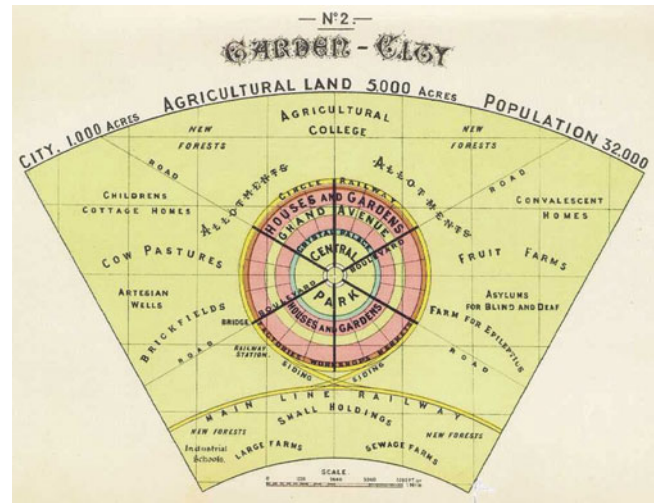


Fig. 2.4 Ebenezer Howard, complementary diagram to Garden City. Published in *Garden Cities of Tomorrow* (1898)



Fig. 2.5 Advertising poster announcing the advantages of Letchworth Garden City (1925)

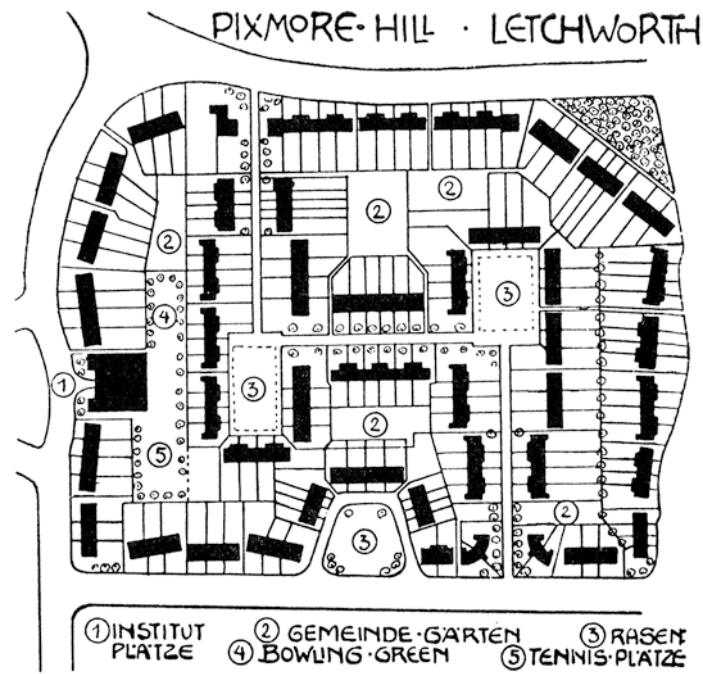


Fig. 2.6 Raymond Unwin and Barry Parker, details of the layout of Pixmore in Letchworth, 1907–09

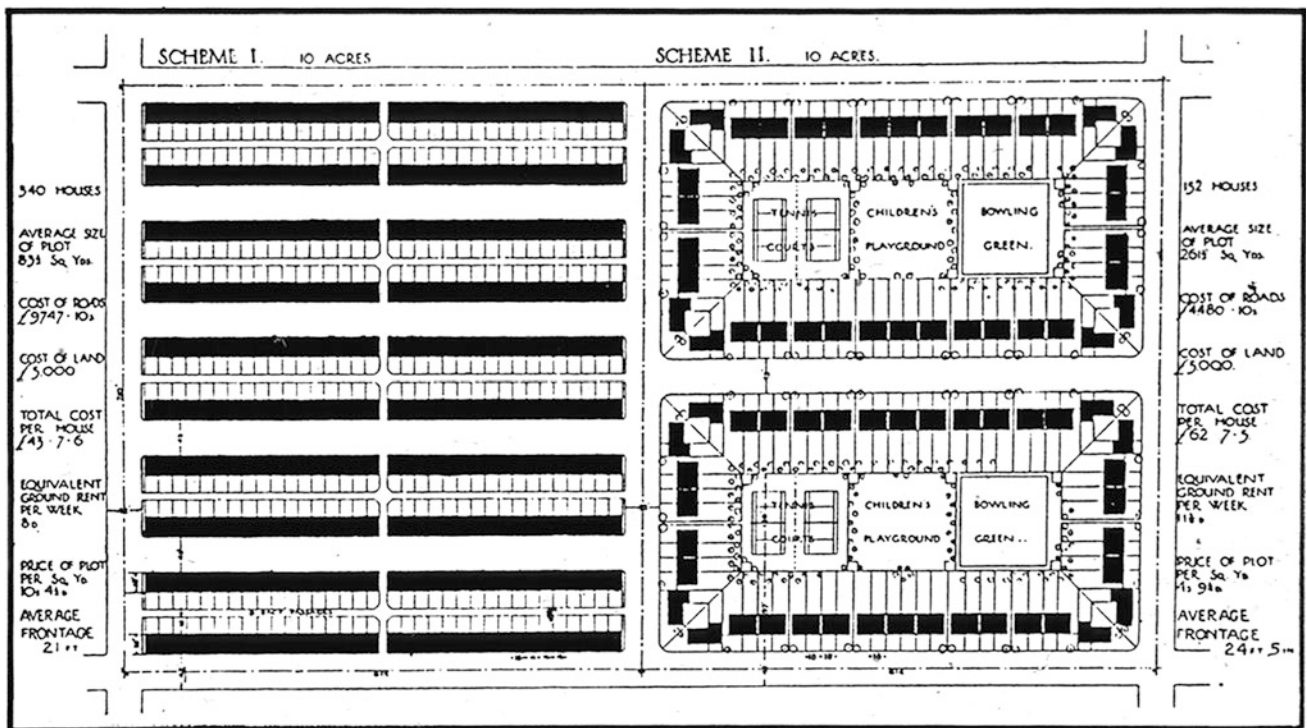


Fig. 2.7 Comparison drawings between a conventional layout and an alternative one reducing roadways and increasing clear spaces. Published in Unwin, R. Unwin (1984)

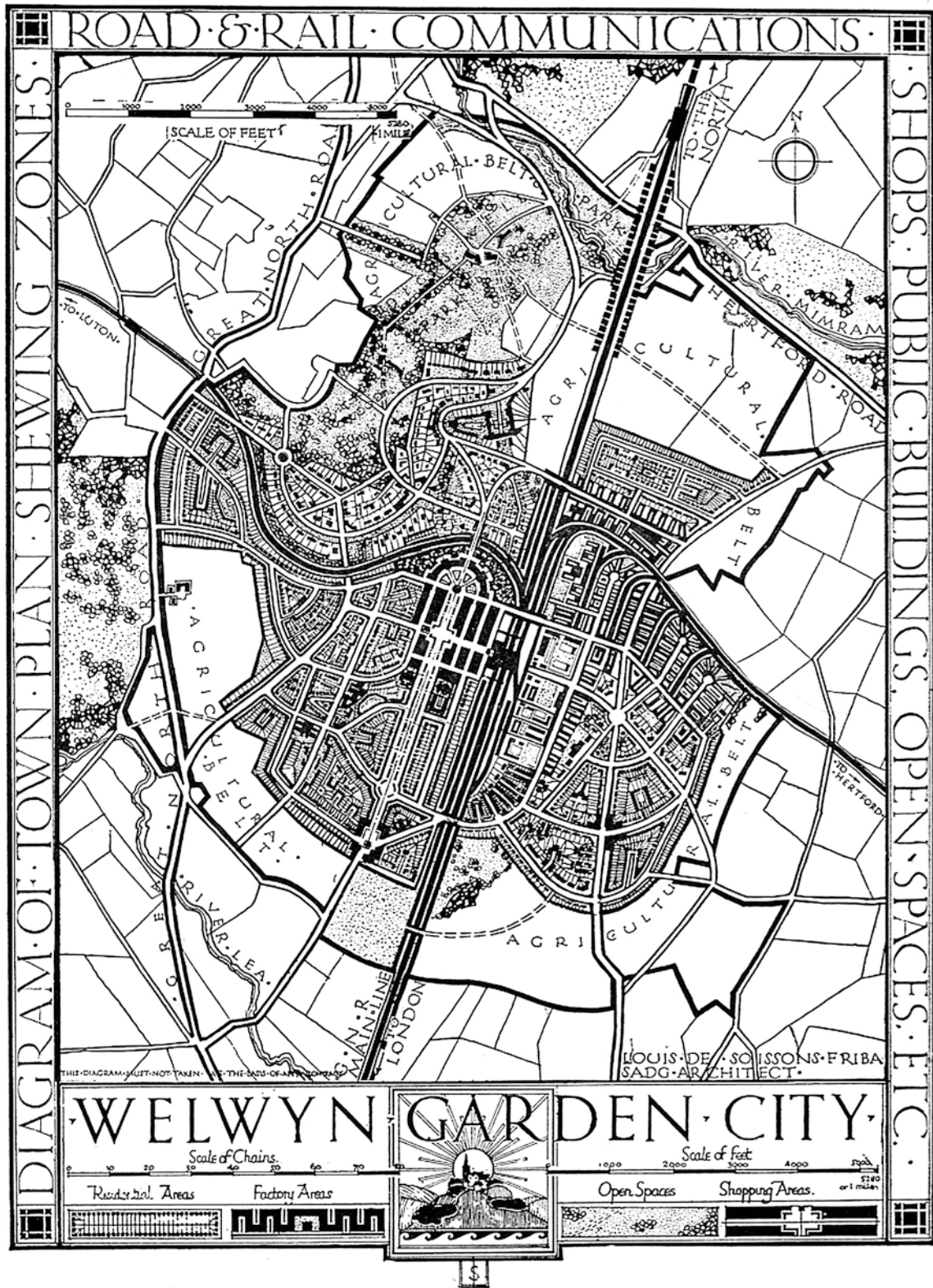


Fig. 2.8 Louis de Soissons, Welwyn Garden City, 1920. General plan

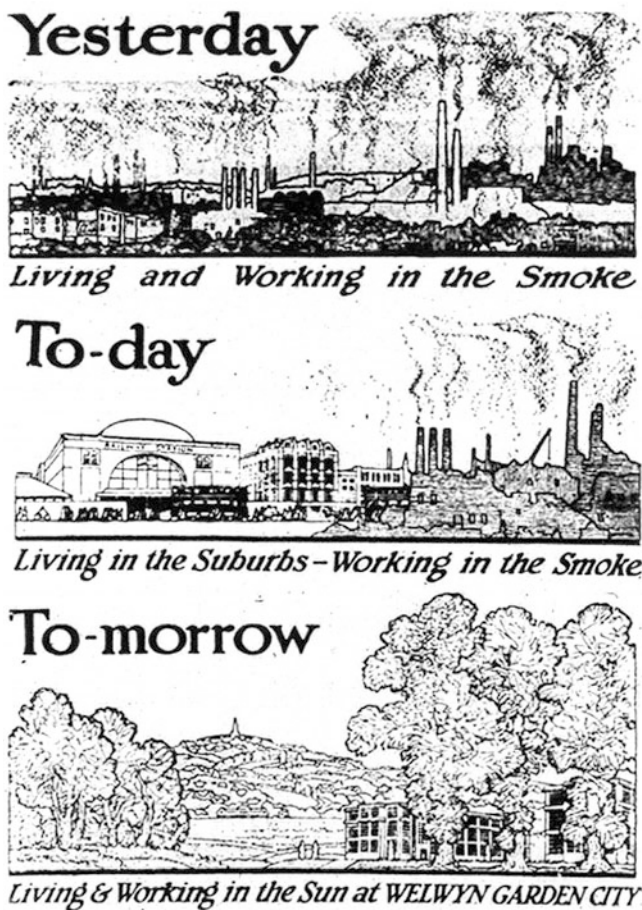


Fig. 2.9 Advertising poster announcing the advantages and disadvantages of living and working at Welwyn Garden City yesterday, today and tomorrow, 1925

that were typical at the end of the century—with lower infrastructure costs.

The formal principles were based on the Arts and Crafts tradition and the ideas of William Morris, and later on the theories of Camillo Sitte, although Unwin appears to be unaware of them in his New Earswick, York (1902) and Letchworth projects. The diversity in the design of the roadways, with main roads and secondary roads or *cul-de-sacs*, is accompanied by a wide variety of housing types, with different ways of grouping houses together as a fundamental mechanism for creating picturesque effects. The formal definition of these suburbs reveals Unwin's eclecticism. On the one hand, the layouts show connections with the picturesque tradition: preference for curved streets, uniformity of façades, albeit often with asymmetrical perspectives, a taste for a changing view comprising separate fragments, open spaces, etc. On the other hand, the regular geometry defines the central areas. In Spiro Kostof's words, "His conception of the street was Modern, not Modernist" (Kostof 1992, 231). In his book, Unwin analyses European

cities, the first part purely Sittesque,⁴ although that should not be confused with folkloric picturesqueness. His preferences are recognised in town planning "obtaining its beauty from putting order to the difficulties of the site" and attention to detail.⁵

Welwyn Garden City, Prototype or Exception?

In the opening third of the twentieth century, despite the confusion caused by the original ideas surrounding garden cities having been adopted in other national and urban contexts, Howard's original idea can be seen in a variety of creative experiences. The English garden cities designed with a certain degree of autonomy stand out above all, as satellite towns that have ended up integrating with metropolitan agglomerations.

The confusion began from the start, when "a large number of projects indiscriminately adopted the name of 'Garden City', without having the right to use it since the results were completely different from the ideas by the founders of the movement. Today, projects of this kind are only seen in Hertfordshire, in Letchworth and the Welwyn Garden City" (Purdom in Hall 2014, 114).⁶ In fact, the creation of 'Garden Suburbs', apparently based on the concept of Howard's garden cities, but actually a far cry from his principles, was the norm in many European cities, not only in the UK.

It was Howard himself who promoted the outstanding Garden City of Welwyn, after having founded the first Garden City in Letchworth. The easy access to London by railway favoured successful development; management was entrusted to Welwyn Garden City Limited, the owner of the land; and the estate became an independent town in 1927.

The Welwyn experience, as a satellite town, was so innovative that it became a benchmark for post-war New Towns, planned within the framework of Abercrombie's Greater London Plan. In exchange, the urban forms adopted in Louis de Soissons's project for Welwyn were not entirely novel. The wide avenues and regular layouts were more in line with Beaux-Art criteria, with picturesque variations in the residential clusters. Indeed, the environmental and architectural quality of the estate is unquestionable and can be considered a model development.

⁴Almost 40 pages are devoted to summarise Sitte's ideas about historic centres and closed squares (Swenarton 1992, 234).

⁵"Sus preferencias están por un urbanismo que obtiene la belleza de poner un orden sobre las dificultades del sitio y de la necesidad" (Solá-Morales, foreword in Unwin 1984, VIII).

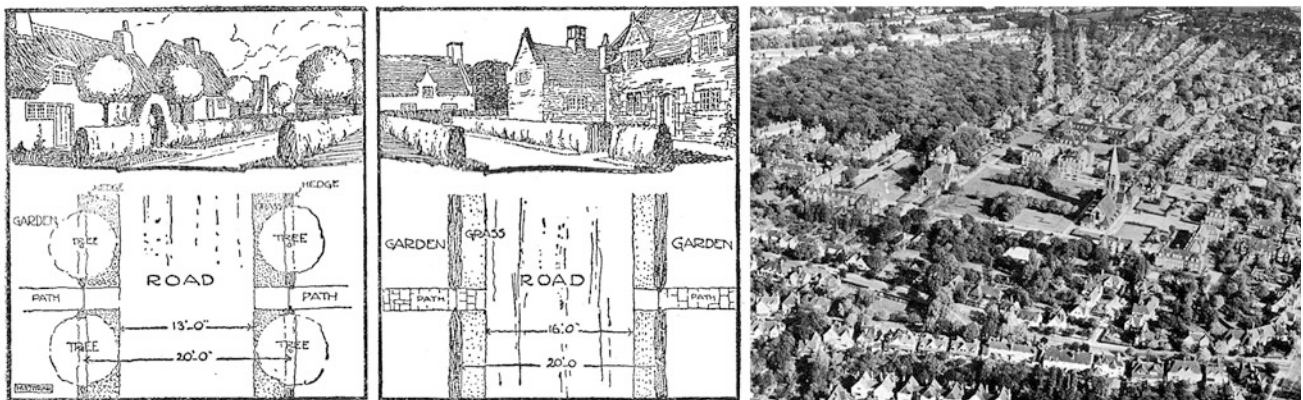
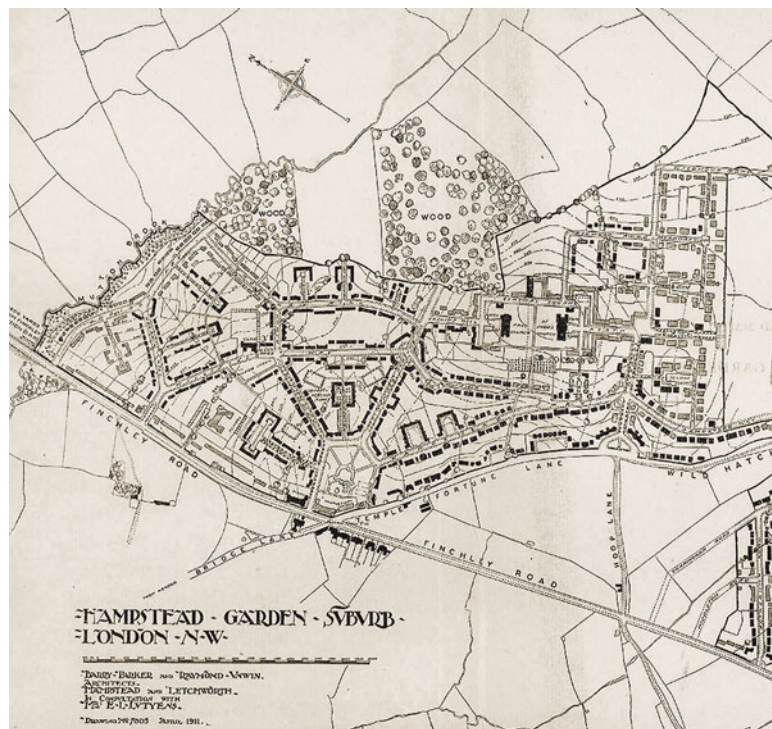
⁶Purdom, C. B. (ed.), *Town Theory and Practice*. London: Benn, 1921 (quoted in Hall, *Cities of Tomorrow*, 114).

Case Studies

Hampstead Garden Suburb, London (1905–1907)

Hampstead Garden Suburb is a Garden Suburb prototype owing its good fortune to success as a business as well as being an example of high-quality town planning. One of the most important contributions made by Unwin and Parker lies in making separate plans for the street and the buildings, thus gaining landscape quality. Unwin was mainly interested in obtaining attractive street views. His sources of inspiration were not only the traditional English villages, but also the mediaeval German towns. An example of this ‘Sittesque mediaevalism’ is also evident in the Great Wall and the huge

access gate. The drawings show an attempt to combine the English preference for a detached home and individual garden, with the volumetric dynamics of old European cities. All of this meant that close attention had to be paid to the topography, the setting back of buildings, the search for curves closing views, the emphasis on crossroads, etc., and careful subdivision work. Nevertheless, the eclecticism is evident in the contrast—as was the case of Letchworth, or as proposed in “Town Planning in Practice”—between the informal geometry of the roadway layout and the strict regularity of the central plaza. Edwin Lutyens took part in the project, designing the two big churches and the adjacent secondary school (religion, community and knowledge), “an abnormal exercise in the City Beautiful tradition” (Hall, 111).

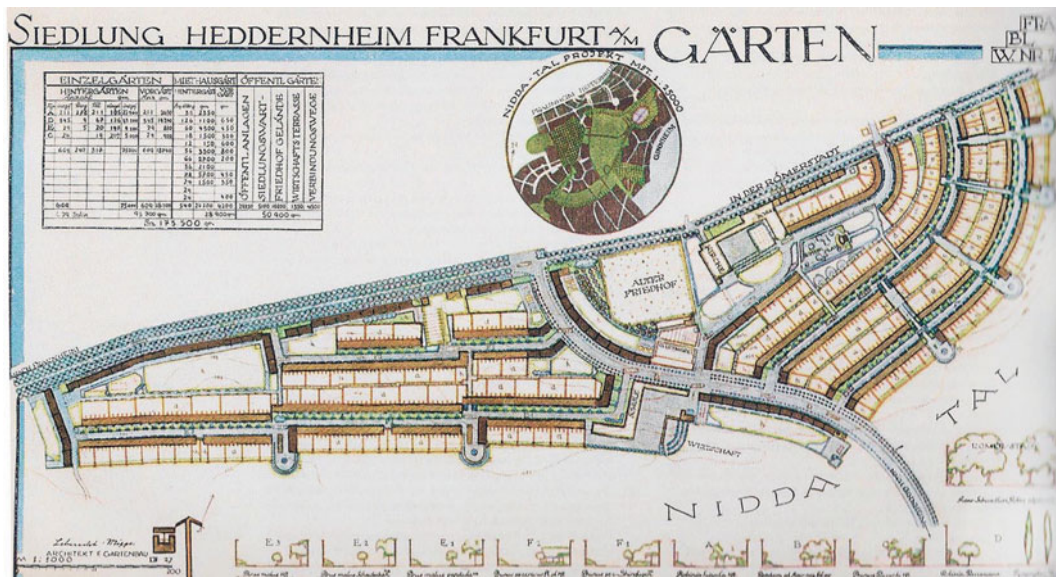


Siedlung Römerstadt, Frankfurt (1927–28)

The German *Siedlungen* from the period between the wars represent a paradigmatic example of how the Garden Suburb model was applied in the ambitious housing and advanced town planning Garden Suburb project that was implemented in the Weimar Republic (1918–1933). Among the 14 colonies that were built, similar to Garden Suburbs (with around 15,000 dwellings), *Römerstadt*, with its 1200 houses, stands out as the most emblematic settlement and the best example of the *Siedlung* ideal. Although it is frequently presented as a statement of modern urbanism in the period between the wars, *Römerstadt* can also be seen as a modern version or interpretation of the Garden City, at a time when the German Social Democrat townships became an ideal testing ground for the new mass housing

policies that were being generalised in Europe after the end of World War I.

The decisive role in these initiatives by the architect Ernst May, hailed in the magazine *Das neue Frankfurt*, points to the direct connections with the British Garden Suburbs movement. May had worked with Unwin in Hampstead Garden Suburb and continued his relations with the expert in the following years. Years later, in 1925, he was appointed head of municipal services in Frankfurt, with wide authority on planning and urban projects. The novelty of *Römerstadt* resides in its desire for the integration and awareness of the site, which included projects for conserving the valley as a leisure, sports and education park. At the same time, the settlement reflects the new attitudes to leisure and modernity (standardised housing, new facilities) and to the picturesque and landscape ideals of integration in the place and nature (walls, plazas, earthworks).



References

- Fishman, R. 1977. *Urban Utopias in the Twentieth Century: Ebenezer Howard, Frank Lloyd Wright and Le Corbusier*. New York: Basic Books.
- Hall, P.G. 2014. *Cities of Tomorrow. An Intellectual History of Urban Planning and Design in the Twentieth Century [1988]*. 4th ed. Oxford: Wiley-Blackwell.
- Kostof, S. 1992. *The City Assembled: The Elements of Urban form Through History*. Boston: Little Brown.
- Lampugnani, V.M. 2011. *Die Stadt im 20. Jahrhundert. Visionen, Entwürfe, Gebautes*. Berlin: Klaus Wagenbach.
- Sutcliffe, A. 1994. El nacimiento de una disciplina. In *Visiones Urbanas. Europa 1870–1993. La ciudad del artista. La ciudad del arquitecto*, ed. J. Dethier and A. Guiheux, 121–128. Barcelona: CCCB Electa.
- Swenarton, M. 1992. Sitte, Unwin e il movimento per la città giardino in Gran Bretagna. In *Camillo Sitte e i suoi interpreti*, ed. G. Zucconi, 229–235. Milan: Franco Angeli.
- Unwin, R. 1984. *La práctica del urbanismo: una introducción al arte de proyectar ciudades y barrios*. [Town Planning in Practice. An Introduction to the Art of Designing Cities and Suburbs, 1909]. Barcelona: Gustavo Gili.

Further Readings

- Gay, P. 2001. *Weimar Culture: the Outsider as Insider [1968]*. New York–London: W. W. Norton & Company.
- Gleiniger, A. 1994. La Siedlung de Römerstadt en el marco del ‘nuevo Fráncfort’. In *Visiones Urbanas. La ciudad del artista, la ciudad del arquitecto*, ed. J. Dethier and A. Guiheux, 316. Barcelona: CCCB Electa.
- Grassi, G. (ed.). 1975. *Das neue Frankfurt 1926–1931*. Bari: Dedalo.
- Henderson, S.R. 1995. A Setting for Mass Culture: Life and Leisure in the Nidda Valley. *Planning Perspectives* 10: 199–222. doi:[10.1080/02665439508725819](https://doi.org/10.1080/02665439508725819).
- Henderson, S.R. 2010. Römerstadt: The modern garden city. *Planning Perspectives* 25: 323–346. doi:[10.1080/02665433.2010.481182](https://doi.org/10.1080/02665433.2010.481182).
- Howard, E. 1898. *To-Morrow: A Peaceful Path to Real Reform*. London: Swan Sonnenschein & Co.
- Kloß, K.-P. 1982. *Siedlungen der 20er Jahre*. Berlin: Haude & Spenersche Verlag.
- Martí, C. (ed.). 1991. *Las formas de la residencia en la ciudad moderna. Vivienda y ciudad en la Europa de entreguerras*. Barcelona: UPC - ETSAB.
- Miller, M., and A. Stuart. 1992. *Hampstead Garden Suburb*. Chichester: Philimore.
- Panerai, P., J. Castex, J.-C. Depaule, and I. Samuels. 2004. *Urban Forms: The death and life of the urban block [Formes urbaines, 1980]*. Oxford: Architectural Press.
- Piccinato, G. 1974. *La costruzione Dell’Urbanistica: Germania, 1871-1914*. Roma: Officina.
- Sánchez Lampreave, R. 2013. Hampstead Garden Suburb: Paisaje informal o paisaje anómalo. In *Sesiones internacionales de arquitectura y ciudad 2012. Paisaje urbano y paisajismo contemporáneo*, ed. C. Díez Medina and L.C. Pérez, 58–63. Zaragoza: Prensas de la Universidad de Zaragoza.

Carmen Díez Medina

Abstract

The aim of this chapter is to present the controversial episode of Red Vienna, an outstanding example of European Social Democrat housing policies during the interwar period. In contrast to the internationally recognized *Siedlungen* built during the Weimar Republic, the Viennese *Höfe* has frequently been the subject of criticism and debate. The text highlights the importance of understanding the realization of this ambitious plan as a continuation of a deeply rooted Viennese tradition with regards to rented housing, in terms of urban forms, architectural typologies as well as management of rental properties. This urban model, away from political considerations and architectural language, had important consequences for the city of Vienna up until today, which make it worthy of a place among the urban visions of this book.

Keywords

Red Vienna • Hof • Social housing • Mietskaserne • Volkswohnpalast • Karl-Marx-Hof

Architectural historiography has paid considerable attention to the Red Vienna period, presented here as an outstanding example of the housing policies of European Social Democracy during the interwar period (Tafuri 1980; Blau 1999).¹ The aim of this chapter is to attempt to explain the colossal political project driven by the Social Democratic administration of the Vienna City Council, which resulted in the production of social housing on a vast scale. The realization of this ambitious plan may be seen as a continuation of a deeply rooted Viennese tradition concerning rental accommodation, in the sense of urban forms, architectural types as well as rental management. During the early years of the twentieth century, after the proclamation of the

Republic of Austria, the Social Democratic Party was to revive a tradition which, although consolidated in the eighteenth century, dated back to the sixteenth century, at a time when the German branch of the Habsburgs chose Vienna for their residence and rented or otherwise occupied properties belonging to the clergy in the city centre.² With regards to social housing, the Viennese residential policy is therefore an undeniable benchmark among European housing policies during the period between the wars, owing both to its singularity and the magnitude of its achievements.³

The dramatic situation in Vienna after World War I had led to a proliferation of illegal settlements on the outskirts of

¹In Chap. 9 Blau's monography ('Architecture and proletariat', 342, 343, 344) other outstanding studies can be found, from the first opinions of the interwar period to historians, critics or architects in more recent times. Among them: Haiko and Reissberger (1974), Ungers (1978), Krischanitz and Kapfinger (1980), Pirhofer and Sieder (1982) or Achleitner (1980). See Blau (1999).

C. Díez Medina (✉)
School of Engineering and Architecture (EINA),
University of Zaragoza, Zaragoza, Spain
e-mail: cdiezme@unizar.es

²The choice of Vienna as the Habsburgs' *Residenz* and their Court in 1533 required accommodation, which led to introducing a legislative instrument, namely the *Hofquartierpflicht* (obligation to rent housing to the Court). For the first time, residential buildings became a direct source of revenue, and therefore an item of barter. It was at that moment that the concept of rented housing appeared in Vienna (Fabri et al. 1975, 1: 215).

³Between 1934 and 1938, Austrian fascism persecuted social democracy, bringing an abrupt end to its housing policy programme. For further information about other projects of the second half of the twentieth century following similar lines to those of Red Vienna, see Steiner and Peichl (1991).



Fig. 3.1 Electoral propaganda by the Social Democratic Party at the 1919 elections, after proclamation of the Republic: 'Against the united front of capitalism, the united front of the workers: vote Social Democrat'. Poster by M. Biró

the city. Despite the fact that some notable social democrats and architects, such as Adolf Loos or Josef Frank, supported municipal housing construction initiatives backed by the *Siedlerbewegung* (a movement in favour of the settlements), they ran into great difficulties in bringing projects to completion. Unlike Germany, where under the sponsorship of the Weimar Republic, the *Siedlungen* became a laboratory for modern architecture and urbanism; in Austria, the *Siedlerbewegung* was only 'appeased' by the municipal administration after recognizing that the huge demand for accommodation could not be met by building settlements on the outskirts. Supporters of Garden Cities, both politicians and architects, were given the opportunity of making some relevant contribution only at the beginning and at the end of

the period.⁴ Alternatively, occupying available plots in the consolidated city, between Ringstraße and Gürtel,⁵ was identified as the most effective solution as the existing infrastructure of paved streets, sewage system, as well as gas, electrical and water supplies, allowed for operations to begin immediately.

The strategy approved in 1923 as an ambitious housing construction project began under the auspices of the Vienna City Council governed by the Sozialdemokratische Arbeiterpartei Österreichs, SDAPÖ (Austrian Workers Social Democratic Party), led to the party's claim on mass production of rental housing as the expression of a new social order. The typological instrument that allowed these proposals to be formalized in an exemplary manner was the *Hof*, which became the Viennese residential model par excellence during the interwar period. It is worth examining this architectural and urban model which was so successful in Red Vienna and which is still present today in a large part of the city's urban framework. The word *Hof* (literally 'courtyard') is used to refer to a large-sized dwelling block, arranged around a courtyard. The entrances are usually located inside the courtyard, a public sheltered area, with communal facilities. As a meeting point and extension of the living space, particularly for the elderly and children, the courtyard contributed a great deal to the improvement in the quality of life in these municipal tenement complexes. The high number of inhabitants—each block contained an average of between 400 and 500 dwellings—warranted the installation of secondary social services. Those who defended the construction of these super-blocks, which were known as *Volkswohnpaläste* (people's palace housing) might be likened, at least in their approach, to the supporters of the Garden City; in fact, examples considered paradigmatic such as Karl-Marx-Hof or Reumann-Hof did feature extensive green spaces, garden areas similar in character to Garden Cities, although of a much higher density.

Historians such as Manfredo Tafuri and Gianni Fabbri have established clear links between the *Volkswohnpaläste* of the period between the wars and a Viennese tradition deeply rooted in the city for over two centuries. The precedent of the eighteenth century *Wohnhöfe*, which belonged to and was managed by the clergy, provided a perfect archetype for the arrangement of community life which the Social Democrats aspired to recreate two hundred years later (Díez Medina

⁴In fact, in the early 1920s Adolf Loos, the director of the Wiener Siedlungsamt (Viennese Office for Construction of Settlements) built the Heuberg settlement and developed several housing typologies in projects following this model. Josef Frank designed many projects for self-managed, cooperative settlements and flats for the City Council, and at the end of the decade was appointed the Wiener Werkbund-siedlung planning director (1930–32), perhaps the most significant demonstration of modern architecture in Austria, the result of contacts with the Bauhaus movement and the Frankfurt and Stuttgart settlement construction programme.

⁵The Gürtel (belt) is the second of the ring roads surrounding the historical centre of Vienna. The first is the Ring and the third is the Zweierlinie (jurisdictional enclosure also known as Lastenstraße). It dates back to 1861 when Emperor Franz Joseph authorized construction of a street 76 m wide. The first buildings started to appear in 1863.

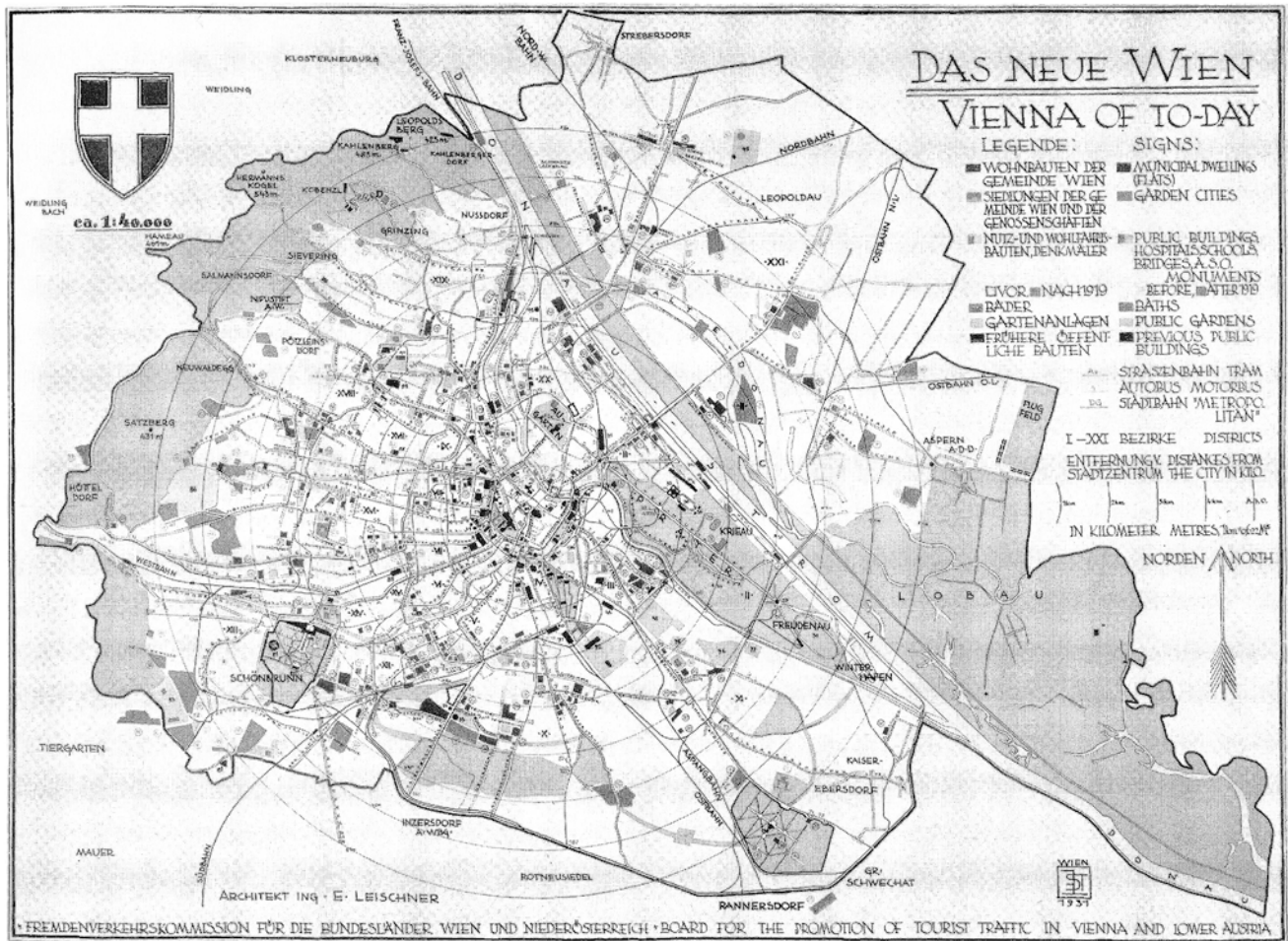


Fig. 3.2 ‘Das Neue Wien/Vienna of Today’, 1931. Map showing the new municipal buildings and equipment, published in Fremdenverkehrskommission der Bundesländer Wien und Niederösterreich (ed.), *Das Neue Wien: Ein Album mit Plan*, 1932

2015, 196). But the increase in density at the time of the *Gründerzeit*,⁶ at the end of the nineteenth century, had led to the degradation of this architectural type, which had

⁶In the last third of the nineteenth century, Vienna was the centre of power of the so-called *Donaumonarchie* (Danube Monarchy). Architecture benefited from economic growth stemming from the Industrial Revolution. During the time of the ‘founders’ or perhaps better said the ‘knights of industry’, known as the *Gründerzeit* (foundational period), a large number of companies were created, which led to a vast amount of architectural commissions, a lot of them related to the world of industry and technology (industrial equipment and railway stations) or to the development of trade (department stores, banks, stock market buildings, etc.). At that time, a large number of public buildings were also constructed (theatres, art academies, concert halls, universities, museums) and also private buildings, the latter direct commissions from the bourgeois class which was on an unquestionable upward trend (villas). The reference models were based on the highly admired former architecture, which led to development of a historical eclecticism that established the taste of the time. But at the same time, the breathtaking population growth gave rise to the other side of the coin, a world of misery and substandard housing—Vienna then had two million inhabitants. See glossary in Diez Medina (2005).

degenerated into what was known as *Mietskasernen* (literally rental barracks). These were very densely populated buildings, housing industrial workers. The rental housing was the property of the so-called ‘*Zinsherren*’ (landlords) belonging to the nobility and upper classes. High rents, overcrowded units and poverty were the consequences of the absence of housing policy regulations. The apartments in the Viennese *Höfe* of the *Gründerzeit* featured three spatial strips bands, *Zimmer/Küche/Kabinett* (living room, kitchen and bedroom), arranged with the first of these along the street façade, and the second and third aligned towards the back courtyard or *Hof*.⁷

⁷In the room that overlooked the street, regardless of orientation, was the most important part of the house, i.e. the main room which was a combined living room, dining room, bedroom (*Zimmer*); on the other side, overlooking the courtyard was the corridors of the super-block, surrounding the *Hof* and from where access to the houses was gained, and between both these zones was the kitchen (*Küche*) lit from the corridor and a small bedroom (*Kabinett*).

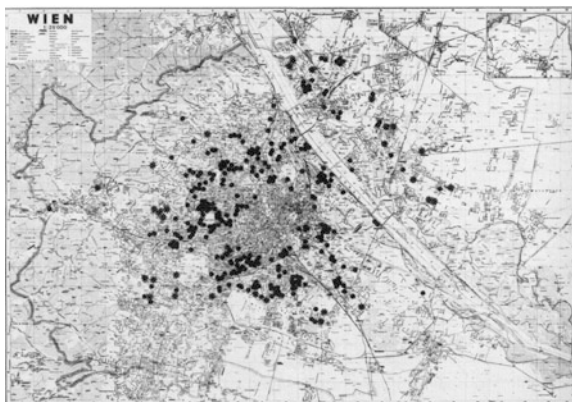


Fig. 3.3 Situation of the *Höfe* and *Siedlungen* in Vienna during 1928–30, in Manfredo Tafuri, *Vienna Rossa*, 1986

This is the meaning of the shortening ‘ZKK’, widely used in reference to this housing type.⁸ Both the toilets and the water supply (taps in the wall called ‘*Bassenas*’) were located along the corridors and were shared by a large number of tenants. The *Bassenas* became a place for the residents of the building to meet and socialize.

The *Hof* developed by the Social Democrats in the interwar period was to introduce certain improvements to the *Gründerzeit* model. The apartments became larger and now included indoor toilets and running water.⁹ In addition, there was more variety in the housing types, so as to meet the residents’ needs.¹⁰ Most importantly, these homes were part of a large urban and social system which offered advantages and benefits which greatly contributed to an improved quality of life. In addition to communal bathrooms, nurseries, social services, etc., they had cooperatives where the

⁸The smallest dwellings had between 16 and 18 m² (*Küche/Kabinett*), whereas a normal home (*Zimmer/Küche/Kabinett*) had between 24 and 26 m². These dwellings were occupied by an average of six people. Since rent accounted for between 25 and 40% of income, tenants were often forced to sub-rent rooms, either for *Bettgeher* (literally those who go there to sleep) or people who used the bedrooms during the day and vacated them at night. There is some wonderful literature that illustrates life in Vienna during those years. See, for example Werfel (2004).

⁹The average size of the dwellings was now between 8 and 48 m². Obviously, we have to take into account the housing situation of the time, when in those years 70% of existing housing was below the minimum levels, and construction of this accommodation was an undeniable improvement, in addition to making viable the construction of a large number of housing in a short time, thus effectively halting, and practically eradicating the housing shortage problem. Even so, despite the unquestionable improvement over the previous model, the small size of the homes was, right from the 1920s, the subject of criticism (Reppè 1993).

¹⁰In the Karl Marx Hof, for example, of the total of 1382 homes, 125 were kitchen/bedroom, 748 were kitchen/bedroom/cabinet, 159 were kitchen and two bedrooms and 136 had a kitchen, bedroom and two cabinets. The remaining 200 homes were either smaller or larger than those listed above (Reppè 1993).



Fig. 3.4 ‘Thanks to the health accommodation and social care, currently only 75 out of every 1000 children die per year in Red Vienna’. Socialist propaganda published in *Der Kuckuck*, 20 March 1932. *Der Kuckuck* was published by the Austrian Social Democratic Party from April 1929 until it was banned in February 1934

residents could buy food at convenient prices. The apartments had balconies, loggias or terraces, providing a visual extension of the living spaces. The possibility of enjoying open air spaces for leisure or the caring of children and the elderly significantly improved the level of sanitation and hygiene within these complexes. The limited space in the homes themselves was therefore offset by these communal living spaces.

The political and social consequences of the construction of these super-blocks were enormous; since these huge ‘red fortresses’ were built within the historical urban quarters, the emergence of dispossessed suburban areas was avoided. From a formal point of view, the cultural presence and political power of the working class was manifest in the clear references to typological and morphological models and iconographies borrowed from polite architecture, symbol of the defeated bourgeoisie: palatial courtyards, archways, towers, belvederes, etc., were elements familiar to the Viennese who turned these mass housing projects into a focus of attention. But it went even further, for the construction of these *Höfe* undermined the position of power

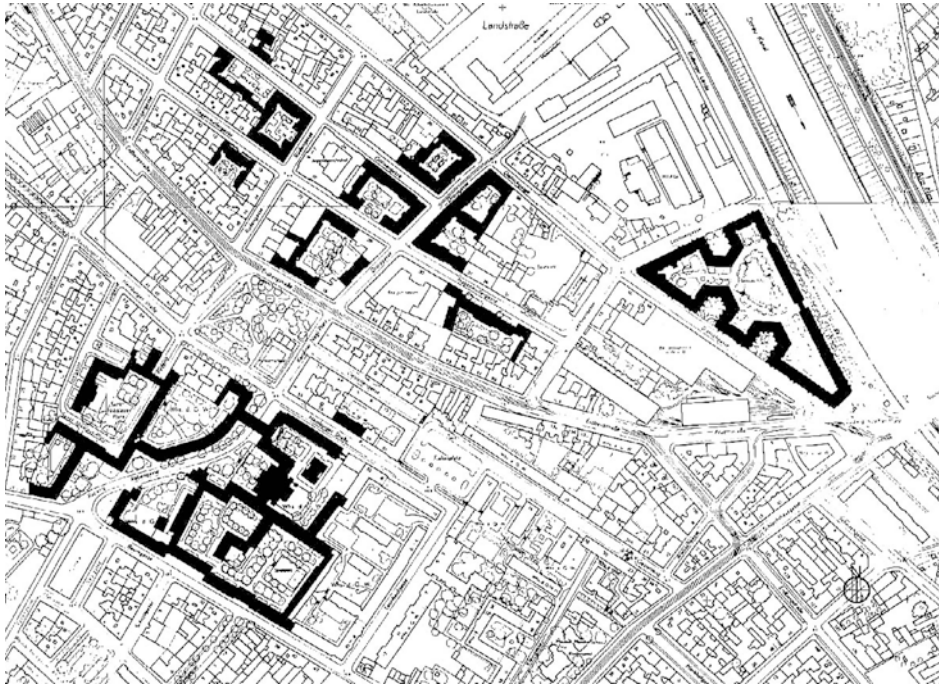


Fig. 3.5 Vienna, district 3: Robert Oerley, Hanuschhof, 1923–25, with 434 dwellings (*above right*); Heinrich Schmid and Hermann Aichinger, Rabenhof, 1925–27, with 1109 dwellings (*above left*)

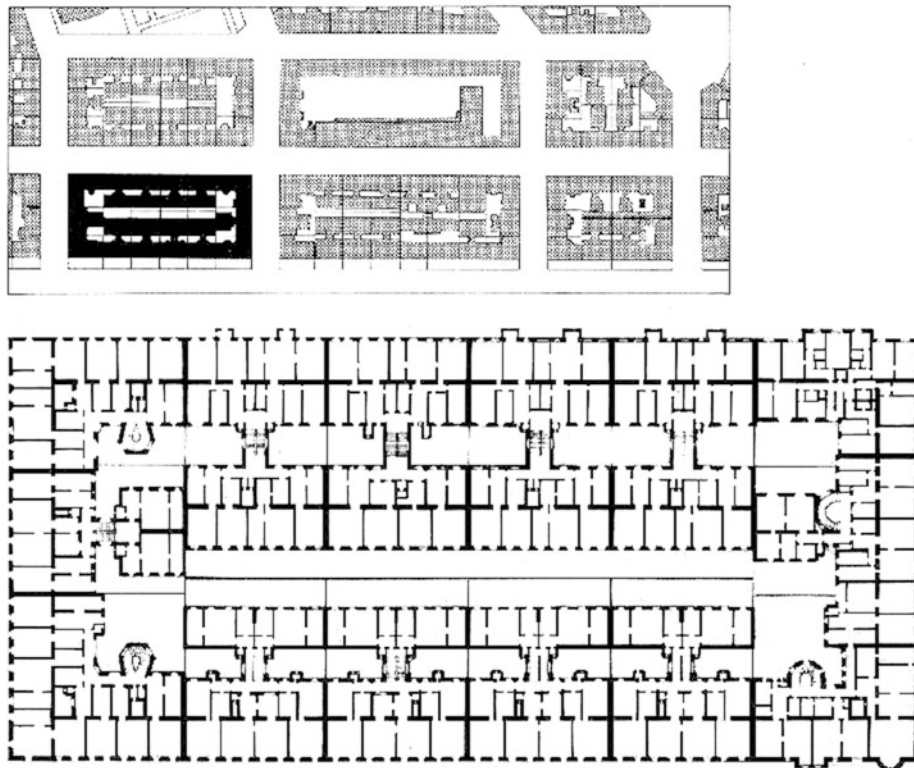


Fig. 3.6 *Mietskasernen* or speculation housing building in Vienna. Layout and diagram of the urban environment. The courtyard or *Hof* is filled with two built internal bodies, being reduced to a sequence of inner patios. The services are communal and are located at the areas near the communications nuclei

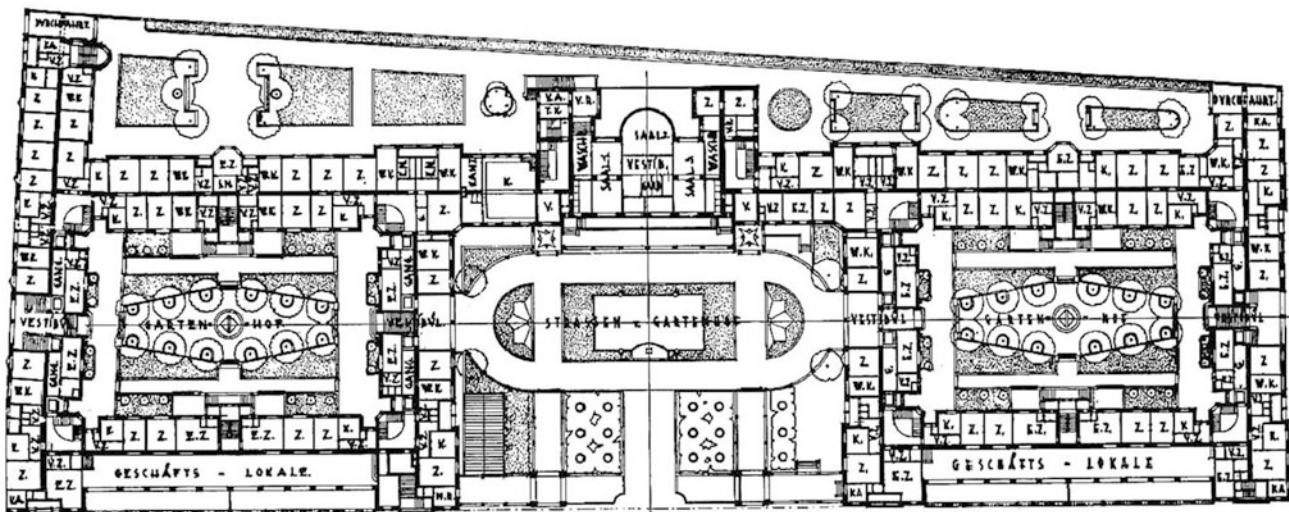


Fig. 3.7 Hubert Gessner, Reumannhof, Vienna, 1924–26, with 478 dwellings. General plan

acquired by some upper-class districts. Indeed, their character changed radically with the appearance of these ‘people’s palace housing’ and a new social class in parts of the city that until then had been exclusively bourgeois.¹¹ For the Social Democrats, this was a tremendous political achievement.

The financing of this housing programme was possible, thanks to the City Council’s implementation of certain legal measures, defensive measures and rent control as well as the creation of specific taxes levied exclusively on the housing owners’ income and on luxury items in general. This both prevented the City Council assuming debt and helped to reduce unemployment.¹² The result was the construction of more than 63,000 council houses (Steiner 1988, 18–23) between 1923 and 1934, year in which the Austrian fascist movement interrupted its development.

The Viennese initiative for the construction of municipal tenement housing was an extraordinary event internationally, both because of its practical success—it provided affordable housing for thousands of people in record time—and because of the diversity of the architectural solutions.¹³ The epic

nature of this episode can be explained by exceptional circumstances. Despite the Social Democrats having won a significant victory in the municipal elections of May 1919, converting Vienna into the first European capital governed by a Socialist majority, it was to be an ephemeral victory. One year later, the SPÖ was defeated at the national elections by the Social Christian party, which aroused antisocialist and anti-Semitic feeling among the voters in rural areas. The Social Democrats were excluded from national power and were left with Vienna, the capital city, as their last and only stronghold. On the other hand, the Social Democrats invested heavily in transforming Vienna into their own laboratory (ideological and architectural), a project which could be carried out thanks to the 1921 constitutional decision of granting Vienna the status of independent province. In Tafuri’s words: ‘From 1920 to 1934 Vienna was transformed into a ‘State within a State’ thanks to the autonomy of its *Landrat* in the new Federal Republic: the city was ready to become the experimental laboratory of Social Democracy’.¹⁴ In this way, Red Vienna became the biggest experiment in municipal socialism, both in Europe and the world.

¹¹As was the case in Döbling, a traditional district of villas for the Viennese bourgeois. The *Karl Marx Hof*, with its 1100 m of ‘red wall’ intercepted the connection between this residential area and Heiligenstadt station.

¹²The numerous taxes imposed to finance construction of Red Vienna were called *Breitner-Steuern* (Breitner Taxes), in reference to the then Treasury Minister, Hugo Breitner.

¹³Several authors (Steiner, Blau, Tafuri) have observed that the great project for Red Vienna was possible, among other reasons, because the generation of architects in charge of designing these huge urban estates (H. Aichinger, H. Gessner, E. Hoppe, O. Schönthal, R. Perco, K. Ehn, etc.) had been educated in great city urbanism at the *Wagnerschule*, a school where they had also acquired a wide formal repertoire.

¹⁴‘Dal 1920 al 1934, Vienna diviene comunque un vero ‘Stato nello Stato’, grazie anche all’autonomia del suo Landrat all’interno della nuova repubblica federale: la città è pronta a divenire il banco di sperimentazione della democrazia socialista’ (Tafuri 1980, 10).



Fig. 3.8 Hubert Gessner, Reumannhof, Vienna, 1924–26, with 478 dwellings. View of the main entrance to the Hof

Criticism followed quickly after the construction of the first *Höfe*.¹⁵ ‘In antisocialist propaganda, the municipal housing blocks were portrayed as socialist ‘voter blocks’ and ‘red fortresses’, which, it was suggested, were massive and strategically sited throughout the city (in middle-class districts and near bridges, railway stations and major traffic arteries) for paramilitary or defensive purposes’ (Blau 1999, 6). Some architects affiliated with the architectural and urban avant-garde of the time also criticized the socialist experiment, not so much because of their ideological or political aspect, but because they represented a solution that did not compare well with the functional, modern complexes built in Frankfurt by Ernst May or in Berlin under the direction of Martin Wagner (Tafuri 1980, 6–7). Tafuri went even further, judging the Austro-Marxist exploit to be tragic, despite its exceptional nature, because the architectural strategy used to

represent the advancement of the working class was in many ways retrograde.¹⁶

It is therefore clear that historians and critics were not very tolerant of this episode, particularly, when compared to the admiration that the experience of the German *Siedlungen* was to awaken in their peers. In any case, aside from political considerations and avant-garde criticism, the great urban quality of the open spaces can today be appreciated from a historical perspective, in the same way as the fitting scale and density of most of those innovative residential settlements or super-blocks and the way they fit into the urban fabric integrating quite naturally, far from existing as peripheral or marginal islands.

¹⁵Red Vienna has generally been censored by architectural critics for proposing a rhetorical model that aimed to take advantage of the boost of Austro-Marxism, rather than the innovative research that was being carried out at the same time in the Weimar Republic and other Central European countries such as Holland, creating a powerful image that permitted extolling the victors, more specifically the Austrian Social Democrat Party (SPÖ) (Diez Medina 2015).

¹⁶The Italian architectural historian clearly explains the paradoxes that this ideological strategy entailed: ‘Ne discende un nuovo ‘dovere’ per la città che si risveglia dopo la ‘seria Apocalisse’ delle mitologie asburgiche. Bisognerà realizzare un ‘rotes Wien’, una Vienna rossa, a costo di negare—sulla base dell’assurdo politico ed economico imposto dalle contingenze—le funzioni specifiche della metropoli moderna, a costo di fare dell’anacronismo e del carattere parassitario di una capitale che concentra in sé un terzo circa della popolazione dell’intero paese, la condizione stessa di un’esperienza urbanistica eccezionale’ (Tafuri 1980, 10). (A new ‘duty’ is imposed for the city (Vienna) that awakes after the ‘serious Apocalypse’ of the Habsburg myths. It will be necessary to build a ‘rotes Wien’, a Red Vienna, at the price of denying—on the basis of the political and economic absurdity imposed by the contingencies—the specific functions of a modern metropolis, at the price of making the anachronism and parasitic nature of a capital where approximately one third of the country’s population is concentrated, the same condition of an exceptional urbanistic experience).

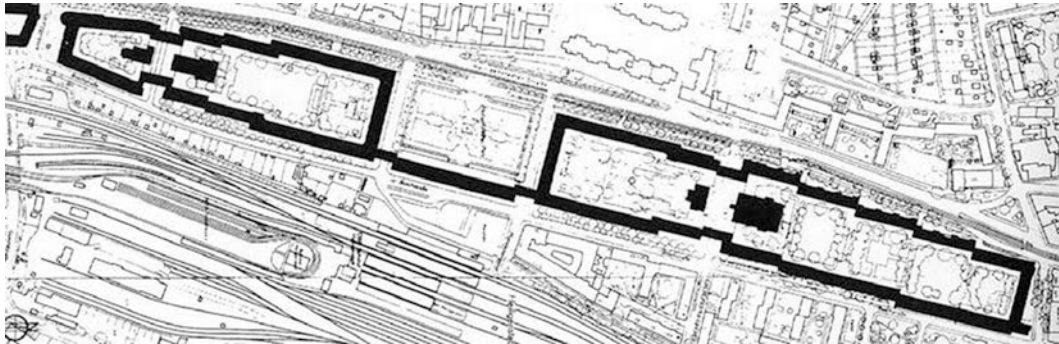
Case Studies

Karl-Marx-Hof, Vienna (1926–30)

The Karl-Marx-Hof, designed by Karl Ehn, is the best known example of the Viennese super-blocks, not only because of its name, its huge size and its physical impact, but also the exemplary character that it acquires within the vast repertoire of projects developed under this urban typology. In addition to its 1382 homes, it had two laundries that included 62 washing points, two bathing facilities with 20 bath tubs and 30 showers, two nurseries, one dental clinic, one mother's advisory, a library, a youth hostel, a post office, a health centre, a pharmacy and 25 shops all on the premises.

It is located on a privileged site, next to the metro station and the local Heiligenstadt railway station, one of Vienna's

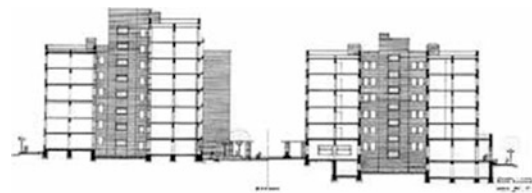
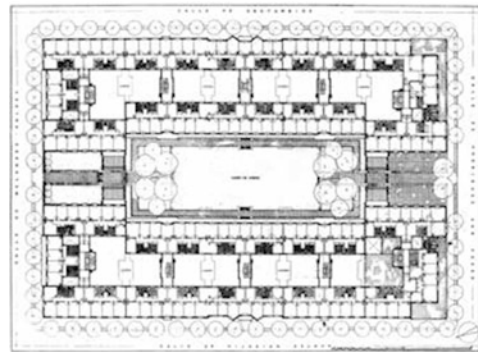
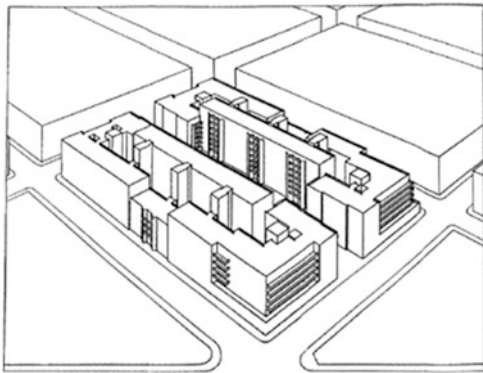
transit hubs, thereby guaranteeing its connection with the city. However, for the inhabitants of the Döbling residential district, the Karl-Marx-Hof worked as an ideological 'red wall' which effectively blocked off access to the station. It spans 1100 m in length and includes two large independent courtyards, connected by a central line within the building. This centre block, the most photographed part of the building, has become an icon, opening up a perspective view through a large archway, towards the courtyard of honour, a kind of park that separates the two main bodies of the building arranged around the open *Hof*. Despite what some images might suggest this monumental and expressive entrance, which has become the symbol of the complex, actually represents a very small, insignificant part of the work as a whole.



Casa de Las Flores, Madrid (1930)

This housing complex located in the western part of the Madrid *Ensanche* (city extension) is one of the most interesting examples of an architectural intervention with an urban dimension. Secundino Zuazo proposed one of the few avant-garde alternatives to the typical closed city block of the *Ensanche* by Carlos María de Castro. It is the only example in the Madrid city extension of the 1930s that might be considered an heir to Red Vienna. As with the Viennese precedent, the emphasis is on the urban nature of the housing layout, although here the housing types are more elaborate and larger. There is also a certain formal influence of the Amsterdam School in the use of brick.

The city block is comprised of two parallel bands, which leave 35% of the area between them open. The complex has ten staircase shafts, with four apartments per floor. The two building blocks have a lower exterior, in line with regulations limiting building height, whereas the interior is higher. The layout of the parallel north/south blocks is designed to allow each dwelling the maximum amount of natural light and ventilation. Each of the four apartments of the six central houses is ventilated on two sides (street—inner courtyard, or inner courtyard—*Hof*), whereas the four corners, with four houses per floor, face outwards on three sides: two towards the street and one towards the inner garden.



References

- Blau, E. 1999. *The Architecture of Red Vienna, 1919–1934*. Cambridge, London: MIT Press.
- Díez Medina, C. 2015. Viena azul, Viena roja. Morfologías urbanas de vivienda colectiva. ¿Revolución o evolución? In *Otra historia. Estudios sobre arquitectura y urbanismo en honor de Carlos Sambricio*, ed. J. Calatrava, C. Díez Medina, S. Guerrero, and R. Sánchez Lampreave, 188–205. Madrid: Lampreave.
- Reppè, S. 1993. *Der Karl-Marx-Hof: Geschichte eines Gemeindebaus und seiner Bewohner*. Wien: Picus-Verlag.
- Steiner, D. 1988. De los Höfe a la rehabilitación. La vivienda vienesa desde los años veinte. *Viena Pálida, A&V, Monografías de Arquitectura y Vivienda*, 18–23.
- Steiner, D., and G. Peichl. 1991. *Neuer Wiener Wohnbau/New Housing in Vienna*. Wien: Löcker Verlag.
- Tafari, M. (ed.). 1980. *Vienna Rossa/La politica residenziale nella Vienna socialista 1919–1933*. Milan: Electa.
- Werfel, F. 2004. *The Man who Conquered Death [Der Tod des Kleinbürgers, 1926]*. Kila: Kessinger Publishing.

Further Readings

- AA.VV. 1988. Viena Pálida. A&V, *Monografías de Arquitectura y Vivienda*.
- Aymonino, C., G. Fabbri, and A. Villa. 1975. *Le città capitali del XIX secolo: Parigi e Vienna*, vol. 1. Roma: Officinaedizioni.
- Bauer, O. 1919. *Der Weg zum Sozialismus*. Berlin: Freiheit.
- Díez Medina, C. 2005. Ferdinand von Feldegg, Der Architekt y la metamorfosis del historicismo en la Viena fin-de-siècle. In *Der Architekt*, 1–12. Zaragoza: Colegio Oficial de Arquitectos de Aragón.
- Díez Medina, C. 2003. El modelo vienés de vivienda colectiva: el Hof. In ed. C. Sambricio, *Un siglo de vivienda social (1903–2003)*, vol. 1, pp. 172–175. Madrid: Nerea.
- Lampugnani, V.M. 2011. *Die Stadt im 20. Jahrhundert. Visionen, Entwürfe, Gebautes*. Berlin: Klaus Wagenbach.
- Olsen, D.J. 1986. *The City as a Work of Art: London, Paris, Vienna*. Yale: Yale University Press.
- Schorske, C.E. 1981. *Fin-De-Siecle Vienna: Politics and Culture*. Cambridge: Cambridge University Press.
- Sieder, R. 1985. Housing Policy, Social Welfare, and Family Life in ‘Red Vienna’, 1919–34. In *Oral History* vol. 13, pp. 35–48. Oral History Society.
- Spiel, H. 1994. *Glanz und Untergang. Wien 1866–1938*. Dtv Verlag.
- Tafari, M., and F. Dal Co. 1979. The attempts of urban reform in Europe between the wars. In *Modern Architecture [Architettura Contemporanea, 1976]*, pp. 153–73. New York: Electa–Rizzoli.
- Zweig, S. 1964. *The World of Yesterday: An Autobiography [Die Welt von Gestern. Erinnerungen eines Europäers, 1944]*. Lincoln, London: University of Nebraska Press.

Javier Monclús and Carmen Díez Medina

Abstract

The different names used to call the new modern visions that appeared around the middle of the nineteenth century in association with each European country (Town Planning, Städtebau, Urbanisme, Urbanistica, Urbanismo) are proof of the diversity in the approaches and traditions that accompanied the emergence of modernist urbanism. Despite these early approaches, architectural historiography has tended to see the emergence of ‘modernist urbanism’ linked to the avant-garde who reached their climax in the twenties and thirties of the twentieth century. This chapter is based on the interpretations that recent historiography has made of the nature and emergence of modern functionalist urbanism, virtually parallel to the birth of the urban planning as a discipline. After studying the principles laid out in the Athens Charter, applied to some paradigmatic cases, it goes on to consider the impact of functionalist urbanism after the Second World War.

Keywords

Modern urban planning • Modernist urbanism • Functionalist urbanism • Athens charter • CIAM

The Modern Discipline of Urban Planning as a Technical Tool for Intervention and Control of Urban Growth

The nature and emergence of modernist functionalist urbanism, virtually parallel with the birth of urban planning, has been the subject of different interpretations in recent historiography. The contrast between them might be ascribed to the different views that the history of urbanism has taken (see approaches by Sutcliffe (1981), Hall (2014) Ward (2002)) on urbanistic historiography with an architectural approach (as shown by Benevolo (2000), Choay (1965) o Gravagnuolo (1991)). The difficulty of unifying different approaches and traditions only proves the complexity of a

discipline with ambiguous status and different meanings depending on national and cultural traditions.

Some authors ascribe the roots of the new ‘modern visions’ to the eighteenth century, when a new discourse paved the way for seeing cities as entities subject to being entirely transformed (Gravagnuolo 1991). However, more recent historiography places the origins of modern urbanism to the middle of the nineteenth century in response to the new conditions arising from the industrial revolution. Indeed, Leonardo Benevolo, in his classic “*Le origini dell’urbanistica moderna*”, believes that “modern urbanism was born to try to correct the flaws of industrial cities: with the Utopian proposals on the one hand, and the new urban planning legislation on the other” (Benevolo 2000).

In any case, it is clear that there are notable differences depending on respective national traditions and the different rates and forms of urban growth, some conditioned by the industrial revolution and others depending on the need to regulate growth through expansion or renewal responding to new developments in transport and housing. In this sense, the

J. Monclús (✉) · C. Díez Medina
School of Engineering and Architecture,
University of Zaragoza, Zaragoza, Spain
e-mail: jmonclus@unizar.es

C. Díez Medina
e-mail: cdiezme@unizar.es



Fig. 4.1 Cover page of the publication by the Royal Institute of British Architects (RIBA), designed by one of its members, Edwin Alfred Rickards, in honour of Sir Christopher Wren. Published in *Town Planning Review*, 1911, 5

turning point occurs during the early decades of the twentieth century, when the first international conferences were held and these new terms were coined. The different names that appear in each country are proof of the diverse visions and traditions that accompanied the emergence of modern urbanism: town planning, *Städtebau*, *urbanisme*, *urbanistica*, *urbanismo* (Monclús and Díez Medina 2017), each with its particular set of manuals, projects, competitions, etc. In addition, this new urban planning discipline was linked to the need to identify the ‘modern’ techniques which permitted systematising and integrating visions of the various sectors in the new concept of town planning and the technique of zoning.

Town Planning, *Städtebau*, *Urbanisme*, *Urbanistica*, *Urbanismo*

Although it is possible to recognise the coexistence of different urbanistic traditions during the twentieth century as a whole (Calabi 2004), one can also see their convergence in the discipline of town planning. Despite the originality and importance of Cerdà’s theory and the 1859 *Ensanche* (city extension) of Barcelona, the superiority of the *Städtebau* is obvious, understood as the modern practice of controlling urban growth that emerged so strikingly in Germany beginning at the end of the nineteenth century. As Stephen

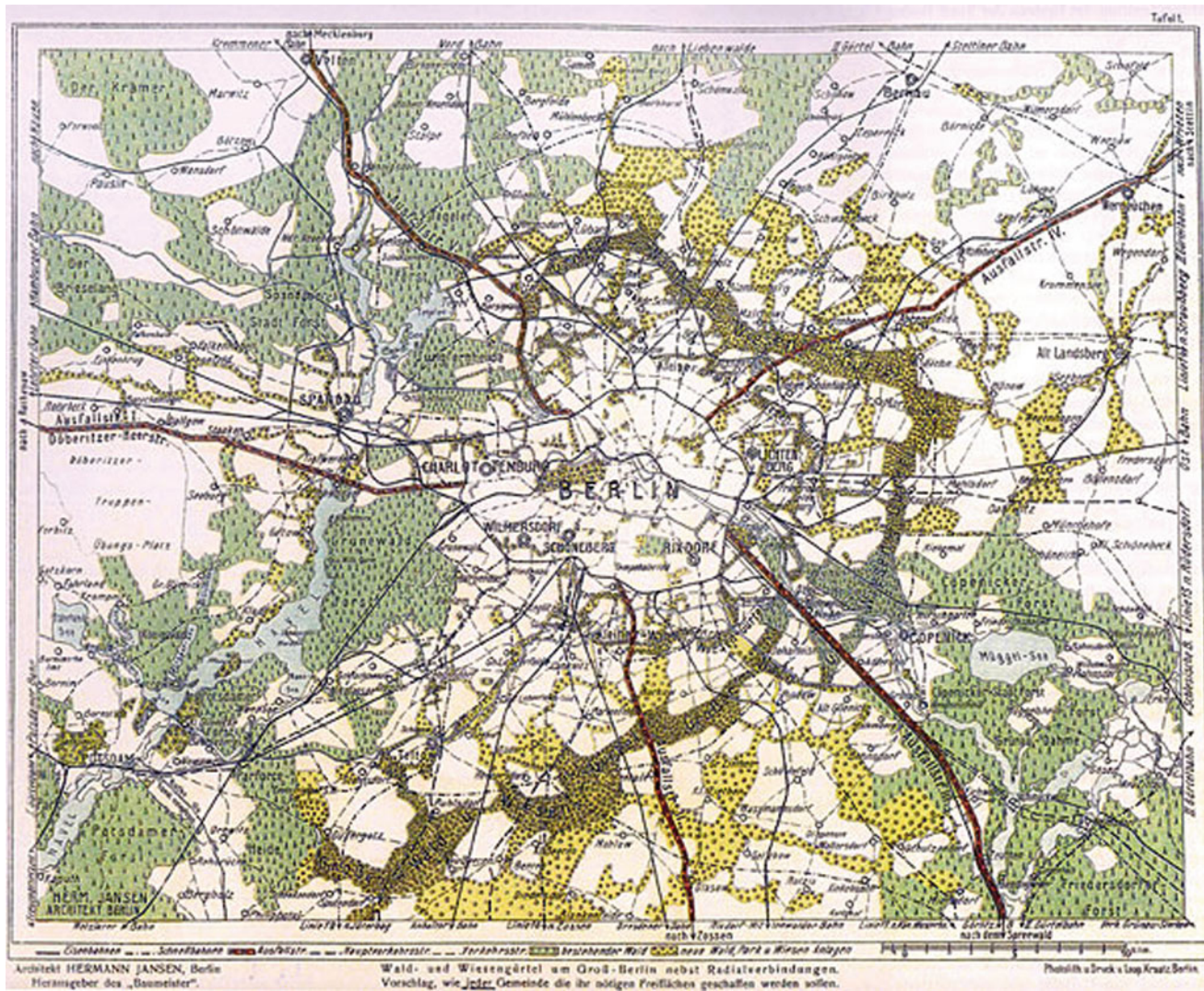


Fig. 4.2 Hermann Jansen, plan for the Great Berlin competition, 1910

Ward remarked, “(...) most key innovations took place in the recently united Germany, or at least in the German speaking world” (Ward 2002, 26). There is nothing comparable in England or any other countries to the urbanism manual *Der Städtebau* (1890), the monumental work by Josef Stübben, author of over thirty plans of city extensions. His leading role in the development of modern urbanism has been established in urban historiography (Piccinato 1974).

Some authors compare the Anglo-Saxon visions of Planning to *Urbanisme* in the Latin European culture. Anthony Sutcliffe, one of the sponsors of urban history, referred to the culture of *urbanisme*, in the sense of contextualised planning and architecture, as something specifically Latin (Sutcliffe 2002). In Spain and Italy, modern urban planning emerged and was institutionalised later than in the UK or Germany, due to a slower process of industrialisation. Michel Hebbert also referred to this difference in traditions in his article ‘Town Planning versus Urbanismo’ in which he stated: “Town planning is Anglo-Saxon, whereas *urbanismo* is Latin”

(Hebbert 2006). We might see this as a ‘battle between two paradigms’, one of a more social, reformist nature and the other more closely linked to architecture. In essence, the nature of ‘Planning’ refers to the beginning, when it emerged as a number of techniques used to control urban growth in complex socio-economic situations. Architecture did not play a leading role in them, as it did at the *École Française d’Urbanisme* (EFU). In any case, the dearth of English translations of the copious literature on Latin Urbanism hinders a better understanding by the Anglo-Saxon researchers on Planning History.

The terminology that appeared at the birth of modern urbanism is key to understanding the origins of the discipline. The Spanish word ‘*urbanización*’ appeared for the first time in 1867, in the *Teoría General de la Urbanización* (General Theory of Urbanisation) by Cerdà. “For Cerdà, *urbanización* covered both urbanism, with its urban implications, and urban planning, with its economic, social, political, ideological and philosophical aspects. This made him the founder of a new discipline, which started to be

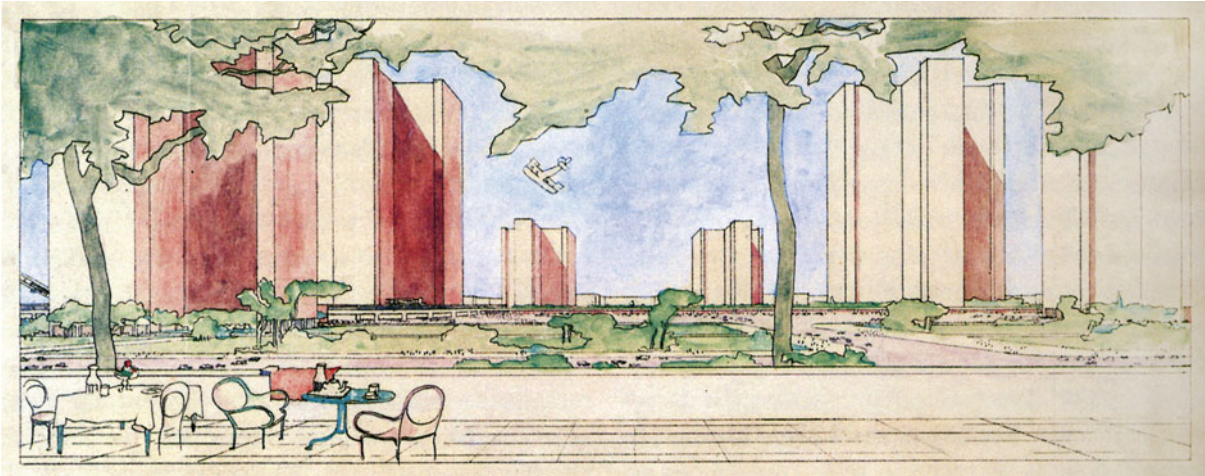


Fig. 4.3 Le Corbusier, contemporary city of 3 million inhabitants, 1922



Fig. 4.4 Le Corbusier, sketch of a contemporary city, 1922



Fig. 4.5 Le Corbusier, diagram with the four functions of zoning, 1933

developed at the end of the nineteenth century, and above all in the twentieth century” (Lampugnani 2011). The French term ‘*urbanisme*’ arrived a little later, at the beginning of the twentieth century.¹ This is a fascinating story that goes way beyond the ‘parenthood’ of the term. According to some authors, the term ‘*urbanisme*’ was coined in 1910. Nevertheless, Henri Prost, one of the most representative architects of the EFU, claimed that “the term was created by four architects and an engineer”, including himself and Léon Jaussely, winner of the 1905 competition for a new plan for Barcelona. Of course, Jaussely knew of Cerdà’s work and

¹According to the German architect and urban planner Oskar Jürgens, ‘From the word *urbanización*, coined by Cerdà, the French formed *urbanisme* to replace the terms used until then, a term which Spaniards later adopted as *urbanismo* to designate their urbanism (*Städtebau*)’ (Jürgens 1992, 271).

his ‘*urbanización*’ neologism. It is hardly surprising that some years later *urbanisme* became the official term, both for the field of urban studies and for the modern discipline of planning (Choay 1983). Despite the complex nature of *urbanisme* or *urbanismo* as a field of study and as a modern discipline, urbanists, or better said ‘Latin urbanists’, appropriated the term, emphasising the physical aspects of the concept (Monclús and Díez Medina 2017).

CIAM and the Athens Charter

In response to those visions of the modern discipline of urbanism, focussing on the development of general plans and zoning as fundamental techniques in planning urban growth, architectural historiography has tended to see the emergence of ‘modernist urbanism’ as linked to the

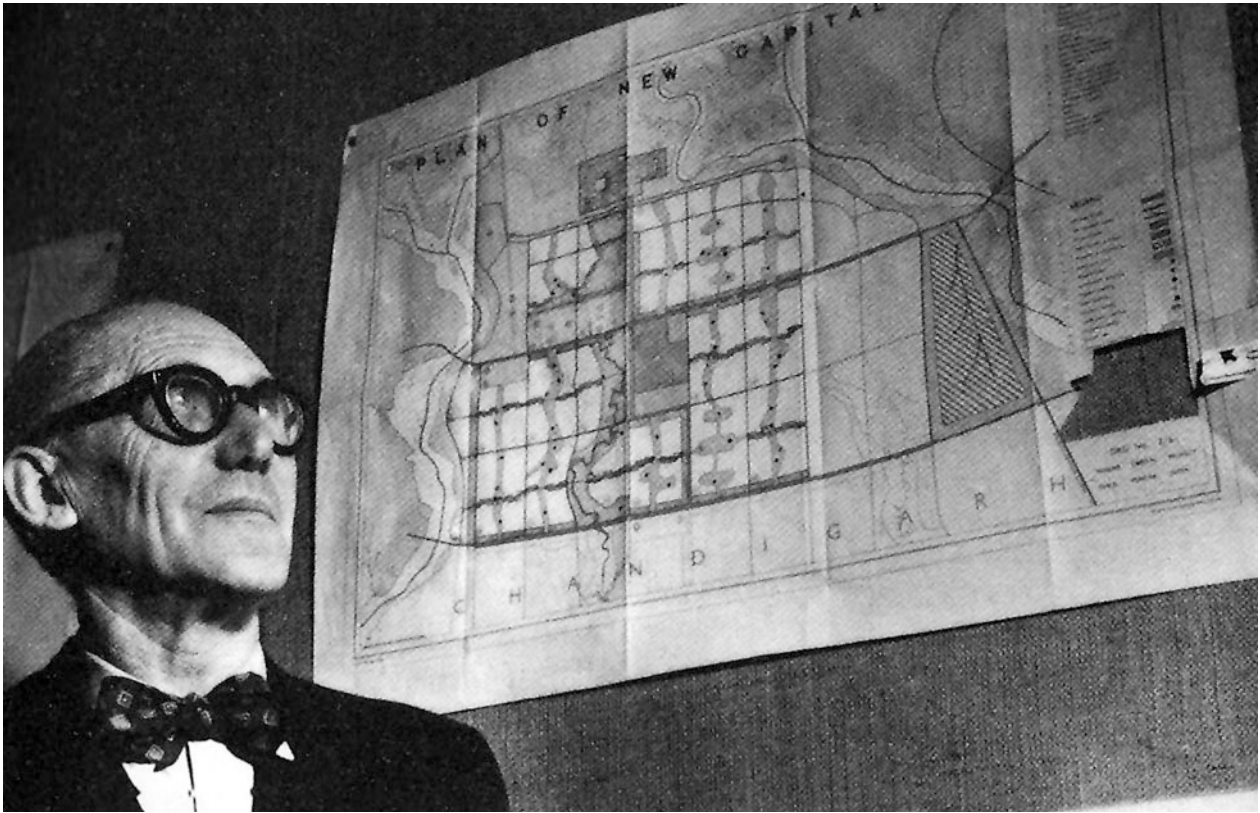


Fig. 4.6 Le Corbusier, plan of Chandigarh, 1951

avant-garde which reached its climax in the 1920s and 30s. In these interpretations, there is a tendency to identify modernist urbanism as another aspect, although fundamental, of the gradual imposition of modern architecture.

Beginning in the 1920s, modern urbanism developed some radical innovations in housing and in urban forms that became consolidated with the support of the CIAM (International Congresses of Modern Architecture) which began in 1928. In 1924, El Lissitzky had been instrumental in the formation of an international modern architecture congress and for this purpose had approached Le Corbusier who, four years later, was to implement the idea albeit with a different format (Lampugnani 2011, 407). The subject of the debate began with basic considerations concerning minimal housing (*Die Wohnung für das Existenzminimum*, CIAM 2, 1929), but shifted onto the subject of the functional city which gradually took over the debates, most likely under the influence of Cornelis van Eesteren, who replaced Karl Moser as president of CIAM in 1931. The spirit of that ‘new urbanism’ was the subject of a great deal of academic literature that emphasised its relationship with certain urban visions, such as the well-known *Ville Contemporaine* model by Le Corbusier (1922), a radical proposal for cities of the industrial era. Although different proposals coexisted during those

years, such as *Vertikalstadt* by Ludwig Hilberseimer (1924), it can be said that the differences are not substantial (vertical zoning) (Monclús and Díez Medina 2016). Other later proposals are in line with the spirit of new urbanism, in which urban blocks with conventional ‘corridor streets’ are generally rejected in favour of open arrangements, independent of the highway system. Previously, in CIAM 3, the high linear block had been gaining ground as an alternative. Moreover, the arterial system of high-speed highways isolates high-rise buildings, and the green areas became dominant in modern planning. This was actually a significant change of paradigm related to the prestige of Taylorism and Fordism which involved in new ways of arranging urban spaces (Hilper 1978; Monclús 2014).

The clearest and most concise expression of the principles of modernist urbanism can be found in the so-called Athens Charter which came out of the 4th CIAM Congress, held in Athens in 1933 (starting on-board a ship which had set out from Marseilles) which consecrated ‘functionalist urbanism’ as it is understood in the language of international urbanism. The baseline for that extraordinary congress was an exchange of analyses and diagnoses of 33 cities, using a systematic approach translated into plans of the same scale (van Es et al. 2014). The centre role taken by the Amsterdam



Fig. 4.7 Secundino Zuazo and Hermann Jansen, Plan for Madrid, 1929



Fig. 4.8 Le Corbusier, José Luis Sert, Plan Maciá, Barcelona, 1933

Plan (1933), drafted by the Van Eesteren team, explains its paradigmatic nature (Galindo 2003). Although there was no official publication with the results of the CIAM 4 analysis, the keys to the new urbanism were canonised as the famed four functions: dwelling, work, leisure, circulation. It was to be José Luis Sert who, during his exile in the USA, published a book, *Can our Cities Survive?*, with the subheading *An ABC of Urban Problems, Their Analyses, Their Solutions: Based on the Proposals Formulated by CIAM* (1942). The book, like a manifesto, might be considered the ‘North American Version’ of the Athens Charter and appeared a year before Le Corbusier published a version of his own (Le Groupe CIAM—France 1943).

The Impact of Modernist Urbanism After World War II

Adopting modernist functional urbanism prevailed among the cities affected by World War II. London, with the two plans by Patrick Abercrombie and his team, was an exemplary model of modernity: both the County of London Plan (1943) and the Greater London Plan (1944) were key moments in the maturing process of urbanism in the post-war period (Gold 2007; van Es et al. 2014). On a different level, particularly concerning the design of new residential areas, there was a greater commitment to a functional

approach. Despite criticism, the functionalist paradigms were widely imposed in the 1960s. Curiously, this coincided precisely with more widespread criticism. That was not only due to the ‘arrogance’ of some of the main players in functionalist urbanism, such as Le Corbusier (Hall 2014). But other factors also came into play, particularly those associated with the extraordinary process of construction and proliferation of mass housing estates in Europe in the 1960s and 1970s, for several reasons: first of all, owing to the critical shortage of housing and the intent to quickly solve the problem and secondly, because standardisation and prefabrication led to increasingly rapid construction. Consequently, both architects and urbanists and their respective governments believed it was correct to apply the CIAM theories. The problem arose when these principles were indiscriminately applied in a context of rapid urban growth (Monclús and Díez Medina 2016, 5) (see Chap. 7).

One of the most widely debated issues in architectural historiography is that of continuity and changes of paradigm which took place after World War II in relation to the revisions of the principles defended by CIAM and the Athens Charter which had begun to emerge during the first post-war period. Of special interest were the debates on the significance of CIAM 8, held in Hoddesdon in 1951, dedicated to ‘The Heart of the City’ illustrating a renewed attention to public urban space after the rejection and indifference to the streets and plazas of traditional urban

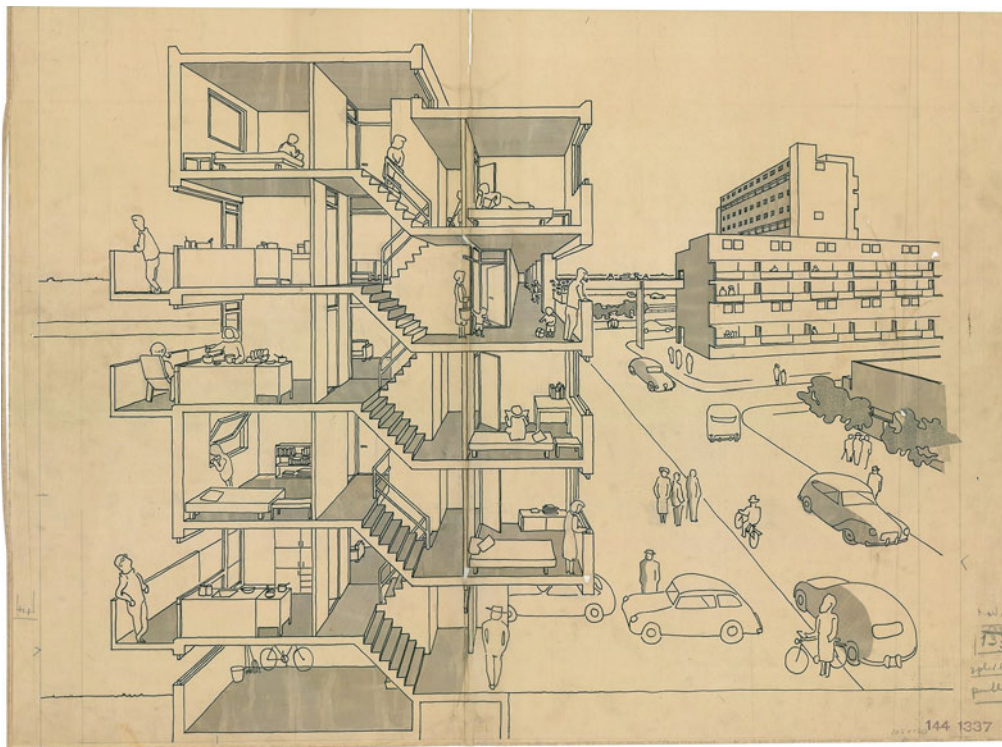


Fig. 4.9 Johannes Hendrik van den Broek and Jacob Berend Bakema, proposal for Lekkumerend housing in Leeuwarden, Holland, 1962

fabric which had characterised the former approach of functionalist urbanism (Mumford 2000).

On the other hand, the counterpoint or the ‘Socialist version’ of the Athens Charter may be found in the document under the title ‘16 Grundsätze des Städtebaus’ (16 Principles of Urbanism) published in 1950, a year before the ‘Heart of the City’ congress was held. This text combined the ideas of functionalist urbanism of the thirties with Stalinist concepts of the Soviet era. Paradoxically, in spite of the principles of the Athens Charter being widely disseminated in the 1950s, the Socialist document partly added to a parallel process of review in the re-examination of traditional urban forms began to gain strength (Monclús and Díez Medina 2016, 4).

In western Europe, criticism of the CIAM proposals began to grow within the very heart of the organisation itself. Team 10 efforts to overcome the coldness of the models that had marked the beginnings of the CIAM are well known. In the 1960s, structuralist concepts dominated the field of architecture and urbanism. Although structuralism was initially introduced as a scientific method in anthropology and other human sciences, the strong reaction to the excessive radicalism of the ‘functional city’ had given rise to a profound review of its principles at CIAM 10, held in Dubrovnik in 1956. Abandonment of the CIAM spirit in favour of the proposals by Team 10 at the meeting in Otterloo in 1959 began to become evident through rejection of the four functions of the Athens Charter in favour of other more complex visions associated with ‘Urban Re-identification Grid’.²

It is important to bear in mind that the work of Alison and Peter Smithson, including the paradigmatic project for Robin Hood Gardens (1969–72), formed part of a wider movement which included other architects. In this context, a mode of technological urbanism appeared as an alternative to the traditional city, structured around networks of ‘streets in the air’, elevated volumes and spaces, with vehicles travelling at ground level, etc. Nonetheless, it is worthwhile to recall that optimism with respect to technology formed a long tradition, with peaks in periods of accelerated urban growth, as was the case in the 60s and 70s.

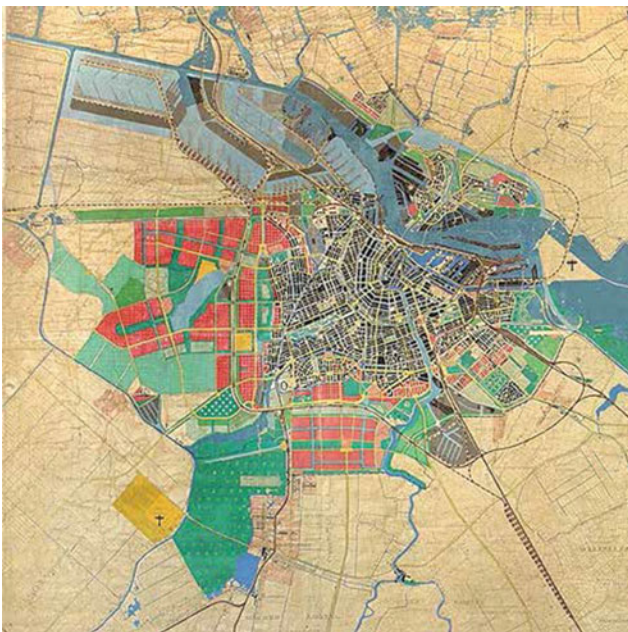
As part of the heated debate on the impact of the Athens Charter, a wave of criticism has addressed urban forms generated by a system of strict zoning—that separates housing from industry and attempts to rationalise transport—which has contributed to disintegration of urban fabric. The negative effects of what was initially a bold effort to create open space have also been recognised. The causes for the loss of ‘urbanity’ are undoubtedly generalised and complex (see Chap. 7).

²Mumford, *The CIAM Discourse on Urbanism*.

Case Studies

Amsterdam South Extension Plan (1934)

In the 1930s, the ‘architectural urbanism’ of Amsterdam South of H. P. Berlage opened up to the city of ‘modernist urbanism’ of the Algemeen Uitbreidingsplan (AUP) or 1934 Extension Plan by Cornelis van Eesteren. On the basis of this plan, new areas of expansion were configured, based on the principles of the Athens Charter (1933–42) that might be considered the bible of functionalist urbanism, in which the work not only of Le Corbusier but also of Van Eesteren



himself, President of the International Congresses on Modern Architecture (CIAM) from 1930 to 1947, had a lot of influence. The analysis of the Amsterdam Extension Plan, drafted by a team that he directed, represents one of the major milestones in modernist urbanism.

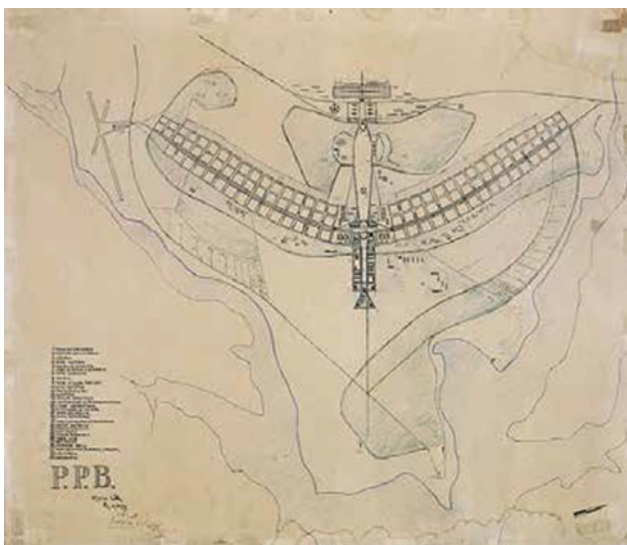
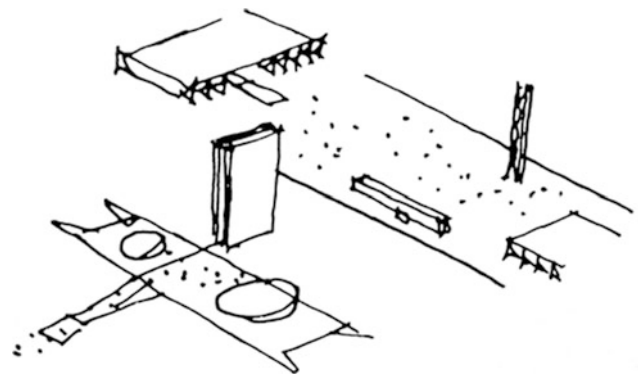
The model adopted is centralised, in direct connection with the economic structure of the city centre, but retaining the chief advantages of a garden city, i.e. a more independent nature, structural clarity and the use of detached houses. In the AUP report, this position was clearly stated: “A link with the city limits is possible, arranging the necessary surface areas to define residential zones, work areas and leisure areas in an organised fashion. Each residential area forms a complete urban complex, but the need for connection makes a comprehensive development a necessity. Hence, we find a centralised type of expansion, with the advantages of a garden city and its isolated nature but we avoid the disadvantages of a remote location which is both uneconomical and impractical”. Van Eesteren himself expresses that duality when defining the AUP assignment as a project in which the aim is to implement the quality of a garden city within the city limits.



Brasilia (1957–1960)

The new city of Brasilia, designed by Lucio Costa and Oscar Niemeyer, is a paradigmatic example of modernist urbanism. As in other newly founded capital cities (Washington, St. Petersburg, etc.), the conditions for construction of the new capital of Brazil were exceptional, comprising a true laboratory where one could experiment with 'the functional city' consecrated in CIAM 4. The starting point was an ambitious programme with the intention of transferring the political centre and part of the population along with business activities from the coast to the interior of the country. It was therefore an economic wager within the framework of 'developmentalism' in which the image of the new city was highly significant in the political context at the time.

The plan by Lucio Costa for the capital had a simple layout, defined by an axis running east–west, crossed by a curved line running north–south, depicting an allegorical aeroplane or bird entering the interior of the country. The principles of strict functional zoning are evident in the segregation of the residential areas from the industrial areas and open spaces, in addition to the predominance and autonomy of the transit system, with the clear distinction between the different types of traffic. The civic–commercial axis, both monumental and metaphorical, crosses the residential 'wings', grouped in '*super-quadras*' (super-squares) of 500 m × 500 m, in accordance with the neighbourhood unit criteria. Moreover, adopting the ideas by Le Corbusier to separate the 'Acropolis' or head of the city gives rise to the Praça dos Três Poderes.



References

- Benevolo, L. 2000. *Le origini dell'urbanistica moderna [1963]*. Roma, Bari: Laterza.
- Calabi, D. 2004. *Storia dell'urbanistica europea*. Milan: Bruno Mondadori.
- Choay, F. 1965. *L'urbanisme, utopies et réalités. Une anthologie*. Paris: Seuil.
- Choay, F. 1983. Pensées sur la ville, arts de la ville. In *Histoire de la France urbaine. La ville de l'âge industriel, le cycle haussmannien*, vol. 253. ed. G. Duby, Paris: Seuil.
- Galindo, J. 2003. *Cornelis van Eesteren. La experiencia de Amsterdam*. Barcelona: Arquia.
- Gold, J.R. 2007. *The Experience of Modernism: Modern architects and urban transformation, 1954–1972*. New York: Routledge.
- van Es, E., G. Harbusch, B. Maurer, M. Pérez, K. Somer, and D. Weiss (eds.) 2014. *Atlas of the Functional City CIAM 4 and Comparative Urban Analysis*. Bussum, Zurich: Thoth Publishers, gta Verlag.
- Le Groupe CIAM—France. 1943. *Urbanisme des C.I.A.M. La charte d'Athènes: avec un discours liminaire de Jean Giraudoux*. Paris: Plon.
- Hall, P.G. 2014. *Cities of Tomorrow. An Intellectual History of Urban Planning and Design in the Twentieth Century [1988]*. 4th ed. Oxford: Wiley-Blackwell.
- Hebbert, M. 2006. Town planning versus urbanismo. *Planning Perspectives* 21: 233–251. doi:10.1080/02665430600731153.
- Hilper, T. 1978. *Die funktionelle Stadt. Le Corbusiers stadtvision: bedingungen, motive, hintergründe*. Braunschweig: Vieweg.
- Jürgens, O. 1992. *Ciudades españolas: su desarrollo y configuración urbanística [Spanische Städte: ihre bauliche Entwicklung und Ausgestaltung, 1926]*. Madrid: Instituto Nacional de Administración Pública.
- Lampugnani, V.M. 2011. *Die Stadt im 20. Jahrhundert. Visionen, Entwürfe, Gebautes*. Berlin: Klaus Wagenbach.
- Monclús, J., and C. Díez Medina. 2017. Urbanisme, Urbanismo, Urbanistica. Latin European Urbanism: Italy and Spain. In *Planning History Handbook*, ed. C. Hein. London: Routledge.
- Monclús, J., and C. Díez Medina. 2016. Modernist housing estates in European cities of the Western and Eastern Blocs. *Planning Perspectives* 31: 533–562. doi:10.1080/02665433.2015.1102642.
- Mumford, E. 2000. *The CIAM Discourse on Urbanism, 1928–1960*. Cambridge: MIT Press.
- Sert, J.L. 1942. *Can Our Cities Survive? An ABC of Urban Problems, Their Analyses, Their Solutions: Based on the Proposals Formulated by the CIAM*. Cambridge, Massachusetts: Harvard University.
- Sutcliffe, A. 1981. *Towards the Planned City: Germany, Britain, the United States, and France, 1780–1914*. Oxford: Basil Blackwell.
- Sutcliffe, A. 2002. Foreword. In *Planning Latin America's capital cities 1850–1950*, ed. A. Almandoz, vii–viii. London: Routledge.
- Ward, S.V. 2002. *Planning the Twentieth-Century City: The Advanced Capitalist World*. New York: Wiley.

Further Readings

- Berman, M. 1982. *All that is Solid Melts into Air: The Experience of Modernity*. London: Verso.
- Borsi, K. 2015. Drawing the region: Hermann Jansen's vision of Greater Berlin in 1910. *The Journal of Architecture* 20: 47–72. doi:10.1080/13602365.2015.1004619.
- Díez Medina, C., and J. Monclús. 2017. On urbanity and urban forms. Some remarks on modernist urbanism's legacy. ed. M.G. Folli. *Urbanity. A New Opportunity for Ukrainian Cities*. Milan: Politecnico di Milano—Gioacchino Onorati editore.
- Gravagnuolo, B. 1991. *La progettazione urbana in Europa, 1750-1960: storia e teorie*. Bari: Laterza.
- Monclús, J. 2014. International Exhibitions and Urban Design Paradigms. In *Exhibitions and the development of Modern Planning Culture*, ed. R. Freestone, and M. Amati, 225–242. Farnham: Ashgate.
- Paquot, T., Y. Tsiomis, C. Secci, and S. Bonzani. 2003. La Charte d'Athènes, et après? *Urbanisme* 330: 35–36.
- Piccinato, G. 1974. *La costruzione dell'urbanistica: Germania, 1871-1914*. Roma: Officina.

Carmen Díez Medina

Abstract

The compromise between ideology and architecture or urban planning is not always univocal; sometimes surprising situations prove how complex this relationship is. This chapter presents two episodes linked to opposing political systems, the Spanish dictatorship and the Italian Republic, both developed in the post-war period. In this context, some innovative proposals carried out within the ‘Pobladados dirigidos’ program in Madrid can be interpreted in parallel to some Italian neighbourhoods linked to the Neorealism movement. Far from representing obvious attitudes, surprisingly they seem politically interchangeable.

Keywords

Pobladados dirigidos • Post-war urbanism • INV • INA-Casa • Neorealism • Tiburtino

In an article written in 1966, Rafael Moneo suggested that architecture might act as a “surgical instrument effective disentangling the intellectual state of a given era”.¹ In some projects, the commitment to a specific political and social climate is evident, such as those linked to what has become known as ‘regime’ architecture or urbanism, conceived along the demagogic lines of a dictatorship. Nevertheless, the relation between ideology and project is not always clearly delineated and interesting situations have arisen that show the complexity of this relationship. Occasionally, the same ideology gives rise to surprisingly different architectural and urban proposals, whereas quite the opposite can be true and opposing regimes can produce paradoxically similar models. Spain, for instance, contributed to the dissemination

of the CIAM models during the government of the Second Republic (1931–39). Despite ideological differences, the same thing happened in Italy during the first years of the fascist era (1922–45), where a clear commitment to rationalism contributed to the creation of a political image of modernity and innovation until a more demagogic position began to assert itself in the mid-1930s.

In other cases, a contradiction arises where the architectural and urban planning solutions are contrary to what might be expected from a political point of view. This is precisely how we might interpret the following two cases analysed in this chapter. The first is the 1950s construction of the Madrid ‘*pobladados*’, during Franco’s dictatorship, which in some cases showed a definite commitment to modernist housing models which tested the creativity of the architects. At the same time in Italy, during the first years of the new Republic, in a move away from rationalist abstraction and towards populism, Neorealism in Rome was to make ample use of the vernacular language. This chapter provides a brief reflection on the meaning of social housing policies in each of the two countries during the later post-war period, and about the attitudes of two politically opposed systems, namely an autocracy and a democracy, towards common problems stemming from housing shortages.

¹ “[la arquitectura] eficaz bisturí para comenzar a desentrañar la situación mental de una determinada época”. Moneo, R. 1966. A la conquista de lo irracional. *Arquitectura (Madrid)* 87: 1.

C. Díez Medina (✉)
School of Engineering and Architecture (EINA),
University of Zaragoza, Zaragoza, Spain
e-mail: cdiezme@unizar.es



Fig. 5.1 José Luis Romany, study on housing for Hogar del Empleado, 1956

The ‘Poblad^os Dirigidos’ of Madrid

In Spain, the 1950s brought a new economic and social optimism resulting from the lifting of the North American blockade. As was the case in Italy, the post-war period saw large cities become a magnet for people escaping the countryside in search of a better life. In Spain, a series of circumstances converged during this time opening the way to the development of one of the most interesting experiences of the century. On the one hand, after an initial post-war period when agricultural interests had been protected, a general industrialisation took place. On the other, a group of young architects later recognised as the masters of the Modern Movement in Spain (Alejandro de la Sota, Miguel Fisac, Francisco Javier Sáenz de Oiza, Antonio Corrales, Ramón Vázquez Molezún) became involved in

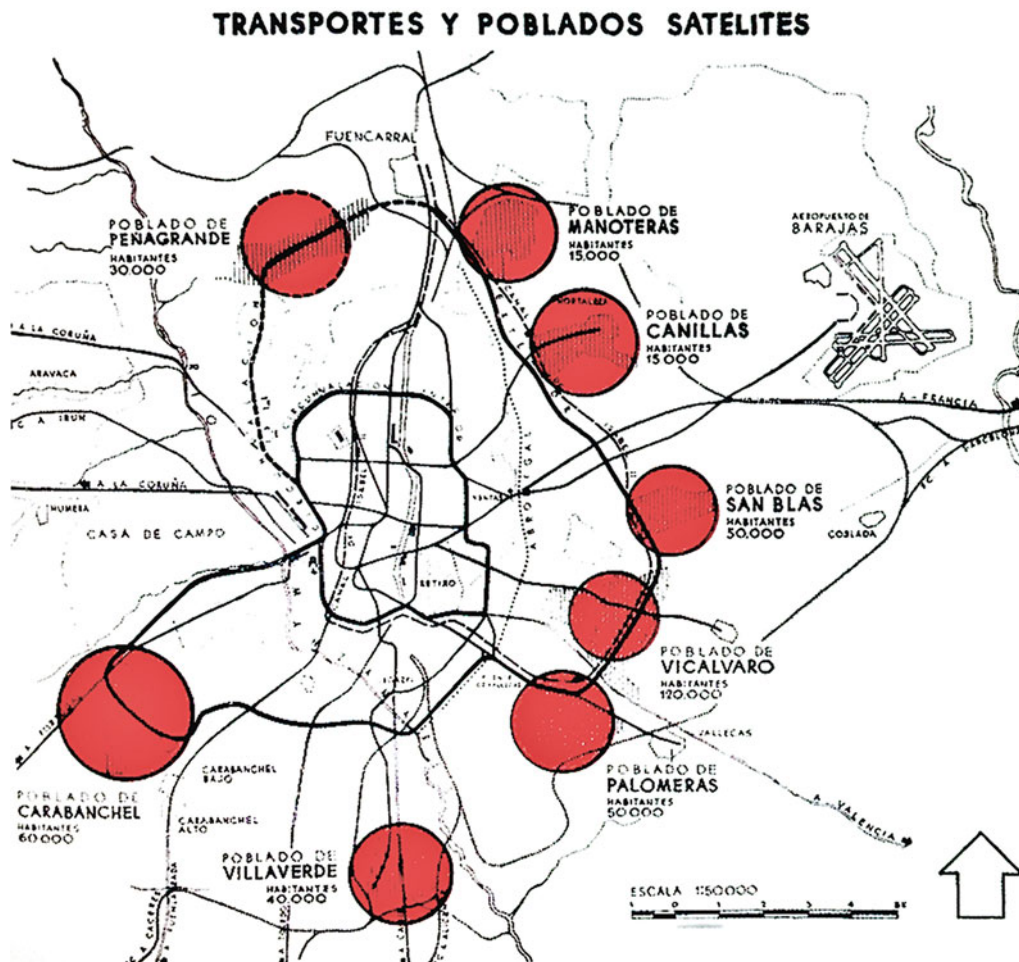


Fig. 5.2 Proposal for eight satellite towns around Madrid, 1948. The city centre is surrounded by the Manzanares River as well as by the Abroñigal and Los Pinos streams, along which the M-30 highway now runs. The scheme of an urban centre surrounded by a belt of satellite towns in rural territory comes from Germany and was already present in the 1929 competition and in the Madrid Regional Plan of 1939, which preceded the Pedro Bidagor plan of 1941

social housing (Fernández-Galiano et al. 1989). Under these circumstances, the modernist housing undertaking was to take place in Spain thirty years after the heroic period of the German *Siedlungen* supported by the Weimar Republic.

Franco's regime actively promoted a housing policy known as '*casas baratas*' (cheap housing) with some significant results,² based on the creation of three public organisations: the Instituto Nacional de la Vivienda, INV (National Housing Institute), dependent on the Ministry of Employment³; the Organización Sindical del Hogar, OSH (Housing Union Organisation), linked to the General Secretariat of the Movement (Sambricio 2003, 41–43); and the Comisaría para la Ordenación Urbana de Madrid, COUM (City Planning Commission), subordinated to the Ministry of Governance.⁴ By 1955 the mechanism to promote new housing plans was under way.⁵

Of the several proposed objectives, two were ultimately realised. This episode is known in Spain as the *pobladros madrileños*. The first goal was to eradicate the shanty towns with the construction of the so-called *pobladros de absorción* (absorption settlements), conceived to 'absorb' almost 120,000 people who lived in the slums near the *Ensanche* (city extension).⁶ Approximately, 4800 dwellings were built, in conditions of extreme austerity, including predominantly single-family two storey homes and four- or five-storey housing blocks. If the *pobladros de absorción* were precarious, the *pobladros mínimos* (minimum settlements) were even more so.⁷ The second goal was to define a model that permitted ownership of modest housing. The formula

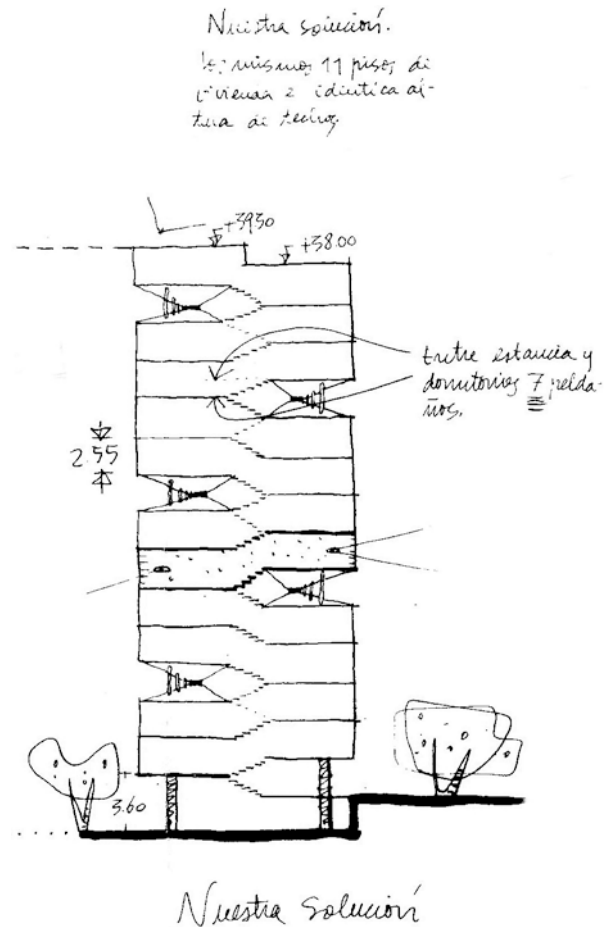


Fig. 5.3 Francisco Javier Sáenz de Oíza, Manuel Sierra and José Luis Romany project for construction of 600 dwellings in the Río Manzanares estate, 1956. Sketch by Sáenz de Oíza

²In 1949, the Official College of Architects of Madrid (COAM) called an architectural competition for proposals for low-rental housing, following the ten-year anniversary of Franco's government. The active participation by the architect Miguel Fisac contributed to activating a heated debate.

³José Fonseca, an expert on council and social housing, took over leadership of the INV in 1939. He was relieved from his post by Luis Valero Bermejo, who became the fundamental figure from the end of 1954 until 1958, (Sambricio 2003, 274–276).

⁴Julián Laguna headed it up from 1954 to 1958. The decision to transform the green belt foreseen in the Bidagor Plan in development land was down to him. His closeness to Franco and his far-sighted search for promising, young architects was crucial.

⁵That year, he launched three major housing plans: the Plan Nacional, the Plan Municipal and the Plan Sindical, (Sambricio 2003, 50–58).

⁶In the early 1950s, Laguna proposed creating eight new nuclei: Manoteras, Canillas, San Blas, Palomeras and Villaverde in 1950; Peñagrande, Vicálvaro and Carabanchel in 1953. These first eight *pobladros* were approved by COUM in 1955 and were developed and built by the OSH and financed by the INV. Construction was covered by the decree of 1954 on social housing.

⁷In order to gradually integrate the immigrants from the countryside in the city, some *pobladros*, such as Orcasitas, were rated as agricultural and had even a stable in each home. Naturally, speculation about these interventions took place, which concealed the strategy of freeing up the former slums to allow for growth of the city.

consisted of introducing self-built homes: the future residents, supported by the technical management and the architects, contributed to the construction of their own homes on weekends (hence the name '*domingueros*' or Sunday workers). The *Pobladros dirigidos* (targeted settlements) were the result of the innovative cooperation between politicians, experts and residents.⁸ This strategy, with the aim of addressing the shortage of around 60,000 dwellings in Madrid, was also adopted a year later in

⁸The *pobladros dirigidos* were covered by the Ley de Viviendas de Renta Limitada (Low-Rental Housing Law) of 1954, which afforded owners the change to pay up to 20% of the total price through a 'personal service, i.e. in the form of working in the construction. The rest of the financing was an interest-free advance payment by the INV. The *pobladros dirigidos* formally arose through a decree of 1957 and an order within the framework of the Plan de Urgencia Social (Social Urgency Plan) of Madrid.

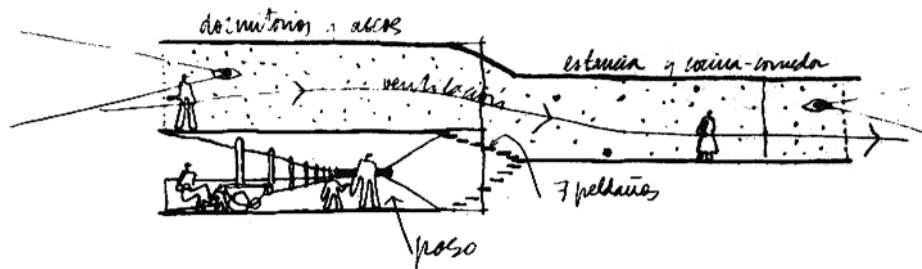


Fig. 5.4 Francisco Javier Sáenz de Oíza, Manuel Sierra and José Luis Romany project for construction of 600 dwellings in the Río Manzanares estate, 1956. Detail of a two levels dwelling with access from a corridor by Sáenz de Oíza

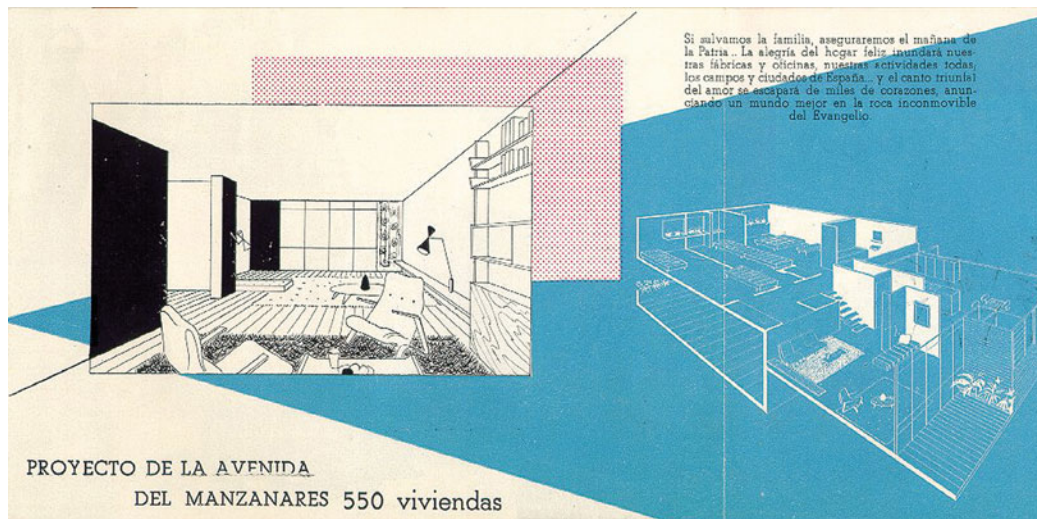


Fig. 5.5 Francisco Javier Sáenz de Oíza, Manuel Sierra and José Luis Romany project for construction of 600 dwellings in the Río Manzanares estate, 1956. Advertising image by the Hogar del Empleado

Barcelona, Asturias and Vizcaya. In some cases, the *Poblados dirigidos* became an interesting laboratory of experimental housing.⁹

The experience of these *poblados* in Madrid stimulated the development of more innovative projects and the search for experimental solutions, as well as fostering the call for architecture competitions and contributing to the introduction of modernity in Spain based on German and Dutch

models of social housing (Sambricio and Sánchez Lampreave 2008). Despite the need to adapt in most of the cases, the advanced construction systems developed in Europe between the wars to traditional construction methods, examples exist in terms of housing typology and constructive solutions that show an ingenious ability to respond to the precarious situation.¹⁰ Attitudes towards modernity were varied. Compared to the scepticism of Miguel Fisac, expressed in his 1955 design for the Zofío neighbourhood in Madrid (“I have just come back from visiting the Marseilles Unité d’Habitation which, as an example of functionality, is

⁹Seven *poblados dirigidos* were developed, most of them on land adjoining the *poblados de absorción*: Almendrales, by J. Carvajal, J.M. García de Paredes, R. Vázquez Molezún; Canillas, by L. Cubillo; Caño Roto, by J. L. Íñiguez de Onzoño and A. Vázquez de Castro; Entrevías, by J. Alvear, F.J. Sáenz de Oíza and M. Sierra; Fuencarral, by J. L. Romany; Manóteras, by M. Ambrós, M. García, E. García and E. Quereizaeta; and Orcasitas, by R. Leoz and J. Ruíz Hervás, (Sambricio 2003, 62–64).

¹⁰For example, the prefabricated cube by Antonio Goicoechea, the corrugated membrane of the Rafael de La-Hoz Arderius prefabricated houses, the adaptation of Dutch typologies and Anglo-Saxon and American models developed by Francisco Javier Sáenz de Oíza in Entrevías.



Fig. 5.6 Official propaganda for dissemination of the *Poblados dirigidos*, partially built using the self-construction formula. The Plan Nacional de Viviendas de renta limitada (National Housing Plan for low-rental housing) forecast construction of 550,000 dwellings over a five-year period 1956–1960

a disaster¹¹), architects like Francisco Javier Sáenz de Oiza, along with Manuel Sierra, José Luis Romany and Luis Cubillo, made a particular, if rather humble, homage to the Unité in the Calero block in Ventas, Madrid, a poor version of an 1956 project for 600 dwellings along the Manzanares River (Pozo 2000, 133–140).

The 1956 initiative for an experimental housing competition in Carabanchel, in the south-east of Madrid, attracted both architects and construction companies (Sambricio 1997). The proposals were submitted in tandem (architect—constructor), with the intention of introducing concepts such as ‘prototype’ or ‘prefabrication’ in the field of experimental housing. The intent was to advance building techniques as well as the organisation of works, the optimisation of resources and the identification of the

¹¹“(…) vengo de ver la Unidad de Habitación de Marsella que, como ejemplo de funcionalidad, es un desastre”. *Boletín Informativo de la Dirección General de Arquitectura*, April 1950, 15–18 and *Revista Nacional de Arquitectura* 109, January 1951, (Sambricio 2004, 363).

most suitable and effective types, to then be replicated by the INV.¹² With the approval of the Ley del Suelo (Land Law) that same year (1956), legislation was in place for the Segundo Plan Nacional de la Vivienda (Second National Housing Plan). Competition submissions were judged on the basis of the process as a whole, from architectural and urban planning concepts to construction quality and execution times, from the budget to the ability to reproduce the different building types in other parts of Spain.

However, in 1957 social housing policy began to change as a result of the creation of the Housing Ministry, which centralised initiatives and administrative management. The appointment of José Luis Arrese, together with the removal of Luis Valero and Julián Laguna, key figures in the *poblados* episode, marked a turning point towards a more pragmatic position leading to private initiatives and providing land on a large scale for the real estate business. The Plan de Urgencia Social (Social Urgency Plan) of the same year created the legal framework that brought housing promotion to the private sector, including private banks.¹³ Arrese’s policy, with private developers defining the conditions and lines of action, put an end to the debate on public housing which, in 1960, was now largely in the hands of private developers.

Roman Neorealism

In Italy, the architects involved in post-war reconstruction took off from a shared, ethical position: the search for a truth other than that which had been manipulated for over two decades by the demagoguery of the regime’s ‘contrived

¹²The master plan, with two housing types, single-family houses and blocks, was designed by Luis Cubillo and Ramón Vázquez Molezún. 36 teams submitted proposals to the competition. Among the architects were Romany, Oiza, Cubillo, Cassinello, Colomina, and among the constructors, Helma S.A., Capel, Constructora San Martín, Constructora Asturiana S.A., etc. Since the end of the Civil War, housing competition had promoted construction of rural housing, focusing mainly on partial aspects of furniture or installations. Only in 1949, the Colegio Oficial de Arquitectos de Barcelona and the Instituto Técnico de la Construcción put forward the problem of large-scale housing construction linked to construction problems (Sambricio 2004, 398–407).

¹³In two years, 85 developments were built with over 100 dwellings, 29 following the official initiative. Almost 48,000 dwellings were built by major developers, and slightly over 18,000 by small developers. Surprisingly, at no time did the plan debate what housing types should be, although it did define the kind of rental protection. The policy of quantity rather than quality was the result of the lack of thought on innovation that had taken place during 1954–57, (Sambricio 2004, 407–417).



Fig. 5.7 José Luis Romany, Fuencarral Poblado dirigido, 1956

architectural styles. Neorealism was one of the ways explored during those years, mainly in central Italy, Rome, being the point of reference. Its principal objective was to show the socio-economic conditions of post-war Italy.¹⁴

Before extending itself to other disciplines, the neorealist movement began with cinema, which presented Italian cities with powerful immediacy during the war, with the resistance to fascism and in the post-war period.¹⁵ In architecture, the neorealist experiment was mainly linked to reconstruction and planning, more specifically in social housing. It was a cry for freedom of expression symbolising a longed-for alternative to the recent works carried out under the fascist regime. “Closely linked to the real difficulties of the post-war period, Neorealism aimed to fit architecture into an operational social context, rejecting the rationalist forms considered acceptable in expressing the social reality of the country”.¹⁶ According to Ludovico Quaroni, who with the architect Mario Ridolfi was to lead the Tiburtino project for a new district on the outskirts of Rome, the immediate result was the recovery of an atmosphere meant to be

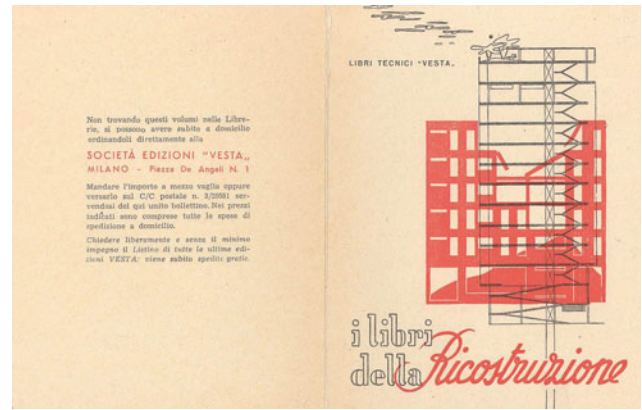


Fig. 5.8 Publicity leaflet to guide work by the architects during reconstruction, published in Milan in the early 1950s

psychologically familiar to emigrants from Lazio and other regions in central Italy and which was in stark contrast with the human error of rationalism (Rossi 1991). Some years later, Quaroni regretted that the project had succumbed to “(...) theatrical sentimentality, in its attempt to re-evaluate urban environment in contrast with the puritan romanticism of the Garden City”.¹⁷

Bruno Zevi, who introduced and staunchly defended organic architecture, was a key figure in the initial stages of the neorealist experience. Upon his return to Italy in 1944, after his exile in the USA, Zevi immediately gathered a group of militant architects in the Scuola per l’Architettura Organica, where teaching began in the autumn of the same year, representing an alternative to the more academic teachings of the Faculty of Architecture.¹⁸ Zevi was to work tirelessly to promote other cultural initiatives such as the creation of the Associazione per l’Architettura Organica (APAO) in 1945, stemming from the School by the same name, where he intended to create a “new technical/professional culture”.¹⁹ Zevi was also involved in other

¹⁴In the immediately post-war period, Roman and Milan were the two cities which catalysed the intellectual discourses that became the architecture’s engine. Among them, Neorealism can be identified as an entirely Roman phenomenon.

¹⁵Cinema, and the literature, sought to set down stories of everyday life, experienced in the first person by writers and readers, with clear, communicative language, rejecting tradition and exploiting the expressive possibilities of verism. In 1945, R. Rossellini started a movement with his film *Roma città aperta* that would be followed by other directors like L. Visconti (*La terra trema*, 1947) or V. de Sica (*Ladri di biciclette*, 1948). Literature, painting and architecture followed in the steps of cinema.

¹⁶“Strettamente legato alla difficile realtà del dopoguerra, il neorealismo aspira a inserire l’attività dell’architetto in un operante contesto sociale, nel rifiuto netto dei modi razionalisti, ritenuti inadeguati a esprimere la realtà sociale del paese”. *Enciclopedia dell’Architettura Garzanti*. 1996. Milan: Garzanti.

¹⁷“(…) sentimentalismo scenografico, nella tentata rivalutazione dell’ambiente urbano, contro il romanticismo puritano della città giardino” (Quaroni 1957, 24–33).

¹⁸Parallel to this in Milan, in October 1945, a proposal by a group of students came to light, the “*Scuola libera di architettura*”, proposing a cycle of conferences and open debates in order to contribute to the “spiritual” and “moral” education of students.

¹⁹See “*La costituzione per l’Associazione per l’Architettura Organica*”, in *Metron* n. 2, 1945. Within this context, the APAO found its counterpoint in the MSA (Movimento Studi di Architettura) of Milan, an association of modern architects who were against academicism. Both were used as rallying calls, to boost renovation in Italian architecture, and led to true mobilisation of the more spirited minds.

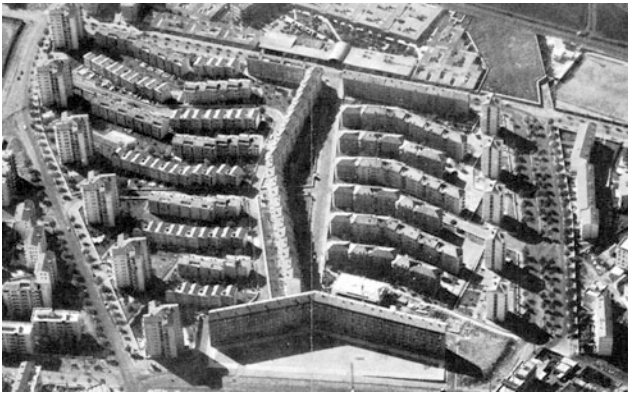


Fig. 5.9 Mario De Renzi and Saverio Muratori (team leaders), L. Cambellotti, F. Fariello, G. Perugini, G. Roisecco, D. Tassotti, L. Vagnetti, Tuscolano 2 District, Rome, 1952–1956



Fig. 5.10 Photogram from the film *Ladri di biciclette*, by Vittorio de Sica, 1945

initiatives at an editorial level, such as the launching of the architecture journal *Metron*, founded in 1945 and conceived as a free association promoting work and study.²⁰ In 1946, he also published the *Manuale dell'architetto*.²¹ This handbook, written in a practical style, was a compendium of architectural and construction solutions featuring 264 tables and construction details and dwelling layouts. The contribution to the book by the Ridolfi, a close friend of Zevi's, was fundamental (Capobianco 1998).²² Even if it was restricted by the historical circumstances of the time, it was nevertheless a major initiative (it was freely distributed among Italian technical experts), despite the opinions of some critics like Manfredo Tafuri, who judged it to nothing more than a “workshop handbook”, “vernacular esperanto” or “a celebration of regionalism dressed up as folklore”.²³

Added to these types of initiatives, was the essential enactment in 1949 of the Fanfani Law, an attempt to increase the number of jobs in the construction industry by building workers' house. It was within the framework of this law that the plan to increase worker occupation known as Piano INA-Casa was developed (1949–63),²⁴ a state action plan for building low-cost public housing and creating new jobs, defined by Giuseppe Samonà as a “magnificent machine for producing houses” (Samonà 1949). The results, however, were somewhat contradictory.²⁵

It was in this context that the neorealist movement became involved in architecture, represented in the work of Ridolfi in Terni and in Rome and with the rural estate UNRRA²⁶-CASAS²⁷ La Martella, by Quaroni,²⁸ as well as the Quartiere INA-Casa Tiburtino in Rome (1949–53),

²⁰Cino Calcaprina, Eugenio Gentili, Luigi Piccinato, Silvio Radiconcini and Enrico Tedeschi accompanied Zevi in this editorial initiative. Another important magazine was “Comunità”, founded in Ivrea by Adriano Olivetti in 1946, with a more Mumfordian slant.

²¹Zevi was also involved in this initiative, thanks to his ties to the USA, returning with the liberating troops following the United States Information Service (USIS). Zevi managed to publish a manual with similar characteristics to those existing in the USA at the time. The “Consiglio Nazionale delle Ricerche” which was chaired by the engineer Gustavo Colnnetti and did not hesitate to cooperate and cover the editing costs. In the organisation, committee were Nervi, Zevi, Bongioannini and Ridolfi.

²²The *Manuale* updated and adapted the previous manuals by G. Curioni (1884), G. A. Brymann (1885), C. Formenti (1893–95) and Daniele Donghi (1906–1925) to the demands of those times, too extensive and not particularly useful for the reconstruction of Italy, and those by Neufert were not much use either as they were drafted according to German regulations.

²³“(…) prontuario ‘da bottega’ (...) esperanto vernacolare (...) celebrazione del regionalismo in abito folk”, (Tafuri 1982, 18).

²⁴The plan was coordinated by Gestione INA-Casa, directed by the architect Arnaldo Foschini, representative of the Roman School, director of the Faculty of Architecture in Rome and president of associations such as the Istituto Nazionale delle Assicurazioni INA (National Insurance Institute).

²⁵On the one hand, the approximately two million dwellings built over fourteen years of activity under this plan provided housing for over 350,000 Italian families, improving their living conditions. One-third of the Italian architects who were exercising their profession at that time were involved in that experience. On the other hand, it contributed to emphasising speculation mechanism that used those districts and houses as an excuse to increase the value of development areas, particularly in the big cities, (Rossi 1991).

²⁶UNRRA: United Nations Relief and Rehabilitation Administration.

²⁷CASAS: Comitato Amministrativo Soccorso ai Senza tetto (Administrative Committee for Aid for the Homeless).

²⁸With Federico Gorio, Piero Maria Lugli, Michele Valori and Luigi Agati, the *borgata* La Martella was built to house families who had been evacuated from Sassi. The Unra-Casas Institute was directed by Adriano Olivetti, who drove the project.

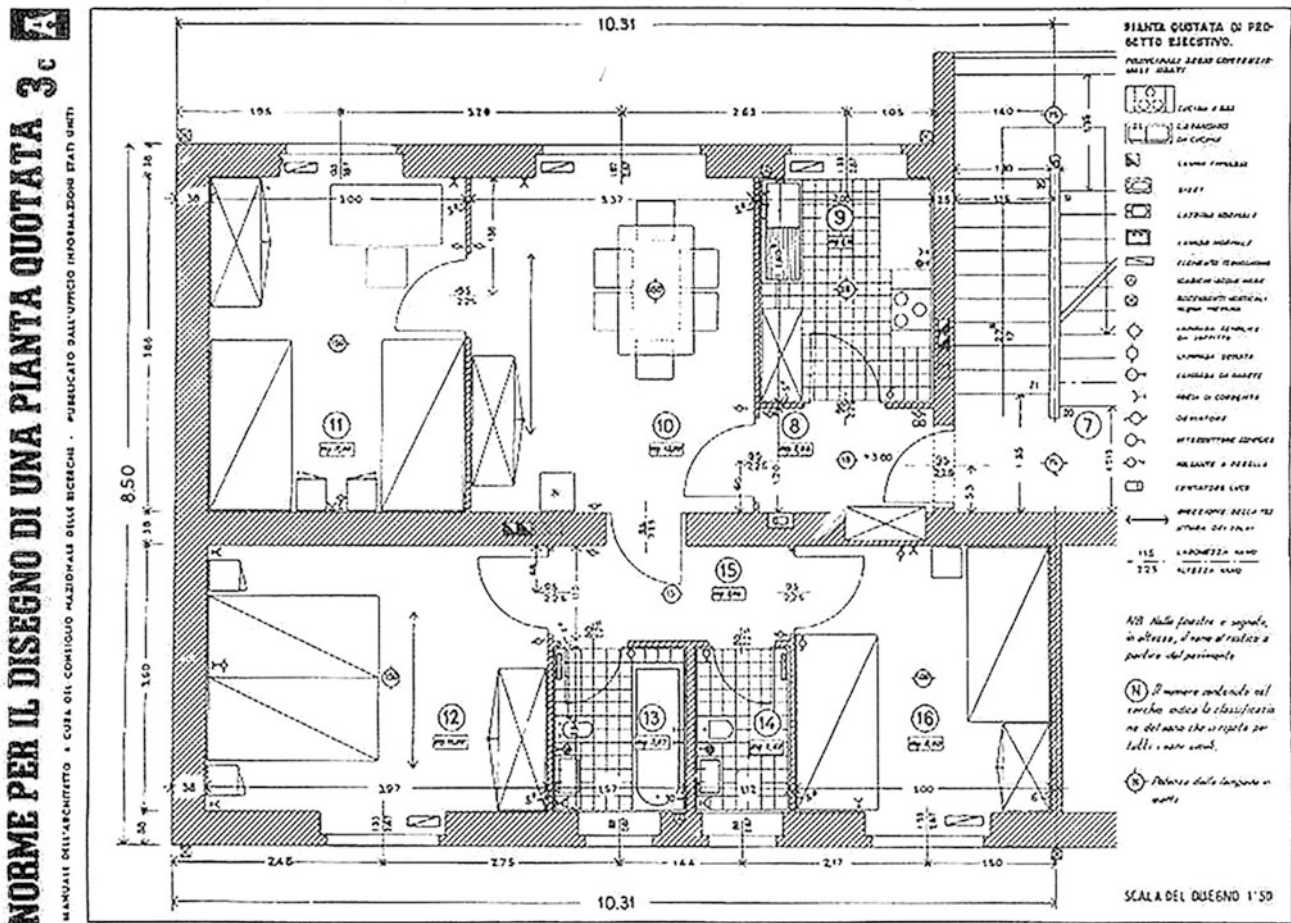


Fig. 5.11 Luigi Nervi, Bruno Zevi, Biagio Bongiannini and Mario Ridolfi (coord.), a page from *Manuale dell'architetto*, 1946

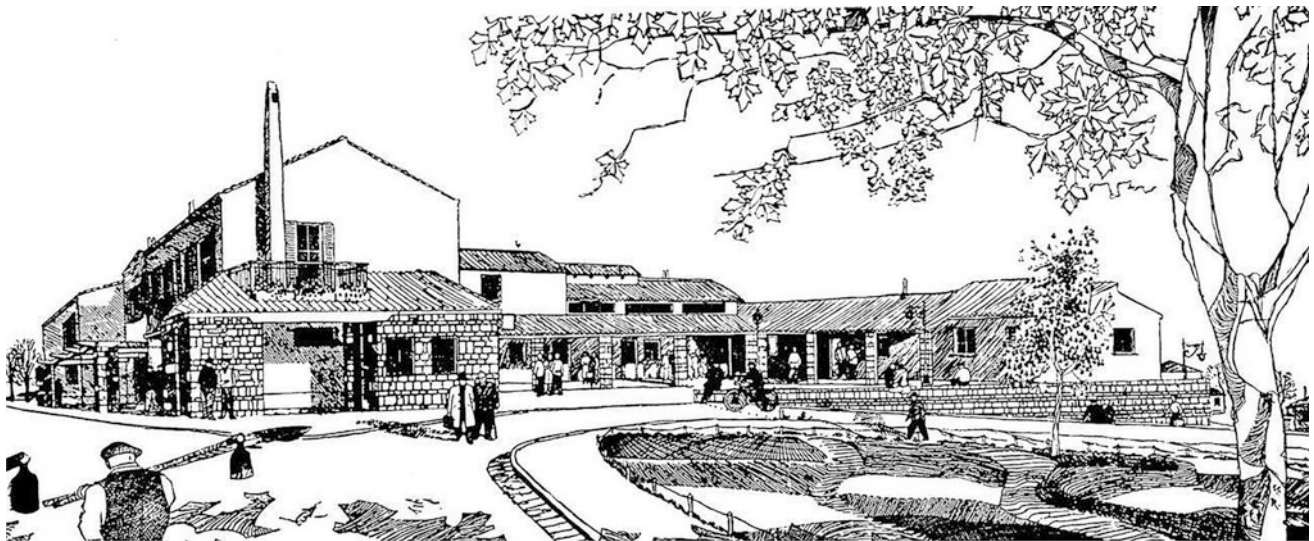


Fig. 5.12 Ludovico Quaroni, Federico Gorio, La Martella, Matera, 1952–54. Within the framework of restructuring the agricultural land, the American Organisation Economic Cooperation Administration (ECA) defined the foundation of a new town. Adriano Olivetti, along with UNRRA-CASAS and the Istituto Nazionale di Urbanistica (INU) organised a study committee endorsed by the architects Quaroni and Gorio, who finally developed the project. This town is one of the paradigmatic examples of Italian Neorealism

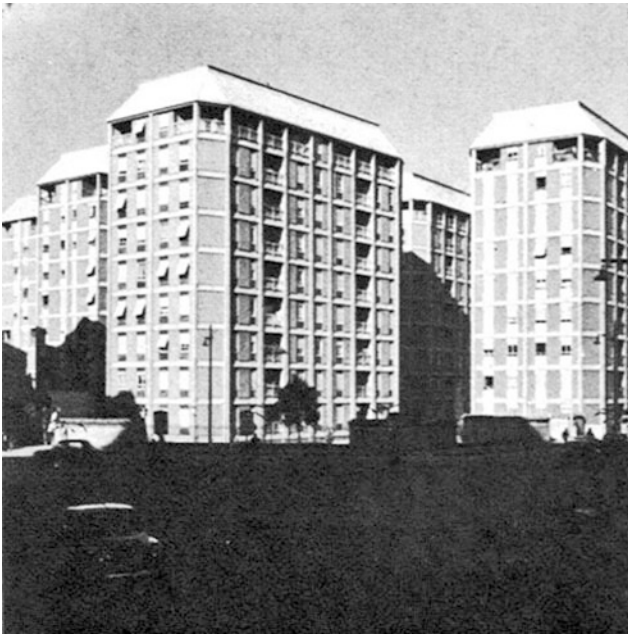


Fig. 5.13 Mario Ridolfi, housing blocks in Viale Etiopia, Rome, 1951–54. The so-called INA blocks were built on commission by the Istituto Nazionale delle Assicurazione (National Insurance Institute) as a large-scale real estate investment. The estate consisted of 8 high-rise tower blocks with 9 or 10 floors, a strip for facilities and generous green areas. Construction was based on the principles of modulation, series and repetition. The colour, the use of enamelled ceramics and iron worked on a small scale show Ridolfi's usually working method, approaching craftsmanship

by both architects.²⁹ The underlying question of all these projects—building cheap housing for workers in new districts—was interpreted not only as a technical issue, but also as a moral question, stemming from social responsibility and the profession's public commitment (Di Biagi 2013). These projects sought to create more human spaces that contrasted with the rather rigid, rationalist grids and alluded to some of the experiences in Sweden like the Sven Backström and Leif Reinius neighbourhoods built during the war [see Chap. 6]. But the difference with the Scandinavian neoempiricism is that these Italian projects reveal an internal Sartrean conflict against the rhetoric and bombast of the previous decades. However, it was to be here that the paradox would become most apparent and most bitterly criticised. In their striving to fight against the aesthetic of fascism, they fell into the trap of populist sentimentality,

²⁹With Carlo Aymonino, Carlo Chiarini, Mario Fiorentino, Federico Gorio, Maurizio Lanza, Sergio Lenci, Piero Maria Lugli, Carlo Melograni, Giancarlo Menichetti, Giulio Rinaldi, Michele Valori. Tiburtino and Valco S. Paolo were the first of the INA-Casa districts built in Rome.

with antiquated models of 'popular purity' in the countryside.³⁰ Tafuri was to pinpoint this paradox within the neorealist language and recognise in it "a desire for anti-rhetoric which, unfortunately, resonated with the ineffective ambitions of the farm lobby's economic policies" (Tafuri 1982, 14).

In his moving article "Il paese dei barocchi" (a play on 'Il paese dei balocchi'—'Toyland' in Pinocchio, an imaginary place described by Carlo Collodi in Chap. 30) Quaroni does not see Neorealism as resulting from a deep-rooted culture, or a living tradition, but rather from a state of mind. As such, it could not provide a solid foundation. "In the drive towards the city, we were held up in the country"³¹.

³⁰Some components of that new popular poetical scenography were the ingenious protective canopies in the landscape of the neighbourhood, the modest rendered walls, the ever-present lattice brickwork for ventilation on the enclosures and patios, the bold, pointed balconies overhanging the streets to promote street life, the profusion of chimneys in harmony with the surrounding pine trees and lamp posts, the partly open shutters or the visible roof gutters, (Díez Medina 1995).

³¹"Il paese dei barocchi non è il risultato appunto d'una cultura solidificata, d'una tradizione viva: è il risultato di uno stato d'animo. (...) Ma uno stato d'animo non potrà mai essere una base solida per una collaborazione. Nella spinta verso la città ci si è fermati al paese". Quaroni, "Il paese dei barocchi", 24–33. Also Vittorio de Sica had discussed the ability of cameras to capture a state of mind a wish, which later on they shared with some architects of neorealism, after the filming of *Ladri di biciclette*: "La letteratura ha scoperto da tempo questa dimensione moderna che puntualizza le minime cose, gli stati d'animo considerati troppo comuni. Il cinema ha nella macchina da presa il mezzo più adatto per captarla." (Some time ago, the literature discovered this modern dimension that emphasises little things or states of mind that in the past were considered too common. Cinema, through its cameras, is the best means to capture them). See *La Fiera letteraria*, 6 febbraio 1948, 3.

Case Studies

Quartiere Tiburtino, Rome (1949–50)

Designed by a group of members of the Associazione per l'Architettura Organica (APAO), young, recently graduated architects brought together by M. Ridolfi and L. Quaroni, this neighbourhood is built on a surface area of 8.8 ha, with 771 dwellings for 4000 residents. The housing types are varied: semi-detached houses, three-, four- and five-storey linear blocks and seven-storey towers. The Tiburtino project was used as a programmatic statement of Neorealism. It sought to

create architecture and urban planning that was based more on the quality of the environmental than on individual buildings, which were deliberately designed to be anonymous. The urban space was intended above all to meet the psychological demands of future residents, most of whom were to be immigrants from Lazio and other central regions of Italy.

The wish to establish an organic urban layout can be seen from the general plan of this Roman quarter. It was an attempt to create an informal atmosphere, where the variety of architecture and flexible layout, adapted to the topography, shows a deliberate alternative to the rigid version of rationalism that had been used in the *borgate* (outlying neighbourhoods) between the wars. Both the urban morphology and the popular iconography refer to a search for communication with those emigrants who, in response to a long past of dire poverty in the countryside, flooded the cities (Rossi 1991).

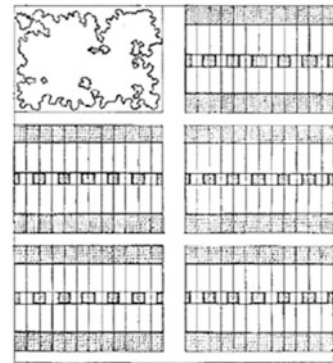
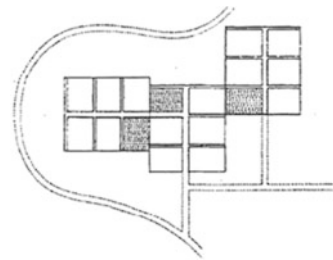


Entrevías Poblado, Madrid (1956)

The Entrevías *Poblado*, built by F.J. Sáenz de Oíza, M. Sierra and J. Alvear, is one of the seven *Poblados dirigidos* built between 1956 and 1957 in Madrid, for the specific purpose of improving the living conditions of the inhabitants of the shanty towns located over the Manzanares River, called Pozo del Tío Raimundo. With the help of Padre Llanos, a Jesuit priest directly involved in the development and construction of the *poblado* for 20,000 people, the architects decided on an orthogonal grid for the road system, strongly rooted in Spanish urban tradition, still a valid solution in minor city extensions. Criteria of speed and economy in construction prevailed, as well as simple options for expansion.

An adaptation of the proposal submitted by Oíza to the experimental housing competition in 1956 (a detached

house architectural type), is repeated in a modular layout, based on an arrangement which, despite the rigidity of the elementary solution, provides flexibility in the general layout. The development is arranged in a number of horizontal terraces, each measuring one hectare, adapted to the topography. Each of the so-called planning units is structured using a system of orthogonal streets in six blocks, each one comprising 24 dwellings. The chosen module for the homes was 3.60 m, i.e. each block of 24 dwellings is defined by a section of 9×12 modules. One of the six blocks in the unit is set free, and the resulting void is a green space (Moneo 1961).



References

- Di Biagi, P. 2013. Il piano INA-Casa: 1949–63. In *Il contributo Italiano alla storia del pensiero: tecnica*. Roma: Treccani.
- Capobianco, M. (ed.). 1998. *Gli anni Quaranta 'la via più fura' dell'architettura italiana*. In *Architettura italiana 1940–50*. Nápoles: Electa.
- Díez Medina, C. 1995. Reflexiones sobre los años de reconstrucción italiana, a partir de la experiencia del Tiburtino en Roma. *Arquitectura: Revista del Colegio Oficial de Arquitectos de Madrid* 301: 14–19.
- Fernández-Galiano, L., J.F. Isasi, and A. Lopera. 1989. *La quimera moderna. Los poblados dirigidos de Madrid en la arquitectura de los 50*. Madrid: Blume.
- Moneo, R. 1961. El poblado dirigido de Entrevías. *Hogar y Arquitectura* 34. Ediciones y Publicaciones Populares, 2–28.
- Pozo, J.M. (ed.). 2000. *Los años 50: la arquitectura española y su compromiso con la historia*. Pamplona: Escuela Técnica Superior de Arquitectura de la Universidad de Navarra.
- Quaroni, L. 1957. Il paese dei barocchi. *Casabella Continuità* 215: 24–33.
- Rossi, P.O. 1991. *Roma. Guida all'architettura moderna 1909–1991*. Roma–Bari: Laterza.
- Sambricio, C. (ed.). 1997. *Concurso de viviendas experimentales de 1956*. Madrid: Fundación Cultural COAM.
- Sambricio, C. (ed.). 2003. *Un Siglo de vivienda Social en Madrid*. Madrid: Nerea.
- Sambricio, C. 2004. *Madrid, vivienda y urbanismo: 1900–1960*. Madrid: Akal.
- Sambricio, C., and R. Sánchez Lampreave (eds.). 2008. *100 años de historia de la intervención pública en la vivienda y la ciudad*. Madrid: Asociación Española de Promotores Públicos de Vivienda y Suelo (AVS).
- Samonà, G. 1949. Il piano Fanfani in rapporto all'attività edilizia dei liberi professionisti. *Metron* 33–34: 14.
- Tafari, M. 1982. *Storia dell'architettura italiana 1944–85*. Turin: Einaudi.

Further Readings

- Aymonino, C. 1957. Storia e cronaca del quartiere Tiburtino. *Casabella Continuità* 215: 18–43.
- Conforto, C. 1977. *Il dibattito architettonico in Italia 1945–1975*. Roma: Bulzoni.
- Cucci, G., and F. Dal Co. 1996. *Architettura italiana del '900*. Milan: Electa.
- Moya González, L. 1983. *Barrios de promoción oficial. Madrid, 1939–1976*. Madrid: Colegio Oficial de Arquitectos de Madrid.

Welfare Planning and New Towns (1945–1970s)

6

Alejandro Dean

Abstract

The aim of this chapter is to analyse the experiences in the field of housing associated with the welfare state that emerged during the process of rebuilding the devastated countries of Western Europe after the Second World War. This process was marked by a period of economic growth that allowed the implementation of socio-economic policies and ambitious social welfare programmes with the aim of improving the lives of citizens. The three concepts explained in the following chapter attempt to summarise these interventions. Although they responded to ideas developed in specific geographical, social and cultural contexts, they quickly became paradigmatic actions that had a decisive influence on much of the urban development that took place in the latter half of the twentieth century.

Keywords

Second post-war period • Welfare state • New towns • New empiricism • Unité d'habitation

The process of rebuilding the devastated countries of Western Europe after the Second World War was marked by a period of economic growth that allowed the implementation of socio-economic policies with ambitious social welfare programmes designed to improve the lives of citizens. These programmes were financed by the state and became the main drivers for the changes made in architecture and urbanism for rebuilding and planning new cities.

The aim of this chapter is to analyse the experiences in the field of housing associated with the welfare state that emerged in the post-war period. The impossibility of extending this analysis to the numerous interventions undertaken in the affected countries leads us to limit our description of only the most significant episodes associated with the welfare state that served as models to guide the difficult task of rebuilding and planning cities. The three concepts explained in the following chapter, while developed in specific geographical, social and cultural contexts,

quickly became paradigmatic methods that had a decisive influence on much of the urban development of the latter half of the twentieth century.

‘New Towns’: The British Model of Decentralisation and Planned Settlement

The conflict between rebuilding and planning that arose in the devastated cities was reflected in the urbanism of Europe after the Second World War.¹ The case of London was particularly significant because the plans required for action, and which contained the most advanced urban design ideas of the time, were set in motion before the end of the war. The

¹“When the war was over the main reaction was one of simple elementary relief. There came a feeling of weariness, a desire to avoid basic problems, to be content with immediate, tangible results: unpropitious conditions for the careful consideration demanded by the gravity of the contemporary problems. (...) Since this process was a very rapid one, there was conflict almost everywhere between the emergency measures necessitated by the war damage and long-term measures necessitated by economic development; in short, between reconstruction and planning.” (Benevolo 1971, 684).

A. Dean (✉)
University of Zaragoza, Zaragoza, Spain
e-mail: adean@unizar.es

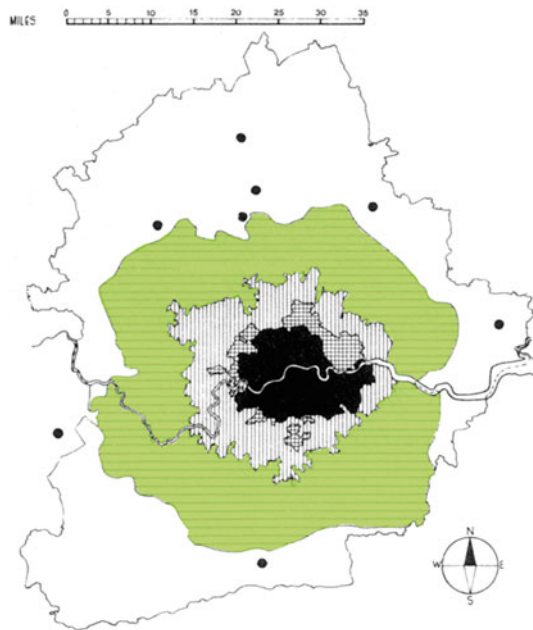


Fig. 6.1 Patrick Abercrombie and John Henry Forshaw, Greater London Plan, 1944. Diagram showing London's growth through a structure of 4 concentric rings. From the centre: the County of London (in *black*), the 'inner ring', the 'suburban ring', the 'green belt' (in *green*) and the 'outer ring' where the 'new towns' would be built as a territorial response to the need to decentralise London's growth

London County Council² commissioned Patrick Abercrombie in collaboration with John Henry Forshaw (chief architect of the LCC) to prepare the County of London Plan (1943) and the Greater London Plan (1944). While the former was limited to the principle of organisation by district and relieving congestion in the county, the latter laid down the aims for the future growth of London based on a structure of 4 concentric rings.³

This territorial response to decentralisation caused the growth of London to be channelled towards the 'new towns', creating a constellation of satellite cities occupying the 'outer ring', establishing a regional influence located outside of the 'green belt' in an attempt to limit London's sprawl. This strategy of planned settlements in rural areas continued the concept of decentralisation defended by Ebenezer

²The London County Council (LCC) was the main government body for the County of London, which had broad authority over matters such as education, planning and social housing.

³The 4 rings of the Greater London Plan comprised: the 'inner ring' (area of the County of London), the 'suburban ring' (suburban zone), the 'green belt' (green space that surrounded the present city and should be maintained) and the 'outer ring' (area destined for 'new towns'). This plan based on concentric rings was totally contrary to the linear plans made for London by Ludwig Hilberseimer (1941) and by the MARS Group (1942) (Pizza 1987).



Fig. 6.2 Frederick Gibberd, Harlow New Town, 1947. Partial aerial view of the Mark Hall neighbourhood, where the different types of residential buildings (terraced houses and multi-level dwellings) and disperse nature of the development are seen

Howard, but unlike his idea for garden cities, the 'new towns' were planned and developed by the state on public land or land acquired through expropriation.

Urban planning received a definitive boost when the New Town Act was passed in 1946, establishing the financing and setting the rules for the first generation⁴ of 'new towns' (1946–51). A total of 13 'new towns' were built (8 of which were around London) with a capacity for between 20,000 and 60,000 inhabitants, designed as independent towns comprising a 'town centre', with public services and commerce, an industrial area separate from housing, and a residential area divided into self-sufficient 'neighbourhood units' for a maximum of 10,000 inhabitants, provided with primary services such as shops, schools, play grounds, etc., and surrounded by green spaces for the purpose of maintaining their own identity.

Featured among these first efforts is the work by Frederick Gibberd⁵ in Harlow. For the most part, however, the

⁴The 13 first-generation 'new towns' were: Stevenage (1946), Harlow (1947), Crawley, (1947), Hemel Hempstead (1947), Hatfield (1948), Welwyn Garden (expanded 1948), Basildon (1949), Bracknell (1949), East Kilbride (1947) in Lanarkshire (Scotland), Peterlee (1948) in County Durham, Glenrothes (1948) in Fifeshire (Scotland), Cwmbran (1949) in South Wales, and Corby (1950) in Northamptonshire.

⁵F. Gibberd acted as a great disseminator of the principles of the Athens Charter, which made him one of the most salient figures of the Modern Movement in Britain. He took part in the CIAM 7 and 8 meetings, where he was able to share the experience of the British 'new towns', and he published the book *Town Design* in 1953, which was a reference manual for the construction of 'new towns' where special attention was given to the visual aspects of the urban space (Gibberd 1953).



Fig. 6.3 Hugh Wilson and Geoffrey Copcutt, civic centre in Cumbernauld New Town, 1955–67. This project shows clear influence from Team 10, and was directly connected to the main roadway system from its low-lying area

disperse nature of these ‘new towns’, based on the implementation of urban concepts espoused by the Athens Charter,⁶ and the use of an architecture that owed much to traditional and popular English tastes produced results that were closer to the picturesque than to the Modern Movement (Ordeig Corsini 2004, 125–137). These first experiments were harshly criticised by the British journal *The Architectural Review*, with articles such as “The Failure of the New Towns”,⁷ epithets like ‘subtopia’ and the descriptive terms such as New Empiricism.⁸

As a result of the criticism received, the experience gained and the maturation of the first generation of developments, substantial changes were made to the ‘new town’ model, which brought about a streamlining of the initial concepts. While the second generation⁹ (1951–61) advocated greater density in residential districts and condensation of activity in a single town centre with evident influence from Team 10 (the case of Cumbernauld New Town), the



Fig. 6.4 Sven Backström & Leif Reinius, residential development, Gröndal, Sweden, 1944–46. Aerial view of the suburb where the strong geometric design of the star-shaped dwellings can be observed, either forming small, interlocked 3/4-storey blocks creating hexagonal courtyards between them, or freely placed seeking the best orientation

third generation¹⁰ (1964–71) placed special emphasis on transport systems owing to the increased population density and introduced new methodological orientations that would produce results close to the vernacular designs typical of the late 1970s (as was the case of Milton Keynes).

There is no doubt that when the ‘new town’ experience—which emerged from an anti-urban idea to satisfy the great demand for housing by offering an alternative and ideal lifestyle—reached its peak, it ultimately defended the need for high urban density without offering a coherent form to

⁶“New towns represented the implementation of such urban concepts espoused by the Athens Charter as master planning, separation of functions, urban hierarchy and separated circulation systems” (García Alonso and Luque Valdivia 2004).

⁷In his article “The Failure of the New Towns”, J.M Richards described these urban settlements as a social, economic and architectural failure (Richards 1953).

⁸With perhaps the odd exception, the setting of the ‘new towns’ formed a type of ‘architectural style’ defined as ‘new empiricism’ by the critics at *The Architectural Review*.

⁹Two ‘new towns’ can be considered part of this second generation: Hook (1960–61) in Hampshire, designed by the London County Council for 100,000 inhabitants but not built, and Cumbernauld New Town (1955–67), designed by the planner Hugh Wilson for 70,000 inhabitants, was created to decentralise the Scottish city of Glasgow. The result of the latter was criticised because its layout did not allow for future growth processes and produced significant traffic problems.

¹⁰Standing out from among the third generation of ‘new towns’ are Runcorn (1964–65) and Milton Keynes (1968–71), with the latter reaching the threshold of 250,000 inhabitants. The criticism directed at the latter was due to the excessive fragmentation of the land, which gave rise to a subdivision into ‘island neighbourhoods’, to the replacement of the urban value of the square with the central area for services located in a single container, and to the loss of the physiognomy of a city by turning it into a ‘Road Town’.



Fig. 6.5 Sven Markelius, satellite city Vällingby, Sweden, 1953–59. Located to the north of Stockholm, it was designed as a self-sufficient town for 25,000 inhabitants. The large variety of residential housing types are grouped in organic clusters scattered around the town centre. It was used to disseminate an image of the harmonious Swedish welfare state around the world

meet this unavoidable requirement, as Benedetto Gravagnuolo explained.¹¹

‘Forest Towns’: The Scandinavian Model of the Satellite City

The socially progressive policies implemented in the 1930s in most of the Scandinavian countries gave rise to a favourable context for the development of residential experiences linked to the welfare state. Owing to its neutrality during the Second World War, Sweden did not have to face the conflict between planning and rebuilding that affected other countries, which allowed it to advance and develop an

¹¹“We can say, in short, that at its peak the new town experience stagnated into a double paradox: on the one hand, as a movement born out of an anti-urban ideology ending up defending the need for high urban density, but on the other, owing to a flawed initial approach, being unable to give a coherent shape to this unavoidable requirement.” (Gravagnuolo 1991).

architecture that broke with the excessively schematic architecture of the 1930s, quickly becoming a role model for post-war European societies.

This Swedish reform movement was christened New Empiricism¹² “In general, it is a reaction against a too rigid formalism. The first excitement of structural experiment has gone and there is a return to workaday common sense. There is a feeling that buildings are made for the sake of human beings rather than for the cold logic of theory. The word *spontانيتet*, so often on the lips of the young Swedish

¹²“So far no strong reaction is evident against the principles upon which functionalism was founded. Indeed, these principles were never more relevant than now. The tendency is, rather, both to humanize the theory on its aesthetic side and to get back to the earlier rationalism on the technical side. (...) However, the effort to humanize the aesthetic expressions of functionalism is open to many interpretations. The Swedish one, which is illustrated here, may, on the basis of statements made by Swedish architects themselves, be called The New Empiricism. Briefly, they explain it as the attempt to be more objective than the functionalism, and to bring back another science, that of psychology, into the picture.” in Richards (1947, 199).



Fig. 6.6 Arne Ervi, civic centre in Tapiola, Finland, 1953–61. View of the entrance to the platform which provides access to the shopping centre and services, where possible influences from the civic centres of the British ‘new towns’ and the urban projects by Alvar Aalto can be appreciated

architect today, perhaps gives the key to the new approach. (...) Indigenous traditional materials are used both inside and out, especially brick and timber. (...) Building are married carefully to the sites and to the landscape, and flowers and plants are made and integral part of the whole design” in De Maré (1948, 9–10) by critics at the *The Architectural Review* in 1947, and it produced a residential architecture that focused on humans and their habits, without sacrificing categories inherent to the Modern Movement. Architects such as Sven Backström and Leif Reinius made their mark on the international scene through their residential investigation that combined organic modern macro-typologies with traditional building designs that paid attention to the psychology of the user,¹³ as can be appreciated in

¹³As with the first generation of British ‘new towns’, this architecture “proposed a style of urban planning that paid attention to the psychology of the user, accumulating experiences from the past, the specific and the detail. It meant, therefore, a reinterpretation of the vernacular architecture by looking to traditional tastes...” (Ordeig Corsini 2004, 125–126).

the residential units designed for Gröndal (1944–46) and Rösta (1946–51) [see case study at the end of the chapter].

In addition to showing certain analogies with the British ‘new towns’, the planning processes brought about by the expansion of the larger Nordic cities were favoured by previous policies of acquiring large areas of peripheral land, giving rise to a balanced decentralisation by means of satellite cities integrated with their natural setting. This setting was mainly forested, which became a physical and mental context that would favour the harmony between architecture and landscape in the new settlements.¹⁴

Satellite cities would generally have a similar layout, based on the use of different residential typologies grouped

¹⁴Together with this empiricist attitude, the interpretation of nature emerges as a crucial concept that is more influential in the urban setting. The mental context, apart from the real, physical setting, continues to be the forest... “For example, for a Finn, the forest signifies protection and comfort, while for a Central European, it signifies a threat and anxiety. In summer, most Finns renounce the modern conveniences of the city and take pleasure in returning to the lifestyle of the earliest inhabitants of the forest.” (Ordeig Corsini 2004, 96).

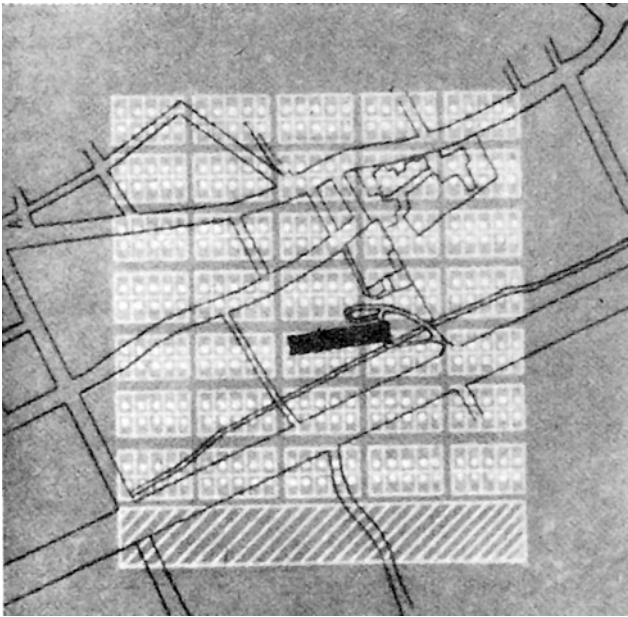


Fig. 6.7 Le Corbusier's Unité d'habitation, Marseille, France, 1945–52. Le Corbusier's reasoning to justify the suitability of his design for 350 residential units for 1600 inhabitants. In black, the 'vertical town' of the *unité*; in white, the land that would be occupied by the same population in a horizontal garden city with its respective facilities

in organic units around a large centre. The General Plan for Stockholm, produced by Sven Markelius,¹⁵ gave rise to two examples used to publicise Swedish welfare, Vällingby (1953–59), designed by Markelius himself, and Farsta (1958), designed by Backström & Reinius. Greater Helsinki (1918), the town plan designed by Eliel Saarinen, with its decentrist guidelines for development, made possible the construction of the first Finnish 'forest town'¹⁶ of the post-war period, Tapiola¹⁷ (1952–56), paradigm of a high-quality residential suburb integrated with nature.

¹⁵“Calling to mind the successful, early 20th-century garden suburb (*villastad*) interventions in Stockholm, Markelius based his plan on the complementarity between the high-density city centre and a ring of peripheral satellite cities to be built starting in the early 1950s: Vällingby (1953–1959), Färsta (1958), Skärholmen (1963–1968), Tenska-Rinkeby (1975), Norra Järvafältet (1977).” (Gravagnuolo 1991).

¹⁶The term 'forest town' comes from the housing project designed by the Finnish master Alvar Aalto for workers of the Sunila Cellulose Factory (1935–39) and would have a decisive influence on Nordic urban design owing to its particular harmony between the landscape and the architecture. In addition to carrying out other planning projects of special relevance, Aalto was the head of the Finnish Office for Reconstruction in 1944. (Torres et al. 2006, 12–19).

¹⁷Tapiola was the initiative of Heikki von Hertzen, executive director of Väestöliitto (Population and Family Welfare Federation of Finland) and it was planned by Otto-Ivari Meurman, in collaboration with brilliant Nordic architects such as Aulus Blomstedt, Arne Ervi, Viljo Revell and Markus Tavio, among others.



Fig. 6.8 Le Corbusier's Unité d'habitation, Marseille, France, 1945–52. Designed as a small, self-sufficient 'vertical town' for 1600 inhabitants, raised above the ground

These experiences would create parameters and strategies for Nordic cities that were of great influence on the creation of new residential areas. In Denmark, the residential suburbs designed by Arne Jacobsen (Klampernborg 1950–63 and Solholm 1950) and by Jørn Utzon (Kingo 1956 y Fredensborg 1959–65), would become model post-war developments.

'Vertical Town': Unité d'Habitation as a Prototype

While the two previously analysed episodes were based on the planned settlement of land influenced by Howard's Garden City, the concept behind Le Corbusier's Unité d'Habitation, emerged from the inverse idea of freeing land from construction by concentrating all the activity in a small 'vertical town' raised above the ground and designed as a self-sustaining community.¹⁸

Le Corbusier was able to develop this concept for the first time in the Unité d'Habitation of Marseille between 1945 and 1952 thanks to the commission from the Ministry for Reconstruction and Urban Development of France,¹⁹

¹⁸Like Fourier's utopian designs for phalansteries dating from the first half of the nineteenth century, the *unité* was defined as a self-sustaining community in which the relationship between the number of residents, communal services and the space occupied by these is balanced by a functional organisation based on the social analysis of the time. Eduard Calafell, *Las unités d'habitation de le Corbusier, Aspectos formales y constructivos*. (Barcelona: Fundación Caja de Arquitectos, 200), 17.

¹⁹The Ministry of Reconstruction and Urban Development of France was created in 1944 to confront the problems created by the war. Minister Claudius Petit dealt with urban and rural planning and organised specific interventions that would attract the interest of the general public, and the *unité* in Marseilles would be the most outstanding project under his leadership (Benevolo 1971).

allowing him total freedom to express his ideas on modern housing.²⁰ Le Corbusier's interpretation of modern life materialised in the prototype of the *unité*, designed as a single architectural object that comprised two differentiated parts. An upper level crowned by a garden terrace and containing 350 residential units of different types, together with the facilities required for an estimated 1600 residents, and a lower level comprising the artificial ground supported on *pilotis* which, in addition to keeping the volume raised over the terrain, houses the necessary elements for this ideal city to function and develop (Monteys 1996).

The dwellings were double height using his Modulor scale based on human proportions, and were laid out as a series of juxtaposed cells assembled by means of Le Corbusier's system called *bouteille-bouteiller* (bottle and rack), and connected by interior streets.

Le Corbusier developed this prototype of 'vertical town' in other locations (Nantes, Berlin, Briey-en-Forêt and Firminy), and it became a basic reference for the field of European housing in the period after the Second World War and one of the most radical and important architectural models of the twentieth century.²¹

²⁰The break in his career caused by the start of the Second World War allowed Le Corbusier to organise his ideas on architecture and urban development developed in recent years and to bring them together in the *Unité d'Habitation à Grandeur Conforme* (Calafell 2000, 15).

²¹"Architects such as Jaap Bakema and Jo van der Broek, who were leaders in Dutch post-war urban planning, took Le Corbusier's unitary idea and totally deconstructed the volume into different blocks, giving rise to their most important contribution: the self-sufficient neighbourhood" (Benevolo 1971).

Case Studies

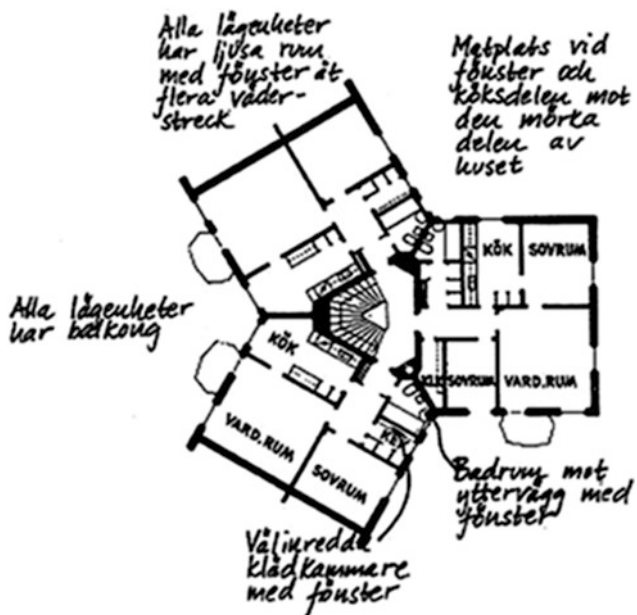
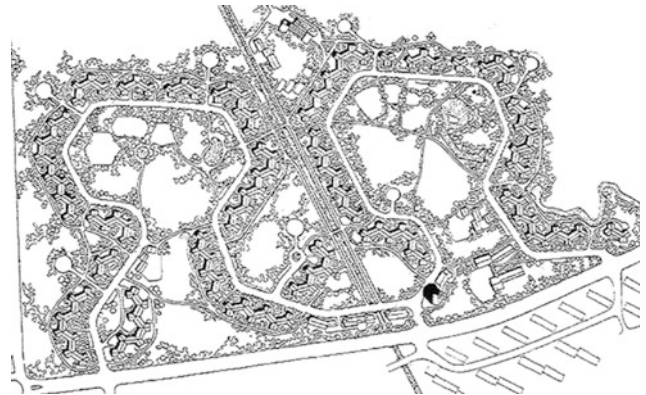
Rösta Housing Area, Örebro, Sweden (1946–1951)

From its beginnings, the work by Backström & Reinius was characterised by the constant research into types of residences and new ways of grouping them. This project was the result of a design competition held by the municipal housing company. The result is based on the large-scale repetition of star-shaped residential buildings to create a modern macro-structure with the strong geometric presence of the buildings, using traditional building techniques and decorative forms.

The design is based on the interlocking repetition of the same pattern to create an organic cluster that is not subordinated to the road network, but rather set around a series of

broad, south-facing communal green spaces. The interlocking buildings create small courtyards open to the façade from which the dwellings are entered, and are interrupted from time to time to interconnect the large green spaces to resolve pedestrian and vehicular traffic.

A 3-storey block structure was developed to combine the advantages of a double-sided, narrow block with a wide residential block in which communal services have been optimised. The three wings of each 'star' building converge in a vertical communication core and give rise to three dwellings per floor, with double or triple orientation, depending on their position in the block. This same type of building was projected previously by the architects in the Gröndal residential development (1944–46), where smaller-scale clusters were made forming a hexagonal pattern with small, isolated towers.

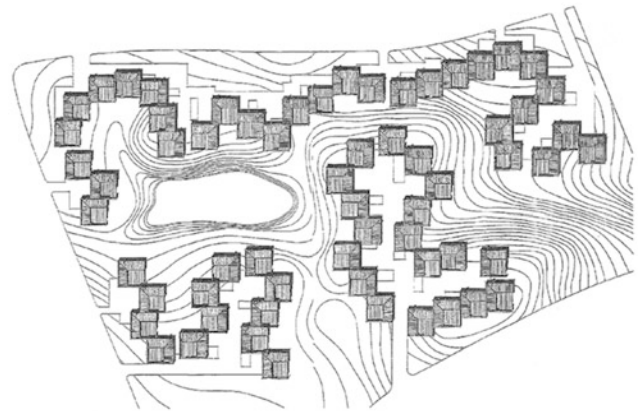


Kingo Housing Complex, Helsingør, Denmark (1956)

Utzon designed this project for the Helsingør authorities in order to provide housing for shipyard workers. The layout is based on a prototype of courtyard house that originated with the competition for economical housing won three years before for the Swedish province of Skåne, together with the architect Ib Møgelvang. The orderly succession of the 63 dwellings over 15×15 m plots, adapted to the irregular terrain around a lake and seeking good orientation and views conveys the idea of community without sacrificing the privacy of each family through the construction of a courtyard enclosed by stepped brick walls.

Different versions were made of a standard 3-bedroom house with a limited built surface area of 110 m^2 to take advantage of the favourable system of state funding. The idea was that the ground-floor dwellings laid out in an L around a square courtyard would continue to develop over time within the enclosing wall. The courtyard would become the differentiating element of the dwellings and act as a connector with the surrounding communal green space (Weston 2004).

The use of traditional materials in the construction of a design that owed much to the concept of additive architecture, a principle based on the patterns of natural growth, would be used by Utzon in later projects in the Swedish localities of Bjuv (1956) and Lund (1957), and years later over a gently sloping hillside to the south of the Danish locality of Fredensborg (1959–65).



References

- Benevolo, L. 1971. *History of modern architecture [Storia dell'architettura moderna, 1960]*. Cambridge, Massachusetts: M.I.T. Press.
- Calafell, E. 2000. *Las unités d'habitation de le Corbusier. Aspectos formales y constructivos*. Barcelona: Fundació Caja de Arquitectos.
- Gravagnuolo, B. 1991. *La progettazione urbana in Europa, 1750–1960: storia e teorie*. Bari: Laterza.
- Monteys, X. 1996. Una síntesis. La Unité d'habitation. In *La gran màquina. La ciudad en Le Corbusier*, 147–161. Barcelona: Demarcación del Barcelona del Colegio de Arquitectos de Cataluña y Ediciones del Serbal.
- Ordeig Corsini, J.M. 2004. *Diseño urbano y pensamiento contemporáneo*. Barcelona: Monsa.
- Torres, J., D. Domingo, F.J. Nieto, R. Castellanos, C.E. Mejía, J. Deltell, M. Pérez, et al. 2006. Tapiola. *DPA Documents de Projectes d'Arquitectura* 22. Barcelona: UPC.
- Weston, R. 2004. *Jørn Utzon Logbook Vol I: The Courtyard Houses*. Denmark: Bløndal.

Further Readings

- Avermaete, T., and D. van den Heuvel, ed. 2011. The European Welfare State Project: Ideals, Politics, Cities and Buildings. *Footprint, Delf Architecture Theory Journal* 9.
- Bardí i Milà, B., D. García Escudero, A. Frediani, J.J. Ferrer Forés, H. Palmer, U. Grønvold, P. Thule, et al. 2010. *Nórdicos. DPA Documents de Projectes d'Arquitectura*. Vol. 26. Barcelona: UPC.
- Canizaro, V.B. 2007. *Architectural Regionalism*. New York: Princeton Architectural Press.
- Colquhoun, A. 2002. Neoclassicism, organicism, and the welfare state: architecture in scandinavia 1910–1965. *Modern Architecture*. Oxford: Oxford University Press.
- García Alonso, M., and J. Luque Valdivia. 2004. Frederick Gibberd 1953, Town Design, Architectural Press, London. In *Constructores de la ciudad contemporánea. Aproximación disciplinar a través de los textos*, 413–420. Madrid: Cie Inversiones Editoriales—Dossat 2000.
- Gibberd, F. 1953. *Town Design*. London: Architectural Press.
- Hall, T. 1991. *Planning and urban growth in the Nordic countries*. Oxford: Alexandrine Press.
- Lujanen, M. 2004. *Housing and housing policy in the Nordic countries*. Copenhagen: Nordic Council of Ministers.
- De Maré, E.S. 1948. The antecedents and origins of Sweden's latest style. *The Architectural Review* 103: 9–10.
- Montaner, J.M. 1993. Arquitectura nórdica: 'New empirism' y la arquitectura en el detalle. In *Después del movimiento moderno. Arquitectura de la segunda mitad del siglo XX*, 83–94. Barcelona: Gustavo Gili.
- Pizza, A. 1987. Acontecimientos catastróficos y modelos de regeneración: Casa, barrio, ciudad, en las experiencias de la reconstrucción europea. 1945–1955. In *La arquitectura de los años 50 en Barcelona*, ed. X. Monteys, 234–267. Madrid: MOPU.
- Swenarton, M., T. Avermaete, and D. van den Heuvel. 2015. *Architecture and the Welfare State*. London: Routledge.
- Richards, J.M. 1947. The new empiricism: Sweden's latest style. *The Architectural Review* 101: 199.
- Tafari, M., and F. Dal Co. 1979a. Between nationalism and populism: The bay region style, Scandinavian neo-empiricism, Italian neo-realism, the work of Alvar Aalto. *Modern Architecture [Architettura Contemporanea, 1976]*. New York: Electa–Rizzoli.
- Tafari, M., and F. Dal Co. 1979b. Urbanistic administration and building policies after world war II. *Modern Architecture [Architettura Contemporanea, 1976]*. New York: Electa–Rizzoli.

Modernist Mass Housing in Europe: Comparative Perspectives in Western and Eastern Cities (1950s–1970s)

7

Javier Monclús, Carmen Díez Medina, and Sergio García-Pérez

Abstract

The aim of this chapter is to compare and contrast modernist European mass housing projects built from the 1950s to the 1970s, namely during the period of rapid urban growth, on both sides of the Iron Curtain. (As a reference, we take the size of French ‘grands ensembles’, more than 1000 housing units.) This comparison could easily focus on the well-known characteristics of the socialist cities, due to the different nature of their urban policies, the absence of a free land market or the relative impact of industrialisation in construction. Nevertheless, many urban planning concepts and urban processes were evidently shared by ideological, political and economic blocs during that period. Despite their different names—*housing estates* in the UK and in other English-speaking countries; *grands ensembles* in France; *Großsiedlungen* in the Republic of Germany; *polígonos de vivienda* in Spain; *panelaky* in some Socialist countries such as the former Czechoslovakia; *Plattenbau in East Germany*, etc.—most of these estates rely on similar urban forms. Therefore while mass social housing is a concept difficult to define, it is one with a clear morphological dimension: “a form and landscape characterised by clusters of blocks and towers in a space subjected to the zoning rules” (Dufaux and Fourcaut 2004, 45–61). The question is to what extent these similar urban forms are the result of the dissemination of modernist international urban culture. The text explores the nuances of these opposed positions, both those which consider functionalist urbanism—and modernist urban forms—responsible for the failure of many of these estates and those which claim that sociological and economic factors to be the cause of their degradation in ghettos. The aim is to understand to what extent the project might be responsible for the low quality and the early obsolescence of most of these estates.

Keywords

Modernist mass housing • Socialist housing estates • Urban design • Urbanity • Eastern bloc • Functionalist urbanism • Athens charter

J. Monclús (✉) · C. Díez Medina · S. García-Pérez
School of Engineering and Architecture (EINA),
University of Zaragoza, Zaragoza, Spain
e-mail: jmonclus@unizar.es

C. Díez Medina
e-mail: cdiezme@unizar.es

S. García-Pérez
e-mail: sgarciap@unizar.es

Modern Ideals and Criticism of Radical Modernity

Urban processes including major construction of mass housing between the 1950s and the 1970s reveal features that should be discussed from a comparative international perspective. The fact that they were built during the same

time rules out some claims that time lags or disparities in a common process of modern urbanisation account for their differences. It is perhaps more relevant to delve deeper into the variations of that similar process to discover to what extent they are in debt to modern functionalist urbanism as defined in CIAM, particularly in the Athens Charter (1933–1943) [see Chap. 4]. It is important to assess how those modern visions contributed to defining the peripheral landscapes that were configured in the years of international urban ‘developmentalism’. And this should be done without attributing excessive responsibility to modern urban forms.

Despite the fact that the application of the principles of functionalist urbanism lies, at least partly, at the heart of a certain obsolescence that took place in the following decades, it is worth considering in some detail. Much ‘post-modern’ criticism attributes the social problems in the North American projects to architectural and urbanistic decisions, as was the case of the emblematic Pruitt-Igoe. Its demolition in 1972, just 17 years after it was built, led to generalised, abusive criticism of the modernist mass housing projects, in the USA and in Europe (Hall 2014). Nevertheless, criticism of this type of residential estates had already taken place in the middle of the 1960s, when construction started to intensify.¹ In addition to the well-known texts by Jane Jacobs (1961), Gordon Cullen (1961), Christopher Alexander (1964), Alexander Mitscherlich (1965) and Aldo Rossi (1966), among others, discontent was already manifest in the West and in the East, as illustrated by two contemporary texts published in West Berlin and East Berlin at the start of the 1970s, *The Murdered City* by J.W. Siedler (1964) and *The City of Tomorrow* based on correspondence between Brigitte Reimann and Hermann Henselmann (1963), give an idea about the speed at which utopian visions on modern urbanism soon turned into negative, critical outlooks. While it is important to qualify these critical visions, they should also be read more deeply, avoiding simple interpretations as ‘post-modern’ or even ‘anti-modern’. An undeniably ‘modern’ author such as Marshal Berman pointed out the contradictions of indiscriminately defending modernity, blaming the modernists for the loss of urban values caused through the radicalism through which orthodox modern urbanism neglected the

virtues of traditional cities.² It is therefore essential to identify the weaknesses and paradoxes of the radical application of the principles of functionalist urbanism, without this becoming ‘anti-modern’.

Mass Housing in Western Europe: A Vulgate of CIAM Urbanism?

The construction of huge mass housing estates was a common practice throughout Europe during the 1960s and 1970s, with the paradox that at that time those principles were under heavy scrutiny.

While the specific features of the estates built during that period in different cities and countries certainly reflect different national traditions or cultures, there can be no doubt that, as Frank Wassenberg pointed out, “there has never been a period in house building in which the similarities between countries have been as great. High-rise estates dominated the building in this era” (Wassenberg 2013, 169).

While avoiding generalisations, particularly in assessing their architectural, urban and environmental quality, it is important to bear in mind the legacy these estates represent fifty years after they were built. Beyond the considerations of their eventual ‘failure’, the diagnosis of an inoperative process appears to be shared: starting with more generic aspects such as the lack of urban life due to rigid functionalist zoning; or the difficulty of integrating isolated, autonomous estates with the city; and including other more specific factors such as the obsolescence of housing types and specific amenities, the inadequacy of construction methods according to current standards, over-sizing or the poor design of urban spaces. (López de Lucio 2013).

Are these shortcomings the consequences of an indiscriminate, large-scale application of the principles of modern, functionalist urbanism? It is important to differentiate and bear in mind that the quality, although difficult to assess, varies markedly between countries and cities, as well as in scale and the time in which construction took place. There can be no doubt that the best examples are rare, whereas those of average quality represent the majority; the average account for most of the suburbs in that period, and those of ‘low urbanistic and construction

¹The case of West Berlin was especially interesting, changing from positive views to the ‘fall from public grace’ towards the middle of the 1960s: “In the case of the Märkisches Viertel, the fifth Bauwochen (Building Fair) in 1968 marked a sudden swing in public opinion” (Urban 2012, 60).

²“Ironically, then, within the space of a generation, the street, which had always served to express dynamic and progressive modernity, now came to symbolize everything dingy, disorderly, sluggish, stagnant, worn-out, obsolete-everything that the dynamism and progress of modernity were supposed to leave behind” (Berman 1982).



Fig. 7.1 Park Hill, located in Sheffield, 1954–61, is one of the most paradigmatic episodes of modernist mass housing construction in England. The decline of the estate was almost immediate, due to the slump in the steel industry: public spaces soon became desolate, abandoned corridors, while the most radical modern concepts led to complete standardisation of architectural solutions



Fig. 7.2 Bijlmermeer, in Amsterdam, 1966–72, was presented as an advanced suburb in the motorised age, an achievement for the most radical functionalists. Nevertheless, this modernity soon became the icon of an acknowledged mistake. However, as is true in other cases, the urban and architectural designs were not the only factors to blame for the problems. In Holland, construction of Bijlmermeer coincided with the arrival of a large number of immigrants after independence of the former Dutch colony of Surinam in 1975



Fig. 7.3 Sarcelles, built on the outskirts of Paris in 1958, is the most significant French *grand ensemble*, an estate with a monolithic composition of residential blocks and towers arranged on a rigid grid in perfect harmony with the rationalist principles of CIAM. The consequential monotony, the vulgar architecture and lack of equipment, commercial areas and activities are the causes of the poor urban quality that was so heavily criticised in the mid-1970s



Fig. 7.4 The Märkisches Viertel built in West Berlin, 1963–1974, is a textbook example. In essence, it is not so different from the *grands ensembles* or the Dutch or British equivalents, since it was a sleeping town, an assembly of high-rise blocks and enormous open areas. But what was initially a proposal of democratic urbanism in just a few years also ended up being a failed attempt

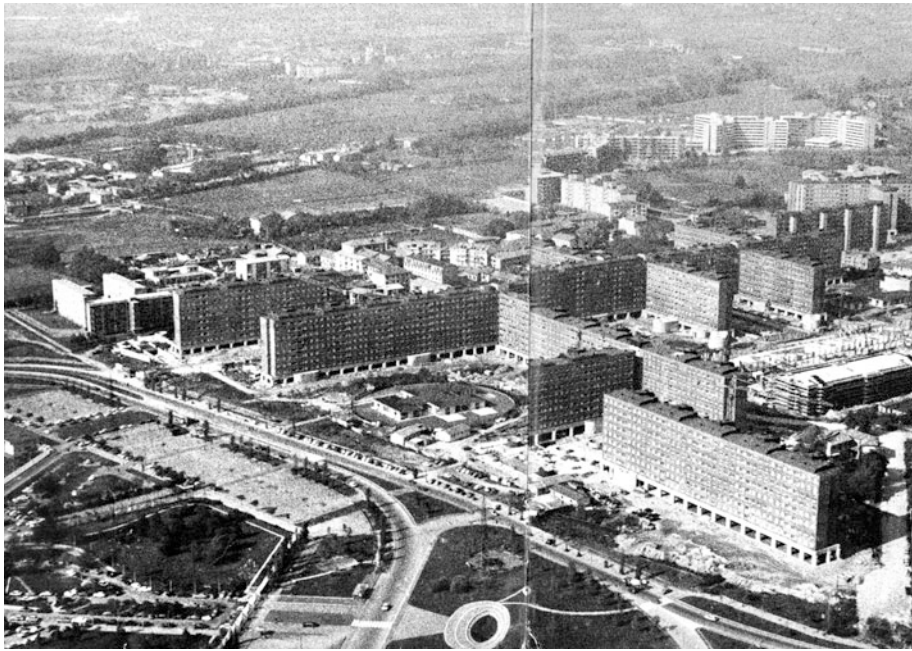


Fig. 7.5 Quarto Cagnino, built in Milan, 1967–73, represents an alternative model to self-sufficient districts, being an unusual example of a coordinated programme. Nevertheless, the economic limitations prevented development of the original project, which featured well-designed intermediate spaces and different housing types, paying special attention to the connection between communal areas and private areas

quality’ are those that coincide with the so-called vulnerable areas (Monclús and Díez Medina 2016, 779–787). The latter, since they are districts undergoing processes of deterioration, are currently the object of more or less comprehensive urban renewal strategies (Monclús and Díez Medina 2015, 13–34).

Indeed, it is obvious that the success or failure of these estates does not exclusively depend on the features of open, modern urbanism design, but on the conditions of their construction and on the particular circumstances of a period in which increased scale and rapid construction processes led to a significant loss of their urban quality.

Mass Housing in the Socialist Bloc: Modern Ideals and Communist Cities

The Socialist Bloc and the West European countries underwent a strong period of accelerated urban growth after World War II as a result of the heavy demand for housing. In the East and West alike, the principles and strategies of modern urbanism appeared appropriate for the new situation. In his book *Urbanism in Socialist Europe* (1971), the influential architect and communist theorist, Edmund Goldzamt, claimed that urbanism in socialist countries could be understood as a continuation of the tradition of experiences developed in Europe during the period between the wars. Goldzamt upheld that “the

liberal ideas of (...) the Athens Charter could be assumed in Socialist planned economy conditions” (Goldzamt 1980, 171–172). Urbanism of the new estates in Eastern Bloc countries was also based on the ‘neighbourhood unit’, although, in the ‘*microrraion*’ (microdistrict) version, a fundamental item in the organisation of infrastructures and services.

Therefore, in spite of the different cultural traditions and political situations, the new residential estates were planned in accordance with the postulates of functionalist modern urbanism. Of course, this was a complex process that was both contradictory and paradoxical, proof of which are the “16 Principles of Urbanism” approved in East Berlin in 1951,³ or other versions of the functional city, such as the ‘ideal communist city’, intensely theorised during the 1960s (Gutnov et al. 1970).

Predictably, the Moscow model was highly influential in urban planning of the Socialist bloc countries, from the 1930s onwards.⁴ In the theoretical work produced after the middle of the 1950s, it can be seen how ‘open urbanism’ was adopted, in a way similar to Western models. The most significant difference between the two is in the proportion of the population living in Eastern estates as much higher,

³“Grundsätze des Städtebaus. Von der Regierung der Deutschen Demokratischen Republik am 27. Juli 1950 beschlossen” (Clelland 1982; Strobel 2003).

⁴Starting with the Plan of Moscow of 1935.



Fig. 7.6 Sykhiv Stryis'kyi district, Lviv, Ukraine, 1970s. As with the other figures of this chapter we can see that all these paradigmatic housing estates belong to a 'family' or a typology of urban forms which show how CIAM tenets were widely applied in housing estates after 1950 both in Western and Eastern cities. This case study is a good illustration of how big open spaces often become a problem, especially when the building of public facilities is delayed or neglected, as is frequently the case



Fig. 7.7 In Pobeda (victory) district, residential area Solnechny (sunny) built in the soviet period in Dnipropetrovsk (Ukraine), unlike Western models, industry was the factor leading to construction, in accordance with the Soviet urbanism principles of the 1930s. This circumstance introduced a new problem: many cities were abandoned when the factories closed down. It is interesting to note in this case the privileged location of the estate, facing southwards and enjoying the best canonical view of the city centre. The 'Dnipropetrovsk Sunrise', a solar-themed installation by Olafur Eliasson (2013), brings a literal injection of light into a predominantly grey landscape. It is an example of how environmentally progressive enterprises, such as Interpipe steel factory, are trying to activate, through artistic actions, degraded industrial areas



Fig. 7.8 In Moscow, the estates located in the districts to the northeast of the city, such as Khimki-Khovrino (shown in the picture), Fili-Izmajlovo or Chorosevo-Mnevniki, demonstrate how the problems related with prefabrication (indiscriminately used for economic reasons) are obvious in the large estates built during the 1960s. With Khrushchev in power, the commitment to industrialisation and prefabrication brought well-known consequences with it to these estates



Fig. 7.9 The example of Nowa Huta, Krakow, Poland, is one of the most significant episodes. This was an attempt to learn from the Soviet experiences, from both the positive and negative aspects. Given the enormity of the estate and the autonomous organisation of each residential unit (*microration*), different urban forms and designs coexist on this estate. The succession of linear blocks, arranged in rows with wide green areas between them and linked to a hierarchically arranged traffic network, reveals the legacy of functionalist urbanism by CIAM, despite the fact that the Athens Charter never dealt with the subject of relating cities to industry

generally over 50%. The degree of standardisation and prefabrication is also evident well through the 1980s which, according to Lydia Coudroy de Lille, makes those estates “an expression of European modernity and not of socialism” (Coudroy de Lille 2004, 90–95).

Obsolescence and Urbanity

We could complete this comparative vision with some considerations about both positive aspects and the heated criticism that occurred on both sides of the Iron Curtain. Firstly, it should be noted that both in the East and in the West, construction of mass housing estates responded to the urgent demand for housing at the end of the war and accounted for a substantial improvement in living conditions for the new urban population. As the demand for housing increased in the 1960s, more pragmatic visions were developed, leading to higher standardisation of housing and the extreme uniformity of urban forms.

It is true that there is more diversity in the architecture of western countries, if not so much in terms of urbanism. Construction quality is also better in the West than in the

East. But it is the higher number of estates and the increase in their size that represents the main difference in the East, where the uniformity of the urban landscape reflects the codes of social equality imposed by centralised administration. Basically, the common weaknesses of mass housing in the ‘age of modernity’, in addition to the commitment to strict zoning and uniform typology, are a result of the speed of construction processes and the significant increase in scale of the estates.

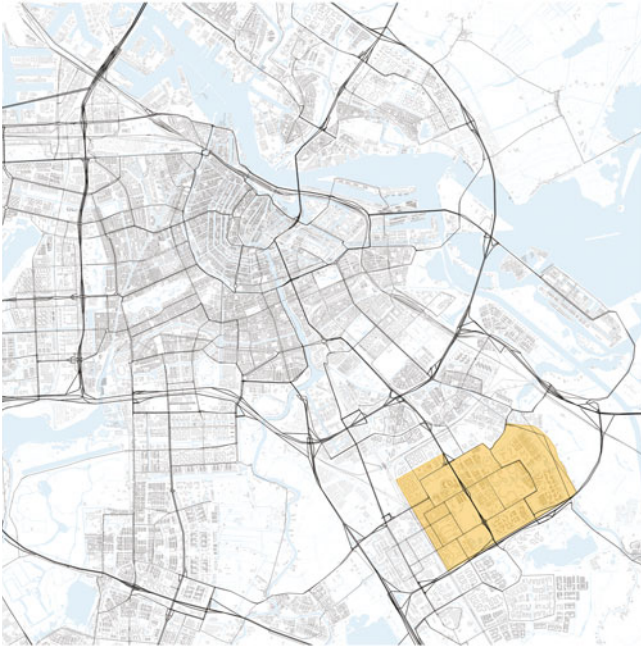
All this led to a generalised (although not indiscriminate) loss of ‘urbanity’ giving rise to the publication of many studies in search of ‘indicators’ that would allow guaranteeing an acceptable level of urban quality. Despite the fact that urban forms are the basic material of the project, identifying which of them most favours the sought after urbanity is not an easy task. The challenge consists in clarifying what is required from urbanity today and understood from a contemporary perspective, and how to give it shape (Díez Medina 2016). In the specific case of mass housing estates, tackling situations of functional and urbanistic obsolescence that stemmed from a general loss of urbanity is one of the biggest challenges cities face at the outset of the twenty-first century (Díez Medina 2015).

Case Studies

Bijlmermeer, Amsterdam (1968–1970s)

Bijlmermeer was presented as a solution for a ‘new advanced suburb in the age of the machine’, an achievement for the most radical rationalism in the southeast of Amsterdam. Despite the fact that the authors of the project (the municipal team responsible for housing and town planning) were disciples of the great architects of the previous generation (van Eesteren, Bakema), an important contrast between the careful design of the former expansions to the West of

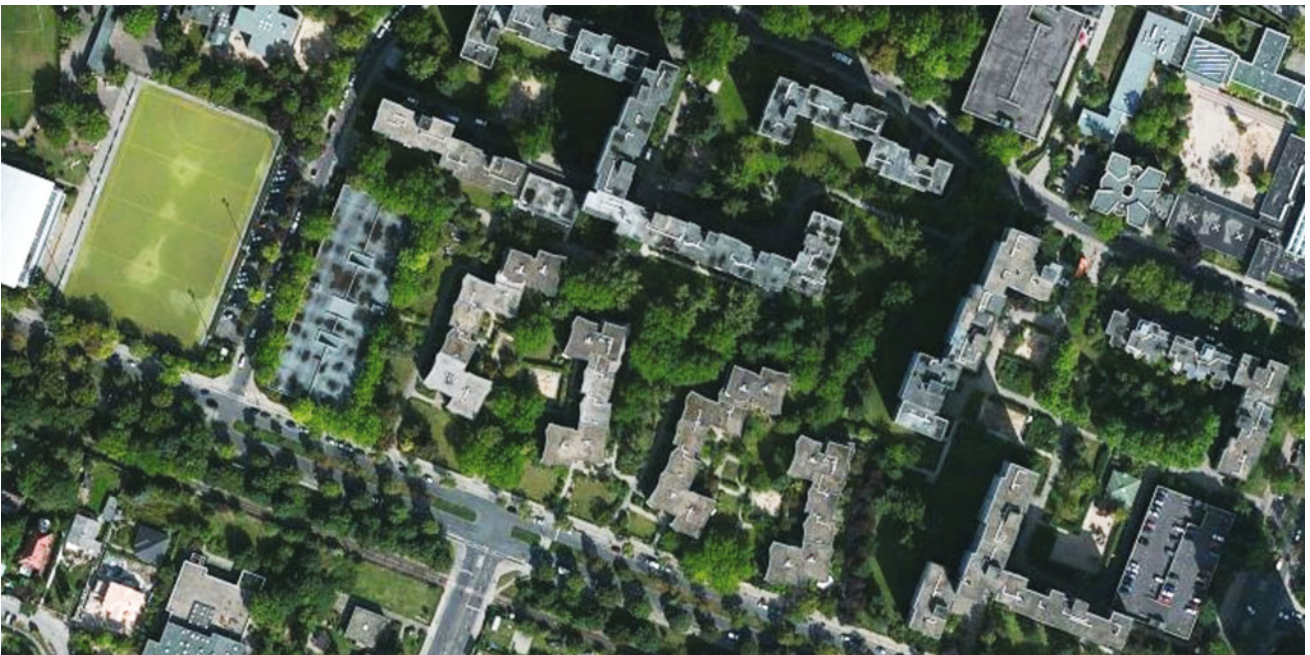
the city and the radical, simplified forms of this huge modern complex can be seen. On the one hand, the 11,500 dwellings on 11 floors were built to high standards for the time. On the other, segregating functions (residential, commercial, traffic and leisure, with different levels for traffic, raised roadways for cars and buses, inner streets for facilities and lower level for parking) were applied strictly, leading to a very rigid layout. Moreover, the blocks were designed in hexagons, thus leading to large, undefined open spaces. The result was that this modern icon soon became the subject of severe criticism and, for many, an acknowledged mistake of modern, functionalist urbanism.



Gropiusstadt, Berlin (1962–1975)

The *Großsiedlung* Gropiusstadt is one of the most paradigmatic examples of this period in West Berlin. The project was by W. Gropius with Wils Ebert and his North American studio TAC (The Architects Collaborative). This extraordinary example provides interesting keys to be able to understand the strengths and weaknesses of housing estates built in

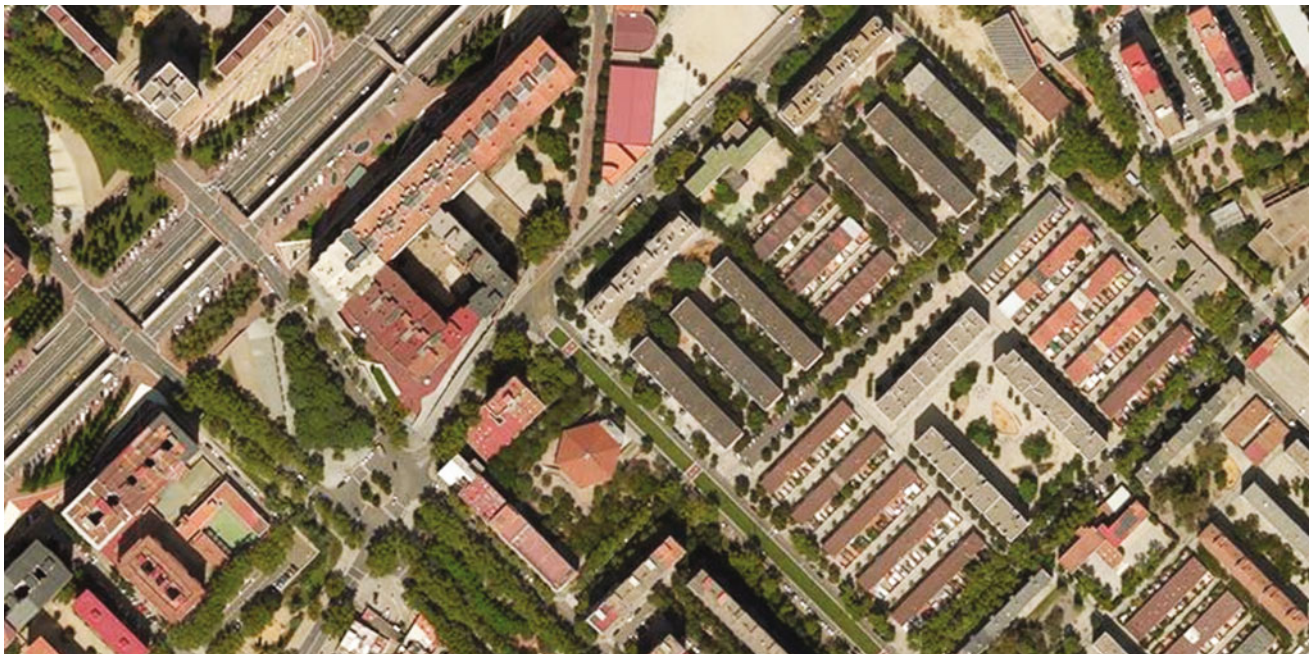
the 1960s, contrasting with those built in the 1950s. Despite the diversity of typology, the principles of functionalist urbanism are very present: large, fluid open areas, without any clear hierarchy and formally undefined. Its image was stigmatised after association with the successful book and subsequent film, *Christiane F. Wir Kinder vom Bahnhof Zoo*, which blamed this kind of inhospitable urban form for the marginal world of drugs and the social problems in the area.



Southwest Besós Estate, Barcelona (1958–1965)

The case of the so-called Polígono del Sudoeste del Besós can be considered a prototype within the higher quality estates that were built in Barcelona. The estate is located in the far northeast of Barcelona, to the southeast of the Besós river. Despite its autonomous design as a unitary item, its adaptation to the Cerdá Expansion zone permits a continuity that is not

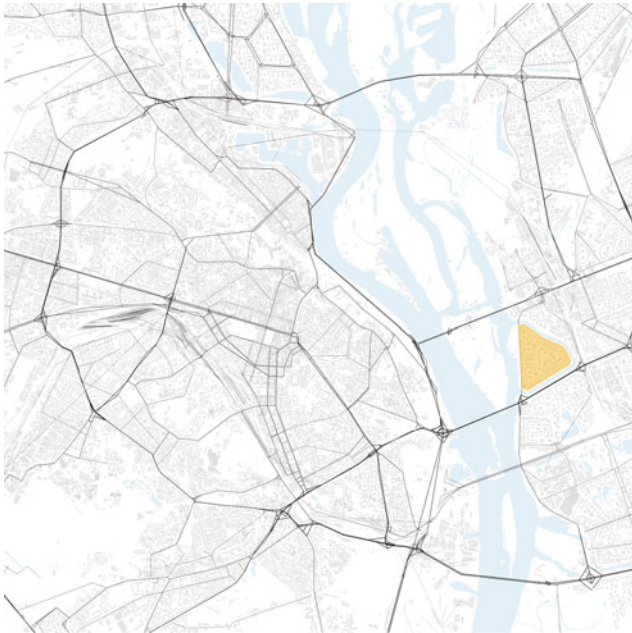
common in this kind of estate. The designers of the project (López Íñigo, Giráldez y Subías/LIGS) arrange the sector according to a partial plan that defines the general conditions for the area (number of dwellings: 4843; surface area: 34.5 ha). In accordance with strictly modern principles, the authors laid out a system of volumes at an alternative counterpoint to masses and voids. The blocks adapt to the directives of super-blocks that structure the roadways and equipment.



Rusanovska *Microraion*, Kiev (1961–1974)

Rusanovska was planned in accordance with the *microraion* principles (number of dwellings: 12,000; surface area: 84 ha). Unlike other estates at the time, it was not linked to industrial complexes, but was conceived as a model sleeping neighbourhood. Its location on the left bank of the Dnieper, facing the historical city, worked in favour of its

subsequent integration. On the other hand, the open spaces are relatively controlled in terms of structure and dimensions, in addition to having been designed in accordance with notable landscaping standards. The weaknesses are the low construction quality and obsolescence of the equipment.



References

- Coudroy de Lille, L. 2004. Une idéologie du préfabriqué? In *Le monde des grands ensembles*, ed. F. Dufaux, and A. Fourcaut, 90–95. Paris: Créaphis.
- Díez Medina, C., ed. 2015. El legado de la vivienda moderna/Modernist Mass Housing Legacy. *ZARCH: Journal of Interdisciplinary Studies in Architecture and Urbanism* 5.
- Dufaux, F., and A. Fourcaut. 2004. *Le monde des grands ensembles*. Paris: Créaphis.
- Goldzamt, E. 1980. El urbanismo en la Europa Socialista [*Urbanistyka krajów socjalistycznych, 1971*]. Barcelona: Gustavo Gili.
- Gutnov, A., A. Baburov, G. Djumenton, S. Kharitonova, I. Lezava, and S. Sadovskij. 1970. *The ideal Communist City*. New York: George Braziller.
- Hall, P.G. 2014. *Cities of tomorrow. An intellectual history of urban planning and design in the twentieth century*[1988], 4th ed. Oxford: Wiley-Blackwell.
- López de Lucio, R. 2013. *Vivienda colectiva, espacio público y ciudad. Evolución y crisis en el diseño de tejidos residenciales 1860–2010*. Buenos Aires: Nobuko.
- Monclús, J., and C. Díez Medina. 2016. Emergencia, obsolescencia y regeneración de conjuntos de vivienda masiva en Europa/ Emergence, obsolescence and regeneration of European Housing Estates. In *Regeneración urbana (II). Propuestas para el polígono Balsas de Ebro Viejo. Zaragoza/ Urban regeneration (II). Proposals for Balsas de Ebro Viejo Housing Estate, Zaragoza*, ed. J. Monclús, C. Labarta, and C. Díez Medina, 13–33. Zaragoza: Sociedad Municipal Zaragoza Vivienda—Prensas de la Universidad de Zaragoza.
- Monclús, J., and C. Díez Medina. 2016. CIAM Urbanism revisited. Modernist Mass Housing Estates in Spain: Best, Good, Standard, Poor (BGSP). In *Adaptive reuse. The Modern Movement towards the future, 14th International conference proceedings*, ed. A. Tos-tões and Z. Ferreira, 779–789. Lisboa: Docomomo internacional—Casa da Arquitectura.
- Urban, F. 2012. *Tower and Slab: Histories of global mass housing*. London: Routledge.
- Wassenberg, F. 2013. *Large housing estates: Ideas, rise, fall and recovery*. The Bijlmermeer and beyond. Amsterdam: IOS Press, Delft University Press.

Further Readings

- Bater, J.H. 1980. *The Soviet City*. London: Edward Arnold.
- Berman, M. 1982. *All that is Solid Melts into Air: The Experience of Modernity*. London: Verso.
- Busquets, J. 2004. *La construcción urbanística de una ciudad compacta*. Barcelona: Serbal.
- Clelland, D. 1982. From ideology to disenchantment. *Architectural Design* 52: 41–45.
- Díez Medina, C. 2016. Sobre el concepto de urbanidad. Un rastreo por textos clásicos y recientes. In *Regeneración Urbana (III). Propuestas Para El Barrio Oliver, Zaragoza/ Urban regeneration (III). Proposals for Oliver Neighbourhood*, ed. J. Monclús and R. Bambó, 56–65. Zaragoza: Prensas de la Universidad de Zaragoza, Ayuntamiento de Zaragoza.
- Dubbeling, D. 2004. *Ukraine, Inheritance of centralized planning/High-rise housing in Europe*. Delft: TU Delft.
- Fernández Per, A., J. Mozas, and Á.S. Ollero. 2013. *10 Stories of Collective Housing. Graphical analysis of inspiring masterpieces: a + t research group*. Vitoria-Gasteiz: A + T architecture publishers.
- Ferrer i Aixalá, A. 1996. The undeserved credit of the housing estate. In *Contemporary Barcelona 1856–1999*, 150–155. Barcelona: CCCB.
- Gaviria, M.J. (ed.). 1968. *Gran San Blas. Análisis sociourbanístico de un barrio nuevo español. Arquitectura: Revista del Colegio Oficial de Arquitectos de Madrid* 113–114. Madrid: Colegio Oficial de Arquitectos de Madrid.
- Monclús, J., and C. Díez Medina. 2016. Modernist housing estates in European cities of the Western and Eastern Blocs. *Planning Perspectives* 31: 533–562. doi:10.1080/02665433.2015.1102642.
- Monclús, J., C. Labarta, C. Díez Medina, L. Agustín, and I. Bergera Serrano (eds.). 2012. *Paisajes urbanos residenciales: en la Zaragoza contemporánea*. Zaragoza: Prensas de la Universidad de Zaragoza.
- Panerai, P., J. Castex, J.-C. Depaule, and I. Samuels. 2004. *Urban Forms: The Death and Life of the Urban Block [Formes urbaines, 1980]*. Oxford: Architectural Press.
- Reimann, B., and H. Henselmann. 1994. *Briefwechsel [Correspondencia]*. Berlin: Verlag Neues Leben.
- Siedler, W.J., E. Niggemeyer, and G. Angress. 1964. *Die gemordete Stadt, Abgesang auf Putte und Straße, Platz und Baum*. Berlin: F. A. Herbig.
- Strobel, R.W. 2003. F. J. Willey from “cosmopolitan fantasies” to “national traditions”: socialist realism in East Berlin. In *Urbanism. Imported or Exported?*, ed. J. Nasr and M. Volait. New York: Wiley.

Raimundo Bambó

Abstract

This text explores the new sensitivity to other lifestyles that arose in the 1960s and 1970s and in which the decision-making capacity by residents themselves was essential during the design process, the subsequent occupation of the dwelling, or both. However, it was not unique to this time: we can trace various genealogies in their origins and ideals, which form a set of sometimes contradictory concepts. The aim of this chapter is to present these concepts and their best-known manifestations, which are fundamental for the revision of the way of thinking about housing and the city by orthodox modernism, presented as three pairs of ‘genealogies’ according to their cultural origin, their reaction to the modernist city, and their attitude toward technology.

Keywords

1960s • Participation • Freedom • Perfectible housing • Modernism revisited

The Narrow Confines of Modernism

The official inauguration of sectors C and D of the Quartiers Modernes Frugès social housing development in Pessac, designed by Le Corbusier and Pierre Jeanneret, took place in June 1926. The commission came from the industrialist Henri Frugès after his hearing the ideas of the Swiss architect. The guidelines were clear: “Pessac should be a laboratory of standardization and mass production” (Le Corbusier and Jeanneret 1937).

Forty years later, a young French architect and town planner, Philippe Boudon, visited the spot, now very different from how it had been originally conceived: users had modified their dwellings, adapting them to their needs

and tastes, for the most part leaving few traces of the original design. The project had failed, and even Le Corbusier himself admitted his mistake.¹ Boudon documented these changes in his book *Lived-in Architecture. Le Corbusier’s Pessac Revisited*, presenting them not in a negative way, but as a means of letting life in, a manifestation of the occupants’ capacity for decision-making (Boudon 1972).

The book is representative of a new sensitivity toward different lifestyles that emerged in the 1960s and 1970s, in which the decision-making capacity of the user was essential during the design process, the subsequent occupation of the dwelling, or both. The house was no longer a machine for living, but the spatial expression of the occupants’ will. This way of thinking was not limited to housing; it could also be

R. Bambó (✉)
School of Engineering and Architecture (EINA),
University of Zaragoza, Zaragoza, Spain
e-mail: rbambo@unizar.es

¹“You know, it’s always life that’s right and the architect who is wrong” (Le Corbusier in Boudon 1972, 2).

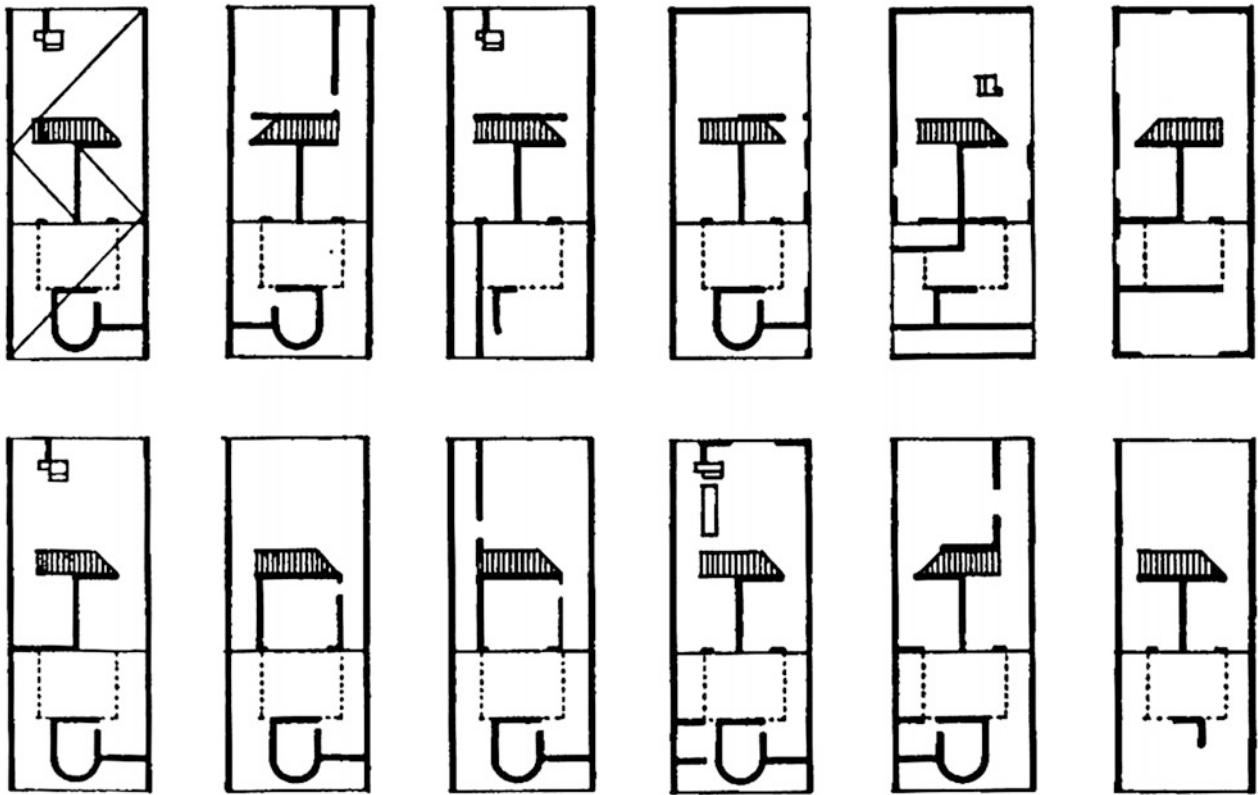


Fig. 8.1 Pessac Revisited, Philippe Boudon, 1967: diagrams showing the different modifications made by the occupants in one of the three types of houses in Pessac designed by Le Corbusier and Pierre Jeanneret (1924–1926). The original design is at the top left

found in public facilities,² or even town planning (Banham et al. 1969, 435–443). Nor was it unique to this time: we can trace various genealogies in their origins and ideals, which form a set of sometimes contradictory concepts. The aim of this chapter is to present these concepts and their most visible manifestations, which are fundamental for the revision of the way of thinking about housing and the city by orthodox modernism, presented as three sets according to their cultural origin, their reaction to the modernist city, and their attitude toward technology.

²See for example the Fun Palace, conceived by Cedric Price and theater director Joan Littlewood between 1962 and 1971 as a reprogrammable facility according to visitor flows, or the work of the British collective Archigram, particularly the Sin Centre in Leicester Square, London, 1959–1962, the Montreal Tower for the city’s World’s Fair, and their design for an entertainment building in Monte Carlo, 1970–1971, none of them built. For further information on the Fun Palace, see Mathews (2007). For further information on works by Archigram, see Chalk, W., P. Cook, D. Crompton, D. Greene, R. Herron, and M. Web. 1999. *Archigram*. New York: Princeton Architectural Press; or Sadler, S. 2005. *Archigram: Architecture without Architecture*. Cambridge: M.I.T. Press.

Contradictory Genealogies: USA/Europe

The term ‘freedom’ is central to numerous social, political, cultural, architectural, and urban movements, both in the USA and Europe, but in each of these traditions this word is understood in a very different way.

The idea of freedom is inextricably linked to the history of the USA,³ a country founded by pioneers defined by two fundamental ideas: freedom and cooperation. Both form the basis of diverse architectural and urban proposals present in popular culture: for example, barn raising, where an entire community unites to build the barn for one of its members, or utopian visions like the skyscraper designed by A. B. Walker, combining collective urban life with privacy and independence, acting as an urban metaphor of the North American city (Koolhaas 1978).

All of these ideas were part of Frank Lloyd Wright’s cultural background, and he compiled his notions about the city in his book *The Living City* (1958). The book is a critique of

³The term can be related to many of its founding myths, like Walt Whitman, Henry David Thoreau, and Ralph Waldo Emerson, not to mention the American War of Independence.

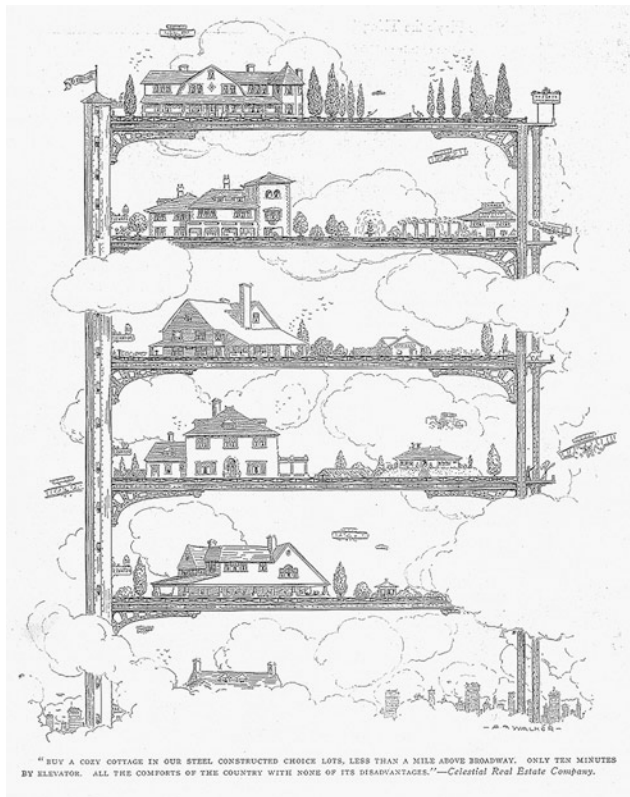


Fig. 8.2 Skyscraper, A. B. Walker published "Real Estate Number" in *Life*, March 1909. The text below says: "Buy a cozy cottage in our steel constructed choice lots, less than a mile above Broadway. Only 10 min by elevator. All the comforts of the country with none of its disadvantages."

urban society and identifies the principles that should govern the relationship of man with nature. The low-density, decentralized city proposed receives the name of Broadacre City since it is based on a minimum area of one acre for each family. Within this area, dwellings are given total freedom of shapes and distributions; the only control would be the "agreeable established social superintendence given... by the cultivated society of which he would... be a cultural unit himself" (Wright 1958, 172). The whole proposal is attractive in its defense of the return to nature but has been criticized as foreshadowing inhuman and unlimited suburban growth based on the culture of the automobile (Mumford 1968, 189).

In Europe, the genealogy of the term is very different. 'Freedom' is associated with different popular insurrections like the French Revolution, the Paris Commune, and the Spartacus League, generally linked to left-wing politics. With regard to urbanism and architecture, the nineteenth-century desire for a life away from the industrial city where the individual could regain his lost autonomy is revealed in the proliferation of utopian self-sufficient communities, such as the settlements proposed by Robert Owen, Charles Fourier's *Phalanstère*, and Jean-Baptiste André Godin's *Familistère*. The same ideas can be found in the works of William Morris,



Fig. 8.3 Frank Lloyd Wright, Broadacre City, 1934: the model of the proposal, which would be developed in *The Living City*, shows the aim to move back to the country, integrating housing in an agricultural environment

which looked in depth at the relations between fine arts, arts and crafts, and social structures.⁴ In the twentieth century, the contribution of French philosopher and sociologist Henri Lefebvre must be highlighted. In such works as *Le droit à la ville* (The right to the city in: Lefebvre 1996)⁵ or *La production de l'espace* (The Production of Space, Lefebvre 1991), he defended the city as a collective construction and proposed the re-appropriation and recovery of urban space.⁶

⁴See Morris, W. 1884. How We Live and How We Might Live, lecture delivered to the Hammersmith Branch of the Socialist Democratic Federation (S.D.F.) at Kelmescott House, on November 30th, 1884, available online at <https://www.marxists.org/archive/morris/works/1884/hwl/hwl.htm> Accessed Feb 11, 2015, or his utopian novel *News from Nowhere*, available online at <https://www.marxists.org/archive/morris/works/1890/nowhere/nowhere.htm>. Accessed Feb. 11, 2015.

⁵Henri Lefebvre, *Le droit à la ville*. Paris: Anthropos, 1968. English translation, *Right to the City*, compiled in Henri Lefebvre, *Writings on Cities*. Oxford: Blackwell Publishing, 1996. The Right to the City is described by David Harvey as follows: "The right to the city is far more than the individual liberty to access urban resources: it is a right to change ourselves by changing the city. It is, moreover, a common rather than an individual right since this transformation inevitably depends upon the exercise of a collective power to reshape the processes of urbanization. The freedom to make and remake our cities and ourselves is, I want to argue, one of the most precious yet most neglected of our human rights" (Harvey 2008).

⁶Lefebvre's thought is in line with that of the Situationist International, which will be discussed in the next section. See Eleonore Kofman, Elizabeth Lebas, "Recovery and Reappropriation in Lefebvre and Constant" (Hughes and Sadler 2000).

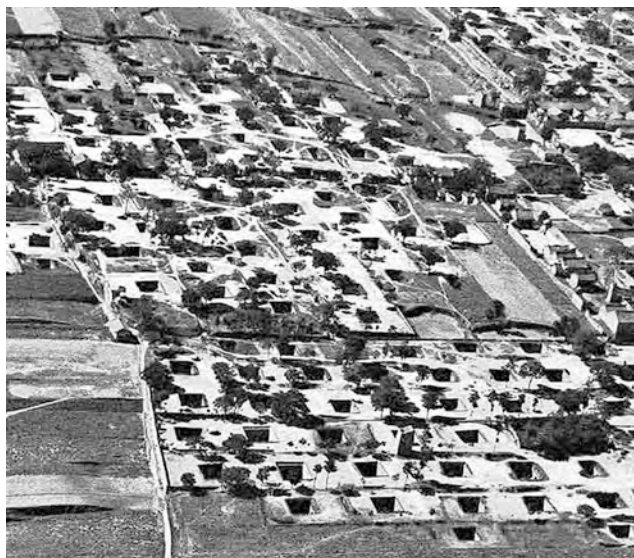


Fig. 8.4 Chinese underground village near Tungkwán (Honnán), as appears in *Architecture Without Architects*. The caption says “One of the most radical solutions in the field of shelter is represented by the underground towns and villages in the Chinese loess belt. (...) The dwellings are clean and free of vermin, warm in winter and cool in summer”. Rudofsky, B., *Architecture Without Architects*, 25. The image is representative of Rudofsky’s approach to primitive cultures, and his search for timeless lessons about architecture and urbanism

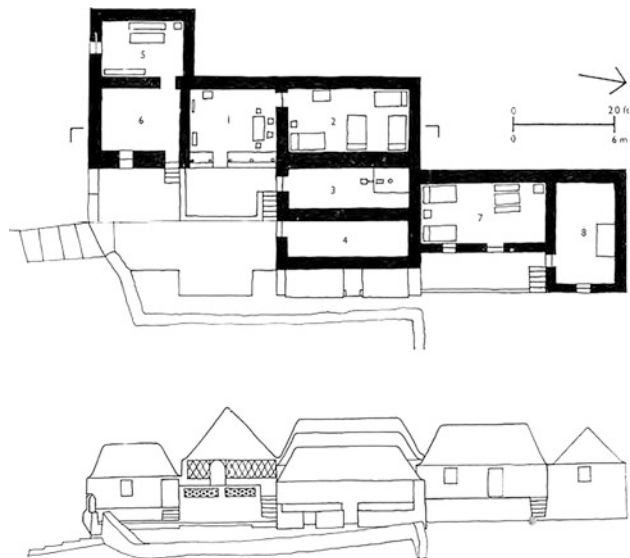


Fig. 8.5 Village artisan’s self-built house in Arquipa (Peru), documented by John Turner, in Turner, J., Mangin, W., “Dwelling resources in South America”, in *Architectural Design* 33, 1963, 361. His objectives in the study of vernacular architectures were the same as Rudofsky’s. However, their approach was different: instead of the succession of images of *Architecture Without Architects*, Turner presented technical documentation to quantify the achievements of these works

Contradictory Genealogies: Village/City

In the 1950s, various attitudes began to appear that were critical of the modernist city.⁷ Urbanism according to the principles of the Athens Charter improved living conditions for the working class but also produced generic and abstract cities with vast monofunctional areas. Challenging this conception, several proposals reconsidered the best place to develop community life, in which the inhabitants of a place could restore their capacity for decision-making, as opposed to the rigidity of modern orthodox planning.

On the one hand, studies of non-Western cultural traditions, which had earlier been rejected for being considered underdeveloped, became important. The fascination with primitivism in architecture was not a new phenomenon,⁸ but it was not until then that diversity and cultural pluralism were accepted. The work of the French anthropologist Claude Lévi-Strauss made an essential contribution to this new sensitivity. In his book *The Savage Mind*, he recognized

the structures of primitive thought, equating them with Western scientific thought (Lévi-Strauss 1961, 1966). This subject was present in several architectural and urban studies including, among others, the following examples. The investigations of Aldo van Eyck on primitive cultures, with whom he had come into contact on several travels,⁹ were fundamental in defining his architectural ideas¹⁰ and could be seen in projects such as The Municipal Orphanage, Amsterdam (1955–1957, built 1958–1960).¹¹ The exhibition and catalog *Architecture without architects*, by Bernard Rudofsky, presented ‘non-pedigreed architectures’ from around the world through photographs and brief explanatory texts, evaluating their adaptation to the environment, their constructive knowledge, and their concern about living problems (Rudofsky 1964). British architect John Turner studied processes of self-construction in villages and squatter settlements in Peru, from which he developed his

⁷Among others, noteworthy is the creation of Team 10 at CIAM 9, held in Aix-en-Provence in July, 1953.

⁸The vernacular played an important role in defining modern architecture in the 1920s and 1930s, and its influence can be traced back to the very origins of the modernity. See Collins, P. 1965. *Changing Ideals in Modern Architecture, 1750–1950*. London: Faber & Faber.

⁹See Strauven, F. 1998. Travels 1947–52. In Aldo van Eyck. *The Shape of Relativity*. Amsterdam: Architectura & Natura Press, 143–149.

¹⁰Ideas expressed for example in his speech at the CIAM congress held in Otterloo in September 1959, see Strauven, F. 1998. CIAM 11, Otterloo, 1959. In Aldo van Eyck. *The Shape of Relativity*. Amsterdam: Architectura & Natura Press, 346–354.

¹¹“Not one but three traditions were involved here: the Classical tradition which he characterized as ‘immortality and rest’, the modern tradition which he described as ‘change and movement,’ and the tradition of spontaneous building, namely, the ‘vernacular of the heart.’” Strauven, F. 1998. *Aldo van Eyck. The Shape of Relativity*. Amsterdam: Architectura & Natura Press, 290.

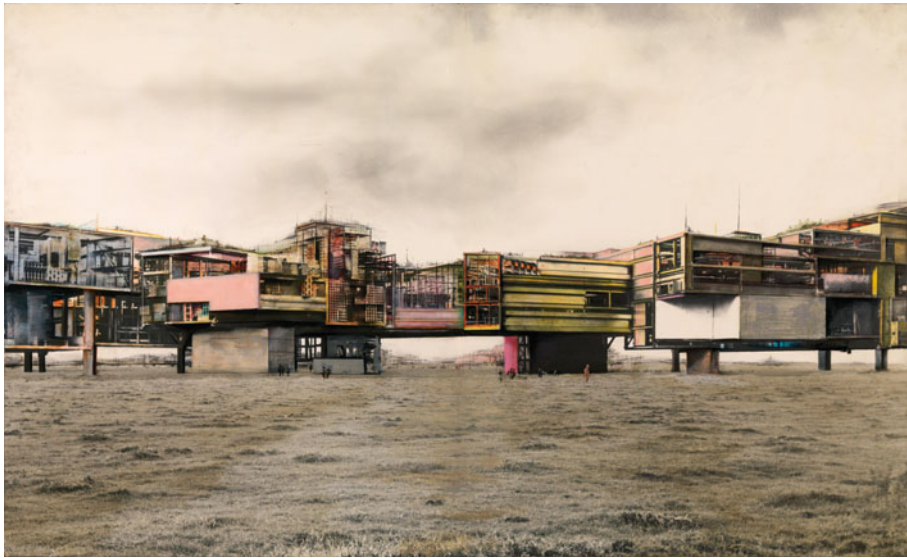


Fig. 8.6 Constant Nieuwenhuys, New Babylon, 1959–1974. This utopian city consists of a network of interior spaces on different levels. Its inhabitants, the Neobabylonians, are nomads who move freely through it, changing its configuration in a playful way, continuously generating ephemeral ambiances according to their desires

theories on user participation in the design process and the construction of dwellings, reflected in texts as *Housing by People and Freedom to Build* (Turner and Fitcher 1972; Turner 1976).

While the aforementioned works sought out the values that had been lost in modern urbanism in the ‘back to basics’ of primitive cultures, others sought out the virtues of the city. In her book *The Death and Life of Great American Cities* (1961), Jane Jacobs made a defense of urban complexity and diversity, surpassing the diagnosis made by the Modern Movement. Although Jacobs did not propose alternative solutions by looking back to the past, the text set out to show the intricate nature of the interaction between urban form and social life, its dynamism and diversity.¹² These same issues were presented in a much more radical way in the theories espoused by the Situationist International (Situationist International Archives 2016).¹³ This organization, formed by artists and revolutionary thinkers, was created in 1957 and brought together different avant-garde groups of postwar Europe such as the International Movement for an Imaginist Bauhaus or the Letterist International.¹⁴ The Situationists sought the dissolution of boundaries between art and life, and for this purpose, they proposed the ‘construction of situations’. Guy Debord, their

main ideologue, defined it as “the concrete construction of momentary ambiances of life and their transformation into a superior passional quality”.¹⁵ The city was the perfect spot for this and led to the Situationists developing their own maps on which ‘unities of ambiance’ were identified.¹⁶ In addition to their actions in the existing city, worthy of mention is *New Babylon*, the utopian city designed by Constant Nieuwenhuys between 1959 and 1974.¹⁷

Contradictory Genealogies: Low Tech/High Tech

This period also produced a redefinition for the role of technology. Machines, industrialization, and technology had been among the main issues of modernity and basis for the new architecture, either as a metaphor and formal argument or as the means of new design methods.¹⁸ In those years,

¹²Tomás, C., and J. Luque. 2004. Jane Jacobs. The death and life of great American cities. In *Constructores de la ciudad contemporánea. Aproximación disciplinar a través de los textos*, ed. J. Luque, 502. Madrid: Dossat.

¹³An extensive bibliography is available online in the site *Situationist International online*.

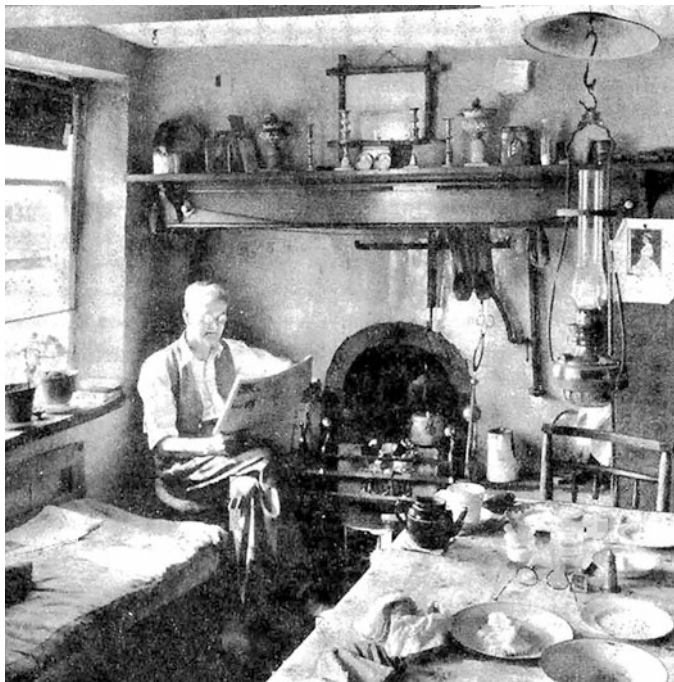
¹⁴This group would have had a great influence in the 1960s, as it was a direct antecedent to the political and social movements of 1968.

¹⁵Debord, G. 1957. *Report on the Construction of Situations and on the International Situationist Tendency's Conditions of Organization and Action*.

¹⁶The best known are two Paris maps made by Guy Debord in 1956 and 1957, respectively: *Guide psychogéographique de Paris* and *The Naked City*.

¹⁷For further information about the project, see Sadler (Sadler 1998, 105–155); or the comprehensive catalog of the exhibition held between October 2015 and February 2016 at the Museo Reina Sofia: AA VV. 2015. *Constant. New Babylon*. Madrid/The Hague: Museo Nacional Centro de Arte Reina Sofia/Gemeentemuseum Den Haag.

¹⁸See the role played by technology in the narrative of the creation of the Modern Movement in Giedion, S. 1948. *Mechanization Takes Command*. New York: Oxford University Press; Banham, R. 1960. *Theory and Design in the First Machine Age*. London: Architectural Press.



78 HOUSE FOR ONE PERSON*

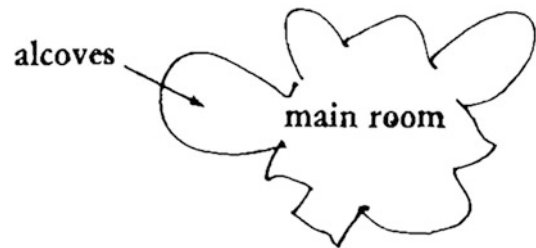


Fig. 8.7 Christopher Alexander, Example of pattern, an extract from his book *A Pattern Language*, 1977 (“Pattern 78. House for one person”, 389–391). Each pattern has a similar structure: an archetypal image representing the spatial idea, a reasoning that sets out and solves the problem, and a conclusion, graphically explained by a diagram

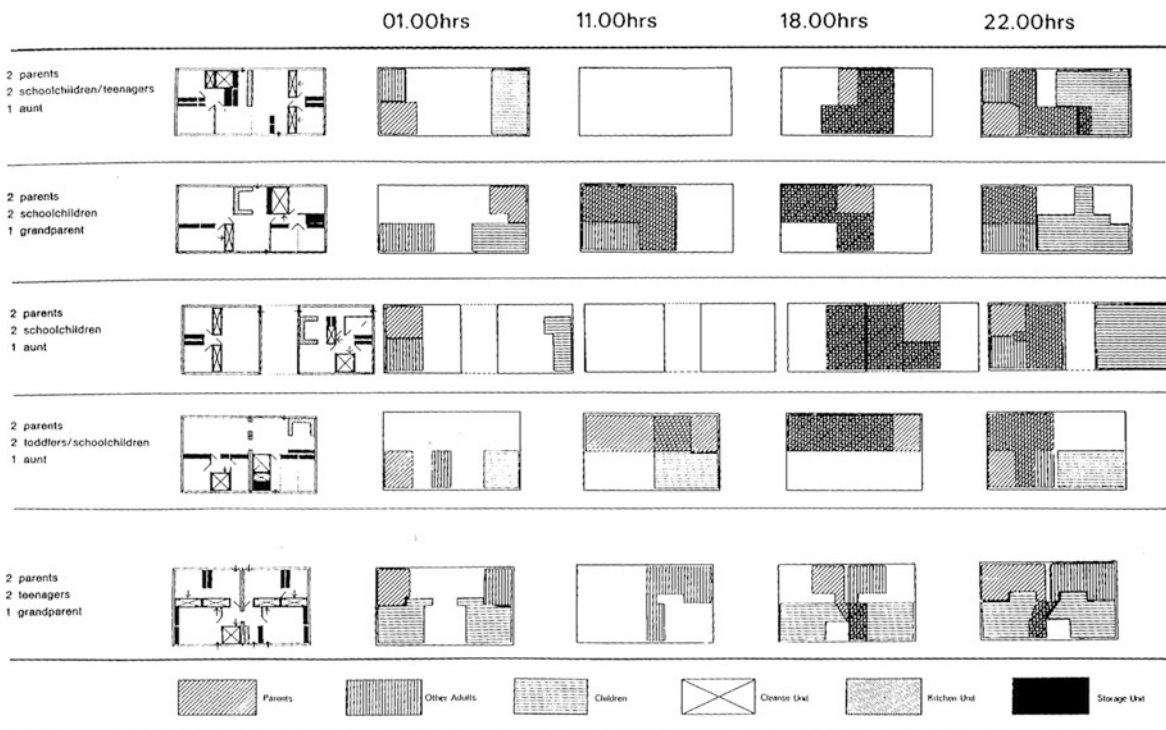


Fig. 8.8 Cedric Price, *Steel Housing*, 1966. Diagram showing the adaptation of the dwelling depending on the family model and the day cycle. Maximum variation of possible use is provided by the fragmentation of services and miniaturization and mobilization of equipment

technology allowed the emergence of new housing proposals that involved user participation. This involvement could occur during the design process, the construction process, or later in their occupation, through the modification of the layout of the dwelling. Some proposals were based on the use of traditional techniques, while others relied on new developments permitted by industry.

The Austrian architect and mathematician Christopher Alexander belonged to the first group. He founded the *Center for Environmental Structure* (CES) in Berkeley in 1967, from where he developed his theoretical activity about architecture and urbanism.¹⁹ Alexander proposed a new method for the construction of living and comprehensive environments that possessed what he called “quality without a name” (Alexander et al. 1977, 37–38). For this purpose, he used patterns, defined as atoms forming the environment and spatial language. These patterns were related by a set of rules that anyone could follow, so anyone could change their environment. Building solutions came from vernacular architectures, also facilitating self-construction. This same purpose could be found in the work of Walter Segal, who developed a system of self-built housing based on traditional timber-frame methods,²⁰ or Lucien Kroll, who included participation by future users in the design and building process in works such as the Medical Faculty Housing, at the University of Louvain, Belgium (1970–1976) or the Vignes Blanches housing development in Cergy-Pontoise (1978–1983) (Ellin 2000).

Other proposals sought the same goals through different methods and exploited the potential of industry. John N. Habraken developed the “Theory of Supports” for the mass construction of collective housing. He proposed the division of the production system into two phases, differing between structural elements (supports) and fill (separable units). Thus, the identification and separation of these two stages and user enrollment in the process as an active agent would accommodate their specific requirements or particular spatial and finishing needs (Habraken 1972). Cedric Price’s original, radical, and iconoclastic approach to architecture has been rediscovered in recent years and is now considered fully valid.²¹ His thought processes can be understood from a set of transversal issues that can be traced throughout his entire production: action, time, expiry, uncertainty, and especially in regard to this text, user participation. The Steel Housing project (1966) is representative of this (Price 2003, 48–50). As Price puts it, “the house is no longer acceptable as a pre-set ordering mechanism for family life” (Price 2003, 48), and he instead proposed a flexible structure capable of adopting different configurations according to family and temporal circumstances and showing it in the radical scheme of a 24-h cycle performance.

Many of the projects presented in this chapter were prototypes or unbuilt theoretical designs. Both of the case studies included were built and incorporated users in the design process in different ways.

¹⁹This theory is mainly set out in a series of three books (Alexander 1975; Alexander et al. 1977; Alexander 1979). He has also carried out several projects reflecting these theories. Among others, Experimental housing for PREVI competition (Lima, 1969), Linz Cafe (Vienna, 1980), and the New Eishin University (Tokyo, 1985).

²⁰McKean, J. 1976. The Segal System. *Architectural Design*: 288–296.

²¹See Mathews, S. 2007. *From Agit-Prop to Free Space: The Architecture of Cedric Price*. London: Black Dog Publishing; García-Germán, J. 2012. *Estrategias operativas en arquitectura. Técnicas de Proyecto de Price a Koolhaas*. Buenos Aires: Nobuko; or Jansen, J. 2014. Cedric Price insert. *Archis* 42.

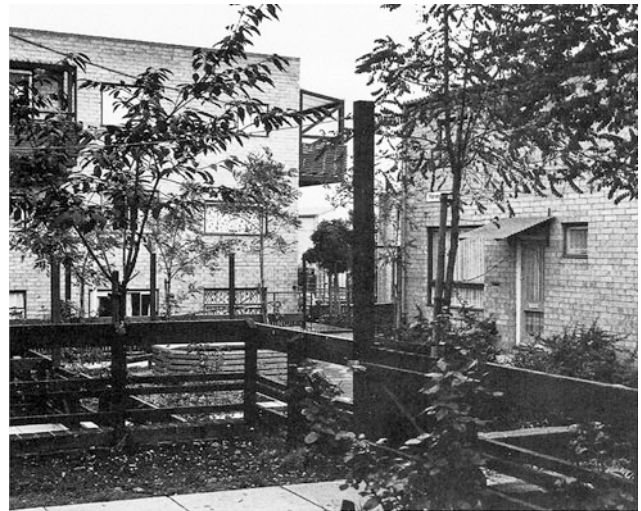
Case Studies

Byker Wall, Newcastle-upon-Tyne, United Kingdom (1969–1982)

Newcastle in the 1960s was undergoing a process of transformation from industrial city to administrative center. One of the planned municipal actions was the rebuilding of Byker, an area of mineworkers' homes. The dwellings were in terrible conditions and lacking in minimum standards of hygiene; however, there was a strong sense of community. The slogan of the intervention was 'Byker for Byker people', showing how much of the population was in favor of the plan and wanted to continue living in the same place (Fernández Per et al. 2013, 385). The commission was given to the Anglo-Swedish architect Ralph Erskine (1914–2005), who had already had experience working on other residential complexes with similar features.

Erskine opened an office, *The Architect's Shop*, in the district during the design and construction process where queries and suggestions from neighbors were received regarding various aspects of the project. This way of working diluted the process over time, causing tension with the administration developing the project (Fernández Per et al. 2013, 386–387).

The project consists of a long, curving, colorful block acting as a wall, protecting a large area occupied by low-level housing from traffic and north winds. The two types of buildings are rich in intermediate spaces: by treating the gallery as a street-in-the-air in the first case and with small gardens, squares, and areas of relationship in the latter, assuring the vibrancy of the neighborhood. The architectural design, combining permanent elements along with others that were modifiable over time, has led to the tenants continuing to customize their dwellings.

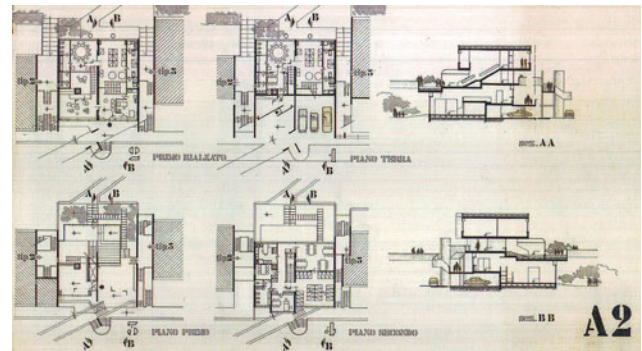
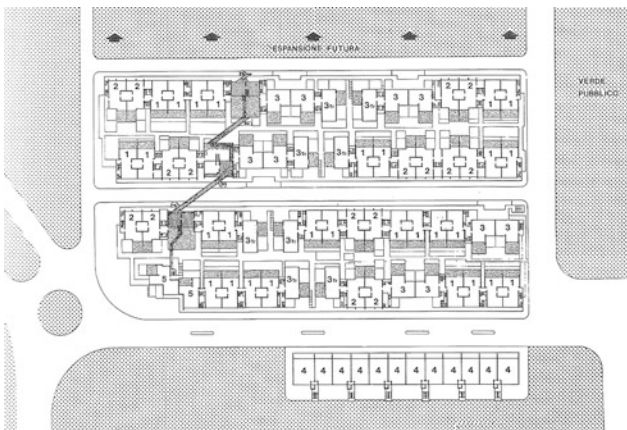


Villaggio Matteotti, Terni, Italy (1969–1975)

Like the previous example, this project involved the restructuring of a working-class neighborhood, in this case housing for steel industry workers, given that this company was the developer, with the encouragement of labor unions. Its creator, Giancarlo de Carlo (1919–2005), shared Erskine's emphasis on user participation, but with a different approach. Instead of the latter's empiricism, De Carlo proposed a systematic process that incorporated user feedback into three specific stages: the definition of the problem, the development of the solution, and the evaluation of the results (De Carlo 2013, 103–109). Matteotti's procedure allowed the timing of the project and its execution to be controlled in a more effective way than in the case of the Byker project.

Different types of housing were proposed to the tenants so that they could choose the most suitable kind for their needs. After several meetings, 45 different types were made for the 250 dwellings that were finally built (De Carlo 2013, 108). The change in the development company management caused many of the initial project ideas to be distorted; however, the flexibility of the approach allowed the occupants greater intervention.

The design adopts a complex layout: a group of parallel linear blocks including housing and facilities connected through elevated platforms, segregating pedestrian paths and motor traffic. As in the previous case, one of the main features of the project is the wide variety of public and semi-public open spaces woven into these linear blocks at different levels, allowing their appropriation by the community.



References

- Alexander, C., S. Ishikawa, M. Silverstein, M. Jacobson, I. Fiksdahl-King, and S. Angel. 1977. *A pattern language: Towns, buildings, construction*. New York: Oxford University Press.
- Banham, R., P. Barker, P.G. Hall, and C. Price. 1969. Non-plan: An experiment in freedom. *New Society* 20: 435–443.
- Boudon, P. 1972. *Lived-in architecture. Le Corbusier's Pessac revisited [Pessac de Le Corbusier, 1969]*. London: Lund Humphries.
- De Carlo, G. 2013. *L'architettura della partecipazione*. Macerata—Milan: Quodlibet abitare.
- Ellin, N. 2000. Participatory Architecture on the Parisian Periphery: Lucien Kroll's Vignes Blanches. *Journal of Architectural Education* 53: 178–183. doi:10.1162/104648800564572.
- Fernández Per, A., J. Mozas, and Á.S. Ollero. 2013. *10 Stories of Collective Housing. Graphical analysis of inspiring masterpieces: a +t research group*. Vitoria—Gasteiz: a+t architecture publishers.
- Habraken, N.J. 1972. *Supports, an alternative to mass housing [De dragers en de mensen, 1961]*. London: Architectural Press.
- Harvey, D. 2008. The Right to the City. *New Left Review* 53: 23–40.
- Hughes, J., and S. Sadler (eds.). 2000. *Non-plan. Essays on Freedom Participation and Change in Modern Architecture and Urbanism*. New York: Routledge—Architectural Press.
- Jacobs, J. 1961. *The Death and Life of Great American Cities*. New York: Random House.
- Lefebvre, H. 1996. *Writings on Cities*. Oxford: Blackwell Publishing.
- Price, C. 2003. *Cedric Price: The Square Book*. London: Wiley—Academy.
- Rudofski, B. 1964. *Architecture Without Architects: An Introduction to Non-pedigreed Architecture*. New York: Museum of Modern Art.
- Situationist International online. 2015. <http://www.cddc.vt.edu/situationist/index.html>. Accessed February 4.
- Turner, J.F. 1976. *Housing by people: Towards autonomy in building environments*. London: Marion Boyars.
- Wright, F.L. 1958. *The Living City*. New York: Horizon Press.

Further Readings

- Alexander, C. 1975. *The Oregon Experiment*. New York: Oxford University Press.
- Alexander, C. 1979. *The Timeless Way of Building*. New York: Oxford University Press.
- García-Huidobro, F., D. Torres Torriti, and N. Tugás. 2008. *Time builds! The Experimental Housing Project (PREVI), Lima: genesis and outcome*. Barcelona: Gustavo Gili.
- Koolhaas, R. 1978. *Delirious New York*. New York: Oxford University Press.
- Lefebvre, H. 1991. *The Production of Space [La production de l'espace, 1974]*. Oxford: Blackwell.
- Le Corbusier, and P. Jeanneret. 1937. *Oeuvre complète 1910–1929 [Pessac 1925]*, pp. 78–86. Zürich: Grisberger & Cie.
- Levi-Strauss, C. 1961. *A World on the Wane [Tristes tropiques, 1955]*. New York: Criterion.
- Levi-Strauss, C. 1966. *The Savage Mind [La pensée sauvage, 1962]*. Chicago: University of Chicago Press.
- Mathews, S. 2007. *From Agit-Prop to Free Space: The Architecture of Cedric Price*. London: Black Dog Publishing.
- Mumford, L. 1968. *The Urban Prospect*. New York: Harcourt, Brace & World.
- Sadler, S. 1998. *The Situationist City*. Cambridge: M.I.T. Press.
- Turner, J., and R. Fitcher. 1972. *Freedom to Build: Dweller Control of the Housing Process*. New York: The Macmillan Company.

Other Urbanisms and Urban Projects

“Quase todos os casos de transformação urbanística considerados de êxito e que foram importantes nas duas últimas décadas, foram adoptados e desenvolvidos à margem, ou mesmo contra, das previsões dos planos em vigência. Nuns casos, para o bem, noutros, para o mal.”

(Almost all the main successful urban transformations adopted and implemented in the last two decades disregarded or even opposed the master plans in place, and although the outcome was often good, this was not always the case.)

Nuno Portas, “De una ciudad a otra: perspectivas periféricas”, en A. Martín Ramos (ed.), *Lo urbano en 20 autores contemporáneos*, Barcelona: Edicions UPC, 2004, 223.

Javier Monclús and Carmen Díez Medina

Abstract

The expression ‘Other Urbanisms’ is an attempt to bring attention to the main urban visions coexisting since the end of the Second World War through to the 1980s. These include approaches most linked to internal debates next to the CIAMs and others developed in parallel to functionalist urbanism, such as Townscape, the new urban design subdiscipline and those that support the idea of the city as a cultural creation sensitive to the values of history, focused on urban forms.

Keywords

Townscape • Urban design • Jane Jacobs • Ungers • Rossi • Moneo • Siza • Krier • Lynch • CIAM 8

The complexity of situations endured by European cities since the Second World War and the variety of urbanistic discourses and strategies demand that we avoid generalisations when attempting to value the meaning of reconstruction and renewal both in the ‘urbanisms’ developed during the years of generalised urban growth (from the 1950s to the 1970s) and in the attitudes that were reactivated after the 1980s. Indeed, we are able to identify the coexistence of approaches and visions so different that what for some means a crisis in the principles of modernist urbanism, for others it is about a number of ‘humanised’ versions of those principles. In fact, renewal and updating of ‘qualitative’ urbanism that took place after the 1980s is based on those traditions true to the architectural dimension—defined in different contexts at the start of the twentieth century by Civic Art and the City Beautiful movement—as well as on the different approaches to urban art during the period between the wars.

Architectural and urban planning historiography has explained in detail how publication of the versions of the Athens Charter by Sert (1942) and Le Corbusier (1943)

contributed to the dissemination of the functionalist urban tenets, whereas at the same time an ‘internal’ review of the modernist proposals was taking place which questioned the rigidity of the principles set forth in that document. Indeed, the basis of modernist urbanism expressed through the formula ‘light, air, openness, standardisation and zoning’ started to be criticised in the 1950s, particularly in Europe. In this sense, after CIAM 8 (organised under the title “The Heart of the City” in 1951) and particularly CIAM 9 (The Charter of Habitat, 1953), there was a fundamental turning point with attention now focusing on more conventional urban layouts, and particularly more ‘humanised’ after the failures of functionalist urbanism, with the proposal of substituting the principles of the Athens Charter for a new “hierarchy of human associations” (Mumford 2000, 200).

To a certain extent, the ‘culturalist’ visions were associated with renewed interest in the symbolic significance of traditional urban elements, particularly historical centres, and, in short, the history of the city. These visions gained weight even in other contexts where they had not been given enough attention, such as the urban theories of the 1950s and 1960s in the Soviet Bloc. Nevertheless, more radical production-oriented visions than in Western urbanism were soon imposed. In the post-war context under Stalin, despite attempts to establish differences between the Soviet vision and the capitalist urban development of the West, these principles

J. Monclús (✉) · C. Díez Medina
School of Engineering and Architecture (EINA),
University of Zaragoza, Zaragoza, Spain
e-mail: jmonclus@unizar.es

C. Díez Medina
e-mail: cdiezme@unizar.es

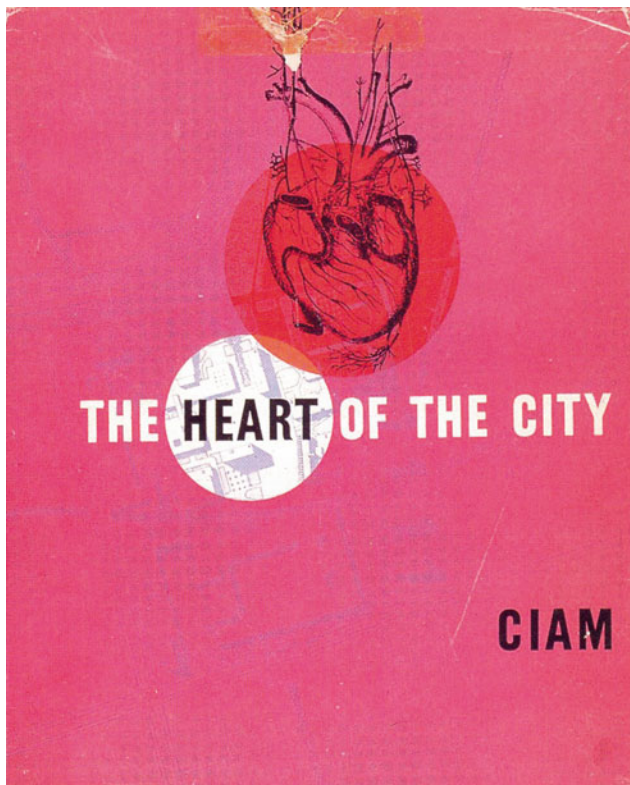


Fig. 9.1 Cover page of the congress publication *The Heart of the City*, CIAM 8, 1951

combined ideas from modernist urbanism of the thirties with the influences that the Stalin era had left behind in Eastern Bloc countries, and perhaps too with the revisionist ideas on the importance of the cultural aspects of cities. Proposals appeared for a more radical attitude to social and economic aspects, which permitted centralised planning. But at the same time, they articulated a growing concern for historical centres, corresponding to the reconstruction strategies that attempted to recover the values of certain ‘urbanity’, despite the contradictions with ‘real urbanism’ that was applied in the monolithic suburbs of socialist cities (Gutnov et al. 1970).

From other perspectives, removed from the internal debates or those in support of CIAM, the analysis on other trends and visions that took place parallel to functionalist urbanism are also relevant (Hebbert and Sonne 2006). Among them, those of the modernist Townscape, the new subdiscipline of Urban Design and other critical visions on ‘dehumanisation’ of modernist urbanism—with emphasis on sociological, psychological and anthropological aspects—particularly stand out.

Along parallel lines, concern for the weak urbanity of functionalist urbanism is the basis of the so-called Townscape which, in fairly simplistic terms, has often been seen as a merely picturesque reaction to modernist urbanism. Its approaches are actually more complex and go beyond the

campaign launched in 1947 by the British magazine *Architectural Review* in which the architect Gordon Cullen and the architectural critic Ian Nairn played decisive roles (Orillard 2014). Beyond those theoretical approaches, the exhibition held on London’s South Bank (1951) for the Festival of Britain could be considered a representative sample of the renewed visions of architectural and landscape urbanism.¹ The humanist perspective that Townscape provided compared to of the Modern Movement was, to a certain extent, recovered by Jacqueline Tyrwhitt and others, acquiring a more important role in the new residential estates of the 1950s. More recently, the significance of that ‘movement’ has been deeply revised, with the rediscovery of some key personalities, such as the British urbanist Thomas Sharp, whose plans and texts had a certain degree of influence during the post-war period. The concept of Townscape permitted those architects and urban planners to provide “a modern focus on urban forms that was different from the dominating paradigms both that of garden cities and Corbusierian views” (Pendlebury 2009). The publication of *The Concise Townscape* by Cullen in 1961 contributed to consolidating that line which would nevertheless take some time in being recognised in international urbanistic culture.

On the other side of the Atlantic, the newly appointed Dean of the Harvard Graduate School of Design, Josep Lluís Sert, promoted Urban Design, updating the traditional views of Civic Design in the important *Urban Design Conference* in 1956. In the words of Sert, the new subdiscipline of Urban Design is understood as “that part of urbanism that deals with the physical form of the city”, with the aim of finding a common basis for the joint work between the architect, the landscape architect and the city planner.² It was also during the same period when Kevin Lynch (with his cooperators Gyorgy Kepes and Donald Appleyard) started his research on the perception of cities and visual urbanism. It is not necessary to mention the relevance that his seminal work *The Image of the City* (1960) had on the development of other approaches to urbanism that were much more focused on the quality of urban landscapes than was the generic, abstract approach of modern functionalist urbanism.³

Among other critical visions on the ‘dehumanisation’ of modern urbanism is that of Jane Jacobs, the activist who opposed ‘urban renewal’ and whose *The Death and Life of Great American Cities* became one of the few best sellers on urbanism in the twentieth century (Jacobs 1961 and reprinted continuously, particularly after the 1980s).⁴

¹(Monclús 2009).

²“(…) that part of city planning which deals with the physical form of the city” (Krieger 2006).

³Lynch, *The Image of the City* (1960). But these theories were developed twenty years after, in his monumental work *Good City Form* (Lynch 1981).

⁴See also *Contemporary Perspectives on Jane Jacobs* (Schubert 2015).

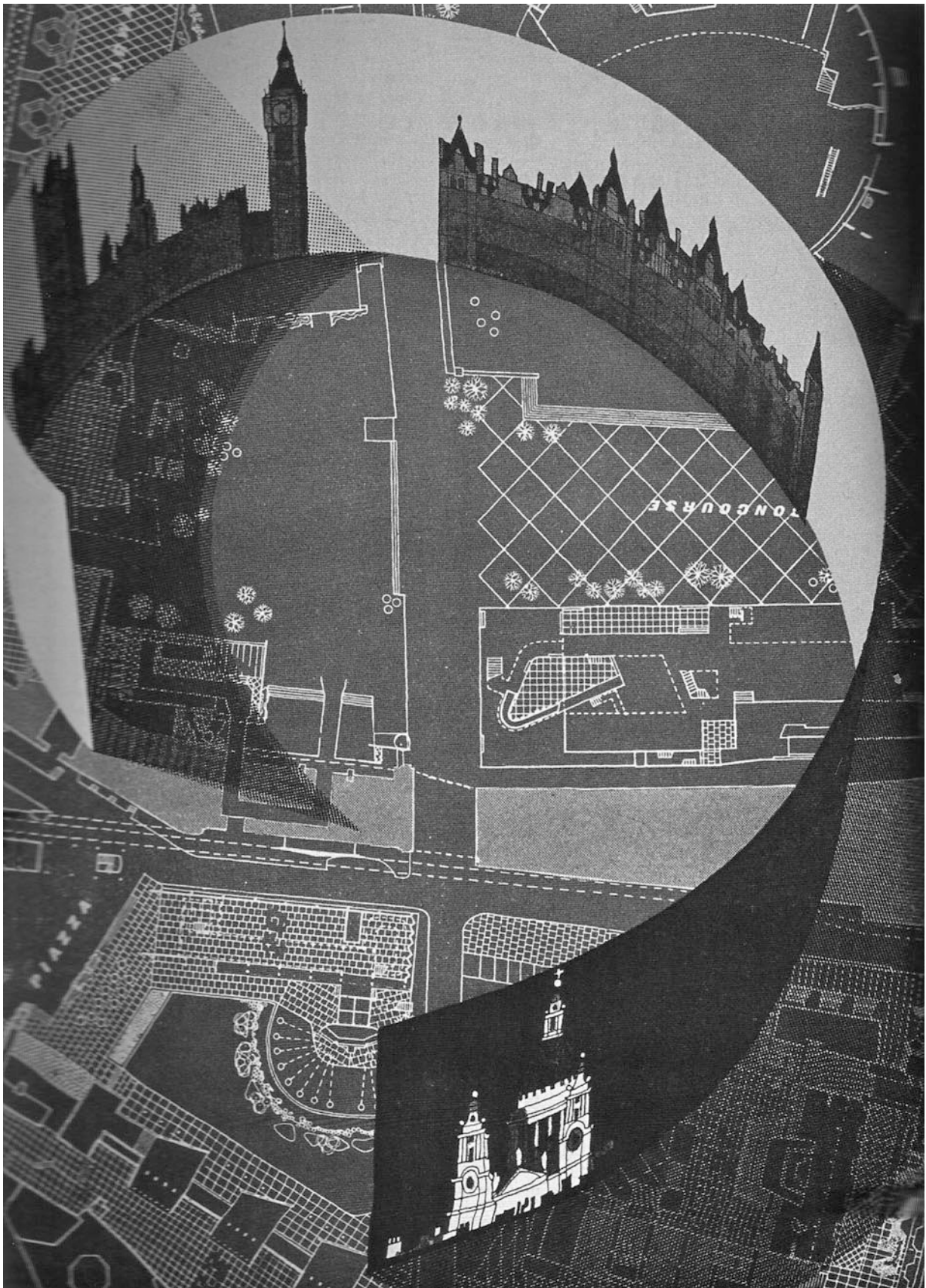


Fig. 9.2 Cover page of *Architectural Review*, 1951, by G. Cullen and D.D. Mills depicting the Festival of Britain for the London South Bank

Her criticism was largely directed at modernist urbanism, particularly the strict zoning and the functional and typological uniformity. Consequently, one of the central themes is diversity: social and economic diversity among inhabitants; diversity in the shape and size of buildings; diversity in the types of activities in delimited areas, etc., all of which is to guarantee diversity among the resident population. Jacobs was also a radical defender of the street and mixed buildings, suitable for different social groups and several age groups, contrary to the principles of functionalist urbanism. Another fundamental critical contribution is by Christopher Alexander, who, in his famous paper of 1965 “A City is not a Tree”, opposed the tree-like structure of cities planned according to the modernist principles to the complex grid-like structures of traditional cities.

In view of the advance of the new modern paradigms that reacted to cities of the industrial era with proposals of open urbanism and low density (both in garden cities and in functionalist models), all these trends that were critical of modernity, representing different traditions based on the value of ‘urbanity’ coexisted with other new visions of modernity that emerged in different historical and urban contexts. It was during that cultural moment when one of the most intense lines of reflection appeared that opened up architectural and landscaping culture in the 1960s marked by a renewed attention to the place and the ‘city as architecture’.

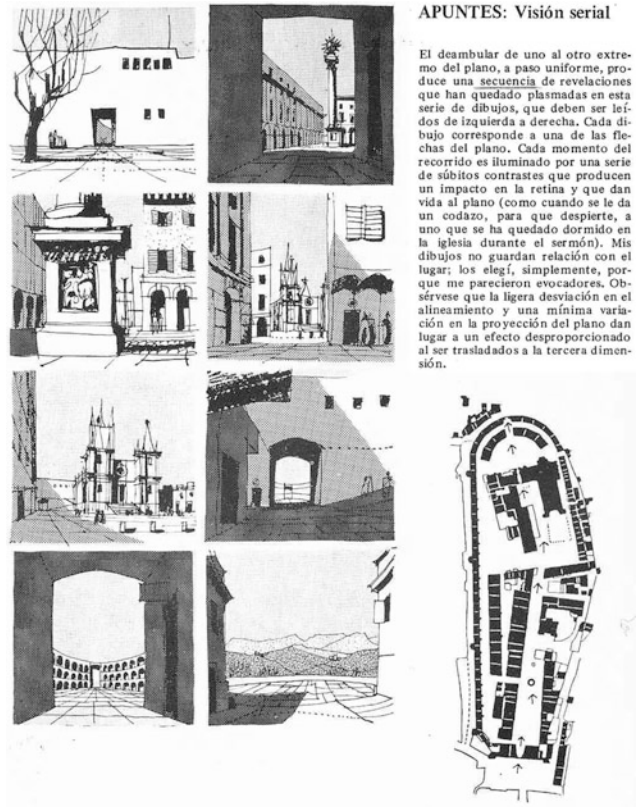


Fig. 9.3 Pages from the book by Gordon Cullen *The Concise Townscape*, published in 1961



Fig. 9.4 Jane Jacobs, in the campaign to save West Village in New York, showing documents at a press conference held at the Lions Head Restaurant (Hudson St. con Charles St.), 1961

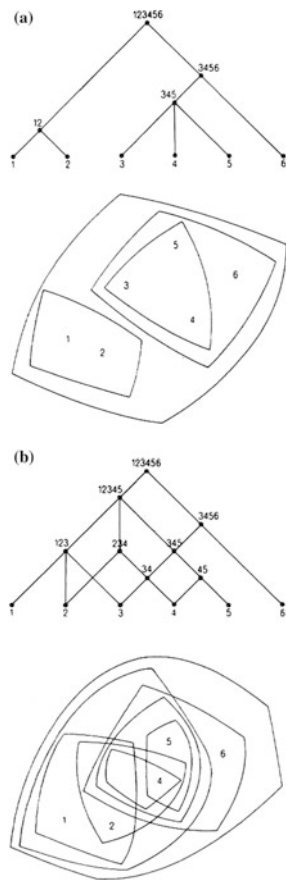


Fig. 9.5 Visual diagrams published in the book by Kevin Lynch *The image of the City*, 1960, and by Kevin Lynch and Donald Appleyard, *The View from the Road*, 1964



Fig. 9.6 Christopher Alexander, tree and grid diagrams, 1965

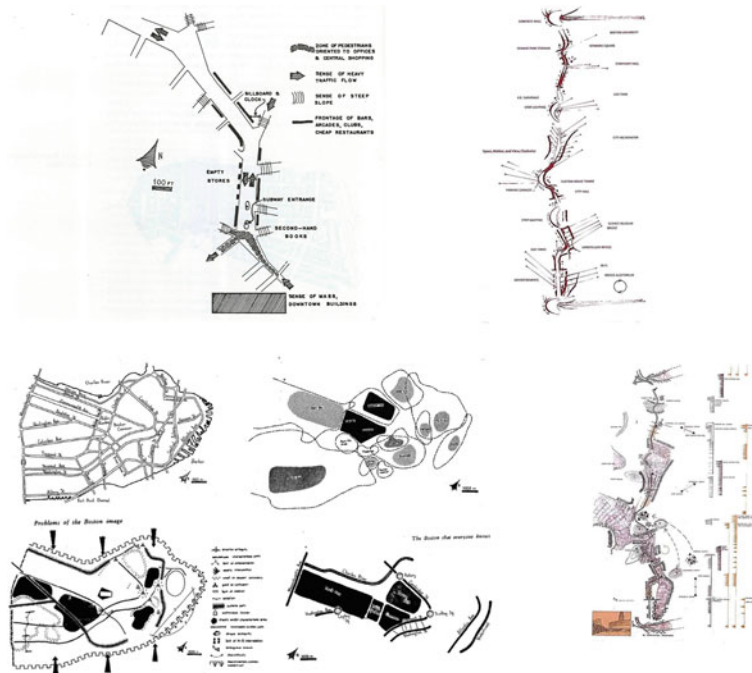


Fig. 9.7 Aldo Rossi, cover page of the first issue of *L'architettura della città*, 1966



Fig. 9.8 Manuel de Solà Morales and Rafael Moneo, proposal submitted for the ideas contest for urban renewal of the historical city centre of Zaragoza in 1969

The idea of the city as a cultural creation sensitive to the values of history was developed in those years at the same time in different countries, being particularly evident in Italy with the renewed conceptions of urban morphology and building typology at the School of Venice, led by Saverio Muratori (*Studi per un'operante storia urbana di Venezia*, 1959). The publication in 1966 of Aldo Rossi's *L'architettura della città* was fundamental. In it, Rossi offers a scientific vision of the city, not far removed from the ideology of the structuralists in vogue during in those years. Concepts such as 'place', 'type', 'monument', 'urban form', at the end of the 1970s became commonplace terms of reference due to the influence of his book (Moneo 2004a). This concern for understanding the city is also recognised in the teaching of some architects, such as Oswald Mathias Ungers and Colin Rowe, who, from opposing positions regarding urban forms and history, converted Cornell University in a centre of lively discussion and debate in the early 1970s. The respect for historical cities is patent in a text by Rowe and Fred Koetter published in 1978 under the title of "Collage City" which was highly influential in those years, with architects such as James Stirling, whose work would become narrative from that moment on, conceived with references to the ancient city, collage and landscape (Moneo 2004b). In the same year, the paper "On Typology" by Rafael Moneo gave a lucid, operative look into history through the concept of

architectural types. Some urban projects at the end of the 1960s and in the early 1970s, carried out in conjunction with Manuel Solà Morales, show special concern for the existing city. In essence, although from different approaches, visions by some architects interested in the historical dimension of urban components began to gain ground. In other words, those approaches in which Moneo and Solà Morales emphasised the physical and material content of urbanity, as reflected in their work together on projects such as the Actur of Lacua in Vitoria (1976–1980) and the Special Plan of Aranjuez (1979–1981).⁵ The text published by Solà Morales in 2008 in the book *A Matter of things* reflects this interest in understanding the city as a specific material fact.

All these traditions and movements are based on recovering culturalist views, with attention to urban forms and new urban projects, in particular the discourse on the 'reconstruction of the European city' that came about in the 1980s, where the visions of Italian and French morphology and the central European tradition encountered each other. The concept of 'critical reconstruction' therefore refers to a careful reconstruction of the city, defending renewal instead

⁵See also the proposal submitted for the ideas contest for urban renewal of the historical city centre of Zaragoza in 1969 (Díez Medina 2013; Martínez Litago 2013).

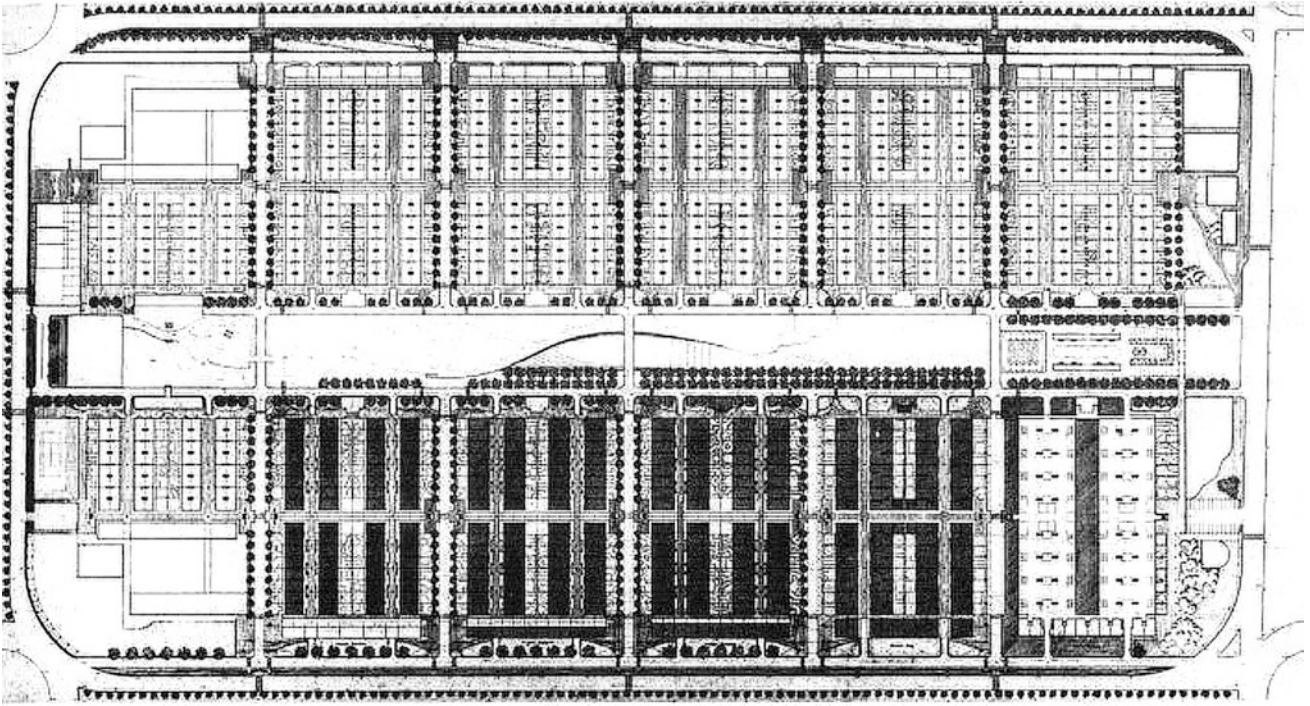


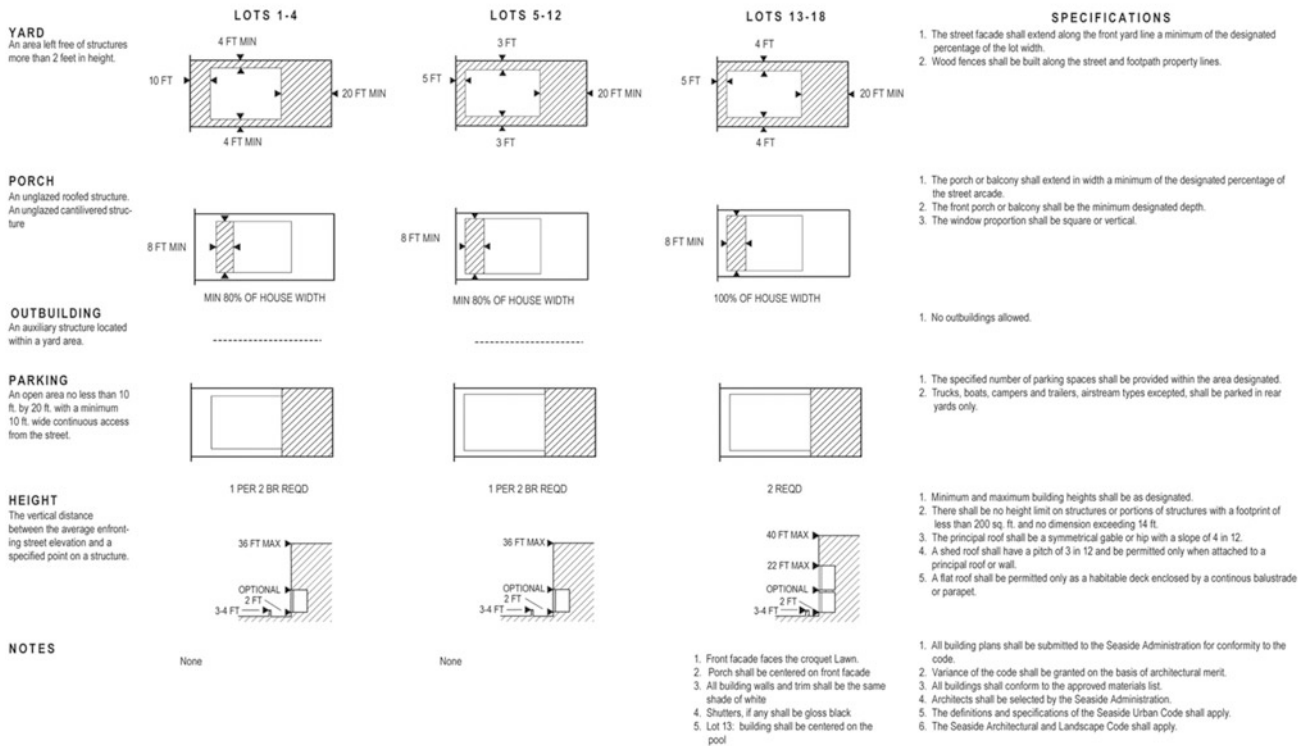
Fig. 9.9 Manuel de Solà Morales and Rafael Moneo, proposal submitted for the restricted contest for Lakua (Sectors 7, 8 and 10), Vitoria, 1976



Fig. 9.10 Manuel de Solà Morales and Rafael Moneo, L'Illa Diagonal, Barcelona, 1987–1993

SPECIAL DISTRICT, SEASIDE

URBAN CODE



© 2002 Duany Plater-Zyberk & Company
Revision Date: 05-15-02, 0208, 000001.mxd

4

Fig. 9.11 Duany & Platter-Zyberk Architects, urban code for Seaside, 1982

of demolition (Fischer 2014). In this context, the urban culture that emerged in the 1980s dealt particularly with the regeneration and reclassification of public areas, as demonstrated at the Berlin International Exhibition (IBA 1984–87). Their slogan “Reconstruction of the European City” showed absolute respect for historical urban fabric, recovery of streets and the morphology of the closed block. The Latin-European cities adopted this type of architectural and morphological urbanism, thus sharing the new paradigm. That was also the case of Barcelona throughout the 1980s, culminating with the 1992 Olympic Games and renewal of the seafront (Ward 2002; Monclús 2003) (see Chap. 11).

Among the most outstanding ‘recoveries’ in North America was the New Urbanism which emerged in the early 1980s in the USA, linked to the Kriers visions in Europe. This movement well exemplifies the ‘recovery’ of urbanistic traditions at the start of the twentieth century before the automobile and the suburban explosion in North American cities. Indeed, to the beginning of Traditional Neighbourhood Design (TND) and Transit-Oriented Development (TOD) there were only a few important steps taken since Frederick Law Olmsted, the Regional Planning Association of America (RPAA) and earlier successful examples.

Although critics against the use of nostalgia of traditional forms have been continuously vocal, their discourse has dominated the roots of architectural urbanism with attempts at integrating other visions of suburban development that are more sensible and sustainable. Indeed, the projects developed to date (Seaside, Celebration, Laguna West) have only extended the repertoire of available suburban models.⁶ In short, as will be seen in the coming chapters, there was a cyclic movement of recovering visions and urban forms that had never completely disappeared, since they were linked to cultural and urban traditions in different countries. This recovery was driven by the review of the functionalist principles of Modern Movement, humanising them and reconciling them with more flexible attitudes aware of urban spaces. The return to the street and the closed block is one way to understand the expression of this new paradigm.⁷

⁶“While these important projects advanced new models of neighborhood development, they have largely been confined to expanding the options available to suburbanites rather than fostering the diversity and sustainability of the compact metropolis” (Silver 2006, 179–196).

⁷(Panerai et al. 1986).

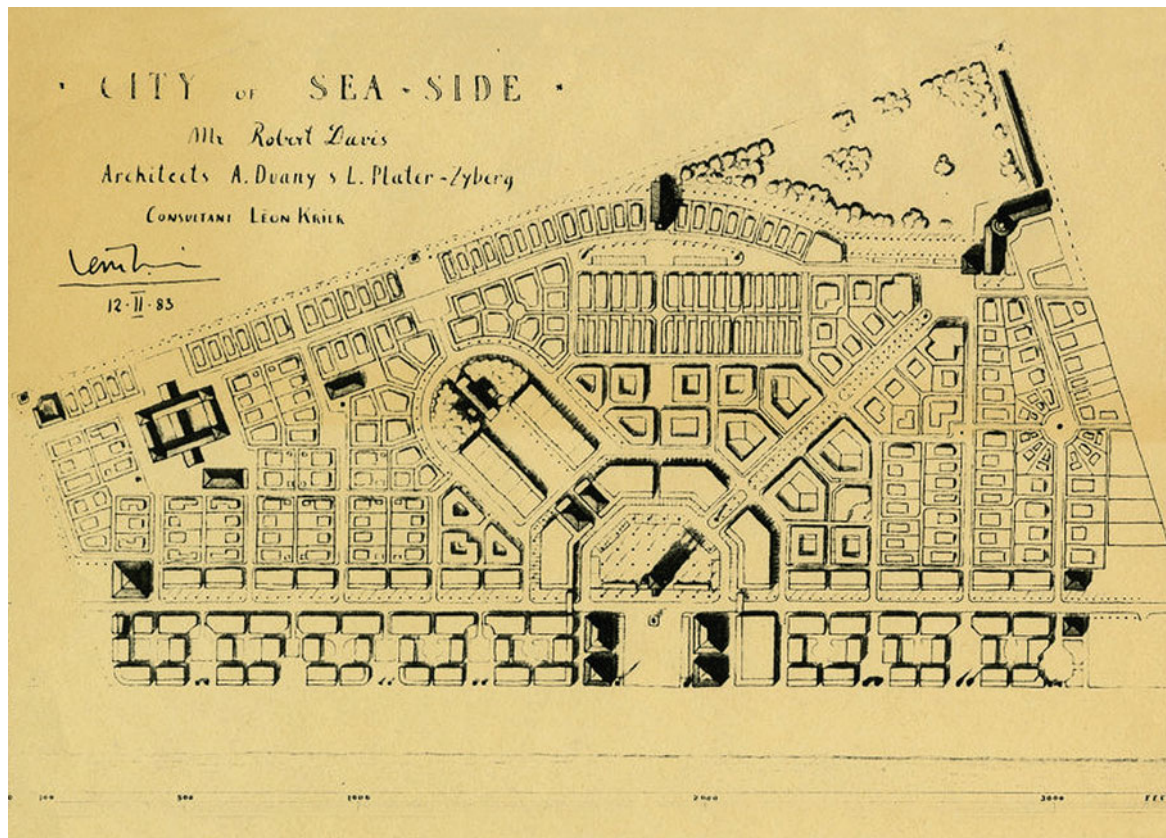


Fig. 9.12 Duany & Platter-Zyberk Architects, project for Seaside, 1982

While it can also be said that the most renewing visions started with an internal review, from the very heart of the Modern Movement, with the critical visions of the second generation of modernist urbanists, those of Team X and other architects and urbanists sceptical of the dogma of CIAM and the Athens Charter.⁸ On the other hand, the continuity in using more or less conventional or ‘dense’ urban forms, as some authors such as Wolfgang Sonne prefer to call them, is

a fact that dates back to projects similar to the visions of the City Beautiful movement. This attitude would extend until it overlapped with the recovery of urban projects of the 1980s, where the ‘updated’ search for, or recovery of, said urban forms had the goal of recovering lost urbanity (Sonne 2014). The projects shown as follows, the IBA of Berlin and the Quinta de Malagueira, are good examples of some of the attitudes described in the preceding paragraphs.

⁸(Portas 2004).

Case Studies

Quinta de Malagueira, Évora, Portugal (1973–1977)

The new residential complex of Quinta de Malagueira, developed according to a project by Álvaro Siza in Évora, is an exceptional example of the experimentation that paved the way towards new urban forms as a reaction against modern functionalist urbanism. It is an emblematic operation of the conceptual changes in the project for mass social housing.

Within the framework of the Portuguese revolution of 1974 and the SAAL programme (Serviço de Apoio Ambulatorio Local) launched by Nuno Portas as Secretary of State in the first democratic government to promote the building

of social housing, a group of 1200 homes was planned on 27 ha. The project was carried out just after the programme was suspended. The development is arranged in a somewhat organic layout. The urban forms used to combine the interest in traditional typology with the innovative layout of the roadway system and residential clusters. To deal with the problem of the spaces between blocks in modern estates, a sequence of interstitial spaces was designed here with a system of streets, plazas and parks.

Moreover, the option of open, growing structures goes hand-in-hand with participative processes, in which the users control the future transformations of the houses. In this sense, the designed houses are also in line with the concept of evolving housing, which can grow according to the needs of the inhabitants, reaching up to 6 bedrooms. The close relationship between the architecture and urbanism marked the project right from the start, and the sensitivity towards the processes of change and permanence of the site: “The houses and objects without value become living presences, breaking up the new settlements” (Siza 1994).



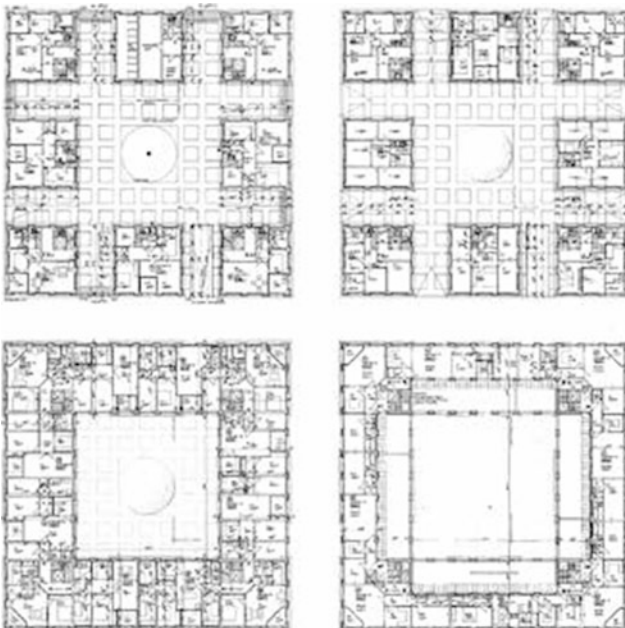
Berlin International Exhibition (IBA) (1984–87)

In the tradition of the *Internationale Bauausstellungen* (IBA), the divided Berlin of the 1980s was the venue of an exhibition of the ‘reconstruction’ culture of European cities. A critical, metaphoric reconstruction, not only of Berlin, still marked by the destructive effects of the war, but also designed as a model for other European cities.

Thirty years after the Interbau (Berlin IBA of 1957), the new IBA, under the direction of J. P. Kleihues, responded to very different, or even opposing criterion: rediscovery of the existing consolidated city, the city as a living space, the value of the traditional spaces in the city, the social housing forms, etc., were all central themes at the exhibition. Unlike the open

urbanism of functionalism, where blocks and roads were predominant, there was a return to traditional models, with the ‘new closed block’ or perimeter block, absolute respect for the historical sector and assertion of the corridor street.

The initial slogan of the Berlin IBA of 1984–87 was “Let us save the city in ruins. The historical centre as a place to live”. The two main objectives were of a local nature: to redevelop the abandoned areas between the Landwehrkanal and the Berlin wall, and finish urban renewal of the Kreuzberg district, since the process had come up against growing resistance until it had been halted altogether. Employing the new principles expressed in the idea of a *behutsame Stadterneuerung* (careful reconstruction of the city) led to a substantial change in the way of tackling urban redevelopment.



References

- Fischer, K.F. 2014. Berlin's International Building Exhibitions 1957 and 1984/87. In *Exhibitions and the development of Modern Planning Culture*, ed. R. Freestone, and M. Amati, 261–276. Farnham: Ashgate.
- Gutnov, A., A. Baburov, G. Djumenton, S. Kharitonova, I. Lezava, and S. Sadovskij. 1970. *The Ideal Communist City*. New York: George Braziller.
- Hebbert, M., and W. Sonne. 2006. History Builds the Town: On the Uses of History in Twentieth-century City Planning. In *Culture, Urbanism and Planning*, ed. J. Monclús, and M. Guardia, 3–20. Hampshire: Ashgate.
- Jacobs, J. 1961. *The Death and Life of Great American Cities*. New York: Random House.
- Krieger, A. 2006. Where and How Does Urban Design Happen. *Harvard Design Magazine* 24: 64–71.
- Lynch, K. 1960. *The Image of the City*. Cambridge: M.I.T. Press.
- Lynch, K. 1981. *A Theory of Good City Form*. Cambridge: M.I.T. Press.
- Monclús, J. 2003. The Barcelona model: and an original formula? From 'reconstruction' to strategic urban projects (1979–2004). *Planning Perspectives* 18: 399–421. doi:10.1080/0266543032000117514.
- Moneo, R. 2004a. Aldo Rossi. In *Inquietud teórica y estrategia proyectual en la obra de ocho arquitectos contemporáneos*, 101–144. Barcelona: Actar.
- Moneo, R. 2004b. James Stirling. In *Inquietud teórica y estrategia proyectual en la obra de ocho arquitectos contemporáneos*, 7–50. Barcelona: Actar.
- Mumford, E. 2000. *The CIAM Discourse on Urbanism, 1928–1960*. Cambridge: M.I.T. Press.
- Orillard, C. 2014. The Transnational Building of Urban Design: Interplay Between Genres of Discourse in the Anglophone World. *Planning Perspectives* 29: 209–229. doi:10.1080/02665433.2013.878879.
- Pendlebury, J., ed. 2009. Thomas Sharp and the modern townscape. *Planning Perspectives* 24. doi:10.1080/02665430802533035.
- Schubert, D. (ed.). 2015. *Contemporary Perspectives on Jane Jacobs: Reassessing the Impacts of an Urban Visionary*. Farnham: Ashgate.
- Silver, C. 2006. New Urbanism and Planning History: Back to the Future. In *Culture, Urbanism and Planning*, ed. J. Monclús, and M. Guardia, 179–194. Hampshire: Ashgate.
- Sonne, W. 2014. *Urbanität und Dichte im Städtebau des 20. Jahrhunderts*. Berlin: DOM publishers.
- Ward, S.V. 2002. *Planning the Twentieth-Century City: The Advanced Capitalist World*. New York: Willey.

Further Readings

- Alexander, C. 1965. A City is not a Tree. *Architectural Forum* 122: 58–61.
- Appleyard, D., K. Lynch, and J.R. Myer. 1964. *The view from the road*. Cambridge, Massachusetts: M.I.T. Press for the Joint Center for Urban Studies of the M.I.T. and Harvard University.
- Broadbent, G. 1990. *Emerging Concepts in Urban Space Design*. New York: Van Nostrand.
- Cullen, G. 1961. *The Concise Townscape*. New York: Architectural Press.
- Díez Medina, C. 2013. Conversación con R. Moneo/Conversation with R. Moneo. *ZARCH: Journal of interdisciplinary studies in Architecture and Urbanism* 1: 344–361.
- Ellin, N. 1999. *Postmodern Urbanism*. New York: Princeton Architectural Press.
- Ellis, C. 2002. The New Urbanism: Critiques and Rebuttals. *Journal of Urban Design* 7: 261–291. doi:10.1080/1357480022000039330.
- de Solà-Morales, M. (ed.). 2008. *A Matter of things [De cosas urbanas, 2008]*. Rotterdam: NAI Publishers.
- van Geisten, C., and E. Pfothenauer. 2007. Parting from the Doctrine of Modernist Urban Development: IBA Berlin 1984/87. In *Metropole: Reflexionen/ Metropolis: reflections: IBA Hamburg*, 220–229. Berlin: Jovis Verlag.
- Martínez Litago, E. 2013. El concurso de ideas de 1969 para la remodelación urbanística del centro antiguo de Zaragoza. *ZARCH: Journal of interdisciplinary studies in Architecture and Urbanism* 1: 362–373.
- Monclús, J. 2009. *International exhibitions and urbanism: The Zaragoza Expo 2008 Project*. Farnham: Ashgate.
- Moneo, R. 1978. *On Typology*. *Oppositions* 13: 22–45.
- Montaner, J.M. 1993. *Después del movimiento moderno*. Barcelona: Gustavo Gili.
- Montaner, J.M. 2015. *La arquitectura de la vivienda colectiva*. Madrid: Reverté.
- Muratori, S. 1959. *Studi per un'operante storia urbana di Venezia*. Roma: Istituto Poligrafico dello Stato, Libreria dello Stato.
- Panerai, P.R., J. Castex, and J.-C. Depaule. 1986. *Formas urbanas. De la manzana al bloque [Formes urbaines, 1980]*. Barcelona: Gustavo Gili.
- von Petz, U. 2010. City Planning Exhibitions in Germany, 1910–2010. *Planning Perspectives* 25: 375–382. doi:10.1080/02665433.2010.481189.
- Portas, N. 2004. De una ciudad a otra: Perspectivas periféricas. In *Lo Urbano en 20 autores contemporáneos*, ed. A. Martín, 221–229. Barcelona: Ediciones UPC.
- Rossi, A. 1966. *L'architettura della città*. Venice: Marsilio editori.
- Rowe, C., and F. Koetter. 1978. *Collage City*. Cambridge: M.I.T. Press.
- Siza, A. 1994. Territorio de Malagueira. In *Visiones Urbanas. Europa 1870–1993. La ciudad del artista. La ciudad del arquitecto*, ed. J. Dethier and A. Guiheux, 457. Barcelona: CCCB Electa.

Basilio Tobías

Abstract

Quite a lot of the university proposals developed in the sixties had a strong urban component, encompassed within the theoretical developments of the time, which was an appropriate scope for university projects, with a variety of functions and a diagrammatic condition arising from the overlapping linkage between their components and the demands for growth. The reconsideration of the teaching structures implied a greater importance of the departmental system. Within the European trend of promoting community values, the university appeared as an ideal community, which should not only be places for teaching but also places for relationships to develop promoting social exchanges. All this took place in a more liberal general context in which concepts such as change, flexibility or spontaneity were well present.

Keywords

University campuses • Megastructures • Mat-building • CIAM 10 • Team 10

The years following the Second World War saw a significant increase in the planning of new universities. Among the reasons for this increase were economic growth and the democratisation of advanced education, one of the hallmarks of the ‘welfare state’ established in Western Europe. This process would reach its maturity in the 1960s (Muthesius 2000).

In addition to favourable economic conditions, these years also saw the convergence of different schools of thought—such as Existentialism and Structuralism—and architectural theory. These circumstances marked a clear break with the predominant principles of the Modern Movement as laid down by the Congr s Internationaux d’Architecture Moderne (CIAM) meetings after 1928, and later included in the Athens Charter that was drawn up during CIAM 4 and published by Le Corbusier in 1943. During CIAM 9, Alison and Peter Smithson presented the “Urban Re-Identification Grid”, in which, in contrast with

the four functions enshrined in the Athens Charter—dwelling, work, leisure, circulation—other concepts such as house, street, district, city, that constituted differentiated, although overlaid, levels of human relationships. The raised external street that was part of the Golden Lane design, in which the social relationships of the streets of the East End of London would be recreated, and which could be articulated to form clusters, was one of the decisive features of the Smithsons’ and other residential and urban projects, whose creators saw the ‘street in the air’ as a symbol of relationships.

Team 10 was founded in the wake of CIAM 9 with a core consisting of Jaap Bakema, Aldo van Eyck, Georges Candilis, Shadrach Woods and Alison and Peter Smithson, which would organise the CIAM 10 meeting in Dubrovnik. CIAM 11, held in Otterlo in 1959, was the last of these events. Afterwards, the more informal Team 10 meetings would take over from the CIAM meetings until 1977. The interests of the new generation were expressed in the existential or phenomenological nature of the concepts they dealt with, with an understanding of the relationship between urban planning and architecture that led to criteria such as mobility being present in many formulations. This is the case of two key

B. Tobías (✉)
School of Engineering and Architecture (EINA),
University of Zaragoza, Zaragoza, Spain
e-mail: estudio@basiliotobias.com

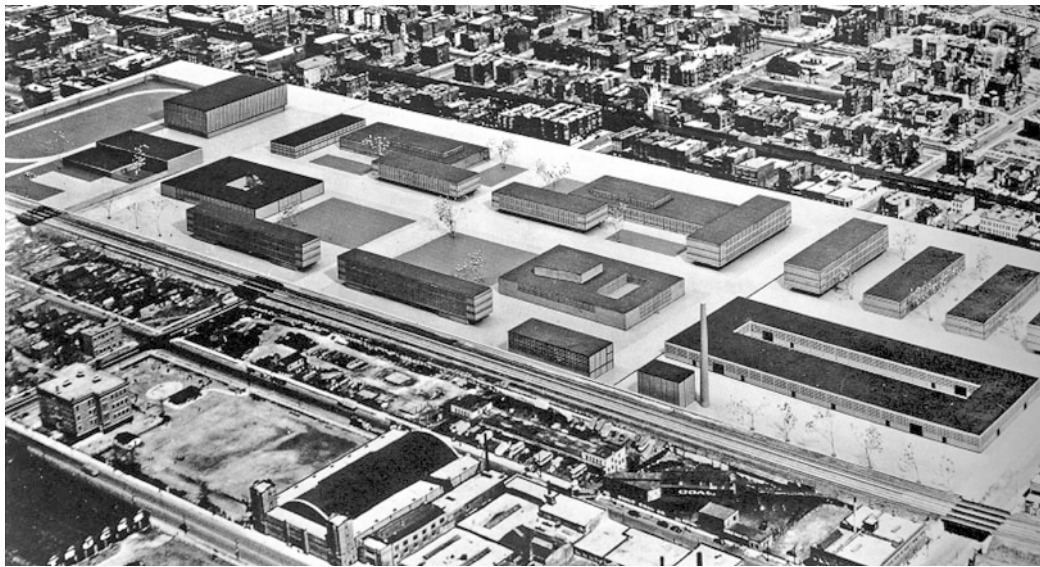


Fig. 10.1 Mies van der Rohe. Master plan for the campus of the Illinois Institute of Technology, 1939

texts by Shadrach Woods, “Stem” and “Web”, published in 1960 and 1962, respectively.¹ The demands of the street were transferred to buildings. As a result, in contrast to the undifferentiated Miesian space, the corridor made its appearance as a long interior street, not measured in length, but in time. Consequently, not only the city but also buildings could be understood as a series of streets, squares and volumes that would recreate the permanent and transmissible structure of the city, from a structuralist point of view.

In the domain of universities, consideration was given to educational structures, with a consequent loss of the identity of faculties in favour of the department. In keeping with the general trend in European countries of fostering community values, the university appears as an ideal community in which importance is not only given to education spaces, but primarily to those where social exchanges could take place.

The Campuses of Modernity

The architectural possibilities of university programmes, combined with the prestige of the institutions, explain the enthusiasm manifest by architects of the Modern Movement, within the two-way relationship established between the American campus and the British college. Mies van der Rohe designed the master plan of the Illinois Institute of Technology (IIT) campus in 1940 over eight blocks of Chicago’s South Side. In it, the buildings produced a blend of open and closed spaces through offsets and the relationships created

between symmetry and asymmetry in their placement. Over the Chicago grid, Mies drew up a 24×24 foot (7.2×7.2 m) structural module for the different buildings. The projects designed by Mies for the IIT campus culminated with the construction of Crown Hall in 1956, completing what could be considered the archetype of the neoplastic campus.

In 1949, Alvar Aalto won the competition to design the Otaniemi campus for the then Helsinki University of Technology, to be built on a peninsula near Tapiola. The main building, which occupies the central area, is adapted to the topography, and is designed as a series of blocks linked by corridors that create a series of courtyards which serve as outdoor spaces. This stepped ensemble, articulated with the library, opens onto the landscape and, together with the University of Jyväskylä campus, begun in 1951, represents one of the best examples of the influence of picturesque on modernist architecture.

1960s University Campuses

In 1974, Alison Smithson published the article “How to Recognise and Read Mat-Building” in *Architectural Design*. The piece analysed a series of relatively coetaneous projects and buildings, and a number of historic buildings. Smithson pointed out that “mainstream mat-building became visible, however, with the completion of the FU. (Berlin Free University)” (Smithson 1974). The project for the Free University of Berlin by architects Georges Candilis, Alexis Josic and Shadrach Woods, in collaboration with Manfred Shiedhelm, won the design competition held in 1963, and the first stage was completed in 1973. The conceptual clarity of the project was seen in both the scale model and diagrams

¹The first one in *The Architectural Review* no. 5, 1960, and the second one in *Le carré bleu* n. 3, 1962 (Woods 1960; 1962).

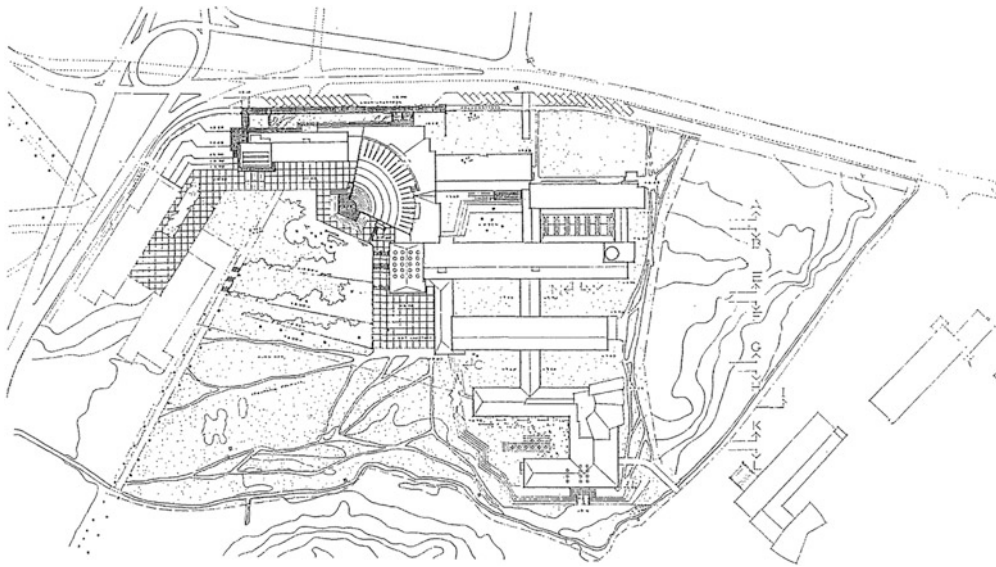


Fig. 10.2 Alvar Alto, main building at the campus of the University of Otaniemi, 1949

that explained its urban nature and the way that it sprawled over the Berlin suburb of Dahlem. The design was built using an industrial construction process in which the French engineer Jean Prouvé played a part (Kiem 2008).

The mat-building concept can be extrapolated to different universities designed in the 1960s. Among them are a number of projects presented in competition for the Universities of Bochum and Zurich, the projects for the University of Toulouse II Le Mirail, and for the University of Odense. Others, such as those for the University of East Anglia and later for the University of Calabria, could be seen as examples of what Reyner Banham defined as megastructures. Among the projects of that time, the Jussieu Campus of the University of Paris, near the Sorbonne, was a radical proposal. Its architect, Édouard Albert, laid out a regular grid of courtyards and buildings over an open plan podium that would form a *parvis*. The project, which was partly built until 1972, is undergoing a thorough remodelling.

The campus of the University of East Anglia, one of the English universities developed at the time, is an interesting example owing to both the nature of its location and the career of its architect, Denys Lasdun, which is translated into the project's strength of form and design, and came about at an extremely interesting time for architecture and planning in the UK.

The competition to design the University of Bochum in 1962 was of interest not only because of the winning design by Helmut Hentrich and Hubert Petschnigg—which, despite its rigidity, has taken root in its location—but because it was a prime example of the trends of the time, when architects such as Walter Gropius and Arne Jacobsen coincided with teams of the newer generation represented by Jaap Bakema,

Eckhard Schulze-Fielitz and Georges Candilis, Alexis Josic and Shadrach Woods.

The University of Toulouse II project, designed in 1968 by Candilis, Josic & Woods with many points in common with the Free University of Berlin, demonstrates how principles of the Berlin project were adapted to a context and situation as different as those of the new town of Toulouse-le Mirail designed by the same architects.

The Odense University, designed in 1967 by Knud Holscher & KHR, is a project of great coherence, both for its general plan and the arrangement of its parts. Its clean and sharp design allows it to be incorporated into its setting and to expand without losing the character of the original project.

The University of Calabria in Cosenza, designed by Gregotti Associati in 1973, is a megastructure built over a land of valleys and hills, with a central axis for traffic and pedestrians that connects the buildings of the different department. Only partially built, it is, in a way, a prolongation and completion of the previous period.

These campuses exemplify the differences established in the 1960s with regard to earlier approaches. The position taken by architects such as the Smithsons and the members of Team 10 had a bearing on this change. Concepts such as the “cluster” or “street in the air”, which the Smithsons consolidated through competitions for Golden Lane in London and the Hauptstadt Berlin in 1957, or designs by Jaap Bakema starting with the Lijnbaan in Rotterdam, built in 1953, influenced approaches to architecture and urban planning of the time. The importance of the team formed in the mid-1950s by Candilis, Josic and Woods, lay both in its projects and the texts and concepts coined by Woods. There is no denying the importance that the collaboration between Candilis and

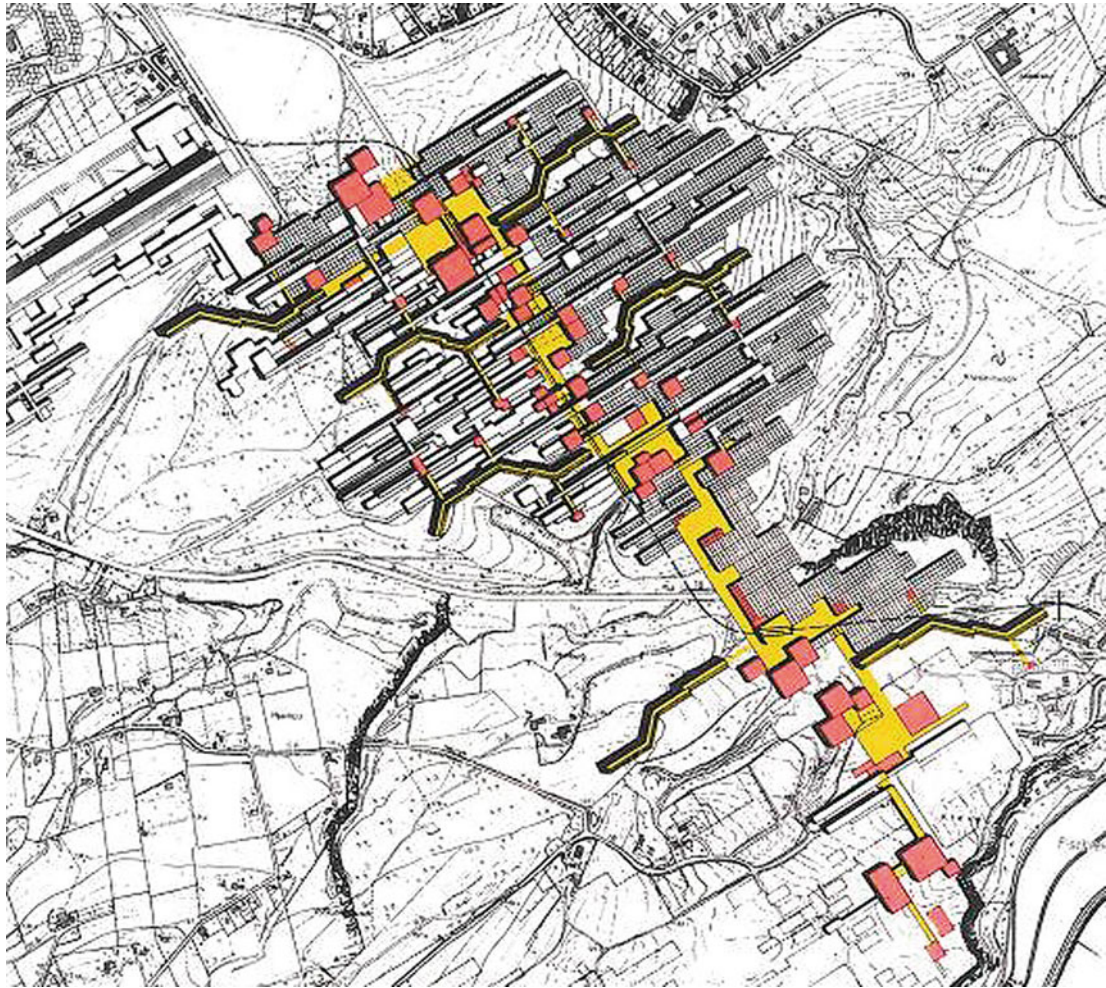


Fig. 10.3 Georges Candilis, Alexis Josic and Shadrach Woods, competition for the University of Bochum, 1962. *Yellow* dwellings and system of public pedestrian spaces. *Red* collective spaces. *Grid* teaching spaces

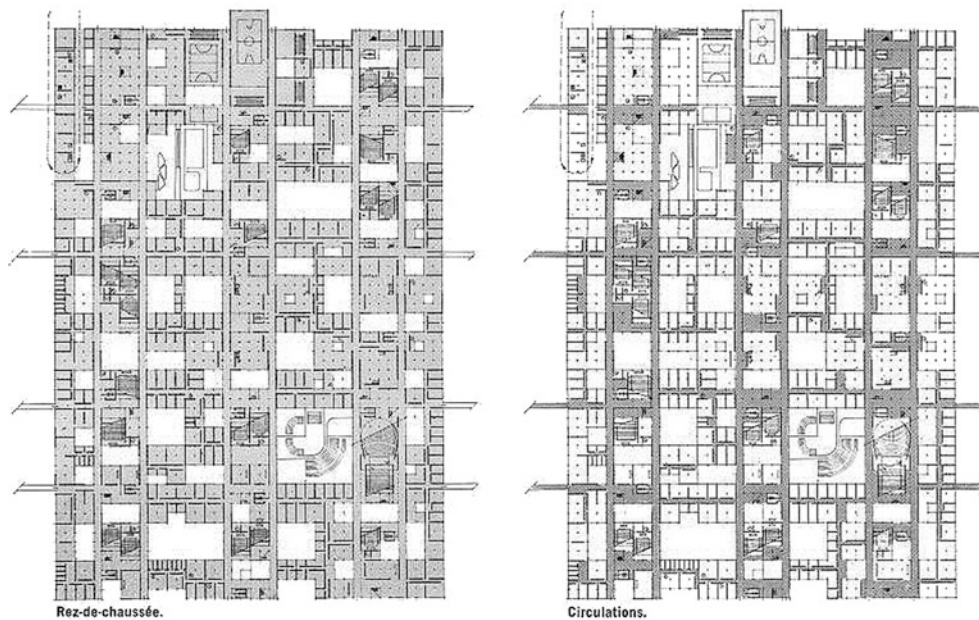


Fig. 10.4 Georges Candilis, Alexis Josic and Shadrach Woods, University of Toulouse-le-Mirail, 1968. Ground floor

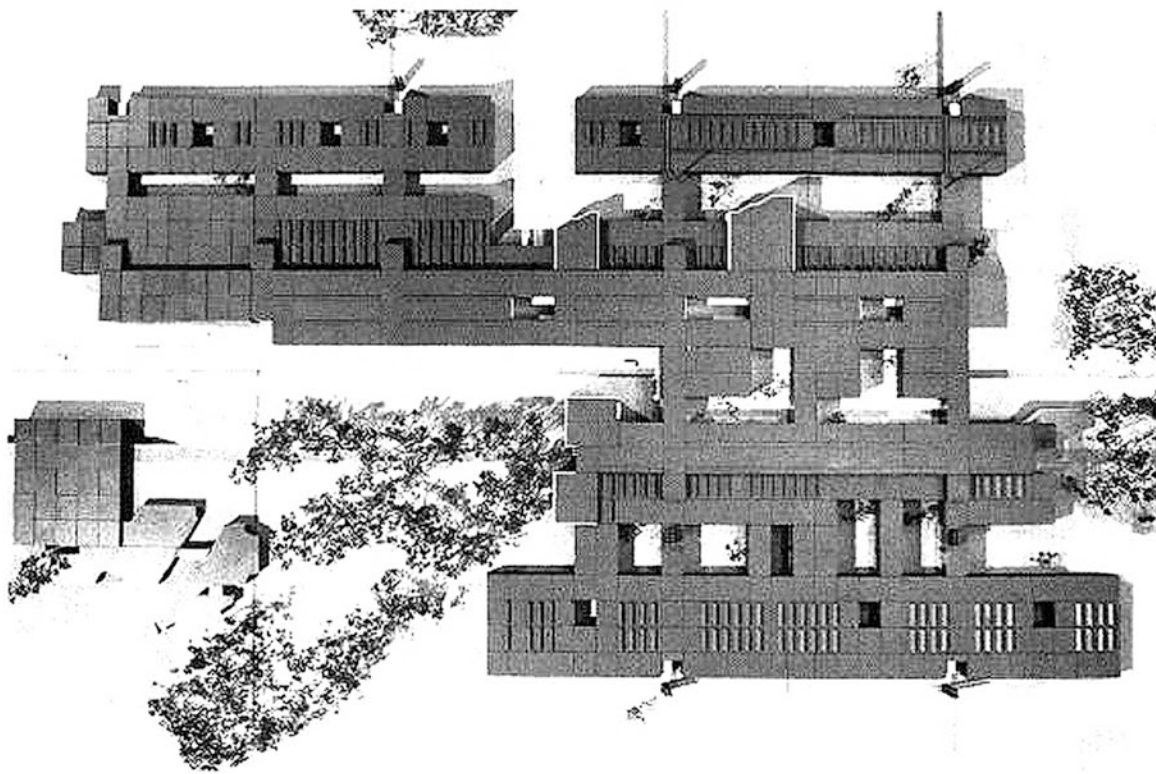
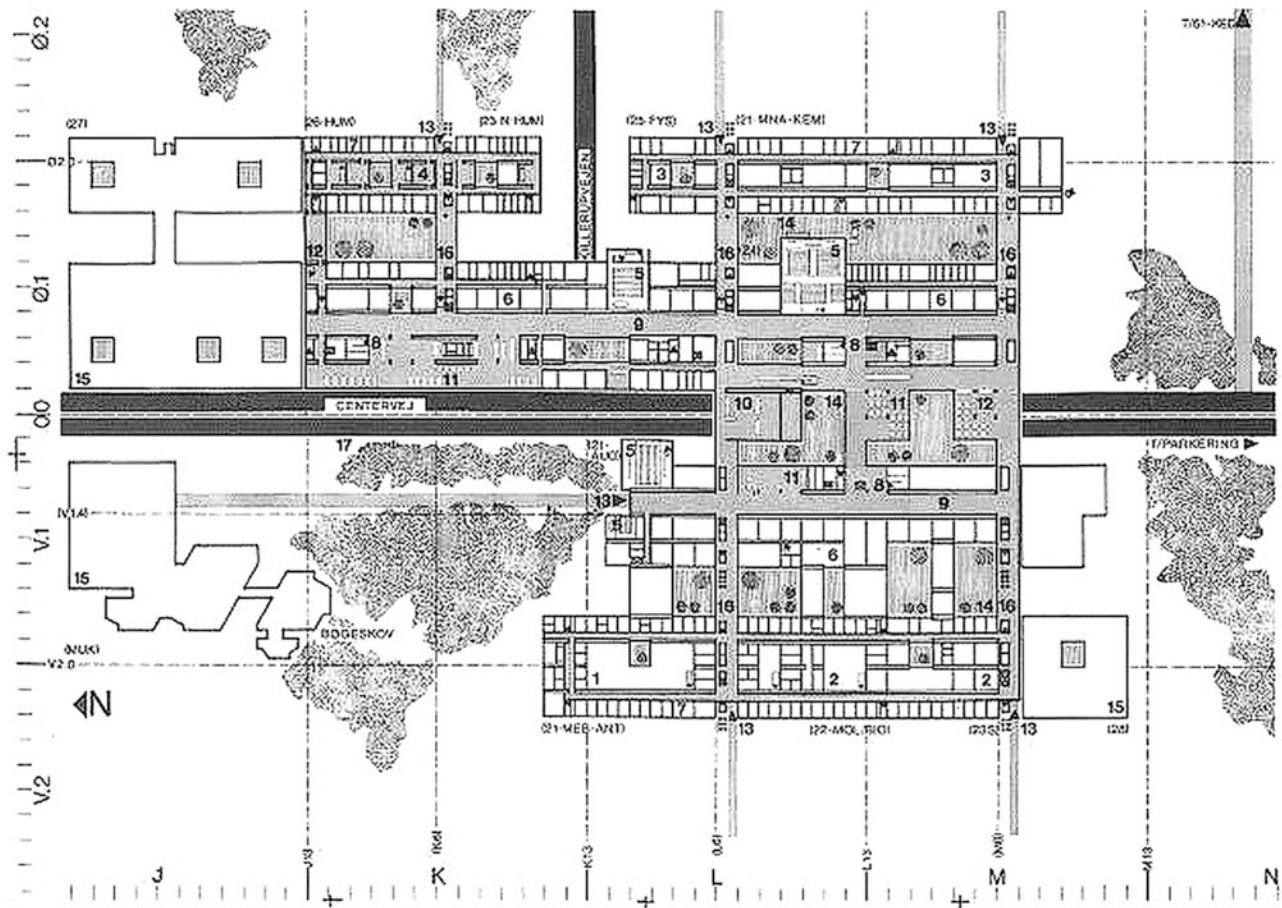


Fig. 10.5 Knud Holscher & KHR, University of Odense (Denmark). 1967. Ground floor and model.

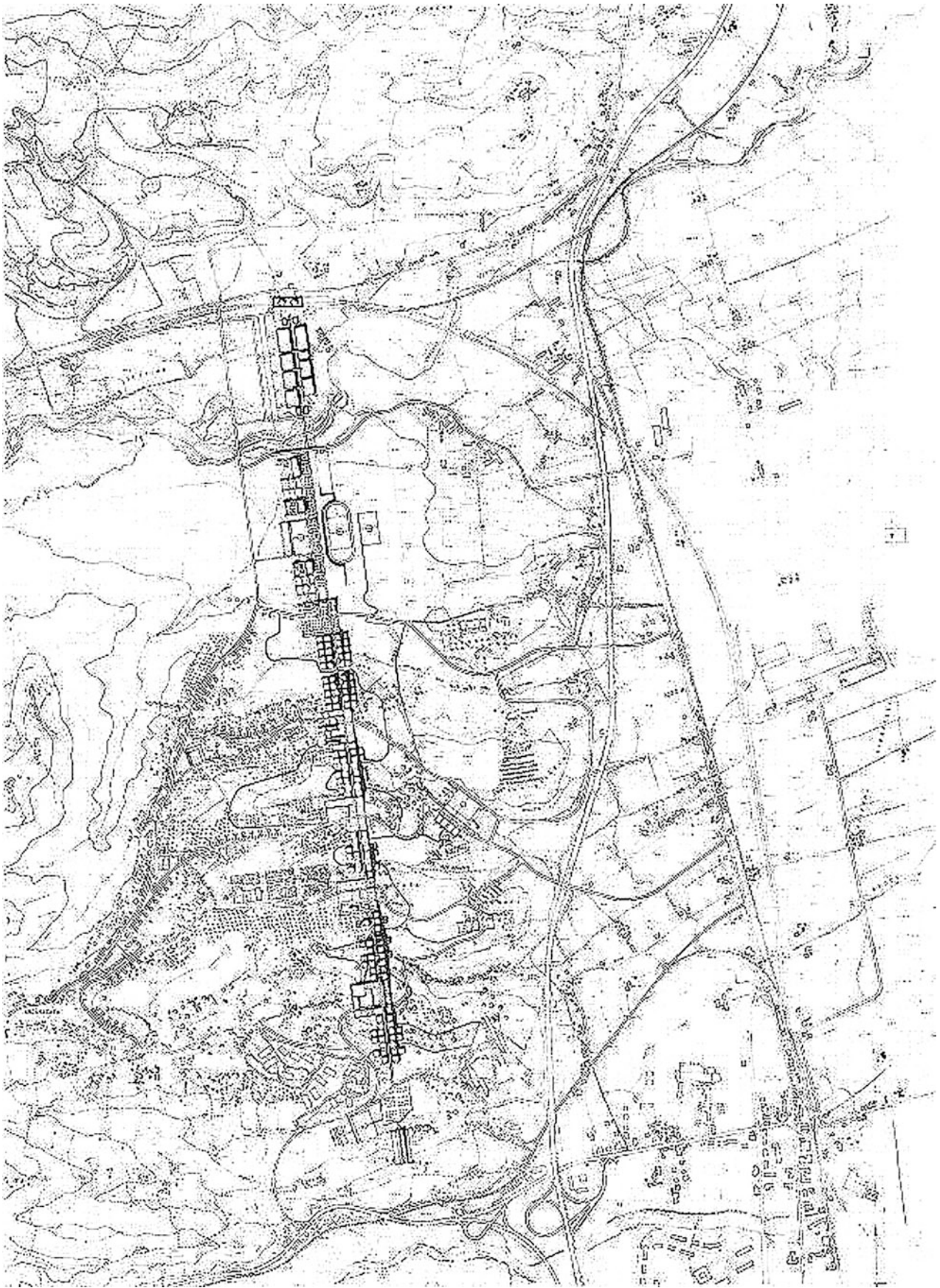


Fig. 10.6 Gregotti Associati. University of Calabria. Cosenza (Italy). 1973.

Woods and Le Corbusier had for the team, in the same way that the discovery of the Mies van der Rohe projects at the IIT had for the Smithsons (Tzonis and Lefaivre 1998).

In addition, new megastructural designs took shape in the late 1950s, not only in Britain, which led to the design of some of the second- and third-generation new towns, but also in Japan, where together with proposals by the Metabolists, Kenzo Tange presented his 1960 Plan for Tokyo. Many of these proposals have a component of urban design, but in addition to the greater integration of architecture and urbanism demanded at the time, this way of working found a suitable field of application in the resolution of complex

projects such as universities, which represent microcosms with a large variety of functions and a diagrammatic condition derived from their functional interrelationships and growth requirements.

In addition to disciplinary approaches, no less importance was given to political, sociological, philosophical and educational ideas, typical at the time in many Western countries. Some of these conditions would change in the following decade, as would approaches to urban planning, and greater value would be given to the integration of universities into cities in contrast to the autonomous campuses, as are most of the examples given.

Case Studies

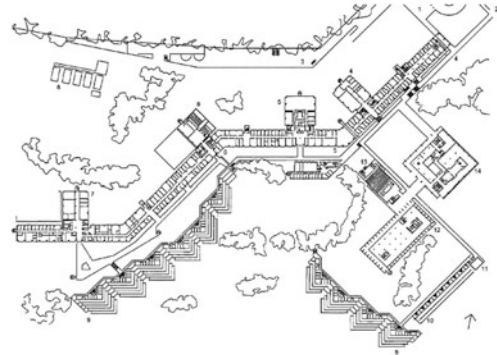
University of East Anglia, Norwich (UK), (1962/1963–1968)

Lasdun's project for the University of East Anglia responded to the features of the site. Instead of a plan based on a picturesque dispersal of the buildings throughout the park Lasdun unites them to follow the contours of the terrain, freeing up the grounds thanks to a compact, urban solution—in keeping with the brief that it should be “not a college, not a campus, but an Italian hill town”. The spinal block contains the elements of communication laid out over two levels; the lower level for vehicular traffic following the slope of the terrain, and the pedestrian walkway kept on the same level as the block. The walkway is connected by bridges to the main access points of the ‘Teaching Wall’, whose four wings, laid out as a continuous and broken line, house the teaching and research spaces. Towards the north, four other square blocks are adjoined.

The Teaching Wall is laid out internally around a central corridor, broken by vertical communication cores, which give rise to two strips of different depths: the south-facing

one housing classrooms, research laboratories, seminar rooms and staff rooms; the north-facing one housing laboratories and offices.

The residential blocks, which are one of the hallmarks of the UEA, are made up of two strips, comprising clusters of six and four buildings, respectively. Each building is terraced and opens onto the landscape like bastions, with a clear counterpoint established between the solidly horizontal floors and communication cores.



Free University of Berlin, (1963/1963–1974)

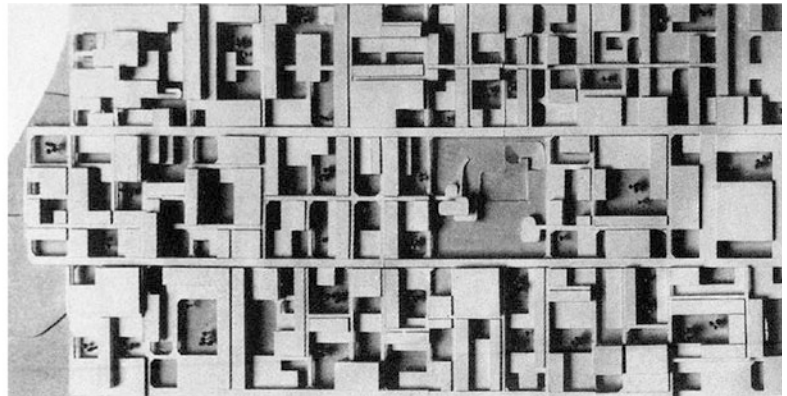
The competition drawings convey the fact that, more than a building, this is a permeable, easily expandable system inserted into its 13.6 ha site in Dahlem—a suburb of free-standing homes—which can be crossed by pedestrians both longitudinally and transversally.

The plans for the university campus comprised an orthogonal network of pedestrian streets: four main streets, running longitudinally, forming three strips—each 65.63 m wide, corresponding to the distance that can be travelled in 1 min—containing nine faculties, crossed by secondary streets. A three-dimensional grid was established, defined by the intersection of the main pedestrian streets—where ramps and stairs were to be located—and secondary ones, together with interior spaces and landscaped courtyards.

The complex formed in this way—approximately 418 m long by 220 m wide—presented a markedly horizontal and isotropic character, with two storeys rising over the base-ment level, with no established main entrances or frontages, and had activity as one of its essential conditions. Only two of the three strips were built, and only partially.

The systematic nature of the project was transferred to its construction, for which Jean Prouvé designed three types of fabrication: structural elements, external wall panels in weathered steel and internal partition elements.

Manfred Schiedhelm completed the library project to the north of the first stage in 1984. Between 1997 and 2005, Norman Foster renovated the first stage, inserting a new library and completely remodelling the interior space of the northern strip.



References

- Kiem, K. 2008. *The Free University Berlin (1967–73). Campus design, Team X ideals and tectonic invention*. Weimar: Verlag und Datenbank für Geisteswissenschaften.
- Muthesius, S. 2000. *Post war University. The Utopianist Campus and College*. New Haven - London: Yale University Press.
- Smithson, A. 1974. How to Recognize and Read Mat-Building; Mainstream Architecture as It Has Developed Towards the Mat-Building. *Architectural Design* 9: 573–590.
- Tzonis, A., and L. Lefaivre. 1998. Beyond Monuments, Beyond Zip-a-tone. Shadrach Wood's Berlin Free University, a Humanist Architecture. *Le carré bleu* 4.
- Woods, S. 1960. Stem. *The Architectural Review* 5: 181.
- Woods, S. 1962. Web. *Le carré bleu* 3.

Further Readings

- A.VV. 1968. Universités. *L'Architecture d'Aujourd'hui* 137. Paris.
- Avermaete, T. 2005. *Another modern. The post-war architecture and urbanism of Candilis-Josic-Woods*. Rotterdam: NAI Publishers.
- Banham, R. 1976. *Megastructure. Urban futures of the recent past*. London: Thames and Hudson.
- Beret, C. 1999. *Edouard Albert: Jalons*. Paris: Centre Pompidou.
- Curtis, W.J.R. 1994. *Denys Lasdun. Architecture, City, Landscape*. London: Phaidon Press.
- Dormer, P., and S. Muthesius. 2001. *Concrete and open skies. Architecture at the University or East Anglia 1962–2000*. Unicorn Press.
- Feld, G., and P. Smithson. 1999. *Free University Berlin: Candilis, Josic, Woods, Schiedhelm*. London: Architectural Association.
- Hoeger, K., and K. Christiaanse (eds.). 2007. *Campus and the City: Urban Design for the Knowledge Society*. Zurich: Gta Verlag—ETH Zurich.
- Montaner, J.M. 2008. *Sistemas arquitectónicos contemporáneos*. Barcelona: Gustavo Gili.
- Schneyder, P., J. Le Chevalier, and B. Marrey. 1993. *Campus universitaire de Jussieu, naissance d'une grande bibliothèque*. Paris: Sens et Tonka.
- Smithson, A., R. Such, J. Coll, C. Muro, R. Castellanos, D. Domingo, J. Torres, et al. 2011. Mat-Building. *DPA Documents de Projectes d'Arquitectura* 27–28. Barcelona: UPC.

Javier Monclús

Abstract

The crisis that modernist urban planning went through in the mid-seventies led to the appearance of different new formulae both in Europe and other parts of the Western world. Globalisation and the breakdown of the Eastern Bloc in the 1990s gave rise to a new approach in the discipline which, despite its obvious internationalisation, remained linked to important cultural traditions specific to each country. This chapter explains how after the ‘golden age of planning’ new cultural and environmental sensibilities emerged that gave rise to a more complex urbanism that dealt with the changes experienced by cities, paving the way for the rise of the strategic urban projects.

Keywords

New paradigms • Urban planning • Urban design • Strategic urban projects • Urban cultures

The coexistence of different urban planning traditions and strategies during the growth of the 1950s and 1960s was not incompatible, as seen in the previous chapter, with the validity of the paradigm of modernist urbanism at that time, including a large number of disciplinary and cultural alternatives. That paradigm, however, entered a profound crisis after the 1970s, when the recession of 1973 put an end to an economic cycle, as well as to a long period in which the principles of functionalist urban planning had been adopted even while their validity was being questioned.

The crisis that modernist urban planning went through at that time led to the appearance of different formulae both in Europe and other parts of the Western world. Globalisation and the breakdown of the Eastern Bloc in the 1990s gave rise to a new approach in the discipline which, despite its obvious internationalisation, remained linked to important cultural traditions specific to each country. Some hypotheses point to substantial changes in the cities themselves,

particularly European cities, which were no longer seen as “degraded forms of modern cities” but rather as “contemporary cities” (Secchi 1999). In this sense, it is important to understand how, at the end of the 1970s and as a result of this crisis, once the ‘golden age of planning’ was over, urban planning and cities underwent substantial changes, particularly in Europe. The modern functionalist urban planning that was valid internationally gave way to a renewed architectural, strategic urbanism in which urban projects acquired the importance that general plans, based on zoning, had during the boom of modernist urbanism in the years of great urban growth. Parallel to the economies of the information era, other cultural and environmental sensitivities emerged, linked to different views on sustainability and the quality of the urban environment. With all the contradictions stemming from the changes in the role that public and private agents played, the ‘new urban planning principles’ were imposed, corresponding to the ‘third age of modernity’ to promote new urban quality for a very differentiated society (Ascher 2001).

The relationships between the different urban planning formulae and the economic dynamics or real estate cycle is another aspect that has played a relevant role in the changes

J. Monclús (✉)
School of Engineering and Architecture,
University of Zaragoza, Zaragoza, Spain
e-mail: jmonclus@unizar.es

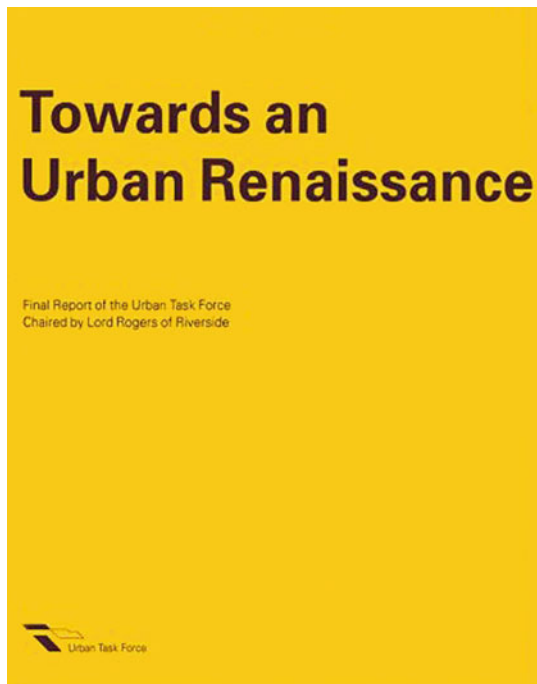


Fig. 11.1 Cover page of *Towards an Urban Renaissance*, prepared by the Urban Task Force headed up by Richard Rogers, Spon, London, 1999

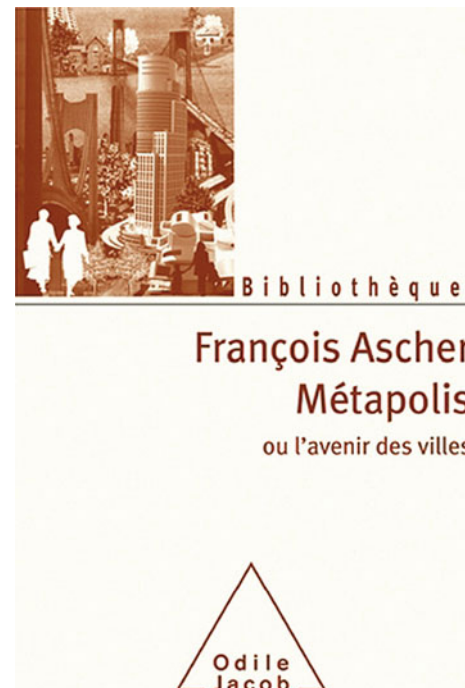


Fig. 11.2 Cover page of some publications reflecting recent paradigm changes François Ascher, *Metápolis*, 1995

in the paradigm and ‘recoveries’ of urbanistic traditions. Some authors, such as Anthony Sutcliffe, have managed to relate oscillations and changes from some paradigms to others with economic cycles and the construction ‘booms’: it could be said that in times of growth “urbanism is ambitious, innovative, passionate about execution”, whereas in times of recession “urbanism is somewhat deceptive in execution but induces a new generation of creative ideologies and artists who pave the way for the new stage of growth” (Sutcliffe 1981). Logically, this outlook should not be understood as literal economic determinism but rather as a way of relating cultural moments with economic cycles. This type of hypothesis leads us to consider the interest in cultural urbanism emerged in the past decades that emphasise intervention, with a renewed attitude, both as a fresh impulse for cultural tradition, as well as a reaction to the accelerated urban growth in the 1960s and 1970s and the inadequacy of the responses afforded by conventional urban planning.

On the other hand, in order to understand the complex process of consolidation, crisis and the consequent reformulation of contemporary urban planning culture, we need to consider the connections between the different national traditions and their specificities, each of them with its own strategies. The fact that concepts such as ‘*Urbanisme*’, ‘*Urbanistica*’ or ‘*Urbanismo*’ used in the Latin-European field have persistently maintained their meaning parallel to Anglo-Saxon town planning is proof of the strength and



Bernardo Secchi
La città del ventesimo secolo

 *Editore Laterza*

Fig. 11.3 Cover page of some publications reflecting recent paradigm changes Bernardo Secchi, *La città del ventesimo secolo*, 2005

marked identity that has brought these traditions to fruition since the beginning of the twentieth century in contemporary urban planning (Monclús and Díez Medina 2017). Paradoxically, some approaches made by those southern European countries, where the discipline of Planning

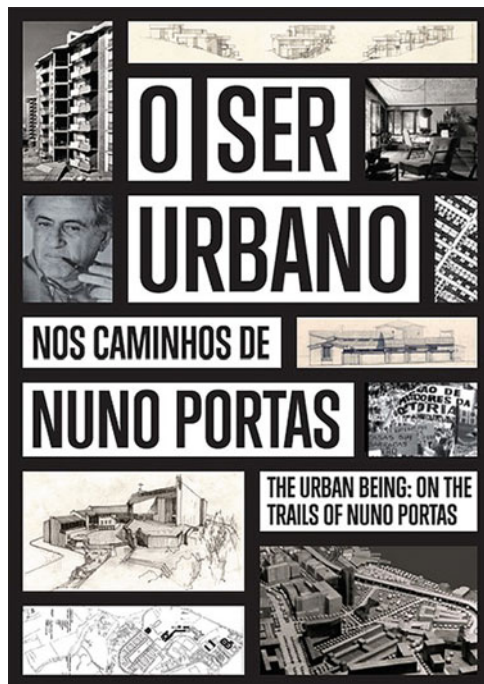


Fig. 11.4 Images of the cover pages of some publications reflecting recent paradigm changes Nuno Portas, *O ser urbano*, 2012

arrived later—therefore, labelled as ‘late comers’—, began to be considered successful paradigms (Hebbert 2006). Hence, in contrast to canonical Town Planning, Urbanism, with its architectural roots that are reformulated as ‘urban project’ since the 1980s, can be considered a reinterpretation of traditions that had persisted more strongly precisely in those cultural contexts. Doubt as to whether urban planning could be considered a ‘scientific’ discipline came about with the varied results in different countries and urban situations. It is typically agreed that drafting general plans using zoning as a basic instrument permitted a coherent response to the demands of cities in the industrial era. Nevertheless, the experience of these urban renewal episodes and the configuration of new ‘modernist’ residential sectors, have been questioned from different perspectives, causing substantial changes in recent decades. Hence, the crisis of the *zoning* as a key instrument of modernist urbanism was associated with the problems suffered by the residential suburbs in the years of ‘urban developmentalism’. The discourse focussing on ‘what and how much’ has also been questioned, i.e. in an understanding of urbanism as almost exclusively addressing uses and intensities of land use (Ezquiaga 2011). Although it cannot be ignored that approaches have often served to legitimise a certain distribution of added value, it is obvious that the successes and failures in controlling urban growth

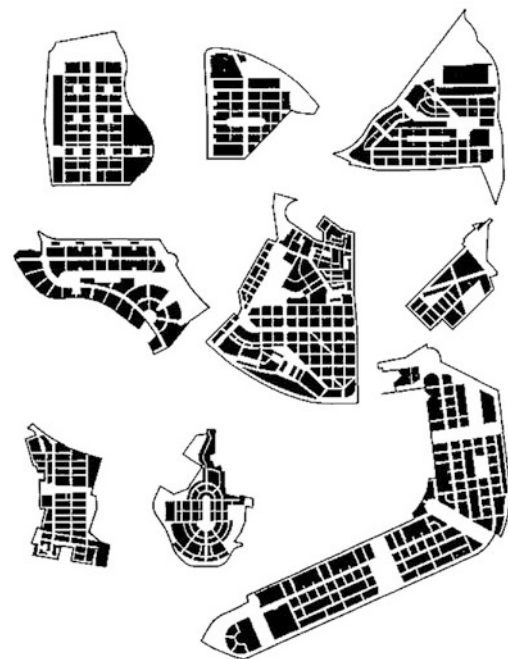
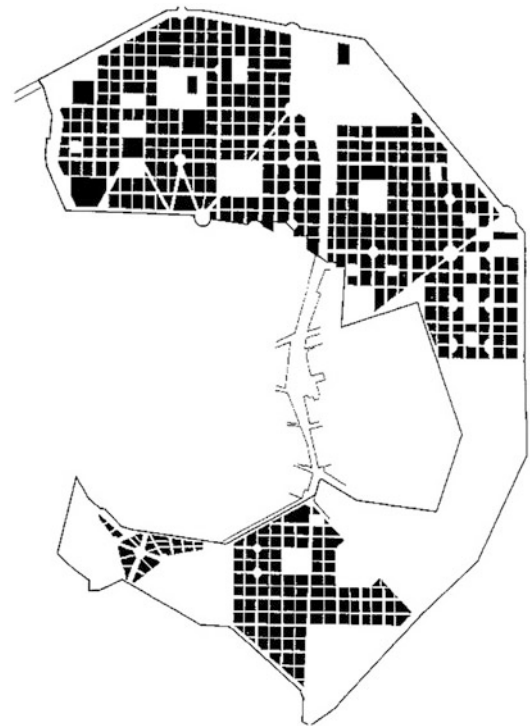


Fig. 11.5 Madrid, *Ensanche* (city extension) of the nineteenth century and ‘new extensions’ from the end of the twentieth century in depictions at the same scale

do not only depend on real estate speculation but also on the limitations of the discipline itself.

Parallel to the repercussions and influences economic cycles have had on urban planning approaches (e.g. the emergence of an urban project culture after a period of rapid

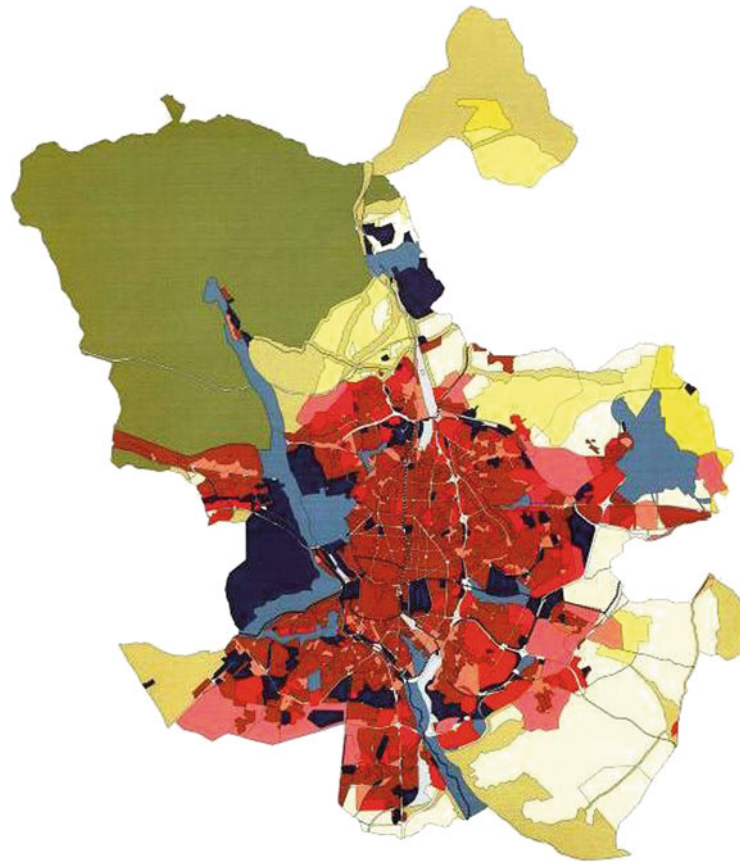


Fig. 11.6 Madrid, General Urban Development Plan, 1985

urban growth), the relative crisis of comprehensive general plans has been losing ground since the early 1980s to strategic urban projects. As Nuno Portas points out, imposing strategic town planning often takes place “outside or against general plans” (Portas 2004). Since the 1980s and 1990s, ‘middle-scale’ plans or urban projects have acquired greater importance as alternative tools to general plans and zoning¹.

Projects for international events, mainly Olympic Games and International Exhibitions, have had a renaissance since the decades of the 1980s and 1990s, drawing on a tradition that dates to the end of the nineteenth century. This new strategic aim is in continuity with historical objectives,

¹“The third generation of urban projects doesn’t differ from the previous ones either in its scale or in its functional composition ... these projects are different, in our opinion, due primarily to the program and the new opportunities offered to the interventions; Also, by the processes, or mechanisms, of organization of the realizations; Finally, and subordinately, by the bi-univocal and non-hierarchical relationship that the project tends to establish with the plan, that is, by the style of planning that characterizes the new project” (Portas 1998).

namely to ‘put cities on the map’. The novelty of these events is that they are used as catalysts for public and private investments, becoming a valuable means for mobilising state and local bureaucracy. It was precisely that ability to attract investments that gave rise to the reconsideration of projects that had been drafted previously for cities as the venues for these events. The 1992 Olympics in Barcelona marked a new generation of strategic urban projects. Despite the differences between cities and urban situations, the emergence of this new strategic town planning is also associated with International Exhibitions, increasingly pragmatic and instrumental catalysts of urban transformation, as was the case of Expo Seville in 1992, Lisbon in 1998, Zaragoza in 2008 or Milan in 2015 (Portas 1998). As for the design of the Olympic Games or International Exhibition infrastructure, some matches can be found with the new architectural and town planning paradigms, with clear protagonism of architectural and landscape urban development (Monclús 2014).

The foregoing considerations bring to light the risks entailed in generic interpretations of town planning in recent decades. As seen, we should not only bear in mind the



Fig. 11.7 Zaragoza, twentieth-century-urban estates and ‘new city extensions’ in depictions at the same scale

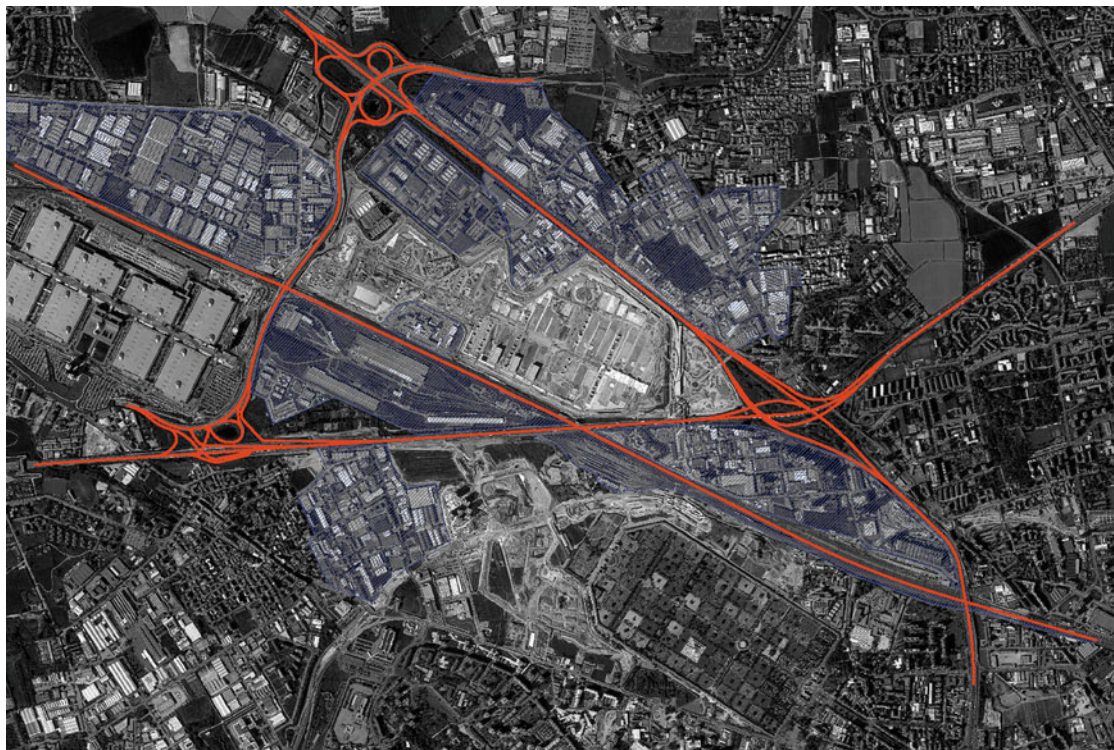


Fig. 11.8 Urban project. Milan Expo 2015 area



Fig. 11.9 Zaragoza, aerial photograph of the Ranillas meander which was the venue for the 2008 International Exhibition “Water and Sustainable Development”

specificities of national and cultural traditions but also the paradigms and technical cultures dominating each period and urban context. The changes in paradigm stemming from the functionalist town planning crisis drafted in the Athens Charter have given rise to different versions of town planning more responsive to the layout of urban forms. Although it could be claimed that revisionist perspectives began with the critical proposals by the second generation of modern town planners and ‘other urbanisms’ that coexisted with the functionalist paradigm [see Chap. 9], it is true that the substantial rupture took place after the final decades of the twentieth century. The claim for the “lost art of urbanism” (Hall 2014) that came from different cultural fields did not, however, entail a complete convergence of methods of urbanistic intervention. Proof of this is the contrast seen between the neo-traditionalism of New Urbanism and other historicist versions of the new architectural urbanism movements compared to other more ‘modern’ variants in

urban projects and in urban cultures in the south of Europe (France, Italy or Spain). In this sense, the report commissioned by the Labour government to an Urban Task Force led by Richard Rogers, which was published in 1999 under the title “Towards an Urban Renaissance”, is noteworthy. Visions of the ‘urban project urbanism’ were celebrated, making reference to cities such as Barcelona (with a foreword by the former Mayor of the city). The report was a diagnosis of British cities that proposed strategies for them based on the principles of design quality, social welfare and environmental responsibility recommending two types of urban planning intervention: small operations on small urban spaces, followed by strategic projects (Urban Task Force 1999). The case studies, described as follows, illustrate these paradigm shifts we have cited. A progressive imposition of the new urban planning paradigms can be seen in the transformations undergone by the city of Paris in the last three decades, with simultaneous interest in major urban

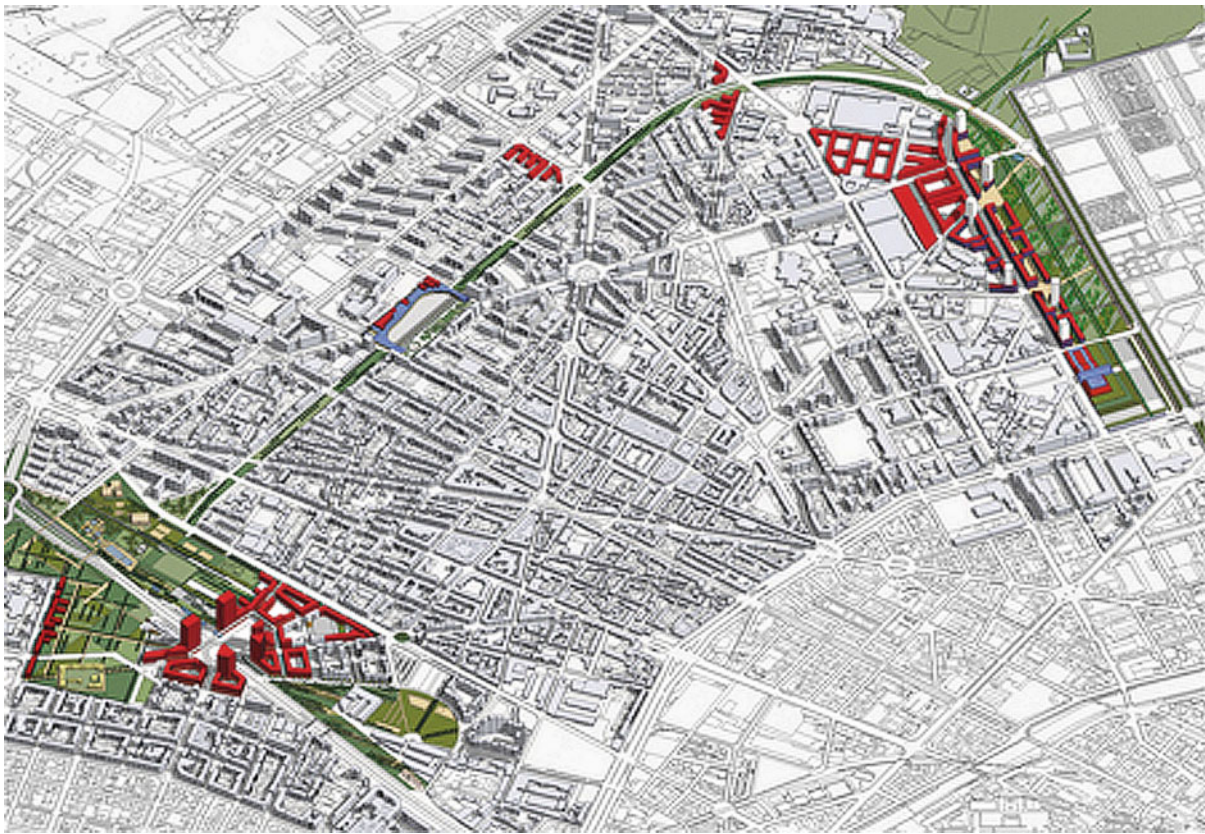


Fig. 11.10 Turin, Piano Regolatore Generale, Variante 200 for integration of infrastructures, 2010

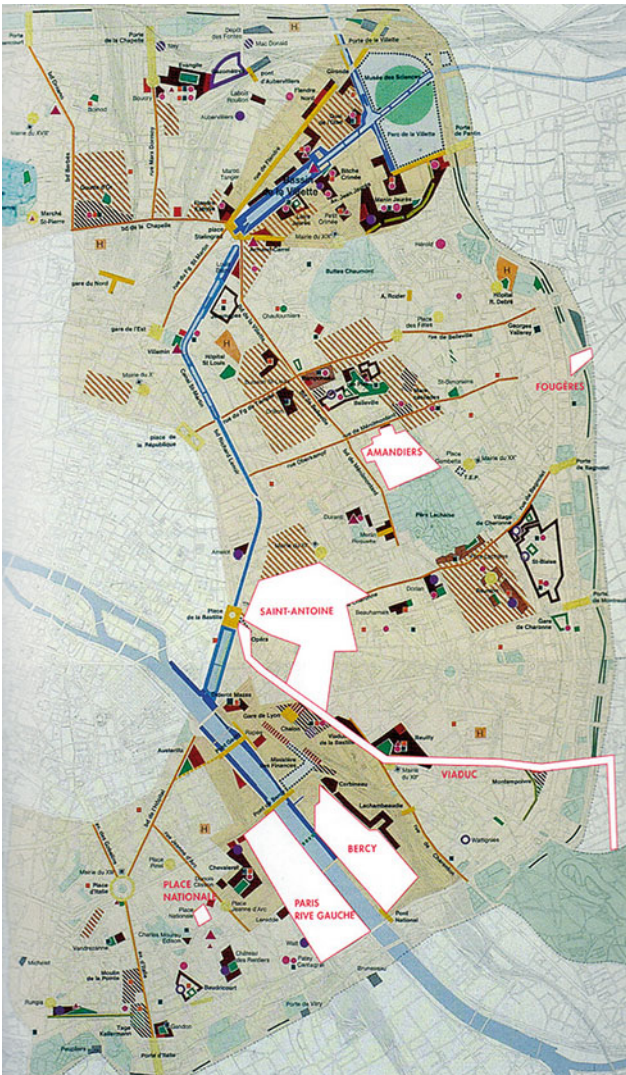
infrastructure operations and occasional urban projects at middle-scale. Hence, the launch of the ‘*Grands Projets*’ in 1982 using the pretext of the bicentennial of the French Revolution celebrated in 1989 to mark a deadline for their execution (Woolf 1987). Although the precedent of the Pompidou Centre is occasionally referred to when speaking of the relationships between the monumental public work and the city, the Parisian urbanistic tradition dates back at least to the Haussmann interventions of the second half of the nineteenth century. Slightly over a century later, we need to understand the ‘*Grands Projets* cycle’ not only as an operation of prestige, without belittling its importance in this sense, but also as a strategy to renew the urban structure of the city, in terms of social rebalance and reconquering of the most impoverished areas of the city. In another example, Barcelona, from the 1980s to the present day, has undergone radical transformations, evolving from an industrial city in crisis to one with tourism and the new services economy,

simultaneously reconverting its economic and social foundations. In that process of reconversion, different phases and periods can be identified, although the continuity in some strategies and methods or urban intervention is the subject of a heated debate between professionals and scholars. In fact, in recent years, international dissemination of the so-called Barcelona model (Calativa and Ferrer i Aixalá 2000) has led to positions somewhat more critical that question the exaggerated originality (Monclús 2003) or prominence of business views compared to those played by the public sector through a series of integrating plans and projects. The generalised vision of urbanism in Olympic Barcelona between town planners and urbanism historians, supported on the international recognition of the quality of certain urban projects and the strategies driven by the public powers, led the episode to be considered as “one of the most powerful international urbanistic models at the end of the 20th century” (Ward 2002, 371).

Case Studies

Plan Programme for the East, Paris (1982–2000)

The ‘*Grands Projets* cycle’ covered action of different natures: the Grand Louvre, the Grande Arche, the D’Orsay Museum, the Arab World Institute, the Ministry of Economy



and Finance, the Bastille Opera House, the National Library of France and the Villette Park. At the same time, as also happened during the Haussmann episode, the creation of a new system of green areas is noteworthy (150 parks, including the new Villette, Bercy, Citroën and Martin Luther King parks).

But it was the great Plan programme for East Paris, launched in 1983 with the major operation on the Paris Rive Gauche sector that specifically dealt with regenerating a large territory covering 130 hectares predominantly industrial and rail yards. Some of these major projects (the Bastille Opera House, Villette Park and the National Library of France) are specifically associated with renovation of an ‘inner suburb’ characterised by obsolete industrial areas. The studies and projects for the Exhibition and Olympic Games, that never materialised, contributed decisively to the recovery of those strategic areas for the city.

Several operations managed through the strategy of the so-called *Zones d’Aménagement Concerté* (ZAC) enabled effective implementation of residential renovation programmes and new activities, equipment and infrastructures, paying special attention to public areas. The lack of definition in the programming of many of those projects nevertheless permitted adapting to new local needs, without renouncing the structuring role of the major urban operations.



Strategic Urban Plans, Barcelona (1992–2010)

Clearly, Barcelona made the most of the opportunity afforded by the 1992 Olympic Games to renew its waterfront by opening up the city to the sea and integrating the seafront in the city, along the same lines as other European and American cities. The step from modest interventions at the start of the 1980s to other more ambitious work linked to the Olympics, both in terms of infrastructure, amenities and public areas, accounted for a change in scale towards strategic urban projects.

Some studies bring to light the continuity with the initiatives that had taken place in the 1970s, begun by

neighbourhood movements, to the leadership of the first democratic city halls and the influence of professionals on the Barcelona council. Others relate visions of ‘urban reconstruction’ to the theorisation of the international town planning culture. Other interpretations emphasise the discontinuity between the first pre-Olympic stage and the subsequent stage, subordinating economic interests and the political interests of the ‘Barcelona brand’ with the proliferation of spectacular, iconic architecture. Beyond these different opinions about the urban transformations in recent decades, there can be no doubt that Barcelona has stood out for its ability to promote structural, deep rooted transformation through urban projects of all different scales.



References

- Ascher, F. 2001. *Les nouveaux principes de l'urbanisme: la fin des villes n'est pas à l'ordre du jour*. La Tour d'Aigues: Éditions de l'Aube.
- Calativa, N., and A. Ferrer i Aixelá. 2000. Behind Barcelona's success story: Citizens movements and planners' power. *Journal of Urban History* 26: 793–807.
- Ezquiaga, J.M. 2011. El Proyecto Urbano: entre la Racionalidad Limitada y la Utopía Fragmentaria. In *Transformaciones urbanas sostenibles*, ed. J.M. Ezquiaga, and L. González, 76–97. Santander: Universidad Internacional Menéndez Pelayo.
- Hall, P.G. 2014a. *Good Cities, Better Lives: How Europe Discovered the Lost Art of Urbanism*. Oxford: Routledge.
- Hebbert, M. 2006. Town planning versus urbanismo. *Planning Perspectives* 21: 233–251. doi:10.1080/02665430600731153.
- Monclús, J. 2003. The Barcelona model: And an original formula? From 'reconstruction' to strategic urban projects (1979–2004). *Planning Perspectives* 18: 399–421. doi:10.1080/0266543032000117514.
- Monclús, J. 2014. International exhibitions and urban design paradigms. In *Exhibitions and the Development of Modern Planning Culture*, ed. R. Freestone and M. Amati. Farnham: Ashgate.
- Monclús, J., and C. Díez Medina. 2017. Urbanisme, Urbanismo, Urbanística. Latin European Urbanism: Italy and Spain. In *Planning History Handbook*, ed. C. Hein. London: Routledge.
- Portas, N. 1998. The significance of urban design/L'emergenza del progetto urbano. *Urbanística* 110: 51–60.
- Portas, N. 2004. De una ciudad a otra: perspectivas periféricas. In *Lo Urbano en 20 autores contemporáneos*, ed. A. Martín, 221–229. Barcelona: Ediciones UPC.
- Secchi, B. 1999. Città moderna, città contemporanea e loro futuri. In *I futuri della città. Conoscenze di sfondo e scenari*, ed. G. Dematteis, F. Indovina, A. Magnaghi, E. Piroddi, E. Scandurra, and B. Secchi. Milan: Franco Angeli.
- Sutcliffe, A. 1981. Why planning history? *Built Environment* 7: 64–67.
- Urban Task Force. 1999. *Towards an Urban Renaissance: The Report of the Urban Task Force Chaired by Lord Rogers of Riverside*. London: Spon Press.
- Ward, S.V. 2002. *Planning the Twentieth-Century City: The Advanced Capitalist World*. New York: Wiley.
- Woolf, P.J. 1987. 'Le caprice du prince'—The problem of the Bastille Opéra. *Planning Perspectives* 2: 53–69. doi:10.1080/02665438708725631.

Further Readings

- Campos Venuti, G., and F. Oliva (eds.). 1994. *Cinquenta años de Urbanística en Italia, 1942–1992*. Madrid: Universidad Carlos III de Madrid—B.O.E.
- de Solá-Morales, M. 1987. La segunda historia del Proyecto Urbano. *UR: urbanismo revista* 5: 21–27.
- French, H. 2002. *Projets urbains en France/French urban strategies*. Paris: Le Moniteur.
- Hall, P.G. 2014b. *Cities of Tomorrow. An Intellectual History of Urban Planning and Design in the Twentieth Century [1988]*, 4th ed. Oxford: Wiley-Blackwell.
- Koolhaas, R. 1995. What Ever Happened to Urbanism? In *S, M, L, XL*, 959–971. New York: The Monacelli Press.
- Monclús, J. 2009. *International Exhibitions and Urbanism: The Zaragoza Expo 2008 Project*. Farnham: Ashgate.
- Monclús, J. 2015. Exposiciones internacionales y paradigmas en diseño urbano. In *Otra historia. Estudios sobre Arquitectura y Urbanismo en honor de Carlos Sambricio*, ed. J. Calatrava, C. Díez Medina, S. Guerrero, and R. Sánchez Lampreave, 438–455. Madrid: Lampreave.
- Sainz Gutiérrez, V. 2006. *El proyecto urbano en España: génesis y desarrollo de un urbanismo de los arquitectos*. Sevilla: Universidad de Sevilla - Junta de Andalucía.
- Solá-Morales, I. 1994. Hacer la ciudad, hacer la arquitectura (1945–1993). In *Visiones Urbanas. La ciudad del artista, la ciudad del arquitecto*, ed. J. Dethier and A. Guiheux, 401–409. Barcelona: CCCB Electa.

Javier Monclús

Abstract

The following essay focuses on the study of several specific events that led to a paradigm shift, and which even today continue to dominate the debate on urban renewal and regeneration. It sheds a contemporary light on the classic debate in favour of and against ‘urban reform’ which has existed for more than one and a half centuries. Integrated urban regeneration is now the emerging paradigm.

Keywords

Urban renewal • Urban regeneration • Historical centres • Conservation • Gentrification

The initial chapters of this section show how urban renewal strategies in the years following the Second World War continued previous experiences of international urban planning culture. Theoretical and methodical reflections on urban renewal and regeneration can be better in light of the debate that has been going on for over a century half in favour and half against ‘urban reform’. It has given rise to two strategies that antagonise supporters of ‘modernising’ and renovating central areas against those who wish to preserve them at all costs. In this discussion, certain episodes stand out as paradigmatic examples that defend opposing forms of urban renovation and regeneration: the Parisian district of Marais or London’s Covent Garden, as the antithesis of the historical centre of Bologna. These attitudes have continued to lead the debate when, after the 1970s, the resolve to act on historical centres extended towards the residential peripheral areas that were becoming abandoned and obsolete.

Hausmann’s Paris, a widely disseminated model which many European and American cities have adopted since the end of the nineteenth century, becomes once again a model for complex urban development strategies. In the 1960s, dilemmas similar to Hausmann’s Paris reappeared, although the intervention strategies were now more sophisticated. Hence, two simultaneous battles were ongoing focused on

two sectors in the centre of Paris. On the one hand, there was the ‘Battle of Les Halles’ with opposing viewpoints on the necessary modernisation of the central market and its environment. In parallel, there was a commitment to preserving the historical centre of the Marais (Kain 1981). The first battle ended with demolition of the market; the second, with the subsequent ‘gentrification’ of the district. As Anthony Sutcliffe points out, the results are contradictory: “Conservation and restoration could even become the most effective, cheapest and fastest way to rebuild the city centre. We could therefore say that in the centre of Paris, conservation won”. The author refers to the ‘decline of Paris city centre’ and the ‘defeat’ of modern urban planning. Instead, ‘ossification’ of the centre and the paradoxical forms of carrying out ‘reconstruction’ have triumphed: on the one hand, conserving the Marais and on the other with the more limited action at Les Halles, where it was decided to demolish the market although with the intention of renewing the district (Sutcliffe 1970).

In London, despite being a different historical and urban context, there was an important parallel episode in the debate about urban renewal and regeneration: the ‘Battle of Covent Garden’. London market underwent a process of obsolescence parallel to that of Les Halles in Paris. At the end of the sixties and early seventies, modernisation and urban renewal strategies similar to those in Paris were proposed, ultimately resolved with a proposal to move it to a more suitable site. The proposal consisted of carrying out work on a large area,

J. Monclús (✉)
School of Engineering and Architecture,
University of Zaragoza, Zaragoza, Spain
e-mail: jmonclus@unizar.es



Fig. 12.1 Paris, the ‘Battle of Les Halles’: demolition of the market, 1972



Fig. 12.2 Paris, the ‘Battle of Les Halles’: Urban void after demolition, 1973

affecting the residents and central activities. The opponents in the battle in this case were the residents and small shop owners, in parallel to conservationists who wanted to keep the market as it was. As in the case of Paris, there was a significant discontinuity in the discourses and strategies for the historical centres compared to the pre-war attitudes. After the sixties, there was a notable effort by preservationists against radical intervention through urban renewal. Nevertheless, we saw implementation of new versions of urban renewal that brought displacement of the local population and existing activities with them. In the end, the

results were not so different from an urban planning perspective, although in the case of Paris the historical market of Les Halles disappeared, whereas in London, Convent Garden was renovated. But at both sites the local population was displaced, with the subsequent theme classification and general gentrification of the districts.¹

¹“(…) the really significant point about Les Halles is that exactly the same process occurred to it as to Covent Garden: it was gentrified” (Hall 2014, 279).



Fig. 12.3 London, the ‘Convent Garden Battle’: image before renovation, photograph by Penny Saunders

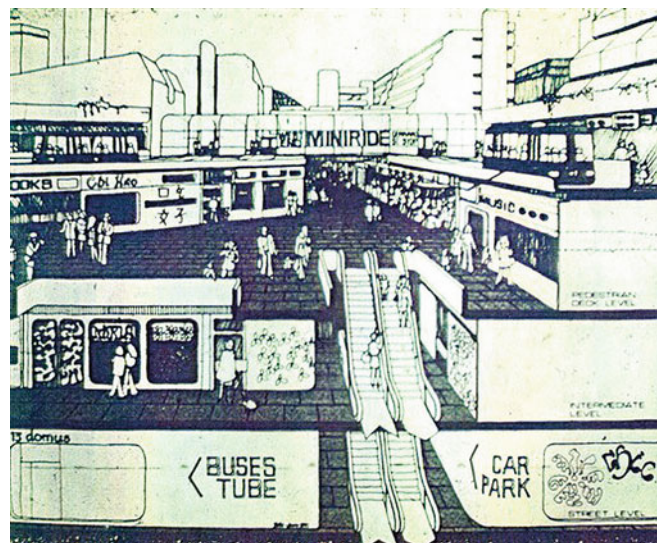


Fig. 12.4 London, the ‘Convent Garden Battle’: proposal for demolition and regeneration of the Covent Garden area

After the decade of the eighties, with the advancement of the neoliberal outlooks of Thatcher’s ‘conservative revolution’ (1979–1997), a strong boost was given to private investment in the most depressed areas of British cities, implementing a process of deregulation based on stimulating competitiveness. The most notable episode during this period was the renovation of the London Docklands area. We must bear in mind that since the end of the nineteenth century, the high and middle classes had abandoned London’s East End, and therefore this area had become one that was exclusively inhabited by the working classes. With the industrial crisis and the relocation of port activities between

1961 and 1967, over 83,000 jobs were lost. Hence the creation of the London Docklands Development Corporation in 1981 was the catalyst for renewal of a large area covering 200 ha. The new City that was built on Canary Wharf led to the creation of 40,000 jobs, although not precisely for the local population. Such radical social changes also took place in other parts of London, particularly in central areas after residents were forced to leave as a result of the increase in housing prices (Brownill and O’Hara 2015).

Certain similarities between the urban renewal in North American cities in the sixties can be seen. However, there were more radical processes and greater exodus of the



Fig. 12.5 London, the ‘Convent Garden Battle’: demonstration against the Covent Garden demolition projects, ca. 1980

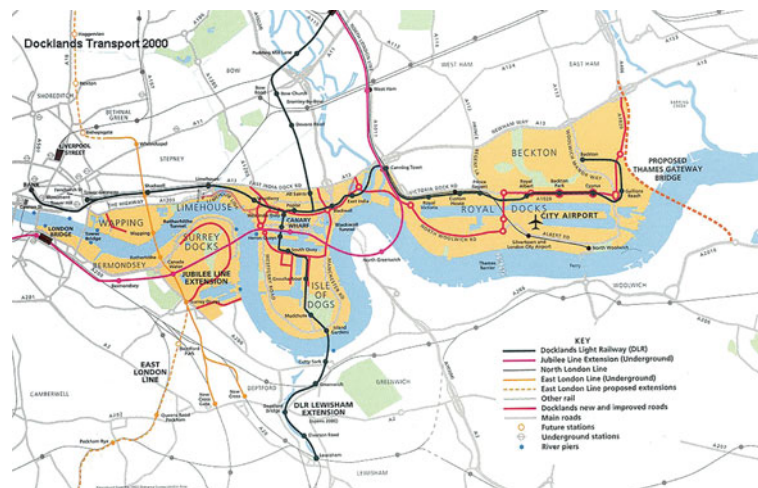


Fig. 12.6 London, renewal of the Docklands, 1982 plan

population that led to the decentralisation of activities. In contrast, it is interesting to look at the experiences of other cities, such as Baltimore, where from the sixties to the eighties, substantial urban renewal took place parallel to a rapid process of de-industrialisation. Authors such as David Harvey or Stephen Ward believe that the transformations carried out over these decades can be described as “urban planning models”, but also as “an example of the most unfair urban degradation where brilliant mirages co-exist with mass misery not far removed from the renovated Inner Harbour” (Harvey 2000; Ward 2006) [see Chap. 13].

With all the variants stemming from the different cities and historical contexts from the sixties onwards, some significant progress can be seen in the regeneration of urban

centres. The discourse and understanding of historical centres as exceptional sites to be conserved, not only physically, but also in terms of their complex sociocultural identity, had already been recognised, particularly in Italian cities during the sixties. It is unavoidable not to refer to the Conservation Plan of the Historical Centre of Bologna (1969–1971) and the renovation and subsidised housing development plans that took place in the seventies in that historical centre (Cervellati and Scannavini 1973). The plan maintained the structural components of the urban fabric, but also renovated the housing in the centre, reversing the exodus of the population. Other plans were subsequently elaborated with truly ambitious objectives for that time, conserving the same uses, resident population and building



Fig. 12.7 London, renewal of Barking Central, 2007–2010

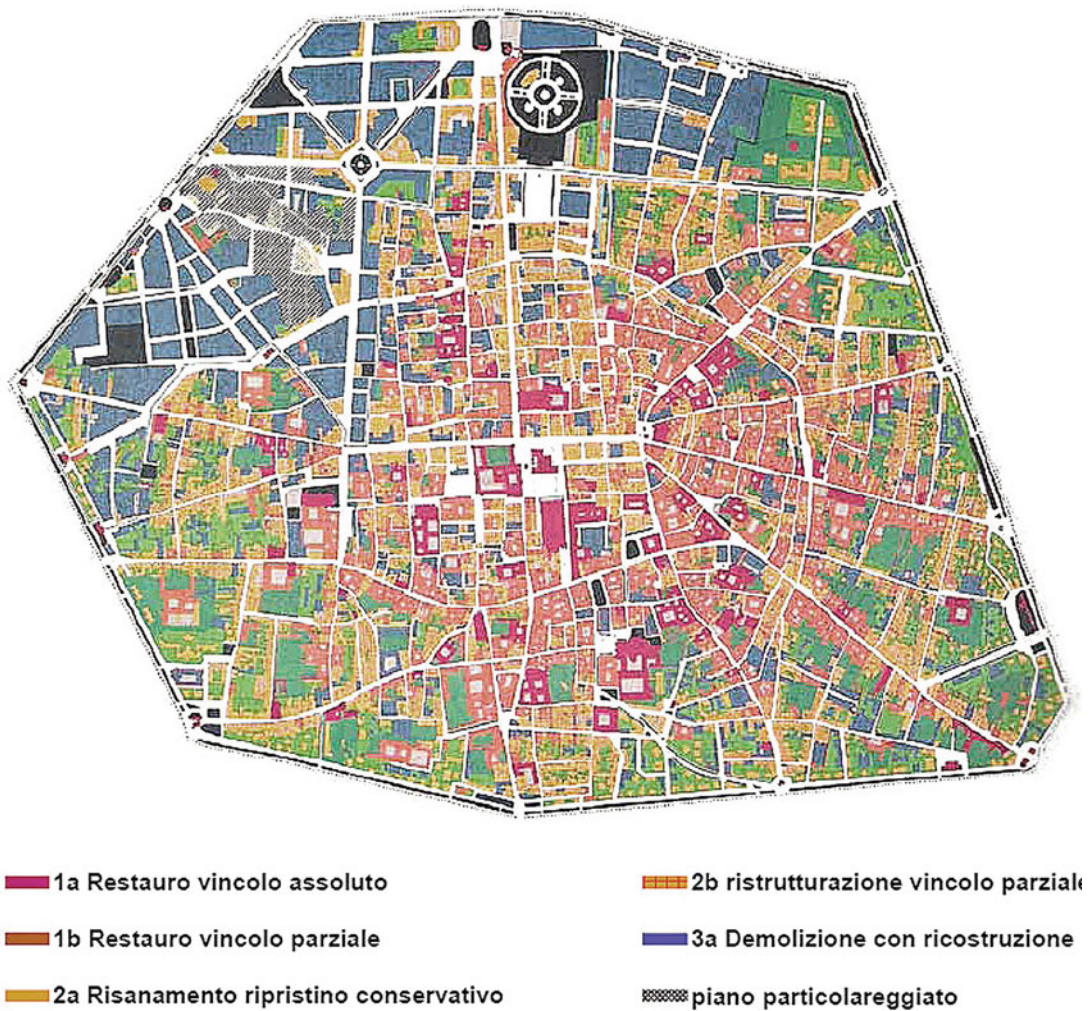


Fig. 12.8 Bologna, historical centre recovery plan of 1973. Intervention typologies and project



Fig. 12.9 Barcelona, Raval plan, looking over the port in 2000

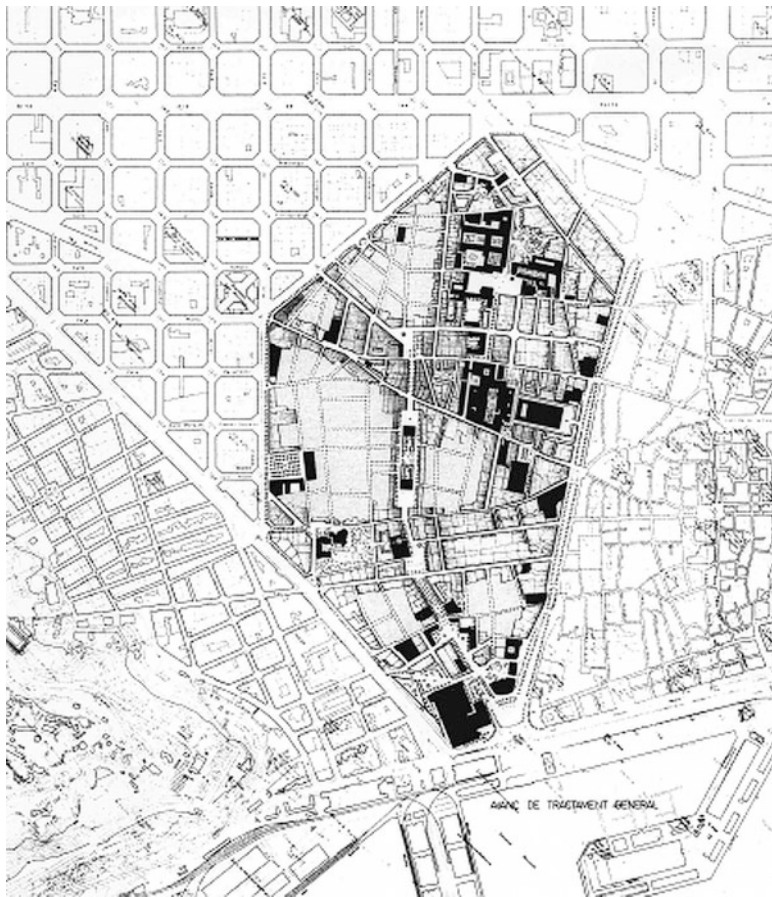


Fig. 12.10 Barcelona, Special Interior Reform Plan (PERI) of 1985

typology. The historical centre then became a representative site, a social area, giving priority to the residents. The Bologna experience became a benchmark for the so-called comprehensive urban renewal.

The influence of the Bologna Plan was unquestionable in the development of strategies in other historical centres. In Spain, too, in Barcelona, Vitoria and many other cities this subject was engaged from the end of the seventies, although the process was delayed until the end of Franco's dictatorship and gained intensity during the nineties. During those years, many cities started to work on their historical centres, carrying out urban remodelling operations, with the renovation of existing buildings. From the eighties onwards, other forms of integrated action in historical centres took place, such as the work carried out in Santiago de Compostela, much celebrated both in Spanish and international urban planning culture. In the last two decades, renovation has progressed towards integrated urban renewal where the scope of intervention is no longer limited to historical centres, but also includes other decayed urban areas, such as the first suburbs from over 80–100 years old, or even the growth of housing estates that were built during the industrial development of Spain (Castrillo Romón 2013).

Performing these processes whilst including the physical, social and economic content has become the paradigm of integrated urban regeneration. Since the eighties, local economic development strategies have been a part of comprehensive policy, such as the Enterprise Zones in the USA or Great Britain, or the *Zones Franches Urbaines* (ZFU) in France (Aparicio and Di Nanni 2011). Less known are the programmes that were implemented after 1997 in the United Kingdom, under the labour government of Tony Blair, which involved reorganisation of the public machinery and the decision to assign important resources from the ordinary budgets to renewal programmes. Identifying priority zones

for intervention through the use of the Index of Multiple Deprivation (IMD) has also been a major step forward for urban renewal policies, which permits identifying the most deprived or vulnerable areas. These are studies that favour another type of work, such as Barking Central Regeneration East London or Coin Street on the South Bank, worthy of mention, although they are not so relevant within the context of London explosive growth of recent years (Velázquez Valoria and Verdaguer Viana-Cárdenas 2011).

In addition to considering those exemplary episodes, it is also worth mentioning several international cases of urban renewal that have taken place in recent decades, mostly in European cities. The work carried out in Hafen City in Hamburg is an example of large scale urban regeneration and one of the most ambitious projects executed in Europe. It entailed work on obsolete port land, covering a total of 150 ha. From the early nineties, Hamburg underwent a process that is common to other river and sea ports, although without the complete disappearance of port activity in those central areas, such as was the case of London or Rotterdam. The docks were moved towards the west liberating central space that was reconverted for mixed use.

It is true that the ambiguity in defining this generic concept entails certain risks of banalising the term and using it as a theoretical support for very different actions that can even be contradictory to each other (Moya González and Díez de Pablo 2012). As with other 'wild card' concepts such as sustainability, compact city, etc., their indiscriminate use and even abuse as political propaganda, entails the risk of disguising simple substitution operations and radical renovation in certain urban areas. In any case, since the 1990s, this concept has been adopted in different disciplinary fields, leading to a number of studies and treaties that have been developed with notable systematisation in the international urban development culture.

Case Studies

South Bank: Coin Street, London (1984–2000)

Unlike the urban regeneration work with a neoliberal approach that has dominated London with the reconversion of the Docklands or the major Kings Cross projects, among others, in recent years other initiatives of a very different nature have been carried out that are enormously interesting owing to the methods of management and layout of urban areas. One of them is the comprehensive renewal of Coin Street on London's South Bank. A company (Coin Street Community Builders), founded in 1984 with the aim of improving living, working and leisure conditions in the area, worked as the driving force behind the urban renewal

process. The members were residents of the district, which facilitates a first-hand understanding of local needs and opportunities.

Among the general goals for Coin Street, the following should be emphasised: developing the area in accordance with the company standards; helping the cooperative Coin Street Secondary Housing to develop affordable housing; guaranteeing high-quality standards through the use of the best contemporary designers and artists; guaranteeing the use of environmentally sustainable materials and practices. As for the South Bank: to work jointly with other players to promote and improve the area, both as a place to live and work, and to make it attractive to visitors. Achieving all these objectives implies making substantial improvements to the management aimed at revitalising public areas.

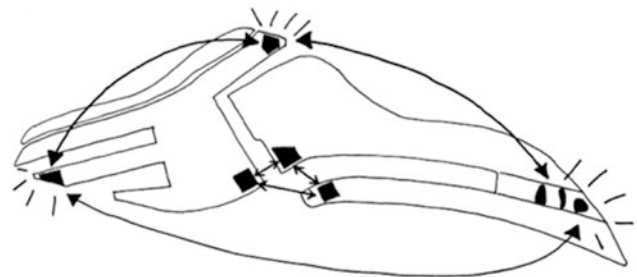
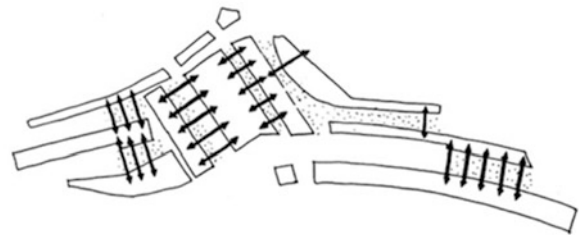


Hafen City and IBA, Hamburg (2013–2000)

The master plan for this zone, approved in 2000, defines a precise strategy for the regeneration of the docks to convert them into urban mixed use “districts” (housing, offices, equipment, public areas) with a variety of urban typologies. Rather than the usual segregation of port areas, Hafen City is integrated with the urban centre, permitting extending the historical centre of Hamburg. The Hafen City project takes advantage of extending the city centre and opening up the city to the Elbe River. As is the case in similar operations, Hafen City risks becoming a victim of its own success. The result is an exclusive district, where it is hard to replicate the urban conditions of a lively, accessible centre such as the historical district of Speicherstadt. Nevertheless, the 6000

homes and 40,000 jobs that were created in the service industry sectors, shops, etc., with excellent amenities, account for an extremely vital urban component of the architectural and landscape.

Although it is conceived independently, the 2013 IBA can be understood as a more balanced, integrated counterpart, with its commitment to the definitive ‘leap across the Elbe’ and regeneration of large sectors located to the south of the river (27 km²). In this sense, it can be seen as a logical step in the city’s general strategy, designed already by Fritz Schumacher in the years between the wars.



References

- Aparicio, Á., and R. Di Nanni. 2011. *Modelos de gestión de la regeneración urbana*. Madrid: Sepes, Entidad Estatal del Suelo.
- Brownill, S., and G. O'Hara. 2015. From planning to opportunism? Re-examining the creation of the London Docklands Development Corporation. *Planning Perspectives* 30: 537–570. doi:[10.1080/02665433.2014.989894](https://doi.org/10.1080/02665433.2014.989894).
- Castrillo Romón, M. 2013. La réhabilitation urbaine: une politique impossible. In *L'urbanisme espagnol depuis les années 1970. La ville, la démocratie et le marché*, ed. L. Coudroy de Lille, C. Vaz, and C. Vorms, 113–126. Rennes: Presses Universitaires de Rennes.
- Cervellati, P.L., and R. Scannavini. 1973. *Bolonia*. Gustavo Gili: Política y metodología de la restauración de centros históricos. Barcelona.
- Hall, P. 2014. *Good cities, better lives: How Europe discovered the lost art of urbanism*. Oxford: Routledge.
- Harvey, D. 2000. *Spaces of hope*. Edinburgh: Edinburgh University Press.
- Kain, R. 1981. Conservation planning in France: policy and practice in the Marais, Paris. In *Planning for conservation*, ed. R. Kain, 199–233. London: Manshell.
- Moya González, L., and A. Díez de Pablo. 2012. La intervención en la ciudad construida: acepciones terminológicas. *Urban NS04*: 113–123.
- Sutcliffe, A. 1970. *The autumn of Central Paris: The defeat of town planning 1850–1970*. London: Arnold.
- Velázquez Valoria, I., and C. Verdaguer Viana-Cárdenas. 2011. *Regeneración urbana integral. Tres experiencias europeas innovadoras: Îlede Nantes, Coin Street y Barrio de la Mina*. Madrid: Sepes. Entidad Estatal de Suelo.
- Ward, S.V. 2006. 'Cities are fun!': Inventing and spreading the Baltimore model of cultural urbanism. In *Culture, urbanism and planning*, ed. J. Monclús, and M. Guardia, 271–286. Farnham: Ashgate.
- Berman, M. 1982. *All that is solid melts into air: The experience of modernity*. London: Verso.
- Fortis, M. 2013. Place and such things. À la recherche du lieu perdu. *ZARCH: Journal of interdisciplinary studies in Architecture and Urbanism* 1: 194–223.
- Gehl, J. 1987. *Life between buildings: Using public space [Livet mellem husene, 1971]*. Washington, Covelo, London: Island Press.
- Hall, P.G. 2014b. *Cities of tomorrow. An intellectual history of urban planning and design in the twentieth century [1988]*, 4th ed. Oxford: Wiley-Blackwell.
- Hernández-Aja, A., C. García-Madruga, I. Rodríguez-Suárez, and Á. Matesanz-Parellada. 2014. Políticas estatales en áreas de rehabilitación integral, tipología urbana y vulnerabilidad social. *ACE: Architecture City and Environment* 9: 127–146. doi:[10.5821/ace.9.26.3686](https://doi.org/10.5821/ace.9.26.3686).
- Larkham, P.J. 1996. *Conservation and the city*. London: Routledge.
- Piccinato, G. 2006. Words and history: controversies on urban heritage in Italy. In *Culture, urbanism and planning*, ed. J. Monclús, and M. Guardia, 113–128. Hampshire: Ashgate.
- Roberts, P., and O. Sykes (eds.). 2000. *Urban regeneration: A handbook*. London: SAGE Publications Ltd. doi:[10.4135/9781446219980](https://doi.org/10.4135/9781446219980).
- Schubert, D. (ed.). 2015. *Contemporary perspectives on Jane Jacobs: Reassessing the impacts of an urban visionary*. Farnham: Ashgate.
- Sepe, M. 2013. Urban history and cultural resources in urban regeneration: a case of creative waterfront renewal. *Planning Perspectives* 28: 595–613. doi:[10.1080/02665433.2013.774539](https://doi.org/10.1080/02665433.2013.774539).

Further readings

Javier Monclús

Abstract

The following chapter deals with the transformation of waterfronts and riverfronts in cities, one of the central events in recent urban processes, mainly those experienced in the 1980s and 1990s. Unlike the processes of urban regeneration examined in the previous chapter, the landscape dimension plays a major part in these processes and interventions.

Keywords

Waterfronts • Riverfronts • Seafronts • Strategic urban projects • Landscape urbanism

The transformation of waterfronts and riverfronts accounts for a central episode in recent urban processes, particularly after the 1980s. The variety of situations typically found in these projects can lead to a certain degree of confusion in terms objectives and results of these interventions. Confusion is due to the generalised trend to focus analyses on ‘canonical waterfronts’, i.e. those that are only identified with declining or renovated port areas. Nevertheless, riverfronts, i.e. ‘urban riverfronts’ that have also been the subject of recovery strategies of notable interest, have been less discussed in professional and academic literature.

Waterfronts and riverfronts that are generally understood as ‘canonical’ are identified in transformed port areas, not only in specialist literature, but also in other media, such as the cinema. The film *On the Waterfront* (1954), set in the docklands of New York and New Jersey, is a good example of this.¹ The film identifies the waterfront as a fairly conflictive zone. Some years later it fell into disuse and became the object of urban revitalisation. This also happens on riverfronts with port activity, such as the case of

London’s Docklands.² There are numerous examples of this vision of waterfronts as areas of opportunity in the obsolete dockland environments which undergo post-industrial redevelopment process, with examples arising both in the US and later in Europe, with the ‘Baltimore Model’ (Baltimore Inner Harbor Redevelopment) as one of the benchmarks with greatest international repercussion (Ward 2006).

A perceptive analyst such as Jane Jacobs had already stated the need to consider these processes in a comprehensive manner in her 1950s study of the evolution of the docklands of Boston and New York. In a passage from her famous book *The Death and Life of Great American Cities* (1961), she reflects on the nature of urban edges from the conceptualisation by Kevin Lynch on the image of cities: “Waterfronts, too, can be made to act much more like seams than they ordinarily do today. The usual form of rescue for a decayed waterfront vacuum is to replace it with a park, which in turn becomes a border element—usually appallingly underused, as might be expected—and this moves the vacuum effect inland” (Jacobs 1961, 281). What is often the case in recent waterfront redevelopments is that the activities inherent to the new post-industrial economy are boosted, such as office space, shops and leisure areas. But sometimes the new waterfronts become the backbone of open and green

¹The Waterfront Commission of New York Harbor—WCNYH—is an agency at the New York and New Jersey Harbour, incorporated in 1953, one year before the film. Its initial mission was to fight against blackmail in the world of dock workers.

J. Monclús (✉)
School of Engineering and Architecture (EINA),
University of Zaragoza, Zaragoza, Spain
e-mail: jmonclus@unizar.es

²The Spanish translation of ‘docklands’ as ‘muelles’ encompasses the functional meaning of the term. The film *On the Waterfront*, however, was translated as *La Ley del Silencio* (The Law of Silence), compared to the French version *Sur les quais*, a more literal translation.

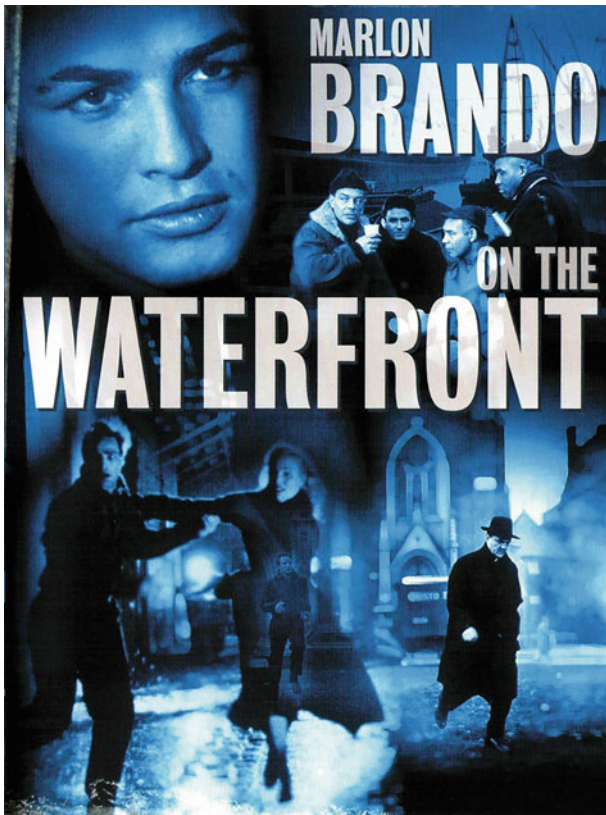


Fig. 13.1 Poster for the première of *On the Waterfront* by Elia Kazan, 1954

space systems, at urban and even territorial scale. These situations are more common on riverfronts where there has been no significant prior activity, where intervention is more in terms of a landscape than economic and programmatic. Consequently, on riverfronts the bodies of water and open spaces acquire more importance, than the urban façades overlooking the river banks.

“Opening up the city to the water”, whether sea or river (or a lake or canal, etc.) is a commonly used slogan. The intention of breaking down barriers remaining from port activities in order to develop new urban fronts is inspired by similar experiences in London, Rotterdam or Hamburg. Nevertheless, landscape, ecological and ‘eco-urbanistic’ outlooks show increasing potential when dealing with redeveloping cities with waterfronts, with or without abandoned port facilities. This perspective is increasingly present today as can be seen by the proliferation of experience exchange platforms focused on this kind of action.³ The problems and opportunities for intervention in regenerating and redeveloping waterfronts and riverfronts are related to their specific image, and the particular solutions to remedy

their deterioration, particularly in urban and suburban environments. Those processes are not exclusive to port cities or cities where industrialisation has had a direct impact on rivers, but also affect many others, such as the cities on the Mediterranean coast and the south of Europe.

In the case of cities that have lost any kind of relationship with their rivers, the risks of flooding partly explain why rivers have been converted in single-function canals that try to respond to the need to rapidly evacuate water.⁴ Other factors responsible for this marginalisation of rivers from the city are similar to those seen in port areas and docklands, which are related to the processes described by Kevin Lynch and Jane Jacobs, particularly those stemming from implementation of highway and railway infrastructures designed opportunistically and pragmatically, without consideration of urban waterfront and landscape concerns. Reactions to these processes have provoked new sensibilities and environmental awareness, but also an awareness of the opportunities associated with the new modalities or urban and strategic planning being imposed in recent years. Hence, implementation of urban development and integrated landscape strategies aimed at “opening up” cities to their rivers and waterfronts.

As is often the case when analysing processes from a historical perspective, it must be said that not all these concerns are so novel, nor therefore can they be associated with the ‘image politics’ so many cities are immersed in, particularly in a context of growing urban competition associated with globalisation. Some ‘historical’ examples of this would therefore be the urban enhancement strategies of riverfronts in French cities, at least since the eighteenth century. From the banks of the Seine in Paris, to those of the Loire in Bordeaux or the Rhone in Lyon, the layout of docks and bridges has always been associated with exploiting waterfront facades and the construction of bridges, ramps or walkways, which have become essential urban items for many cities. Some observers outside the discipline such as the writer Juan Benet, perceive the image created by riverfronts as one of the distinguishing marks of European cities: “Perhaps the most pleasant, unanimously accepted image of a great European city is that view of bridges over a big river, as if it were after them, clinging to the docks and quays whilst respecting the topography defined by towers, needles, domes and façades” (Benet 1989). Since the Enlightenment and its neo-classical urban development, concern for façades facing waterfronts has always been present in improvement and renovation projects, with a renewed impetus from the City Beautiful movement at the start of the twentieth century. An example such as the 1909 Chicago Plan (see

³See, for instance: Wasserstadt GmbH, Centre Cities on Water (www.waterfront-net.org www.citiesonwater.com).

⁴“(…) whereas the quality of them, the landscape value and the vitality of the ecosystems has deteriorated to critical levels” (Pellicer 2002).


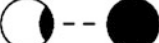





Stage	Symbol		Period	Characteristics
	○ city	● port		
(I) Primitive cityport			Ancient–medieval to 19th century	Close spatial and functional association between city and port
(II) Expanding cityport			19th–early 20th century	Rapid commercial and industrial growth forces port to develop beyond city confines, with linear quays and break-bulk industries
(III) Modern industrial cityport			mid-20th century	Industrial growth (especially oil refining) and introduction of containers and ro-ro facilities require separation and increased space
(IV) Retreat from the waterfront			1960–1980s	Changes in maritime technology induce growth of separate maritime industrial development areas
(V) Redevelopment of the waterfront			1970–1990s	Large-scale modern port consumes large areas of land- and water-space: urban renewal of original core

Fig. 13.2 Model of port/city relationships according to B. S. Hoyle, in *European port cities in transition*, 1992



Fig. 13.3 ‘Baltimore Model’. Riverfront, photo-plan and views of the new waterfront



Fig. 13.4 Thames riverfront, London, photograph ca. 2014



Fig. 13.5 Left bank of the river Seine, Paris, 1991–2015



Fig. 13.6 Renovation of the riverside façade at “Place de la Bourse”, Bordeaux, 2009

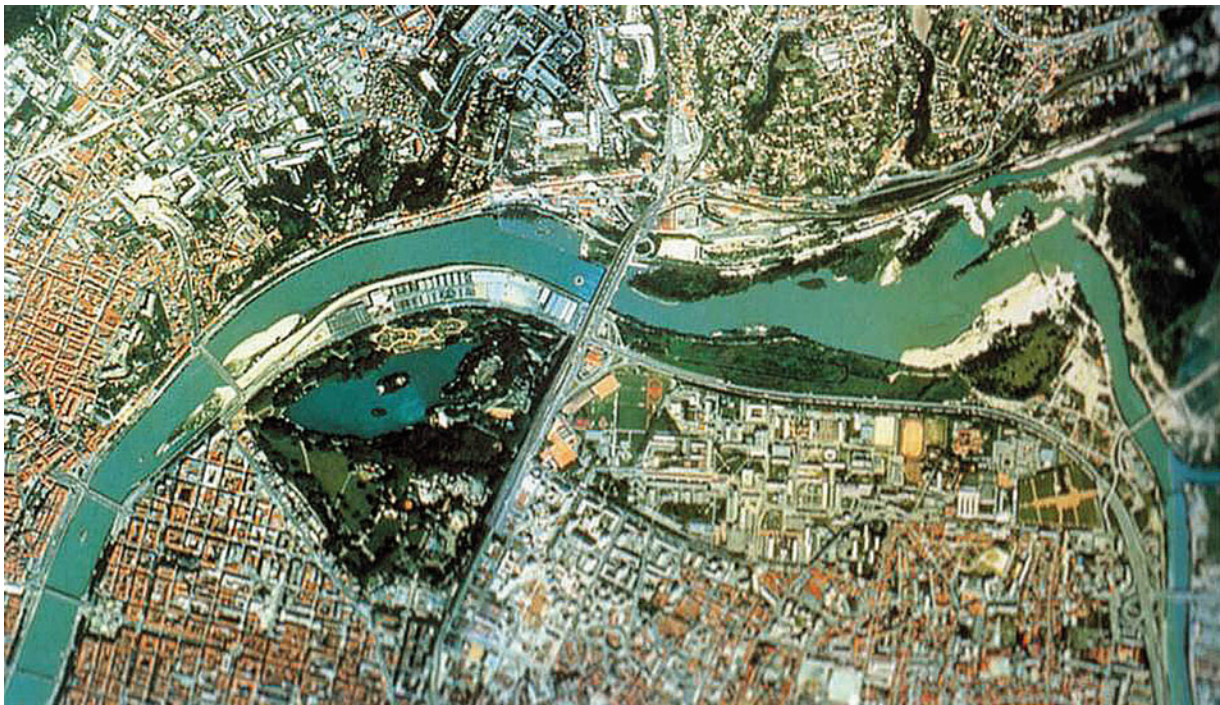


Fig. 13.7 Renovation of the left bank of the river Garonne, Bordeaux, 2009



Fig. 13.8 Renovation of the right bank of the river Garonne, Bordeaux, 2015

Chap. 1) confirms the importance of the commitment to a renewed lakeside, responsible for creating a new urban image.

Since the end of the twentieth century, in spite of the diversity of situations, the starting point in most cases (particularly in southern European cities) was not only the existence of docks or port facilities converted in unused enclaves, but also the deterioration of industrial infrastructure which led to the abandonment of many waterfronts. In recent years, the redevelopment of vocabulary concerning waterfronts has become consolidated, not only in generic discourse by laymen, but also in action by local governments and technical departments that take part in these processes. In that context, we can refer to some significant principles and forms of intervention that have been widely accepted, such as the 10 Principles for a Sustainable Development of Urban Waterfront Areas, established in the United Nations World Conference “Urban 21” (2000) prepared by the company Wasserstadt GmbH in Berlin, in cooperation with

the cities on water international centre in Venice (Wasserstadt GmbH 2000). These principles can be summarised as follows: (1) Secure the quality of water and the environment; (2) Waterfronts are an integral part of the existing city and contribute to its vitality; (3) The historical identity of waterfronts must be taken into account to promote the collective heritage; (4) Mixed use is a priority, offering a diversity of cultural, commercial and housing uses; (5) Public access is a prerequisite, high quality public spaces should be constructed to invite intensive use; (6) Planning in public private partnerships speeds the process; (7) Cities should benefit from sustainable waterfront development not only in ecological and economical terms but also socially; (8) Redevelopment of waterfronts is a challenge for more than one generation and must be long-term; (9) Plans should be flexible, adapt to change and incorporate all relevant disciplines; (10) Re-development of waterfronts is a highly complex task that involves professionals of many disciplines taking advantage of international experiences.

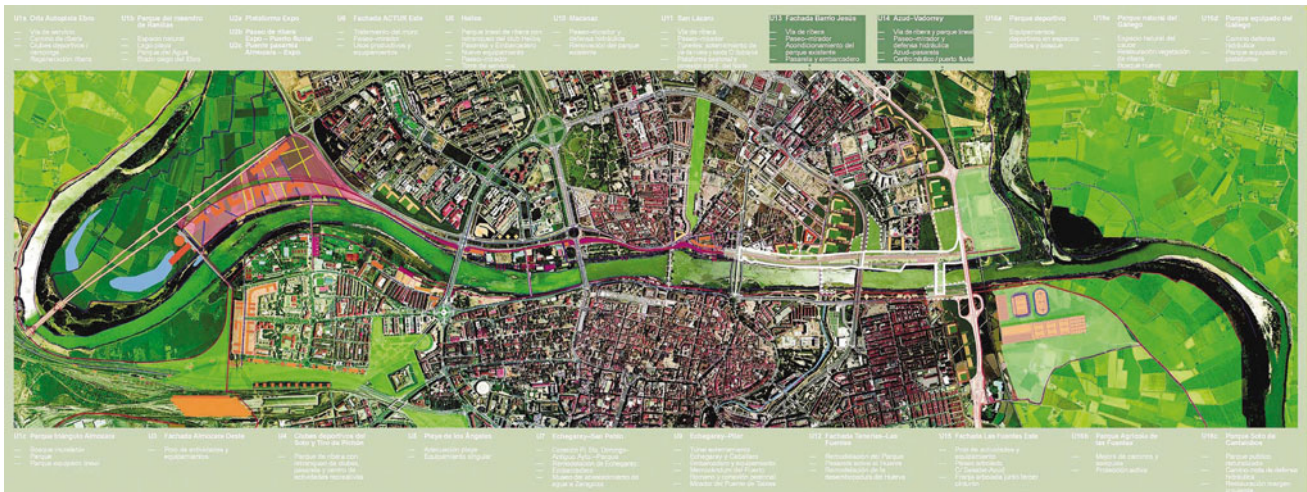


Fig. 13.9 Javier Monclús, Enric Batlle, Joan Roig (coords.), Proyecto de riberas del Ebro, Zaragoza, 2001

Other visions more concerned with urban design and landscaping, emphasise the opportunities to blend nature with culture to create new urbanistic and landscape scenarios. An interesting approach also resorts to the list of 10 principles for successful redevelopment of waterfronts. Two of them are particularly relevant to the debate about riverfronts. On the one hand, the need to overcome the understanding of the natural limits between water and land is emphasised, conceived as a ‘fine line’. On the other hand, waterfronts come to life when they have to be converted in places for people to live, not only for visitors or tourists (Krieger 2003). When taking a look at cities that engage these models, we can see the creative and innovative nature of the different urban development and landscaping projects that are transforming European cities (Portas 1998a, b). From the perspective of the conventional approach, integration of sea and river waterfronts in cities that have grown with their backs to their waterfront, represents another challenge both to employ some orthodox instruments, but also to measure their limitations, such as strict zoning and eminently defensive regulations. The most important achievements are associated with implementation of strategic and operational urban development, whereas the conventional urban approach has played a secondary role, having been frequently revised or ignored. In

these cases, we can once again see the effectiveness of applying new urban and landscape projects, both on ‘classical’ waterfronts and riverfronts, and how they respond to the broadest views referred to here.

The holding of international events such as the Olympic Games or Exhibitions, apart from promoting the host cities, has also contributed to foster action of this kind. These events have been powerful catalysts that have permitted new formulae of integration between urban development and landscape often difficult to put into practice because of bureaucratic and technical obstacles that limit integrating action. The case of Barcelona and its opening up to the sea has been widely studied owing to the ambition and success of the plans and projects that were developed, encompassing the 1992 Olympic Games (discussed in Chap. 11) and the Forum 2004. The case of the 2012 Olympic Games in London could be considered a prolongation and revision of the strategy that began in the Docklands, now extended and corrected in the urban redevelopment project of the new sections of the Thames and the Lee Valley. Even in other cities where international events had been planned and not held, the impact of their planning led to major strategic projects, as is the case of Paris, Lyon, Lisbon and many others (Monclús 2009).

Case Studies

Renovation of the Tagus Riverfront, Lisbon (1998)

Some of the most attractive views of the city/river binomial have been described by the writer Fernando Pessoa: “I love the Tagus because there is a great city on its banks”. The relationship between Lisbon and its river and the work carried out since the end of the eighteenth century are reminiscent of some French cities. Until the *Praça do Comércio* was created, after the devastating earthquake of 1755, the final, successful relationship there is today between the water and the city was not consolidated. But the decisive boost came about with the International Exhibition 1998, conceived from the start as an instrument to drive a strategic urban development operation. The plan involved renovating and re-integrating an industrial port area that had fallen into disuse and neglect, located to the north of the historical city centre on the banks of the Tagus. The company Parque Expo 98 was responsible for operations, which were carried out not only in the area strictly dedicated to the event, around 60 ha, but also in the ‘intervention zone’, covering an additional 330 ha. Along with the amenities and pavilions in the first zone, reconverted for tertiary use, an urban sector was planned for tertiary, commercial and residential use (for 25,000 residents) on a strip of land 5 km long and 800 m wide. The entire riverbank, previously in a state of disrepair, was thus

reconverted, with housing and infrastructure offering a substantial improvement to the urban structure and façade of Lisbon over the Targus.



Recovery of the Ebro Riverfront, Zaragoza (2008)

The River Ebro has historically played an ambiguous role in the urban growth of Zaragoza. For centuries, the city felt identified with its river, but it was also an obstacle that drove urban development to the south. Although occupation of the left bank by industries and infrastructure began in the nineteenth century, it was not until the decade of the 1970s when the river was no longer considered an unbreachable barrier, thanks to the construction of new bridges conceived as a part of the city's highway network. Nevertheless, at the time of this definitive leap to the right bank, the Ebro and its riverfronts were a rundown no man's land, completely remote from all urban development.

Without underestimating the different proposals and initiatives that took place during the second half of the twentieth century, the willingness to 'open the city up to the river' did not gain significant force until the nineties. The Zaragoza International Exhibition of 2008 and the Ebro riverfront projects gave a decisive boost, although not definitive, to the integration of the river and the city. The urban and landscape development concept in the Expo master plan, as an extension of the Riverfront Plan, was drafted independently from the general plan, in line with a wide-scope development and environmental strategy that included the Metropolitan Water Park and a multi-purpose urban pole.



References

- Benet, J. 1989. Del tiempo y los puentes. *El País*, October 28.
- Jacobs, J. 1961. *The Death and Life of Great American Cities*. New York: Random House.
- Krieger, A. 2003. The Unique Characteristics of Urban Waterfront Development. In *Remaking the Urban Waterfront*. Washington, DC: ULI—The Urban Land Institute.
- Monclús, J. 2009. *International Exhibitions and Urbanism: The Zaragoza Expo 2008 Project*. Farnham: Ashgate.
- Pellicer, F. 2002. Ordenación paisajística de espacios fluviales en las ciudades mediterráneas. In *Paisaje y ordenación del territorio*, ed. F. Zoido, and C. Venegas, 283–295. Sevilla: Consejería O.P.T.
- Portas, N., ed. 1998b. *Cidades e frentes de água/Cities & Waterfronts*. Lisboa: FAUP Publicações-Parque Expo.
- Ward, S.V. 2006. 'Cities are Fun!': Inventing and Spreading the Baltimore Model of Cultural Urbanism. In *Culture, Urbanism and Planning*, ed. J. Monclús, and M. Guardia, 271–286. Farnham: Ashgate.
- Wasserstadt GmbH. 2000. Centre Cities on Water. In *10 Principles for a Sustainable Development of Urban Waterfront Areas*. Berlin, Venice.

Further Readings

- Alday, I. 2012. Catástrofe, infraestructura y economía. Reflexiones construidas en torno al proyecto urbano. In *Proyectos integrados de arquitectura, paisaje y urbanismo*, ed. J. Monclús and R. Sánchez Lampreave, 204–213. Zaragoza: Institución Fernando El Católico.
- Bruttomesso, R. (ed.). 1993. *Waterfronts y Riverfronts: A New Frontier for Cities On Water*. Venice: International Centre Cities on Water.
- Bruttomesso, R. 2001. Complexity on the Urban Waterfront. In *Waterfronts in Post-industrial Cities*, ed. R. Marshall, 39–49. London, New York: Spon.
- de la Cal, P., and F. Pellicer (eds.). 2002. *Ríos y ciudades. Aportaciones para la recuperación de los ríos y riberas de Zaragoza (1996)*. Zaragoza: Institución Fernando El Católico.
- Meyer, H. 1999. *City and Port. Transformations of Port Cities London, Barcelona, New York, Rotterdam*. Rotterdam: International Book.
- de Miguel González, R. 2014. Metamorfosis urbana en Zaragoza. *Biblio 3W XIX*.
- Monclús, J. (ed.). 2008. *El urbanismo de la Expo*. Actar: El Plan de Acompañamiento.
- Monclús, J. 2015. Exposiciones internacionales y paradigmas en diseño urbano. In *Otra historia. Estudios sobre Arquitectura y Urbanismo en honor de Carlos Sambricio*, ed. J. Calatrava, C. Díez Medina, S. Guerrero, and R. Sánchez Lampreave, 438–455. Madrid: Lampreave.
- Monclús, J. 2016. Waterfronts y Riverfronts. Recuperación de frentes de agua fluviales como proyectos urbanos estratégicos. El proyecto de riberas del Ebro. *planur-e #07*.
- Porfyriou, H., and M. Sepe. 2017. *Waterfronts Revisited: European Ports in a Historic and Global Perspective*. London: Routledge.
- Portas, N. 1998a. The Significance of Urban Design/L'emergenza del progetto urbano. *Urbanistica* 110: 51–60.
- ULI—The Urban Land Institute. 2004. *Remaking the Urban Waterfront*. Washington, DC: ULI—The Urban Land Institute.

Orsina Simona Pierini

Abstract

Urban design is the term that best encapsulates the sense of the comparison between these projects. The new ordering of the Dutch metropolitan area stretching between the cities of Amsterdam, Rotterdam and The Hague is seen as an opportunity to create of several residential plans that investigate the subject of urban design. From the experimentation of the Borneo Sporenburg project and works by West 8 in Amsterdam and Chassé Terrain by OMA in Breda from the early 1990s, to the more recent reconversion of brownfield areas and newly created islands, such as IJburg and GWL Terrain, the quest for a new urbanity, morphological experimentation and investigation of typological diversity reveal a wealth of case studies of relevance to contemporary projects.

Keywords

Amsterdam • Rotterdam • Morphology • Typology • Masterplan • Residential districts • Experimental projects

The experience of designing housing developments in northern Europe in the last twenty years has seen significant advances, particularly in the Netherlands. An important tradition of work, consolidated through the stages of the Modern Movement with the urban projects of Hendrik Petrus Berlage and the Amsterdam School and the refined experimentation in Rationalist neighbourhoods by J.J. P. Oud, and successively put to the test by the critical stances taken by Toen Van der Broek & Jaap Bakema, has been enriched by the research into design and the relationship between dwelling and city in the 1990s and also by the figure of the landscape architect.

The opportunity for the development of large-scale residential areas, through the *Vierde Nota Ruimtelijke Ordening Extra* (VINEX) programme, is certainly one of the driving aspects to take into account. The VINEX, supplement to the Fourth National Policy Document on Spatial Planning published in 1990, and the VINEX programme document of 1995 planned the construction of 650,000 homes in a

ten-year time frame. The programme laid down a series of principles, which would influence Dutch urban planning, such as the consolidation of the principles of the compact city, mobility strongly linked to public transport and a large variety of building types. These regulatory principles suggested by the VINEX programme were accompanied by a contemporary theoretical reflection on density (refer to the publication by MVRDV), in the two extremes of high and low density, on the urban hybrid and the debate on the nature of urbanity. Moreover, the programme reduced the presence of the state in property ownership, deregulated the property market, and modified its structures, until then based on large-scale public planning initiatives. The actions envisaged by the programme, such as the urban restructuring of an entire complex metropolitan area, like the one that connects Amsterdam, Rotterdam and The Hague, as well as other minor ones, have seen the comparison of different experiences on very diverse urban models based on density, settlement morphologies and typological structures.

The negation or, in other cases, strengthening of the redesign of the urban fabric, for example, is one of the main subjects, as is the role of the discipline of urban design and the role of professionals such as planners, architects and landscape designers. There is also a dimension of collective

O. S. Pierini (✉)
Department of Architecture and Urban Studies,
Milan Polytechnic, Milan, Italy
e-mail: orsina.pierini@polimi.it

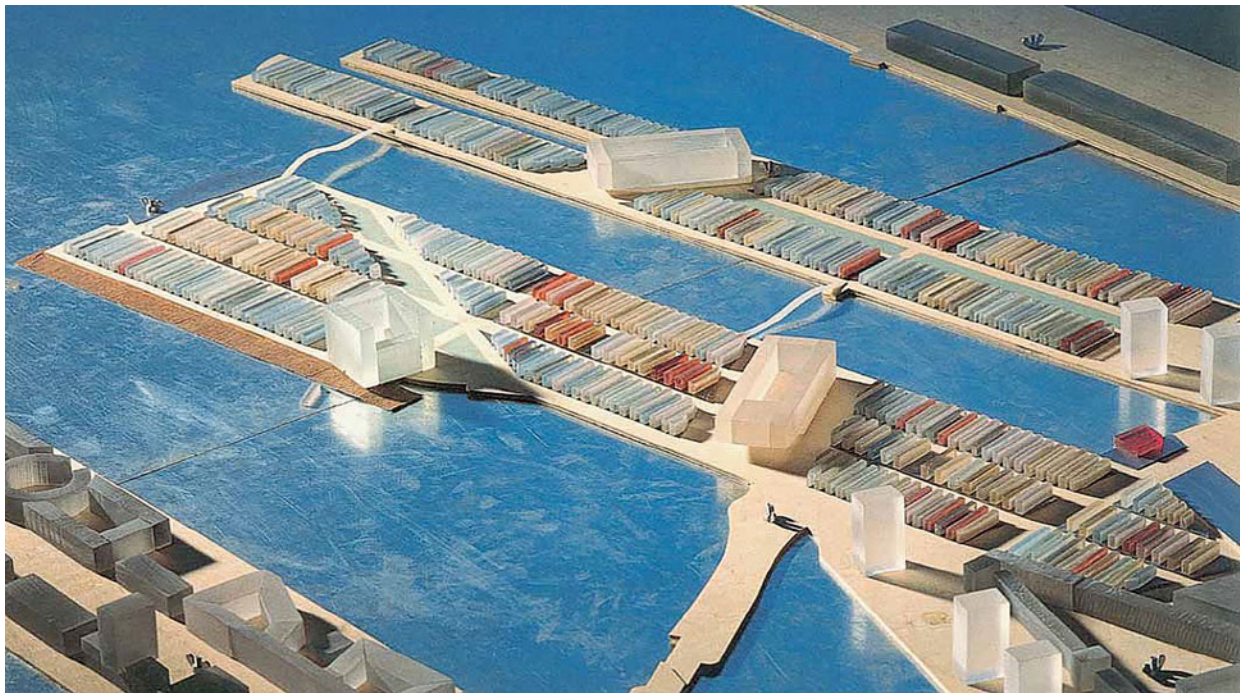


Fig. 14.1 West 8. Borneo Sporenburg, Amsterdam, 1993–1996. View of the model

planning for these large sectors, which is reflected in the fragmentation of many commissions, with the consequent range of stylistic and linguistic solutions. While some of the designs by OMA at the turn of the new millennium had great impact with international critics for their irreverent approaches to tradition, and their strongly innovative features in their placement and relationships of urban buildings, the following years brought a consolidation of planning in the Netherlands based on regular parcelling, particularly on newly created islands.

This chapter follows the trail of the most recent trends in Dutch urban planning, singling out in a number of residential case studies some of the more general themes that characterise the contemporary scene.

The case of Borneo Sporenburg (Amsterdam, 1993–1996) was a large-scale scheme to convert the docklands on the north-eastern outskirts of Amsterdam to housing. The masterplan was entrusted to the landscape architecture firm West 8. The subject of brownfield site conversion, dealt with in the same period in many European cities, was resolved in this case with a landscape design that was not only urban but which focused on the dialogue between two different scales of intervention. The choice of design then allowed for integration on the same level of different housing types, beginning a trend of working in typological diversity which would become very successful in the following years. Many architects worked on the new type of low-rise housing, a sort of hybrid between the terraced housing and the courtyard house

(Neutelings Riedijk architecten, Rem Koolhaas, Enric Miralles, etc.) with different degrees of success and interest. However, the choice of large sculptural elements fell to highly experienced architects, such as Hans Kollhoff with the *Piraeus* building. The Berlin architect created a large uniform block of dark brick, in which his detailed and complex architectural style is evident in many spaces and surfaces as required in such an urban scale: a fragment of porch, a façade layout that becomes public space at a certain elevation or an opening onto the landscape are brought together by a masterful control of form, in which the individual details become parts of a harmonious whole, and the variations enrich the building dimensions that would otherwise be unmanageable with urbanism alone. Even the residential tower by Wiel Arets and the large hollow building known as *The Whale* by de Architekten Cie. have become design icons.

A very different case is that of the contemporary result of the design competition for *Chassé Terrain*, Breda 1994–1996, which brought together in its working team such diverse figures as Rem Koolhaas, Hans Kollhoff, Josep Lluís Mateo and Christian de Portzamparc. Here, the relationships between building and urban fabric are negated in favour of an imaginary archipelago of different morphologies, which will stand as an emblematic case of contemporary fragmentation and detachment from the urban character of the traditional city. The plan, which revives the Le Corbusian tradition of objects freely arranged on the ground, inspired by the Acropolis or the *Campo dei Miracoli* in Pisa, contains



Fig. 14.2 OMA. Chassé Terrain, Breda, Urban development, 1994–2000. Aerial photograph

close to 800 dwellings, seen as complex pieces rather than isolated objects, according to the successive execution of the plan by OMA, Xaveer de Geyter, Hans Kollhoff, Claus en Kaan Architecten and others, completed in 2006.

Among the achievements of the VINEX programme is the case of Ypenburg and the design by Frits Palmboom & Van Den Bout: a design that focused on public and collective spaces that put into practice the famous slogan “Low Rise—High Density” in a large area on the outskirts of The Hague, in which MVRDV also intervened. At the time, VINEX was publishing interesting studies on urban density and on the construction of contemporary cities through the use of high-rise buildings.¹ The same VINEX programme also initiated the creation of new artificial islands that were mostly devoted to housing, for example, IJburg (Ibelings 2000; Claus et al. 2001). In this case, the practice of de Architekten Cie., among whose members the contribution by Frits van Dongen stands out, took on the task of reinventing the design of new urban layouts, greatly inspired by the revival of the urban block. This subject has proven to be of great interest in Europe, and it would be useful to compare this case with the creation of the new *ensanches* (areas of urban expansion) in Spain or the so-called *ilot ouvert* (open block) in Paris. In the Dutch case, this investigation forms a part of a strong tradition of working on block-style residential development: Susanne Komossa (2010) has long

studied and analysed elements of continuity in the tradition of the elongated block from the seventeenth century to the present day. In this light, the earliest examples of modern design—for example, the Spardammerstock quarter in Amsterdam, or Spangen, by Johannes Brinkman and J.J. P. Oud in Rotterdam—are seen as an evolution and reinterpretation of the historical system, and recent designs by de Architekten Cie. and KCAP on the artificial island continue along this line. Once again, the list of renowned architects working on this project is very long; however, attention can be drawn to the elegant solutions proposed by ANA Architecten: their projects often choose to work on the internal and external elements of the fragments of the blocks that they have built on, according to a canonical interpretation of the characteristics of closing off the exterior street frontage and opening up the interior. This opening up on occasions becomes a dismantling of the building, as if to recapture the Loosian theme of the house that is broken up into inward-facing steps, in juxtaposition with the building’s austere and silent bearing, as Loos had expressed so well in the house he designed for Tristan Tzara in Paris. Galleries for circulation, public loggias, exposed access stairways and cantilevers are juxtaposed with the rigorous layout of identical windows in a repetitive pattern along the street frontage, bringing back public spaces to the different levels.

Also in IJburg, a different interpretation of the urban block is to be found. Dick van Gameren’s design for a block-style housing complex celebrates the theme of the compact city, seen as an audacious and controlled mixture of

¹MVRDV 2005. *Km3: Excursions on Capacity*. Barcelona: Actar.

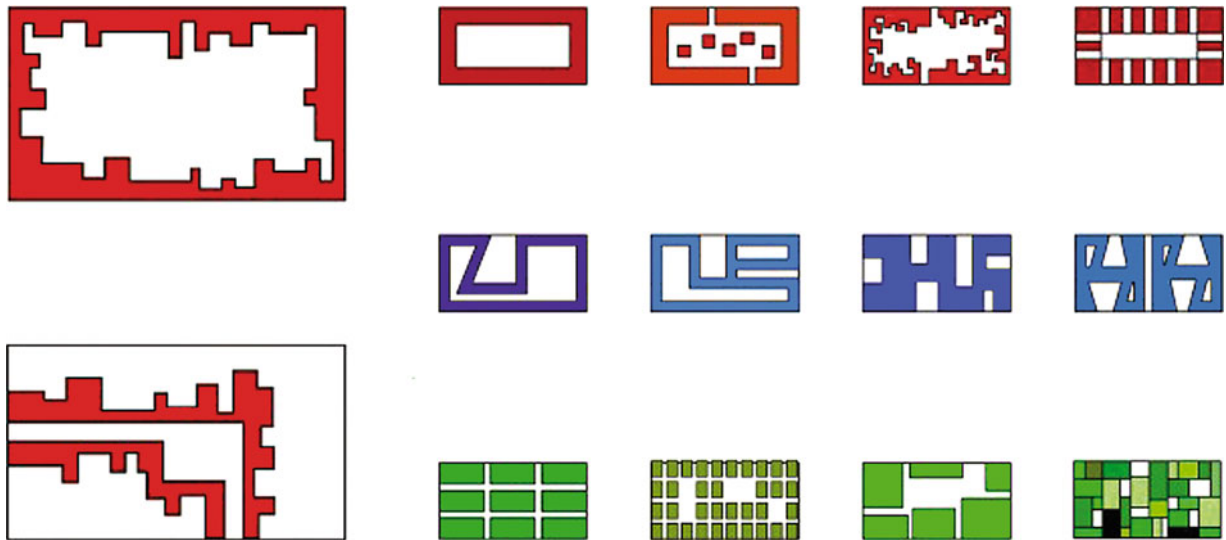


Fig. 14.3 Felix Claus. Ijburg Haveneiland and Rieteilanden, studies of possible urban block solutions for Ijburg

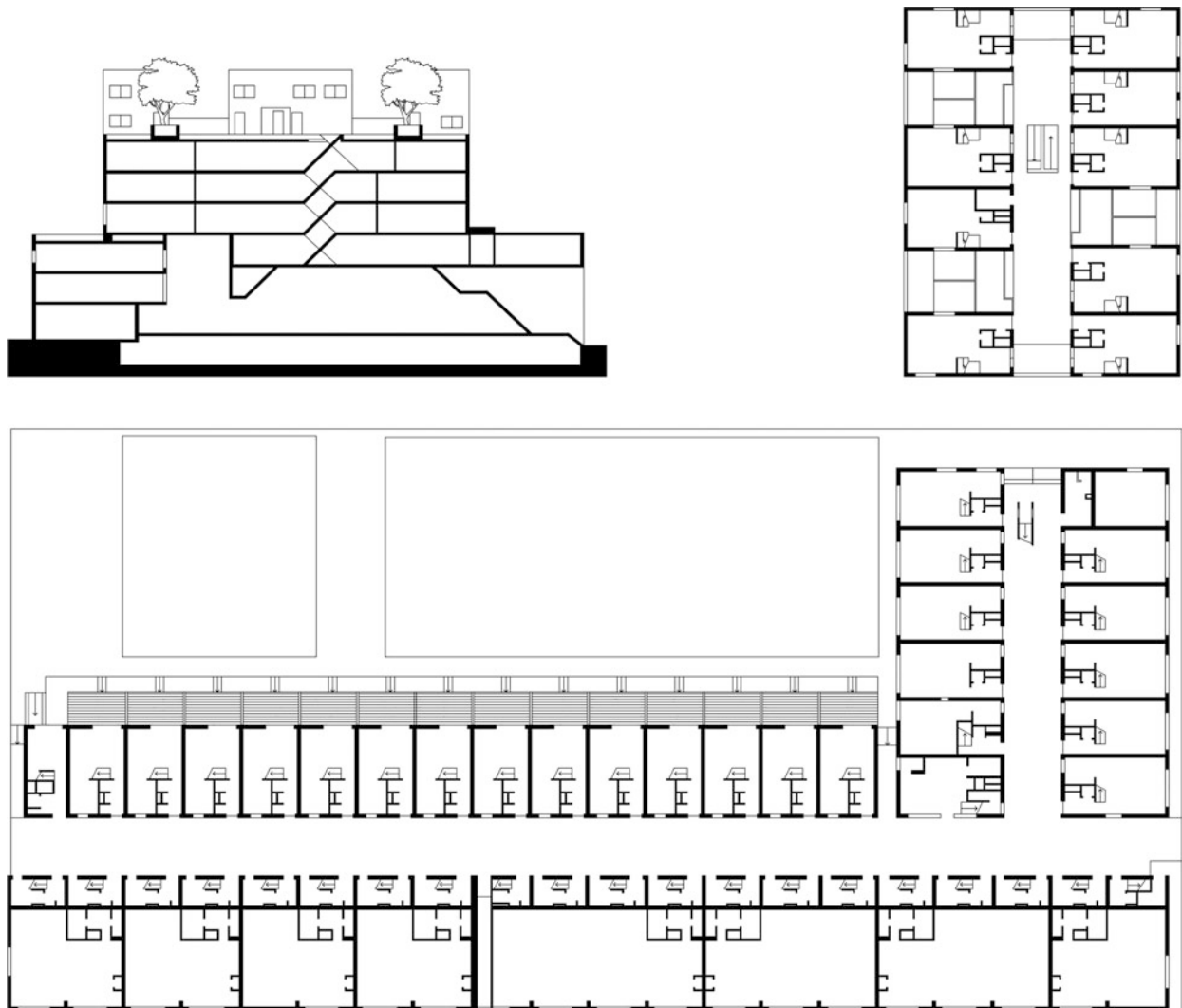


Fig. 14.4 Dick van Gameren. Ijburg, Amsterdam. Plan and section of the urban block

building types, drawing from the different styles of housing over time: the medieval street, the city apartment block and the detached house. This project forms an image of a dense and compact town, most likely the legacy of the Dutch experience of the urban 'knots' of the 1950s, and completely suited to the parcelling into large blocks that had been imposed on the entire development area and which articulately and cleverly encapsulated this new vision of housing, even managing to include a large proportion of single-family homes.

With the new millennium, the city of Rotterdam is also dealing with the restructuring and redesign of peripheral and brownfield areas, although in a very different way, as seen in the large area to the south of its port, Kop van Zuid. The KCAP (Kees Christiaanse) practice designed the plan for Stadstuinen, another experiment in the Dutch urban block, perhaps less explicit in its actions, but definitely of great interest owing to the ability to modify an apparently abstract ideal and incorporate it into its context. There are at least two compositional processes that were tested with this block. The large urban block that contains a central public space is broken up and redesigned with smaller blocks. These, in turn, are broken up into buildings of different heights, scale and solutions for the base, succeeding in the difficult operation of creating a dialogue between the apparent indifference of the buildings in the urban structure and the exceptional setting of the canal. On the other hand, the

adjacent Landtong project by the Dutch firm of de Architekten Cie. has a more programmatic character from the perspective of the composition of different building types, where there is a didactic reading of different parts, in which urban typologies and scales are recognised and positioned for dialogue with the different frontages of the city. Each building type is shown explicitly: the terraced housing look back to the scale of the old city, the linear blocks are reminiscent of the dimensions of the bourgeois city, and terraces were added to the higher buildings closing off the large courtyards to the south. The north side responds in its dimensions to that of one of the extensive metropolitan areas in Europe. In the same project, the housing types and, above all, the different ideas of the city that these building types describe, are coherently and legibly decomposable.

We have tried to follow the thread of a story that describes the potential for experimentation with regard to the planning of housing projects in the Netherlands at the start of the new millennium, to outline a number of urban design practices to which different morphological choices correspond. They are often the same professionals' names, or those of large urban planning and landscape design practices that appear in the individual operations, and this allows us to speak of a line of continuity that is challenged with regard to a number of design-related points: identifying with the existing plots or working in juxtaposition, reviving the urban block and its reinterpretation, investigation regarding



Fig. 14.5 Architekten Cie. Landtong, Kop van Zuid, Rotterdam, 1994–1999. General view



Fig. 14.6 KCap (Kees Christiaanse). GWL Terrein, Amsterdam. Aerial view

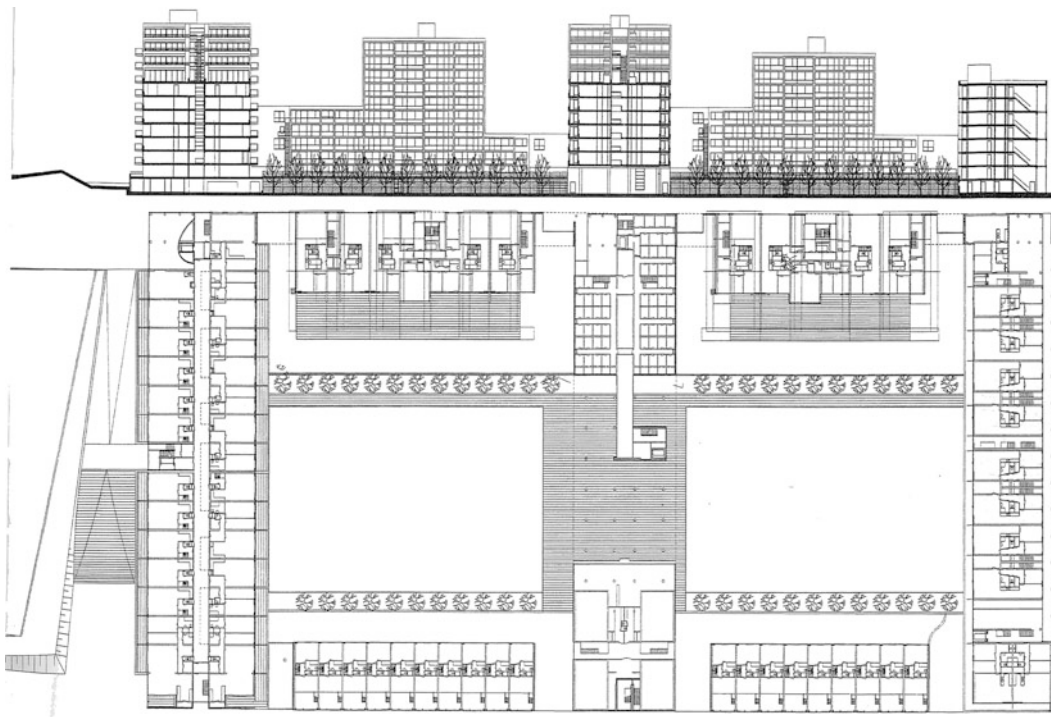


Fig. 14.7 Architecten Cie. Landtong, Kop van Zuid, Rotterdam, 1994–1999. Plan and section of two units

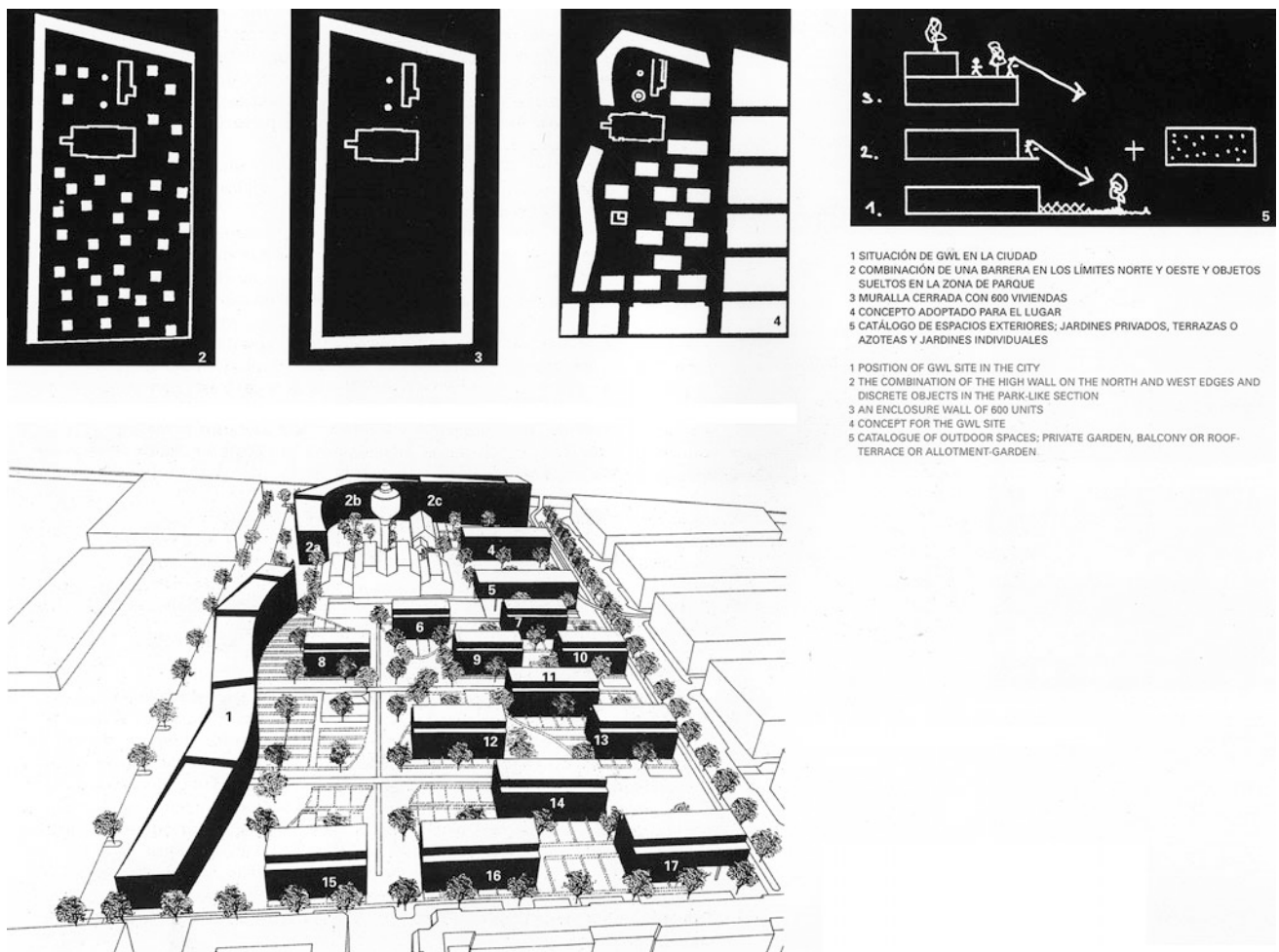


Fig. 14.8 KCap (Kees Christiaanse). GWL Terrein, Amsterdam. Morphological studies

the linear building or block-style housing and their hybridisation, the use of different scales to respond to the requirements of landscape, the challenges of a terrain without plot division and the identities of individual architectural objects, just to name a few.

There is also a further exemplary aspect that should be taken into account in this narrative: the extensive size of these large-scale urban interventions and the presence of different players. The new role of the landscape architect, whose work on the same subjects as that of the architects bring about great diversity in language and choice of typologies. This not only offers a wealth of interesting case studies of residential typologies but it also offers a broader reflection on large-scale planning and its implementation through the interpretations, reinterpretations and creations of singular architects.

It would be true to say that the Netherlands presents a wealth of exemplary solutions and that the intervention to

redevelop the GWL Terrein in Amsterdam, through the design project by KCAP (Kees Christiaanse) and landscape work by West 8, is totally coherent with this line of research. In the conversion, KCAP works on the combination of different types, on the one hand, which blends the plot with its context, and on the other, on their rearrangement in a unified action, summarising the design that runs from west to north to redefine an urban boundary that is necessary so as to be able to recognise the new living spaces. In the protected part, inside the intervention area, the extension of the existing street network becomes an opportunity to place a series of short buildings in fragmented and staggered lines, focused more on the design of the empty spaces than on the layout of the buildings. A great deal of attention is given in the neighbourhood development to ecological aspects in the section of the buildings, the solution for which takes into account the base of the buildings.

Case Studies

Borneo Sporenburg, Amsterdam (1993–1996)

For the exemplary, nature in which new attention given to the landscape is represented: the role of landscape in the urban design, the participation of a large number of architects and the complexity of scales and languages, and how their designs are the result of their experimentation with housing, make this a unique case. Two scales are contrasted in the design of West 8 office: on the one hand, the minute fabric of the terraced houses, typical of the Dutch tradition, and on the other, large buildings of monumental size and out of scale are nestled into this dense network that triangulates with each other on the “new” peninsulas.



Ijburg, Amsterdam (1993–2010)

This entire project (by Architekten Cie.: Felix Claus, Frits van Dongen and Ton Schaap) covers an island, a unique opportunity, which continues the Dutch tradition of reclaiming land from the water. In this case, the pursuit of a new layout for the terrain is conducted with a clever balance of collective spaces, infrastructure and block-style housing. The interpretation made of the residential side does not always adopt the classical urban block, instead offering a wide range of morphological solutions enriched by a useful mix of building styles to consolidate the quest for a new urbanity.



GWL Terrain, Amsterdam (1993–1998)

This is a redevelopment project (by KCap, with DKV Architecten, Neutelings Riedijk architecten, Meyer & Van Schooten, Zeinstra van der Pol and West 8) for a brownfield site, which became a double opportunity for the city: the design opened up eastward towards the traditional city, continuing on with the alignment of the street network, while to the north-west, along the length of an infrastructure system, the area is closed off with a long linear building, which forms a clear urban boundary and protection for the residential area, like the protection offered by the Byker Wall by Ralph Erskine in Newcastle (see Chap. 8). The project pays particular attention to ecological concerns and is an experience of a car-free neighbourhood.



Kop van Zuid, Rotterdam (1994–1999)

In the redevelopment of the southern side of the port of Rotterdam (by KCap and Architecten Cie), on a central peninsula, two grand reflections are contrasted regarding the idea of the urban block on a large metropolitan scale, which is perhaps only found in the Netherlands in Rotterdam. The three immense urban blocks with central courtyards that make up Landtong, comprising very different buildings heavily orientated towards the south, are set against the network of fragmented urban blocks that make up the more discreet and articulated design of Stadstuinen. In this case, a double hierarchy of scales comes together in a large development, subdivided into smaller blocks, some of which also feature different heights. The complexity of the double network is adapted to the different façade styles of the surrounding area.



References

- Claus, F., F. van Dongen, and T. Schaap. 2001. *Ijburg Haveneiland and Rieteilanden*. Rotterdam: 010 Publishers.
- Ibelings, H. 2000. *Artificial Landscape: Contemporary Architecture, Urbanism and Landscape Architecture in the Netherlands*, ed. Netherlands Architecture Institute. Rotterdam: NAI Publishers.
- Komossa, S. 2010. *The Dutch Urban Block and the Public Realm. Models, Rules, Ideals*. Nijmegen: Vantilt.

Further Readings

- Architecture in the Netherlands—YearBook 1996*. 1997. Rotterdam: NAI Publishers.
- DASH—Delft Architectural Studies on Housing. 2016. TU Delft. <http://dash-journal.com/>. Accessed October 19.
- van Dongen, F. 2007. Le rappresentazioni della città. Tre trasformazioni della città interna/The Representations of the City. 3 Inner-city Transformations. *Lotus International* 132: 41–64.
- Ebner, P., E. Herrmann, R. Höllbacher, M. Kuntscher, and U. Wietzorek. 2010. *Typology +: Innovative Residential Architecture*. Basel: Birkhäuser.
- Farina, M. 2012. *Spazi e figure dell'abitare—Il progetto della residenza contemporanea in Olanda*. Macerata: Quodlibet.
- Fernández Per, A., and J. Arpa. 2006. *Density, New Collective Housing*. Vitoria-Gasteiz: A + T Architecture Publishers.
- Fosso, M., and H. Meyer. 2004. *Trasformazioni del paesaggio urbanizzato*. Clup: Progetti di città. Studio Palmboom & van den Bout. Milan.
- La ricerca contemporanea nell'abitazione/Contemporary Research into Housing. 1997. *Lotus International* 94.
- Leupen, B., and Mooij, H. 2011. *Housing Design: A Manual*. Rotterdam: NAI Publishers.
- Melotto, B., and O.S. Pierini. 2012. *Housing Primer, le forme della residenza nella città contemporanea*. Santarcangelo di Romagna: Maggioli editore.
- MVRDV. 2005. *Km3: Excursions on Capacity*. Barcelona: Actar.
- New Urban Housing I. 2011. *Lotus International* 147.
- New Urban Housing II. 2011. *Lotus International* 148.
- Wagenaar, C. 2011. *Town Planning in the Netherlands Since 1800: Responses to Enlightenment Ideas and Geopolitical Realities*. Rotterdam: NAI Publishers.

Orsina Simona Pierini

Abstract

The reinterpretation of recent residential interventions in northern Italy, the Madrid metropolitan area and the ZAC Masséna project in Paris highlights the specific quest that has emerged in the new millennium: the return to the compact city, to experimentation with the urban block and to revive the role of the street. With criticism of the open design of the Modern Movement, complete, contemporary projects are able to rethink the concept of the urban block through the morphological wealth that good twentieth-century architecture managed to produce. Paris imposes a series of classical compositional themes to its open block, such as the continuity of the podium, while Sanpolino in Italy achieves great urban diversity with a wealth of typological offerings and density.

Keywords

Madrid • Barcelona • Paris • Block • Density • Urbanity • Street • Residential district • Urban block

A comprehensive view of recent success stories in European urban planning allows two contrasting attitudes to be distinguished that separate north and south. While the scene in the Netherlands can be seen as bold and experimental, one that engages new ideas about the city and morphological structures—examples being the bold actions made by Koolhaas in Breda or Almere—the panorama in Southern Europe, with the cases of France, Italy and Spain, is mostly tied to the tradition of the urban block and integration into the urban fabric of the city, its recovery and its interpretation. It is from this perspective that we can reinterpret some of the significant episodes of residential design in the Mediterranean countries, verifying the return to the compact city, revisiting it in the eyes of those familiar with Modernism, who have mastered a freer design of buildings, knowledgeable and critical heirs to all of the large-scale planned construction taking place after the Second World War. Rethinking the design of the nineteenth-century urban fabric, contemporary architecture once again puts forward the type of urban block or

block-style building defined by streets, for a better design and delimitation of public spaces.

The traditional urban block typically comprised different buildings, often of diverse types and built over time by different developers. Contemporary design culture has actually taken a decisive leap in scale, covering the block with a single type of construction, often—but not always—with a large courtyard. The study of recent activity shows an articulated use of block-style buildings, urban fabric and solutions for the block, which has had to come to terms with the new urban image inherited from the Modern Movement and which was actually born out of the negation and dissolution of the block (Panerai et al. 2004). The recent historiography of modern architecture has often, rightly, tended to highlight the continuous nature of the historical experience of the Modern Movement in the city, but the fact remains that the modern city has undermined some of its traditional structures, for instance the role of the street façade or the idea of visual continuity of buildings.

It is common knowledge that one of the biggest problems caused by large-scale, unrestricted building is that places are difficult to recognise. This is also the result of the abstraction and expansion of public space, which becomes diluted in so

O. S. Pierini (✉)
Department of Architecture and Urban Studies,
Milan Polytechnic, Milano, Italy
e-mail: orsina.pierini@polimi.it

much open space, and where the collective recognition of place that all urban landscapes should have is lost.

It is now possible to make a precise analysis, free from ideological significance, on the traditional, nineteenth-century city and the modern city aimed at identifying a new line of design that will take into account the positive and urban aspects of both. In recent years, often as a result of the disappearance of large industrial areas, there has been a need for reflections regarding the fragmentation of zones, and on the concepts of grid, block, road network and plot size, as well as their architectural definition and nature, and deeper insight into the ideas of street façade, interior space and the courtyard, and often reconfirming the division between interior and exterior, which the modern city had sought to dismantle. Thus, the block is reinterpreted because of its role in defining a street frontage that is mostly exposed, leading it to regain its central significance—that of contrasting the ‘interiority’ of the interior space—in order to provide an architectural solution suited to the idea of protection that domestic space should have.

The modern city had modified the canonical concepts of habitation with different experiences and variations for the

role of the street, until it sought to negate it—we need only call to mind Le Corbusier’s *morte de la rue* (death of the street). This is certainly not the place to list the many proposals of modern architecture with regard to this subject. However, Giancarlo Consonni reminds us that in studies by Cerdà, Berlage and Tony Garnier (Consonni 2009, 63), designs are to be found with a balance of invariables and variations. Berlage would expand the block and the dimensions of the street, while Tony Garnier in his project for *Une cité industrielle*, such as that for the Les Etats-Unis neighbourhood in Lyon, experimented with different arrangements for the residential buildings in relation to the street.

The residence is allowed to assume this double meaning in its architectural nature: the façade facing the street responds to the requirement for a representative street frontage, while the other façades can easily fulfil the needs of domestic life. This backside of the building, once considered less important, now fully responds to the need for protection, privacy and confidentiality that domestic life requires. From the architectural perspective, it also glorifies the work on what is ‘between things’, in other words, on spaces that are

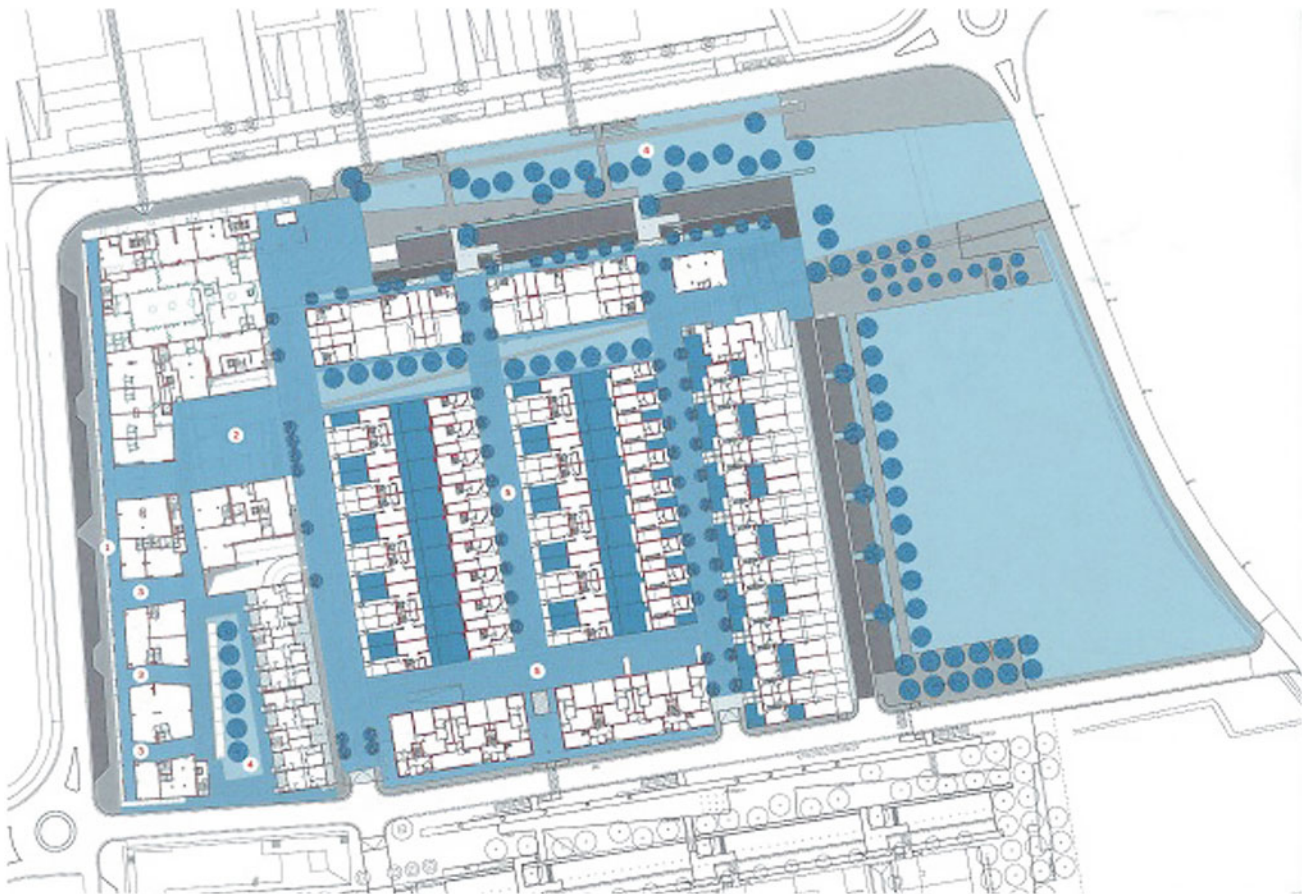


Fig. 15.1 Mauro Galantino, Marco Frusca. Sanpolino development, Brescia, 2002–2008. General plan

contained, concealed and protected inside buildings: a new enclosed spatiality, revived by relationships.

This clear, very middle-class division of space leads us to a much discussed concept in recent years, urbanity, to the point where we wonder whether today we can speak of a precise nature of urbanity sought by a dwelling. While the term *urbanity* is defined in dictionaries as courteous behaviour in normal relations with other people, the German urban planner Sieverts explains that the concept of urbanity was developed as “a particular quality of the enlightened, bourgeois city and was coined to indicate a cultural and social form of living and not the quality of a specific form of urban design and special structure. (...) a tolerant, outward-looking attitude of its inhabitants, to each other and to outsiders. (...) [Urbanity] acts as a kind of counter-concept to provincialism by evoking an atmosphere of cosmopolitanism, openness to the world and tolerance, intellectual agility and curiosity” (Sieverts 2003). Perhaps a more precise description of its physical and architectural character is the definition given by Françoise Choay “urbanity is the reciprocal readjustment of a type of urban texture and a form of conviviality”.¹ We can deduce that the nineteenth-century compact city is only associated with the concept of urbanity in the collective imagination, although today we can also observe a return to the manners of the spaces found in this kind of city.

There are many ways of interpreting this idea of spatiality that revives the character of urbanity that is both upstanding and reserved. While it was the well-known debates on the rebuilding of Berlin following the fall of the wall—in which the Senate of the city had imposed the revival of the traditional urban block—which led to the first outlines for theoretical treatises and introduced the issue to international journals in the late 1990s, it is, however, through the comparisons made after recent Italian, French and Spanish experiences on this subject that we are able to grasp the wealth of solutions, legible through a morphological analysis of their specificities.

This return to the compact city is perceptible in buildings that are slightly set back from the boundary, the adjacency of very different types of buildings, also in height, in passageways and in openings in the rediscovered continuous perimeter façade. It is the subject of designs for the ‘urban doorsteps’, i.e. every situation in which the boundary of a block is revealed to be a fringe capable of hosting important relationships, helping to achieve a range of intermediate spaces that offer variations in urbanity from public to private.



Fig. 15.2 Mauro Galantino, Marco Frusca. Sanpolino development, Brescia, 2002–2008. Photograph of the working model

This subject was already familiar to the erudite modernism of Italian Rationalism: the determined rotation perpendicular to the street of the two buildings comprising Casa Rustici, designed by Terragni and built in Milan in 1933, is imbued with the search for unity—compatibility, one would say today—which the horizontality of the balconies holds together and recomposes. The search for new spatiality also characterises the designs by Luigi Moretti, not surprisingly the editor of *Spazio* (Space) magazine, and more specifically that of the building of Corso Italia, built in 1957 in Milan. Its architecture is marked by the expressive gesture of rejecting the street by the upper part of the building, as opposed to the podium on which it rests, which instead maintains its continuity.

These now famous examples allow us to refine the way in which we observe more recent experiments in which the subject of the street, and all their variations, has become an opportunity to overcome the boundaries of construction, in order to create new relationships between the inside and outside. Lessons in this regard are offered by the designs by French architect Philippe Gazeau, who often fragments buildings on the street or uses transparency in the vertical distribution of buildings in order to connect the two inhabited worlds. In Italy, the recent project for an entire urban block on the outskirts of Brescia adjacent to the open and repetitive design of the 1970s development by Leonardo Benevolo creates contrast through combinations of building types and morphologies, some even evocative of Roman *insulae*. In Mauro Galantino’s Sanpolino project, there is a deliberate mixture of different types of mid-rise residential buildings, terraced housing and low-rise dwellings, as well as the search for a language to describe the doorstep/entrance and to delineate the image of the urban street.

The subject of the urban block has been dealt with on a particularly massive scale in the design of large housing developments, such as the new neighbourhoods that form what are known as the ‘*nuevos ensanches*’ (new areas of

¹Choay, F. 1994. Le règne de l’urbain et la mort de la ville. In *La Ville, art et architecture en Europe 1870–1993*, 26–35. Paris: Centre Georges Pompidou.



Fig. 15.3 Mauro Galantino, Marco Frusca. Sanpolino development, Brescia, 2002–2008. View of an interior street

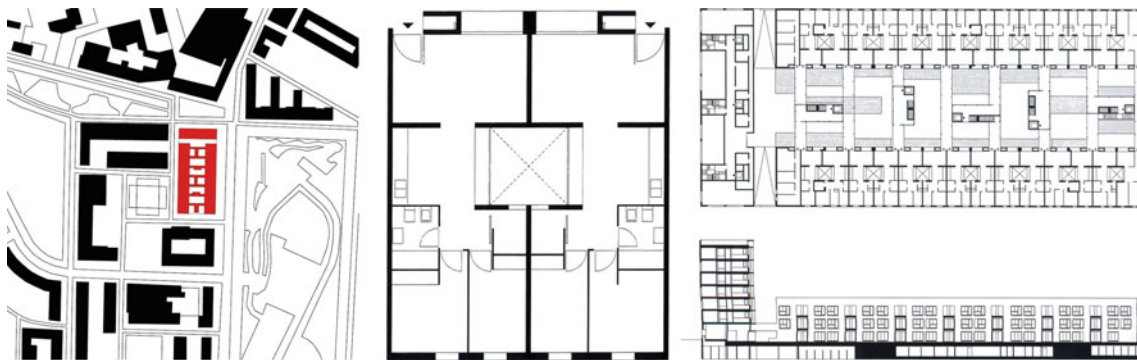


Fig. 15.4 Alberola and Martorell, 122 dwellings (EMVS) in the Carabanchel PAU, Madrid, 2001–2004. Plan, section and elevation

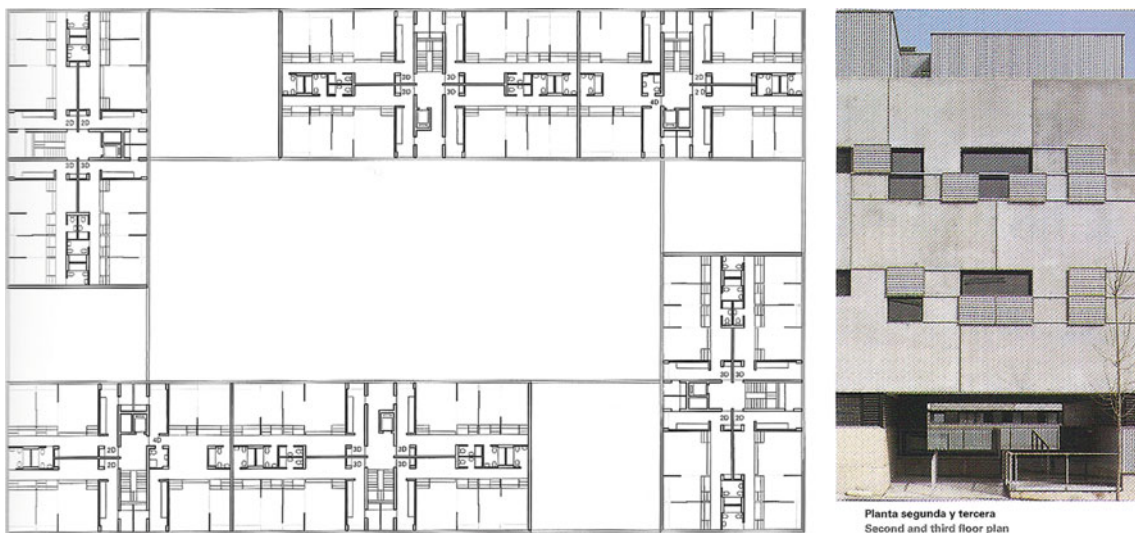


Fig. 15.5 Aranguren and Gallegos, 64 social dwellings in the Carabanchel PAU, Madrid, 2001–2003. Plan and photograph of the elevation

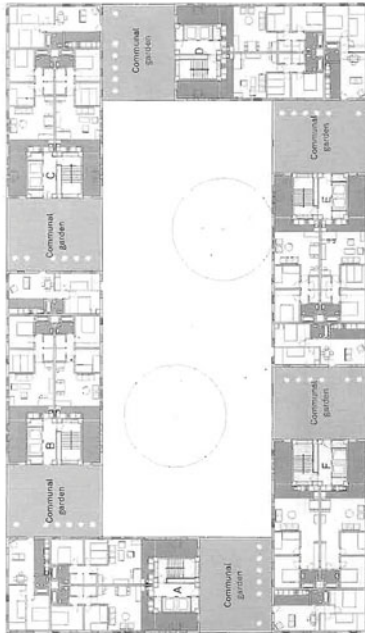
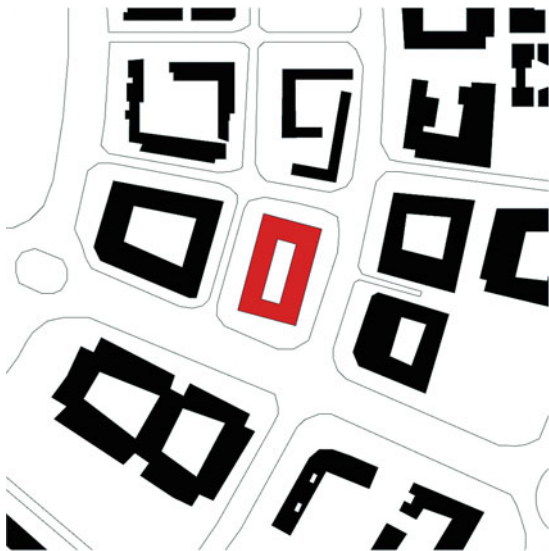


Fig. 15.6 Blanca Lleó and MVRDV, Edificio Celosía, 146 dwellings (EMVS) in the Sanchinarro PAU, Madrid, 2001–2008. Plans and views from the outside and of the interior space

urban expansion) of the city of Madrid. The outcome are the individual *Programas de Actuación Urbanística* (Urban Action Programmes, PAU) built according to the public plan with first-hand involvement by the municipal housing authority, EMVS,² in competitions and tendering processes. The case of Madrid and the planned growth areas of the 1990s and those of recent creation offer at least two examples of issues for debate: the large regulated urban block of Carabanchel, and the imposing street network created in Sanchinarro. In the case of Madrid's large-scale PAUs, as Ramón

López de Lucio pointed out, the redesign urban blocks sized to nineteenth-century scale is diluted in an uncontrolled metropolitan space, in which the traditional ratio of density between street and building block is reversed (López de Lucio 2013). An aerial photograph of these neighbourhoods immediately takes us back to another time—the nineteenth century—when the great European metropolises began to design for their massive growth by means of abstract systems of regular street grids and urban blocks, alternated with public spaces. But in reality, a closer look at their architecture allows us to grasp the ambiguity of the works inherited from more recent research, which covers the last 100 years.

²EMVS, Empresa Municipal de la Vivienda y Suelo de Madrid.



Fig. 15.7 Burgos and Garrido. 13 dwellings (EMVS) in the Sanchinarro PAU, Madrid, 2004–2007. Photograph of the outside, plan and sections

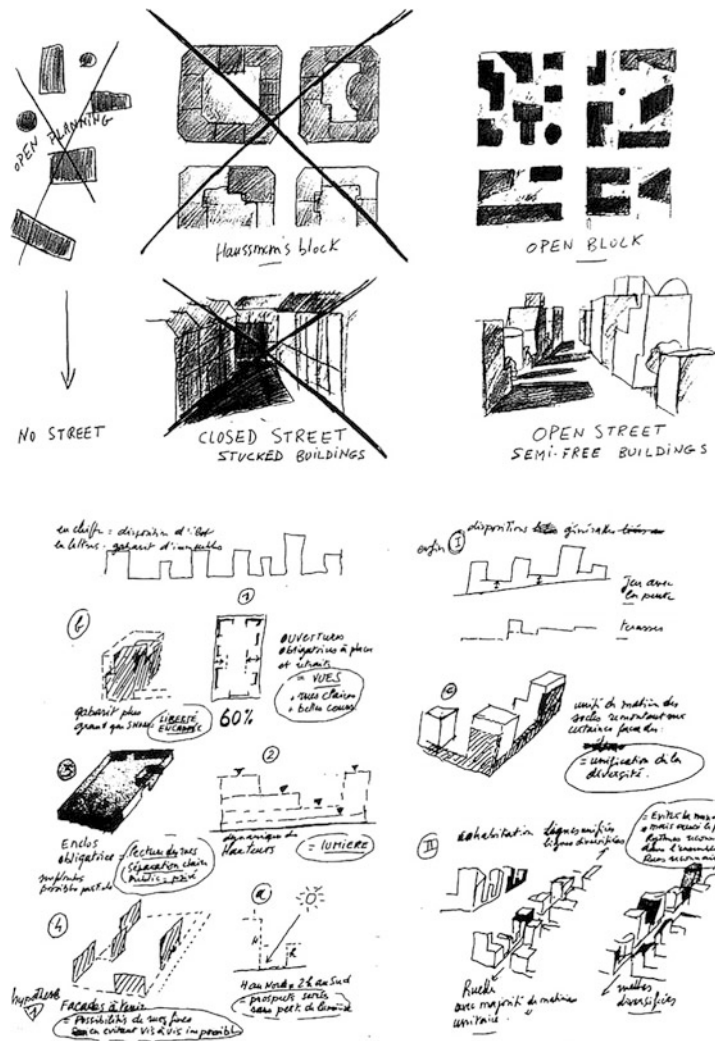


Fig. 15.8 Christian de Portzamparc, Paris, ZAC Masséna, 1994–2008. Preliminary studies of the *ilot ouvert*

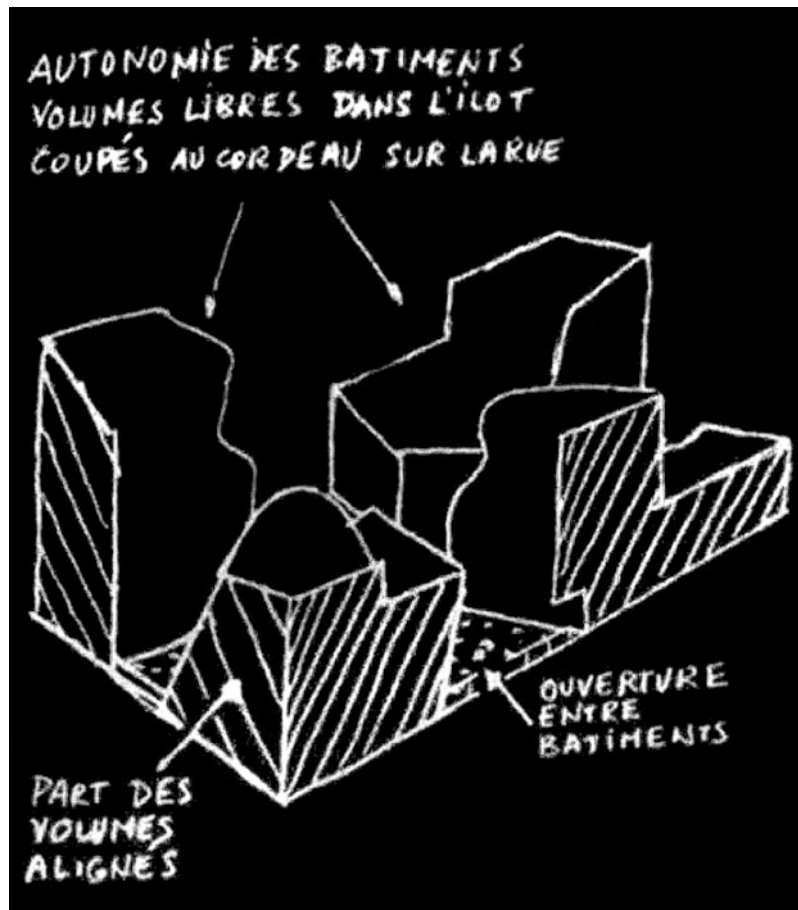


Fig. 15.9 Christian de Portzamparc, Paris, ZAC Masséna, 1994–2008. Sketch of a detail of the *îlot ouvert*

The two PAUs cited above, Carabanchel and Sanchinarro, are actually very different, owing both to the rules for action in the plan, and to the different solutions and interpretations made by the architects for the individual zones. In the case of Carabanchel, it is the repetition of the urban block, with a network of very wide streets and huge squares. These diluted spaces have had a negative influence on the design of the public areas, bringing a monumentality that is clearly inappropriate for the suburban landscape, and accentuate the awkwardness of this dispersion. However, it did allow architects to experiment with the plot interiors for the new articulation of buildings, with effective results as seen in the projects by Mónica Alberola, Consuelo Martorell, o di Aranguren + Gallegos Arquitectos (2002–2004).

Sanchinarro also suffers from the problem of oversized streets, which expands the design unnecessarily, making the distances between the buildings almost impossible: the density of blocks is highly reduced by the scale of the urban design, creating an effect of estrangement and inconvenience. Criticism of this system was given by the architects themselves that had to work with it, among them, MVRDV with Blanca Lleó with the provocative design of a block with

disproportionate heights or with exaggerated perforations in the Celosia (lattice) building, and Ginés Garrido with a building whose different heights allow different morphological variations that were not provided for in the plan.

In Paris, the design of the *îlot ouvert* or ‘open block’ by the architect and urbanist Christian de Portzamparc also defends the decomposition of the block,³ including its development with taller buildings. Despite the attempt to impose a minimum height for the four sides of the plot, identified in the measurements of the two storeys of the podium, and useful for a unified perception from pedestrian level, the reduced dimensions of the land available for building, about 40 metres, lead to a somewhat fragmented overall result in the cityscape. However, the design choices made by individual architects give interesting results. The design by John Beckman is another, quite successful, attempt to interpret this urban development regulation, albeit

³“Reflecting on the development of a type of block that allows an urban structure to be created, while keeping the modular character of the buildings.” *Le Grand Paris*.



Fig. 15.10 John Beckman, Paris, ZAC Masséna, 2008. Residential urban block with kindergarten

one written by a cultured architect: continuity of the lower floors and volumetric and typological fragmentation for the upper, residential levels. This design solution includes a number of precise typological and architectural choices, which allow the residents to gain glimpses and unexpected views from gardens and terraces on high levels; its compact character, achieved through the use of pre-cast coloured concrete panels, compensates for the overly fragmented effect imposed by the regulations. This design highlights the research which is present in a great deal of contemporary residential architecture and which we can consider to be an innovation: attention to the third dimension. In fact, for many years the city was determined planimetrically; its third coordinate, the height of the buildings, was not a part of design so much as it was dictated first by the limits of construction technology, and then successively regulated by building codes. Certainly the use of this compositional idea, this bar which is gauged by the heights on urban frontages, can be read as an interpretation of the question of density at the present time, in its different meanings, which one can choose to accept or to have imposed, to declare or to refuse, to augment or to minimise; the freedom in new housing built

with the broadest range of different building types has been shown to be an excellent tool for this.

The subject of the compact city and the matter of density have become the programme of large municipal authorities. You only need to recall the French example of the recent Grand Paris Project, among whose basic principles for the design of housing are the instructions *Foster diversity and proximity, Combine density with intensity, New building types and Build on roofs.*⁴

⁴The Grand Paris Project is the document that contains the plans for the reorganisation of the Paris Region, the accompanying law for which was published on 5 June 2010. The themes for “Building a city over the city” are few and expressed in a few pages of a manifesto, accompanied by the morphological designs drawn up by the big names who are working on the city. Jean Philippe Vassal and Anne Lacaton wrote: “We have to build MORE, build bigger, build WITH, build BETTER and more economically. We have to head towards the maximum instead of defining a minimum. Change should be encouraged instead of blocking everything. Things should be added rather than demolished. Densify instead of disperse”. Roland Castro proposed a shift “from urban renewal to urban remodelling”, while Ateliers Christian de Portzamparc revived the concepts of “*ilots ouverts* and neighbourhoods in evolution”.



Fig. 15.11 Coll-Leclerc, residential building in Carrer de Londres, Barcelona, 2005–2006

Sieverts reminds us that there are three types of density: material density, visual–spatial density and social density (Sieverts 2003, 27). Limits and boundaries of the urban system must therefore be explored from the perspective of this third spatial density for the development of building heights.

Research into the contact with the ground, the breaking of the traditional street frontage, which is made to breathe and to provide new urban views, and the fragmentation of buildings and also their rotation towards the interior of the block are a legacy of benefit to recent designs, implicitly engaging the significance of the doorstep in urban design. In the *Team 10 Primer* (1968),⁵ one of the three chapters was given the title ‘Doorstep’, and Aldo van Eyck had chosen as the representative image of this concept a free-standing door opening onto the landscape. Since 1968, notable academics, such as Georges Teyssot, have studied in depth the role of the doorstep in architectural design, and the term is now the

subject of experimental design, often combined with the more rigorous concept of the street.

As a reinterpretation of the varied role of the street, we can observe the successful points of Cerdà’s plan, into which he inserted a constellation of small public spaces, obtained from his particular form of *manzana* (urban block) and *chaflán* (chamfered corner), and his attempts for insertion on a smaller scale with *pasajes* (laneways).

In Barcelona, the Coll-Leclerc design proposed a new way of opening up the *manzanas* laid out by Cerdà, later fully enclosed, with a path cut through the excessive depth—more than 20 m—of the block structures, which the dimensions of the current city can now dismantle and open up as new access routes, seen on the *chaflán* with the fragmentary nature that Carlos Martí had evoked when speaking of the modern city. We can also imagine what young Catalan architects had in mind in the 1980s, with experimentation by Josep Martorell, Oriol Bohigas and David Mackay (MBM) in the housing project in Mollet de Valles, in which the tradition of the smaller scale of the London mews was brought to the interior of the urban block, making a hybrid with a sense of urbanity that Cerdà’s city plan had expressed so well.

⁵Smithson, A., ed. 1968. *Team 10 Primer*. London: Studio Vista.

Case Studies

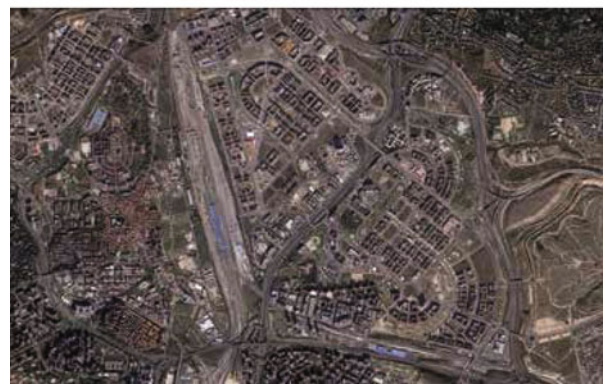
ZAC Masséna, *Îlot Ouvert*, Paris (1994–2008)

After long architectural experimentation of this concept in his own work, such as in the Hautes Formes neighbourhood built in the 1980s, Christian De Portzamparc proposed regulated parcelling for the ZAC Masséna, while delegating the architectural choice for its full realisation to individual architects. The proposed morphological norm imposed the use of different heights in a volumetric composition of a small plot, in a fragmented visual connection that completely undermines the concept of interior and exterior of the block, instead becoming a quasi-physical representation of density.



Carabanchel PAU and Sanchinarro PAU, Madrid (2000–2006)

To the south of the old district of Carabanchel, the plan called for a regular layout, a large central square and the construction of a neighbourhood through the extended repetition of a new type of urban block, with very large dimensions, a macro-block with a pinwheel-shape, composed of a double row of buildings on its four sides, the outer row with seven storeys and the inner row with three storeys, in order to adapt its scale to the small park in the middle of the block. The broad dimensions and the many personal approaches by its different architects have allowed the construction of many interesting solutions, which have successfully varied the repeated scheme of large, fragmented urban blocks. In contrast, the result of the aggressive infrastructural design of the Sanchinarro PAU is less successful. Its buildings are isolated and distant from each other. The rich architectural language of the best works is not enough to offset the effect of estrangement that the residents feel owing to the disproportionately large scale of the project.



Housing Block, Barcelona (2002–2004)

On the *chaflán* or chamfered corner of a typical block of Barcelona's *Eixample* district laid out in the plan developed by Cerdà, the young architects Coll–Leclerc worked on their interpretation of a variation in the classic dimensions of a residential building of excessive depth—about 22 m—divided into apartments with internal light wells. In the new design, this dimension is divided into two parallel buildings that push out towards the corner, opening onto the city. Thanks to a portico that occupies the ground level of one section, this new urban entrance connects the street façade with the inside of the block, where there is a school and gymnasium. Being on the interior of the block, they introduce collective, modern amenities.



Sanpolino, Brescia (2002–2008)

The renowned architect, planner and urban historian Leonardo Benevolo had designed a large-scale social housing project, known as San Polo, on the outskirts of Brescia in the 1970s. The design consisted of high-rise towers, their silhouettes creating a modern skyline, which were contrasted by a network of low-rise buildings with very small garden spaces on the same scale as the homes. In the early twentieth century, the Secchi–Viganò architectural studio received a commission for a new adjacent development, part of the design of which was given to Mauro Galantino, an architect who had trained in France. The project combined the tradition of the old-style urban block with the knowledge and use of elements of a modern language and mixed building types. The central blocks mostly develop the theme of the house and garden and terraced houses, while the neighbourhood consolidates its urban image through the construction of a more solid edge which is morphologically more varied.



References

- Consonni, G. 2009. *L'internità dell'esterno. Scritti sull'abitare e il costruire*. Milano: Maggioli editore.
- López de Lucio, R. 2013. *Vivienda colectiva, espacio público y ciudad. Evolución y crisis en el diseño de tejidos residenciales 1860–2010*. Buenos Aires: Nobuko.
- Panerai, P., J. Castex, J.-C. Depaule, and I. Samuels. 2004. *Urban Forms: The Death and Life of the Urban Block [Formes urbaines, 1980]*. Oxford: Architectural Press.
- Sieverts, T. 2003. *Cities Without Cities: An Interpretation of the Zwischenstadt [Zwischenstadt, 1998]*. London: Spon Press.

Further Readings

- Fernández Per, A., J. Mozas, and J. Arpa. 2011. *Density is Home. Housing by A+T Research Group*. Vitoria, Gasteiz: A+T Architecture Publishers.
- Fernández Per, A., J. Mozas, A.S. Ollero, and A. Deza. 2015. *Why Density? Debunking the Myth of the Cubic Watermelon*. Vitoria, Gasteiz: A+T Architecture Publishers.
- Lleó, B., and C. Sambricio. 2006. *Informe Habitar*. Madrid: Empresa Municipal de la Vivienda y Suelo de Madrid.
- López de Lucio, R., and A. Hernández-Aja. 1995. *Los nuevos ensanches de Madrid, la morfología residencial de la periferia reciente, 1985–1993*. Madrid: Ayuntamiento de Madrid.
- Lucan, J. 2012. *Où va la ville aujourd'hui? Forme Urbaines et mixités*. Paris: Éditions de la Villette.
- Montaner, J.M., and Z. Muxí. 2006. *Habitar el presente: Vivienda en España: sociedad, ciudad, tecnología y recursos*. Madrid: Ministerio de Vivienda.
- Mulazzani, M. 2009. Un'idea di città sociale: il nuovo quartiere Sanpolino a Brescia. *Casabella* 774: 34–43.
- Reale, L. 2008. *Densità città residenza. Tecniche di densificazione e strategie anti-sprawl*. Roma: Gangemi.
- Secchi, B. 2006. *Prima lezione di Urbanistica*. Bari: Laterza.
- Villasante de la Puente, J. (ed.). 2005. *EMVS Concursos de viviendas/ Housing Competitions: Madrid 2003–2005*. Madrid: Empresa Municipal de la Vivienda y Suelo de Madrid.

Pablo de la Cal

Abstract

The idea that ‘it is the people who make the city’ has been remarked on by many authors such as Churchill, Jacobs, Alexander, Gehl, and others, who considered that human scale and the conduciveness of a determined space to sociality should be the main ingredients of urban design. This article reviews the design of urban space from its human dimension and with active participation by citizens, discussing concepts as neighbourhood, processes for participation and real involvement by residents, mechanisms of empowerment, selfish attitudes so-called NIMBY, or marginalisation. And it goes a step further: the mobilisation of an organised civil society, establishing its own networks for information, decision-making and strategic alliances, and the activation of urban life are needed to guarantee the survival and success of our cities.

Keywords

Citizen participation • Participatory planning

Although it might seem obvious, we should remind ourselves that the ultimate purpose of a planner’s work is not the urban layout, building ordinances or urban infrastructure. It should not focus on overlaying the urban grid with abstract plans; rather, it should focus on understanding how our designs directly affect the quality of life of the residents of a certain area, and on how to make them the city’s true protagonists.

A large number of authors have stressed this message. Among them is the urban planner Henry Churchill, who in 1945 announced his basic thesis: “It is the people who make the city” (Churchill 1962, Preface, 1). Despite the clarity of this statement, in the preface of the new edition of his book *The City is the People*, released in 1962, he condemned the perversion of the urban planning methods and processes in the United States and the way in which a number of initial, well-intentioned democratically organised processes had given way to a system of authoritarian control for the benefit of a few (Churchill 1962, Preface, 1). In effect, the rapid

growth of car ownership after the Second World War led to the unprecedented expansion of urban areas, large-scale infrastructure and new towns, designed from the perspective of regional planning and removed from the qualitative and inclusive aspects of traditional cities, with significant disregard for the human scale in urban design.

The reaction of many authors was no coincidence. Like Churchill, they were trying to refocus these approaches to urban planning. Among them were the activist Jane Jacobs (*The Death and Life of Great American Cities*, 1961), the sociologist from the Chicago School Louis Wirth (*On Cities and Social Life*, 1964), the critic Bernard Rudofsky (*Streets for People*, 1969), and the architect Christopher Alexander (“A City is Not a Tree”, 1965). All of them were defending the complex nature of cities, while advocating living cities and multifunctional spaces in which citizens could carry out their activities in pleasant collective environments (see Chap. 9).

It was already clear at the time that it was easier to build suburbs than it was to create urban life. Since then, these and many other authors have attempted to incorporate the human scale as the main ingredient of urban design. The Danish architect Jan Gehl is one of them, working since the late 1970s to point out the shortcomings of modern urbanism. His book *Life Between Buildings: Using Public Space*

P. de la Cal (✉)
School of Engineering and Architecture (EINA),
University of Zaragoza, Zaragoza, Spain
e-mail: pdelacal@unizar.es



Fig. 16.1 Ablade Glover, Peoplescape, 1991. Oil over canvas painting. Donated to UNESCO by Ghana in 1991



Fig. 16.2 Rahba Kedima square, Marrakech. Photograph of 2012



Fig. 16.3 Piazza del Campidoglio, Rome. Protest by farmers' unions in 2015

(Gehl 1987) marked the start of a career for which he has gained international renown for his many projects to make cities accessible to their citizens, and more pedestrian, more cyclable, more comfortable and more secure. In the foreword to his most recent book *Cities for People*, Richard Rogers explained: “Well-designed neighbourhoods inspire the people who live in them, whilst poorly-designed cities brutalise their citizens” (Rogers 2010, IX). Thus, there is dual interaction between people and the urban planner: a good design, conceived for people, contributes to achieve a living space. At the same time, a design created with people leads to a heartfelt, collective appropriation of the space, and a positive identification of users with their own contributions.

Therefore, it is not a question exclusively related to aspects of urban design, but rather one that also has to do with the actual sociological nature of contemporary cities. The analysis of the city that has been produced since the mid-twentieth century from a more social and political perspective easily allows the identification of stratified, unconnected and isolated spaces, cities with physical barriers, socially unjust cities, unbalanced cities and cities of ghettos. The crisis of the city denounced by the militant philosopher and sociologist Henri Lefebvre in the late 1960s can only, in his opinion, be resolved by the configuration of a truly urban society, so that “...the city and his [urban man’s] own daily life in it become

oeuvre, appropriation, use value (and not exchange value)” (The Right to the City in: Lefebvre 1966, Page 168 in Spanish edition). Lefebvre coined the expression ‘the right to the city as a basic right that involves motivating civil society to recreate the city as part of a common and collective mission. In short, everybody has a right to an urban life.

In those years, active involvement in the field of participatory design was a challenge pursued by many other architects and planners, with notable experiences, such as the intervention by Ralph Erskine in Byker Wall in Newcastle upon Tyne, England, and in other projects undertaken by Team X. More recent, regional-scale experiences can also be mentioned, such as that of the redevelopment of the Ruhr Valley, in northern Germany, and the participatory processes for the approval of municipal budgets, such as those taking place in Porto Alegre, Brazil, in the 1990s. These also include innovative formulas for citizen mobilisation, such as the *indignados* (‘outraged’) movement that set up camp in the Puerta del Sol, the central square of Madrid, Spain, in 2011.

In parallel with these local processes, we are witnessing a global economy that standardises and homogenises our surroundings, in which it seems that all decisions have already been adopted by remote control. The global dimension of urbanism was already decried by Lefebvre and others, such as Shadrach Woods, who in 1975 argued: “The world is a city, and urbanism is everybody’s business”

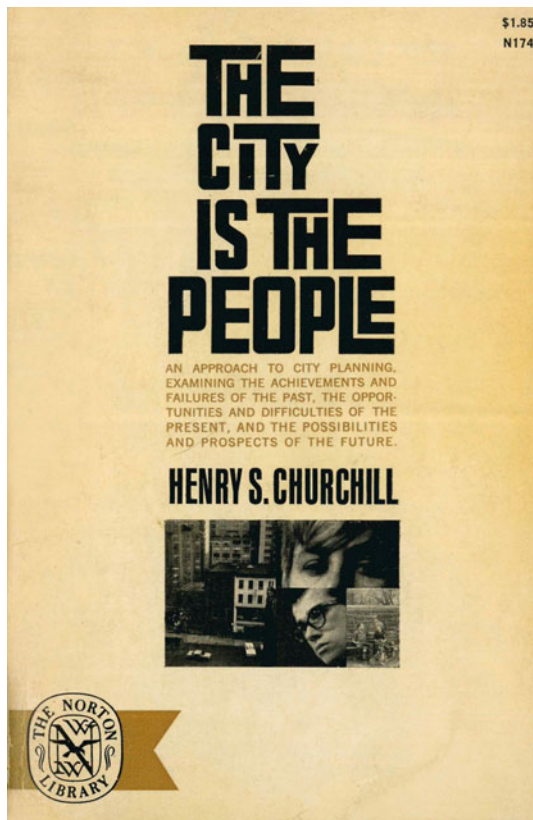


Fig. 16.4 Henry S. Churchill, cover of *The City is the People*, 1962

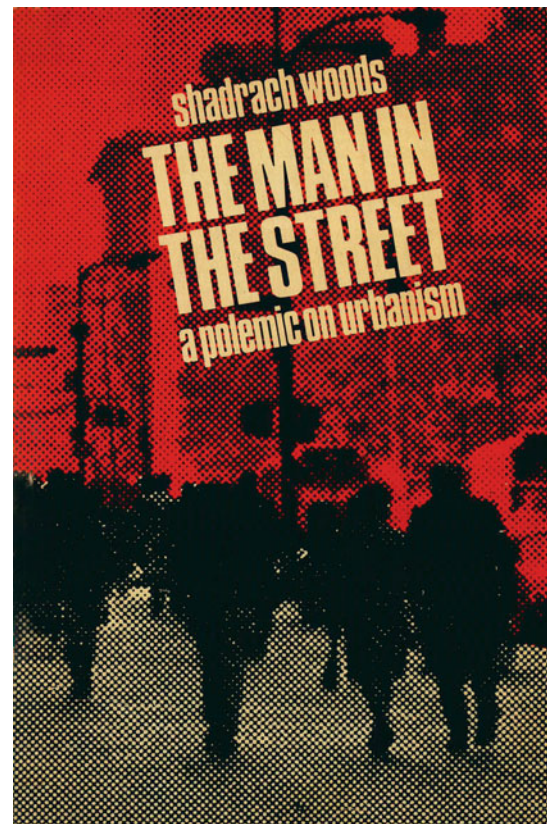


Fig. 16.5 Shadrach Woods, cover of *The Man in the Street*, 1975

(Woods 1975, 224). In this ‘global city’ coined by Woods (1975, 214) and later by Sassen (1991), in Koolhaas’s ‘generic city’ (2014, 37–68), and in Castell’s ‘informational city’ (1989), places, now standardised, uniform, amorphous spaces, are more flows than spaces, and there is no room in them for decision-making by their inhabitants.

But in the face of these dazzling speeches on the elusive nature of this planetary city, we urbanists must go back to analysing the environments that govern people’s lives. In short, the neighbourhood continues to be the urban environment in which transformation and improvement are essential. John Friedmann believes that a good neighbourhood should be a combination of at least five characteristics: vibrant and alive; centred on one or more places of gathering and encounter; a sense of collective identity; a physical environment conducive to sociality and civility; and, finally, cherished by those who partake in its daily life (Friedmann 2011, 15). A good neighbourhood should also have a project, a series of expectations and a set of goals, which are identified collective needs. And it requires planning as a continuous process that is upheld year after year by defending projects that can be successfully executed in order to bring about real improvement in the collective life.

It is often easier to combine the interests of a certain neighbourhood for the classification of spaces or territorial places that are defined by their centrality, not by their boundaries. The thesis by the English anthropologist Stephan Feuchtwang introduced the concept of centering (Feuchtwang 2004, 178), in which the main condition of a place is its conduciveness to sociality.

The strengthening of these spaces of centrality, of sociality, requires cohesive societies. Indeed, one of the challenges for socially sustainable neighbourhoods from the social perspective is, evidently, that of preventing inequality, and more clearly, of preventing *marginalisation*, which is understood as the hidden or open tendency in societies to consider as undesirable and to exclude those people who lack certain skills or who deviate from the norms of the group. These are people who have no access to the opportunities that are available to socially integrated groups, and this causes them psychological and social problems.

The acknowledgement of these situations, and their reaching the level of politics and decision-making, has led to the establishment of the term, *empowerment*, which defines the process of making basic opportunities available to marginalised people, whether by means of direct assistance or through non-marginalised people who share their access to



Fig. 16.6 Participatory process in the restoration of a village expropriated in the 1960s. Jánovas (Huesca, Spain), 2010



Fig. 16.7 Session for the presentation of student projects (Master in Architecture, University of Zaragoza) to the residents of the neighbourhood San José. Zaragoza, 2016



Fig. 16.8 Session for the presentation of student projects (Master in Architecture, University of Zaragoza) to the residents of the neighbourhood Oliver. Zaragoza, 2015

these opportunities (Friedmann 1992). Empowerment also involves attacking any attempt to deny these opportunities to people, and encouraging and developing skills for self-sufficiency, with emphasis on eliminating the need for charity. This is a difficult process to implement, but there are a large number of initiatives for the self-management of facilities or of empty buildings in our recession-struck cities, and for small-scale, important experiences in poverty-filled spaces, such as the one carried out by Boa Mistura in their global project Crossroads.¹

The processes for participation and real involvement by residents in the construction and management of the city have functioned better in situations arising from a specific problem, one that has brought about social mobilisation, and when these situations in turn have received support from specialists or politicians who have played a coordinating, facilitating or supervisory role in the process. As the Mexican architect Álvaro Morales explains, it is about each participant doing the work that they know best. The architect or planner is the best-qualified professional to transform the contributions from people into spatial terms. And this professional has to perform another fundamental step, rarely carried out, which is to give back: the participating

population and general public should know, understand and value the proposed design (Morales 2002, 41).

At the same time, it is necessary to identify local players and verify whether they are really representative of society or, on the other hand, they are driven by their own interests. It has been shown that participatory processes can sometimes encourage self-centred and short-sighted attitudes, such as the so-called NIMBY² attitude, increasingly common in our cities, which sets certain groups in opposition to others or against undesirable policies. In fact, a number of authors have also pointed out the risks that these processes may lead to a disintegration of the public sphere or the impossibility of significant public action.³

These self-serving attitudes, typical of groups and classes who endeavour exclusively to maintain their privileged status, contrast with the struggles of neighbourhoods, in socially destructured contexts, and with important shortcomings in facilities and transport. An interesting participative process has been implemented in Santiago, Chile, with regard to design and management in the city by means

¹Refer to Boa Mistura website: http://www.boamistura.com/luz_nas_vielas.html.

²NIMBY: Not In My Back Yard.

³In his interesting article “When people have a say... Reflections on the Renaissance of Direct Democracy in Germany”, Frank Eckardt found from the sociological analysis of the most recent citizen participation processes in Germany that greater participation does not necessarily lead to establishing a more democratic base for urban planning (Eckardt 2011).



Fig. 16.9 Logo of the Mi Parque Foundation, an initiative whose objective is to improve the green zones of ‘Chile urban’, and to create a sense of community through recovery of green areas

of the programme known as Appropriate Green Spaces (EVA in Spanish), in which new types of green spaces are part of a strategy for preserving spaces for public use and reducing areas more prone to crime.⁴

Our final challenge therefore transcends the two initial considerations (designing the urban space from its human dimension, and designing the city with active participation from citizens), and takes them a step further. Cities should find their role in this global condition, strengthening the role of citizens and involving them in decision-making and

management processes, but without losing the meaning of the democratic nature of urban planning.

Architects and urban planners should therefore revise their role in this new scenario that Inés Sánchez de Madariaga describes as ‘mobilising urbanism’, in which “the architect is no longer fundamentally a technocrat at the service of government, in order to become associated with local organisations that mediate between the state, civil society and economic players, often in opposition to the latter and also to the state” (Sánchez de Madariaga 2000).

As some authors, such as Manuel Castells, point out: “Local governments should encourage the mobilisation of an organised civil society, establishing its own networks for information, decision-making and strategic alliances, in order to emulate the mobility of organisations that uphold power” (Castells 1989, 488). This is the only mechanism to prevent the destruction of the city as a local entity and to reconstruct the meaning of local versus the non-spatial logic of organisation based on flows. In short, cities are people, and the activation of urban life as a basic ingredient of urbanism is essential to the survival and success of our cities.

⁴In addition to a strategy for reducing the cost of upkeep for gardens, these aspects of the participatory design experience that have led to the building of public squares that work well for their users, while providing the identification and appropriation of the spaces for them (Dascal 1994).

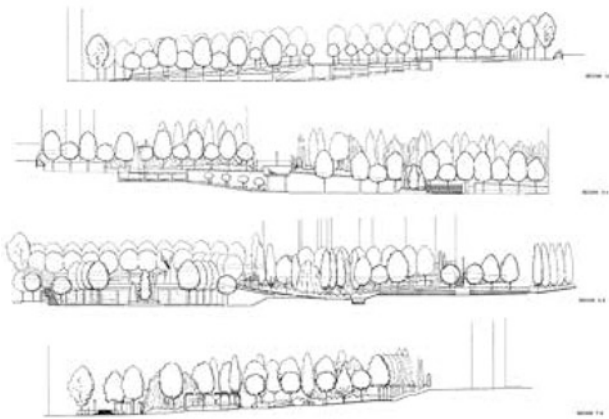
Case Studies

Garden of Memory, Zaragoza (1992)

In the 1960s and 70s, the densely populated but poorly serviced housing developments built in the new areas of growth bordering the centres of Spanish cities became consolidated. These became the focus of attention for municipal authorities in later decades. A leading role in this transitional urban development process was played by the protest movement organised by social organisations, such as the San José District Residents' Association, recognised for some of their experiences in the participatory design of public space. The move to transform the empty, 15,400-m² site of the former Pina textile factory into a green space began in 1979. For years, architect Antonio Lorenzo,

landscape designer José Luis Ferrando and the so-called "Committee of the Forty", together with participation from leading artists in the city, worked intensely to define all the details of the final project, which was presented in 1991.

The main path through the garden winds its way along the riparian vegetation of the open Ontonar irrigation ditch, the first stretch of which was turned into a pond, in which a bather attracts the attention of onlookers. After this, the waterway forks, bordering a series of terraced vegetable garden beds, which can be seen from a raised walkway, serving as both a vantage point and a colonnade for the central square. Since 1992, the Garden of Memory has become an intensely used public space, and strongly embodies the spirit of a design process which arose from and was made by and for the residents themselves, overcoming the traditional, hierarchically imposed decision-making practices.



Luz Nas Vielas, Vila Brasilândia, São Paulo, Brazil (2012)

Vila Brasilândia is one of the many *favelas* or shantytowns that blanket the hills of São Paulo. The narrow winding streets that cut through it are known as *becos* where they run along flat land and *vielass* where they run up and down the slopes as stairways. Five of these *vielass*, each stretching some 30 m, were used by the Madrid collective Boa Mistura for its work Luz nas vielas (Light on the Stairways), part of Crossroads, a global project that uses art as a tool to promote change in communities suffering from dire poverty. Each *viela* is painted with strong, bright colours to spelling out a positive concept: *Beleza* (beauty), *Firmeza* (strength), *Amor* (love), *Doçura* (kindness), *Orgulho* (pride). Through use of the anamorphosis technique, the words could only be perceived from a specific viewpoint and only in an instant

while climbing or descending the stairs. Away from these 'magic' spots on the itinerary, the words become distorted and are turned into an interesting burst of abstract splotches of colour covering the flat surfaces on the ground and buildings.

Art is an effective way of bringing awareness, but the key does not lie in the technique, but in the process, in which an appropriate design, adapted to the social idiosyncrasy of this space, drew residents to the initiative, to clean, fill with colour, and embellish their meeting places. Spontaneously, residents created an empathy uniting their homes, street and neighbourhood. Participation in the process and the feeling of community and empowerment contributed to the community's social cohesion.

The images capture certain moments during the 'Firmeza' intervention. It shows the area prior to the intervention, during public participation in the action, and the completed work, seen from different viewpoints.



References

- Castells, M. 1989. *The informational city: Information technology, economic restructuring, and the urban-regional process*. Oxford: Basil Blackwell.
- Churchill, H.S. 1962. *The City is the People [1945]*. 2nd ed. New York: Reynal & Hitchcock.
- Dascal, G. 1994. Los espacios verdes apropiados (EVAs). Una propuesta para mejorar las condiciones de vida en zonas urbanas desfavorecidas en Santiago, Chile. *Revista de Geografía Norte Grande* 21: 7–12.
- Eckardt, F. 2011. When people have a say... Reflections on the renaissance of direct democracy in Germany. *Urban* 51: 67–80.
- Feuchtwang, S. 2004. *Making place: State projects, globalisation and local responses in China*. London: UCL Press.
- Friedmann, J. 1992. *Empowerment. The politics of alternative development*. Massachusetts: Willey.
- Friedmann, J. 2011. Barrio por barrio: reclamando nuestras ciudades/neighborhood by neighborhood: Reclaiming our cities. *Urban* NS01: 13–19.
- Gehl, J. 1987. *Life between buildings: Using public space [Livet mellem husene, 1971]*. Washington, Covelo, London: Island Press.
- Koolhaas, R. 2014. *Acerca de la ciudad*. Barcelona: Gustavo Gili.
- Lefebvre, H. 1966. *Writings on cities*. Oxford: Blackwell Publishing.
- Morales, Á. 2002. La metáfora colectiva. Metodología participada en la arquitectura y el urbanismo. *Urban* 7: 35–51.
- Rogers, R. 2010. Foreword. In *Cities for people*, ix. Washington: Island Press.
- Sassen, S. 1991. *The global city: New York, London, Tokio*. Princeton: Princeton University.
- Woods, S. 1975. *The man in the street: A polemic on urbanism*. Baltimore: Penguin Books.

Further Readings

- Costes, L. 2011. Del ‘derecho a la ciudad’ de Henri Lefebvre a la universalidad de la urbanización moderna/from Henri Lefebvre’s ‘Right to the City’ to the universality of modern urbanization. *Urban* NS02: 89–100.
- Friedmann, J., and M. Douglas. 1998. *Cities for Citizens*. London: Willey.
- Gehl, J. 2010. *Cities for People*. Washington: Island Press.
- Sánchez de Madariaga, I. 2000. Urbanismo y Participación. *Urban* 5: 147–148.
- Sandercock, L. 1998. *Towards cosmopolies*. London: Willey.

New Strategies and Urban Planning

“L’urbanisme moderne s’assurait les moyens de réaliser ses projets par des règles simples, aussi impératives et stables que possible : zonages, fonctions, densités, hauteurs, etc. Les règles étaient de nature exigentielle, c’est-à-dire qu’elles fixaient en même temps les objectifs et les manières de les atteindre. (...) Le néo-urbanisme privilégie les objectifs, les performances à réaliser, et laisse voire encourage les acteurs publics et privés à trouver les modalités de réalisation de ces objectifs les plus efficaces pour la collectivité et pour l’ensemble des intervenants.”

(Modern urban planning ensured the means to perform projects based on simple, imperative and stable rules: zoning, functions, densities, heights and so on. (...) New urbanism gives priority to targets and achievements and encourages public and private stakeholders to find the most effective means of meeting these objectives for the community and everyone involved.)

François Ascher, *Les nouveaux principes de l’urbanisme*, éditions de l’Aube, 2001, 81.

Javier Monclús

Abstract

The starting point of the essay is the international debate inherent to the theory and history of urban planning, that of ‘urban planning models’. The aim is not considering abstract theoretical proposals but rather action models based on specific cases. The main hypothesis is that the dissemination process and adopting urban models is hardly ever limited to literal ‘export’ or ‘import’. Other than the cases where models are ‘copied’ or imposed, it is common for some of the most admired items to be selectively extracted. Two case studies follow this essay: the ‘Curitiba model’, from the capital of the Brazilian state of Parana, internationally considered to be the best planned city in Brazil, and a model for sustainable urban development; and the ‘Freiburg model’, the German city that is considered an urban model where all the challenges have been covered with a comprehensive approach.

Keywords

Urban planning models • Model cities • Best practices • Diffusion of planning • Appropriation of planning

One of the recurring themes in the debate on international urban planning culture is that of ‘urban planning models’. From a geographical and historical perspective, we usually refer to ‘model cities’: North American, European, Latin American, Islamic, Asian, etc. There are also ideal or Utopian city models in literature and in urban discourses, such as those by some of the great visionaries: the Garden City by Ebenezer Howard, Broadacre City by Frank Lloyd Wright or Radiant City (*Ville Radieuse*) by Le Corbusier (Fishman 1977). But we are not so much interested here with models in the sense of theoretical and abstract proposals, but rather action models based on specific cases. To a certain extent, this is a debate inherent to the theory and history of urban planning. As Marshall Berman pointed out: “By the 1880s, the Haussmann pattern was generally acclaimed as the very model of modern urbanism. As such, it was soon stamped on emerging and expanding cities in every corner of the world, from Santiago to Saigon” (Berman 1982, 151–152). There is

extensive analysis of urban planning models represented by Haussmann’s Paris, its ‘replicas’ after the middle of the nineteenth century (Lortie 1995), the plans and projects for London after World War II, Brasilia in the fifties, Berlin in the eighties or Barcelona at the end of the eighties and in the nineties (Monclús and Guardia 2004).

It should be noted that urban planning models reflect a predominantly Eurocentric perspective, at least in most of the specialist literature. From different fields and for some time now, research has focused on what could be called ‘consolidated urbanistic traditions’, particularly in Europe, although in the USA too, both as the locations of many modern urban episodes, as well as the source of its historiography. But there are an increasing number of studies that deal with the phenomena of ‘imports’ and ‘exports’ or urban models, without neglecting their local significance. Beyond the analysis of colonial or post-colonial urban planning, it is interesting to deal with the complex processes of transnational urban development (King 1980; Sanyal 2005). In relation to those studies, an emerging interest in the processes of globalisation can be seen as well as the specificity of traditions and

J. Monclús (✉)
School of Engineering and Architecture (EINA), University of
Zaragoza, Zaragoza, Spain
e-mail: jmonclus@unizar.es



Fig. 17.1 Paris model. Cover *Paris s'exporte* exhibition catalogue, in Pavillon de l'Arsenal. Paris, 1995

'urbanistic cultures' linked to certain national and geographical areas (Monclús and Díez Medina 2017).

In this sense, Latin American perspectives on the impact of European urban models are particularly interesting. Despite some conventional interpretations and the nuances that recent historiography provides, the diagnosis by Roberto Segre is clear: "Between the middle of the eighteenth and nineteenth centuries, the European neoclassical model accompanies growth of cities in the region: walkways and boardwalks definitively break the uniform introversion of the primitive grids. (...) "Havana, Mexico City, Río de Janeiro and Buenos Aires assume the metropolitan images of Haussmannian layouts, with participation by European urban planners: Joseph Antoine Bouvard, J.N.L. Forestier, Alfred Agache, Maurice Rotival. A fragment of Nice (the French city and Mediterranean resort) in America. The influence of Otto Wagner and Camilo Sitte appears on the other side of the Andes: the Austrian Karl Brunner takes part in urban designs in Santiago de Chile and Bogota" (Segre and Vélez Catrain 2000, 12).

At any rate, research on the influence of urban models stretches beyond strictly disciplinary outlooks, centred on discourses and urban projects. Indeed, approaches from 'cultural urban history' have been widely developed in Latin America, in terms of the transfer of urban planning models



Fig. 17.2 Avenida de Mayo. A Haussmannian boulevard in Buenos Aires. Photograph ca. 1910



Fig. 17.3 *County of London Plan, 1943. A post-war 'organisation type' model*



Fig. 17.4 *Vancouver. A model city after the 1986 Expo*

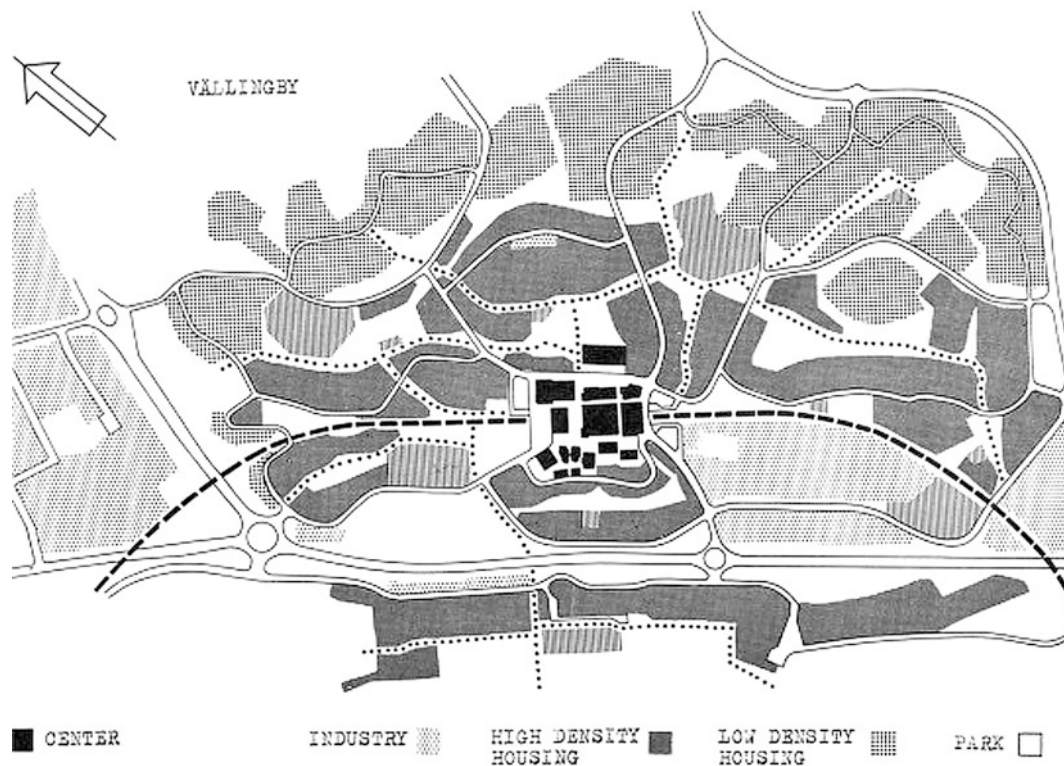


Fig. 17.5 Vällingby model, Stockholm. The first ‘ABC Model’ prototype (*Arbete-Bostad-Centrum* or Work Dwelling Centre), a new suburban nucleus in Stockholm, 1954–1972

and urban culture since the end of the nineteenth century “in the midst of an intellectual’s plea for a cultural alliance with the Old World” (Almandoz 2002a, b, 28). One century later, those reflections remain pertinent to other forms which the urban elite have appropriated (e.g. adopting North American models of closed residential suburbs). But also to new models developed by local democratic governments, with impact beyond Latin America, as is the case of the ‘Curitiba Model’. In this sense, there is a different, more positive vision about transfers between nations and cultures, sometimes quite remote from each other, that overcomes the interpretations typical of colonialist or neo-colonialist attitudes.

Learning from Model Cities and Best Practices

Many studies by the historians of architecture and urbanism focus on the identification of cities admired because of their ‘good urbanism’. Some authors, such as Stephen Ward, have been concerned with explaining the reasons why these models arise, and their forms of development, dissemination or appropriation, and even the degree of creativity inherent to them. Apart from the case of Paris, some of whose specific, emblematic components were copied in other cities, Ward refers to a fairly limited group: Frankfurt and Vienna

in the early twentieth century; Moscow in the thirties and forties; London, Rotterdam, Warsaw and Stockholm in the years following World War II; Copenhagen and Amsterdam in the seventies, Barcelona in the eighties; in North America, New York, Chicago or Toronto in the fifties, Baltimore in the eighties, Portland and Vancouver from the nineties onwards; and also other cities around the world such as Singapore or Brasilia. It is worth mentioning that the dissemination process and adoption of urban models is hardly ever limited to a literal ‘export’ or ‘import’. Other than the cases where models are ‘copied’ or imposed, it is common for some of the most salient features to be removed: “(...) the model becomes a disassembled ‘kit of parts’. In an even more abstracted sense, the model city may also become simply a symbol deployed to reinforce a particular planning approach within policy debates” (Ward 2013, 297). Hence, models are usually used to support specific strategies and projects based on successful experiences. This is the case of the so-called ‘Barcelona model’, which is particularly interesting when one analyses the way in which it was received and emulated in other Spanish, European and Latin American cities. Their impact on British urban planning at the end of the nineties is significant. In 1999, RIBA, the Royal Institute of British Architects, granted their award to the city (for the first time, until then it had always been given to architects). Previously, in 1987, the city had been given

the Harvard award for its design, but now the RIBA Gold Medal (1999) was awarded to the politicians and architects for their ‘commitment to urban development’, including the ‘combination of spectacular urban projects and small scale improvements in plazas and streets’, celebrating both the small-scale action in public spaces and the major, strategic urban projects. Two types of urban development that are associated with both stages of the city’s renovation and which were acknowledged as the most original of said urban development ‘model’. On the one hand, the ability to regenerate central areas through small efforts at urban renovation, but also the large-scale action in the ‘strategic’ projects that characterised further interventions (Monclús 2003, 401–402).

In recent years, several ‘model visions’ have coexisted with others that recognise an effective empirical method in the so-called best practices that permit crossing over reciprocal outlooks between the advanced western world and other less developed urban contexts that have arisen within the context of globalisation processes. One of the recent approaches by Peter Hall, centring on Europe, stands out because it aims at what is generally called the eclectic and somewhat confusing list of ‘best practices’ Hall (2014) with solid, uniform criteria. The author selects some themes and countries to subsequently analyse in detail examples of ‘good urban practices’. The interest in these visions is obvious, not only due to the careful selection of examples

and aspects in which the analysed cities and countries stand out, but also because of the author’s critical viewpoint concerning recent urban development in the British cities and the ways in which other European cities have rediscovered the ‘forgotten art of urbanism’. Regardless of certain exaggerations, Hall’s work is impeccable and systematic, with an operational look at cities that have achieved high standards of quality in sound urban planning strategies. Indeed, the most innovative cases are analysed, starting with Germany, where the achievements concerning the functioning of cities as economic engines are emphasised (paying special attention to certain strategies and projects in Hamburg/Hafen City, Berlin, Leipzig, Duisburg, to name a few). He then moves on to consider Dutch projects, where he highlights some of the recent successful residential developments. In French cities, he underlines the commitment to the integration of the different public transport systems associated with urban reclassification (Lille, Montpellier, Strasbourg). In Scandinavia, he cites the progress in urban sustainability, paying special attention to the ‘Hammarby Model’, a new district that was built through an urban regeneration process near the centre of Stockholm (also in Copenhagen and Malmö). Finally, Hall returns to Germany, to the city of Freiburg, which he considers to be ‘the city that did it all’, i.e. an urban model where all the challenges were met with a comprehensive approach. He establishes ‘five challenges’ that British cities,

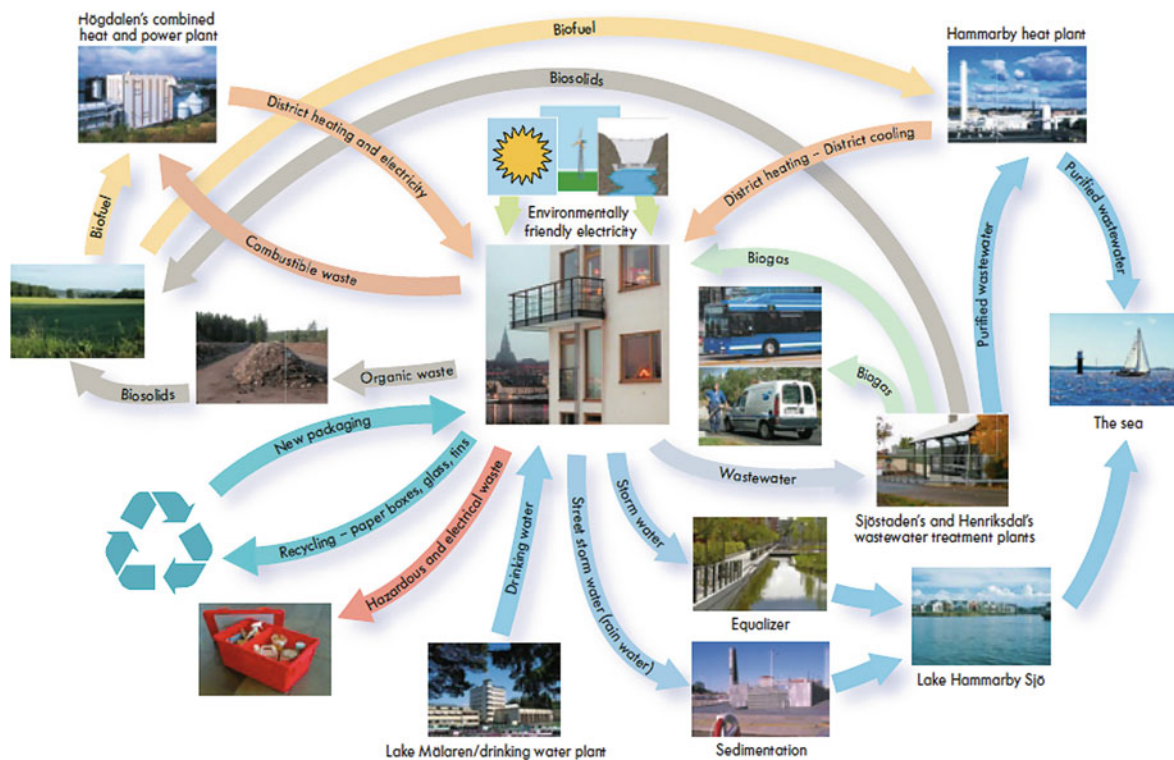


Fig. 17.6 Hammarby Sjostad, Stockholm, 1995–2015. An urban regeneration operation and an eco-district model. General concepts and strategy



Fig. 17.7 Hammarby model, Sjostad, Stockholm, 2007. Urban morphology as the basis for the master plan

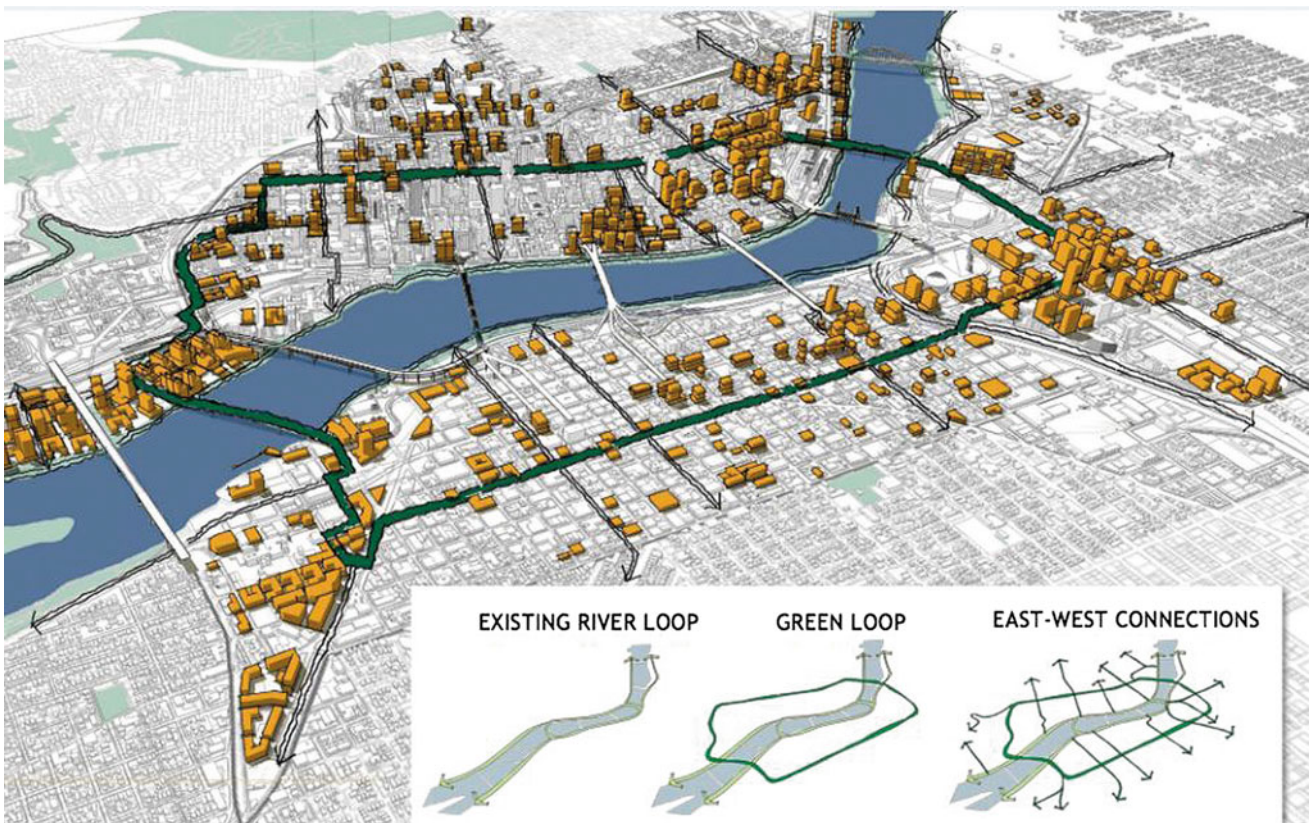


Fig. 17.8 Portland model, 2015. The 'Green Loop' as a linear park and transport corridor in the central urban area

and nearly all European cities in general, face. It is therefore interesting to analyse the recent action in the city of Freiburg, since it has rapidly become a model for urbanists around the world.

In any case, the lack of confidence in ‘scientific’ urban planning is significant, which was still dominant a couple of decades ago, and which has been relieved through the gradual dissemination by another kind of urbanism based on models and methods. This urbanism is no less ambitious, but it is more committed to complex realities, that are difficult to reduce to exclusive fields inherent to specific disciplines with excessively monopolising aims and incapable of substantially improving the quality of life of the cities. Nonetheless, it is necessary to ask if the cities that have become ‘models’ are the most innovative, or if they are models because they

have creatively adapted ideas and strategies from other cities. Logically, the proximity and size factors are important, but the ways certain types of urbanism are developed is also important. Urban marketing has quite a lot to do with all these processes, as does the information and experience exchanged in strictly disciplinary and professional fields, from meetings, conferences or publications to international cooperation by teams of urban planners. In this sense, the repercussions of some European and North American models on Latin American cities are somewhat striking, particularly the ‘Barcelona Model’ after the 1992 Olympic Games to the models of London’s Docklands or Battery Park in Manhattan. The Puerto Madero project in Buenos Aires is a good example of these three influences in a more or less direct manner (Segre in Monclús and Guardia 2004, 254–270).

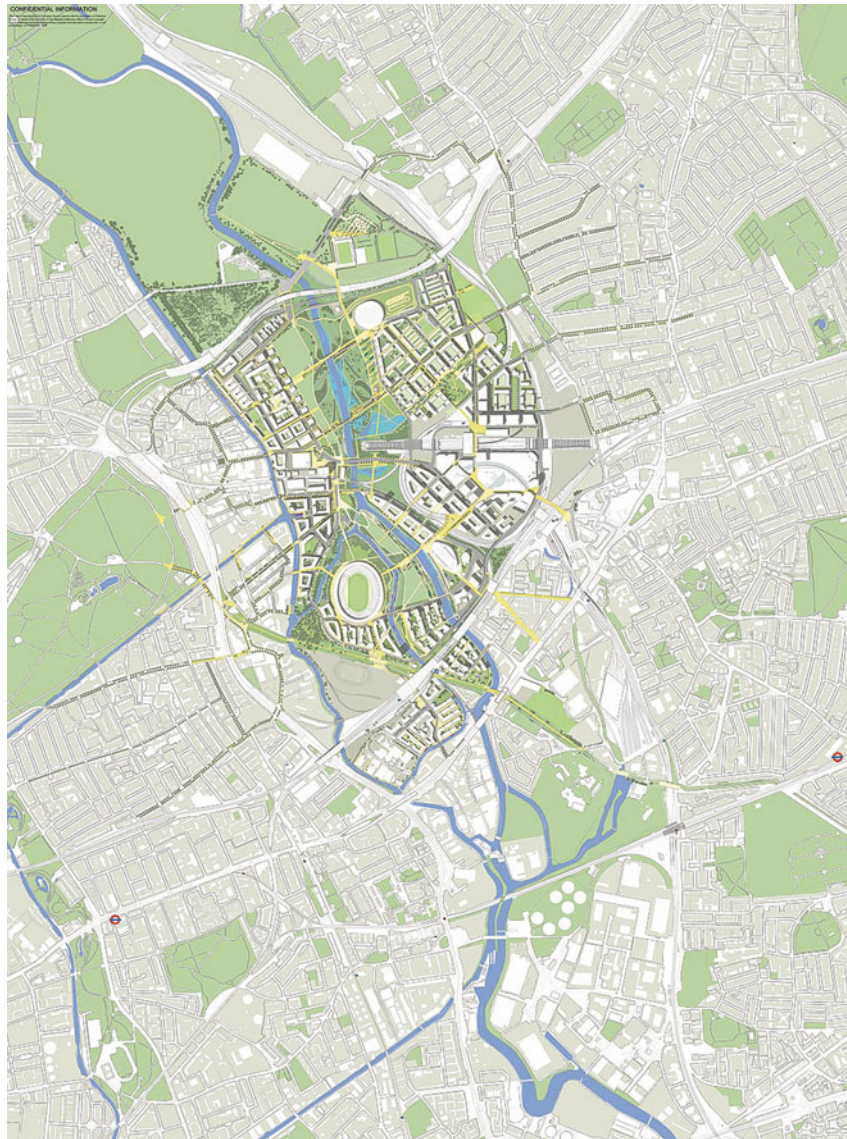


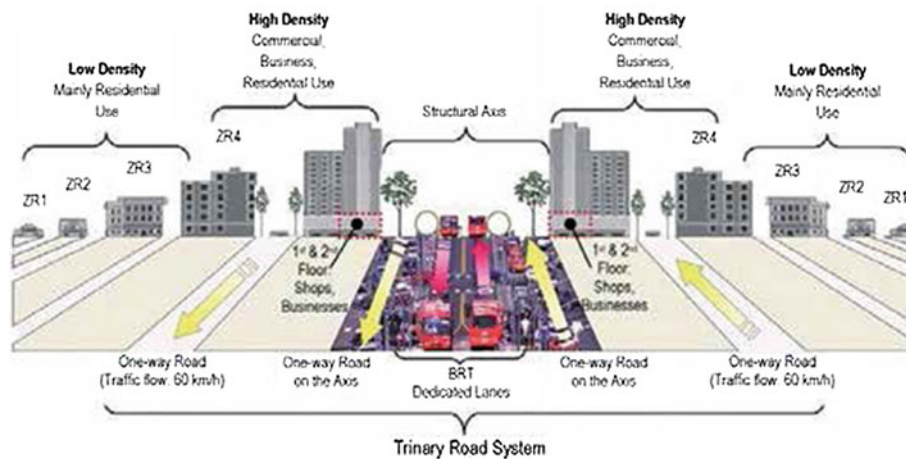
Fig. 17.9 London, master plan for the Olympic area, 2012

Case Studies

The Curitiba Model (1971–1991)

The city of Curitiba, capital of the Brazilian state of Parana, is internationally considered to be the best planned city in Brazil, and a model for sustainable urban development. Despite the differences with other models such as that of Freiburg, here too the achievements in recent years are the result of a considerable urban planning tradition and continued application (for more than forty years) of strategic, comprehensive urban planning in accordance with strong political leadership and efficient administration. The strategy encompasses all aspects of advanced urban development, including innovative social, economic and environmental programmes.

Over the years, the city's population has doubled, and now stands at approximately 2 million inhabitants. In spite of the challenges this process of rapid urban growth entails, application of this type of strategy has permitted the implementation of innovative transport systems, as well as improvements in the conservation of local heritage including a system of parks and open spaces associated with social and environmental programmes. The role played by the team responsible for urban development in Curitiba, directed by Jaime Lerner, has been essential. The design of the transport corridors is based on the idea of concentric local bus lines connected via five spokes, thus achieving the equivalent of conventional metro lines, at a lower cost (an eighth of the cost), in spite of certain inadequacies. Moreover, the increase in pedestrian and cycle routes has permitted progress to be made in a high-quality environment, particularly when comparing it to the standards in other Brazilian and Latin American cities.



The Freiburg Model (1990–2000)

The urban layout of the new district of Vauban starts off with a more sophisticated mesh than the conventional ones, designed around vehicular traffic. The neighbourhood (5000 inhabitants and 600 jobs on 42 ha) connects to the urban centre via the tramway, giving priority to local pedestrian routes and cycle paths. The exceptional quality of the built area and the open spaces is achieved through a fairly rigid master plan that defines maximum heights of 12.5 m, suitable for four storey buildings. The careful layout of the green public areas and sophisticated citizen participation associated with the community architecture movement of the seventies does the rest.

But in this city of just over 200,000 inhabitants, this model district is just one part of the urban development concepts that

underlying many aspects of urban life, from producing energy to urban regulations. Not only does it support and promote an economic base modelled on the economy of knowledge of the twenty-first century, but it cannot be understood without the strength of the environmental movement supported on the naturalist tradition, on the anti-nuclear fight of the seventies and the growing weight of green policies at local levels. The continuity of political leadership, and above all technical leadership, lasting over 25 years has meant strict regulations for low-energy consumption have been promoted, and a decisive effort to encourage the use of public transport and pedestrian and cycle routes has been made. A strategic vision that is simple: keeping the city compact, trying to occupy the lowest possible surface area outside the consolidated city, in two model districts: Vauban and Rieselfeld.



New sustainable suburb of Vauban, Freiburg



A typical residential street („neighbourhood“)

C = co-housing project

References

- Almandoz, A. (ed.). 2002a. *Planning Latin America's capital cities, 1850–1950*. London: Routledge.
- Berman, M. 1982. *All that is solid melts into air: The experience of modernity*. London: Verso.
- Fishman, R. 1977. *Urban Utopias in the Twentieth Century: Ebenezer Howard, Frank Lloyd Wright and Le Corbusier*. New York: Basic Books.
- Hall, P.G. 2014a. *Good cities, better lives: How Europe discovered the lost art of urbanism*. Oxford: Routledge.
- King, A.D. 1980. Exporting planning: The colonial and neo-colonial experience. In *Shaping an urban world*, ed. G.E. Cherry, 203–226. London: Mansell.
- Lortie, A. 1995. *Paris s'exporte*. Paris: Arsenal.
- Monclús, J. 2003. The Barcelona model: and an original formula? From 'reconstruction' to strategic urban projects (1979–2004). *Planning Perspectives* 18: 399–421. doi:[10.1080/0266543032000117514](https://doi.org/10.1080/0266543032000117514).
- Monclús, J., and C. Díez Medina. 2017. Urbanisme, Urbanismo, Urbanística. Latin European Urbanism: Italy and Spain. In *Planning history handbook*, ed. C. Hein. London: Routledge.
- Monclús, J., and M. Guardia, ed. 2004. Prologue/Prólogo. In *The 11th IPHS conference. Planning models and the culture of cities*, 19–25, 27–33. Barcelona: UPC.
- Sanyal, B. (ed.). 2005. *Comparative planning cultures*. New York: Routledge.
- Segre, R., and A. Vélez Catrain. 2000. ¿Por qué hablar de modelo europeo de ciudad en América Latina? *Revista de Occidente* 230–231. Madrid: 11–24.
- Ward, S.V. 2013. Cities as planning models. *Planning Perspectives* 28: 295–313. doi:[10.1080/02665433.2013.774572](https://doi.org/10.1080/02665433.2013.774572).

Further Readings

- Almandoz, A. 2002b. Notas sobre historia cultural urbana. Una perspectiva latinoamericana. *Perspectivas Urbanas/Urban perspectives* 1: 29–39.
- Brazil, B. 2010. A planned city model: Curitiba, Brazil. *The Bartlett development Planning Unit*. May 25.
- Hall, P.G. 2014a. *Cities of Tomorrow. An intellectual history of urban planning and design in the twentieth century [1988]*, 4th ed. Oxford: Wiley-Blackwell.
- Home, R. 2017. global systems foundations of the discipline: Colonial, post-colonial and other power structures. In *Planning history handbook*, ed. C. Hein. London: Routledge.

Javier Monclús

Abstract

The growing prominence of transport in the city and its impact in its transformation is the subject of this essay. It highlights the key role played by transport in new urban strategies through a series of texts, case studies and projects that draw consideration to topics of debate in relation to pedestrianisation, mobility control, enhancing public transport and the problems of densification and decentralisation, among others.

Keywords

Urban transport and growth • Transport systems • Mobility • Networks • Infrastructures • Technology

Public Transport and Urban Growth

Cities have always been supported by different infrastructure networks in order to cope with their growth, and the role of transport in these networks has grown. It is a well-established fact that the development of transport infrastructures since the nineteenth century has played a decisive role in the shaping of contemporary cities (Tarr and Dupuy 1988).

First of all, we should refer to the development of urban and suburban railways. Although these were different in each city, we are able to talk about the ‘age of the train’ in each city, highlighting the industrial cities and major capitals. In the latter, construction of stations around the middle of the nineteenth century was associated with remodelling of urban centres to a greater or lesser extent. Consequently, not only barriers were formed that would condition urban growth for decades, but new stations also led to major renovation and reconfiguration processes. Haussmann’s Paris cannot be explained without understanding the wish to provide access to the new railway terminals. The impact of the railway network and stations in London gave rise to an

enormous amount of the literature, not only specialising in architecture and urbanism, but also in studies by geographers, sociologists and urban historians (Hall 2014, Chap. 9). In general, railway companies shared a strategy of locating their stations close to city centres, although in many smaller cities, their role as promoters of urban growth was also relevant, as happened in most Spanish cities (Monclús and Oyón 1996).

In addition to interurban or goods transport, the development of public urban transport had a considerable impact on decentralising the compact, pre-industrial city and defining new extensions and suburbs. In North America and Europe, cities built prior to collective transport or ‘the Walking City’, imposed a limit on physical growth due to the difficulty of overcoming the distance between places of work and residence, which were at walking distance (around 2 miles, 3–4 km was the norm from the centre). With the appearance of buses, but particularly trams, the possibilities of urban growth increased considerably (Daniels and Warnes 1980, 45). Referring to technological innovation is fundamental, although the causal relationship with urban growth is often oversimplified. All the same, it is possible to prove the connection between land value change processes and the layout of tram lines (first animal drawn and then electrical), and also the link with new urban forms.

J. Monclús (✉)
School of Engineering and Architecture,
University of Zaragoza, Zaragoza, Spain
e-mail: jmonclus@unizar.es

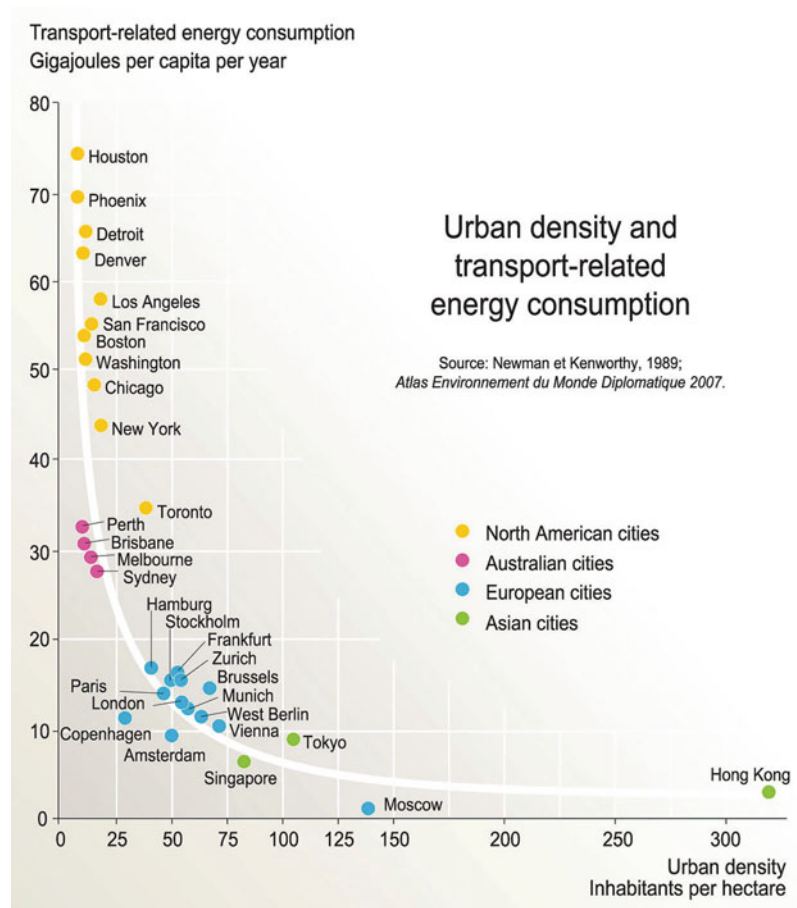


Fig. 18.1 Urban densities and energy consumption of motor vehicles according to Peter Newman and Jeffrey Kenworthy, in *Cities and Automobile Dependence: an International Sourcebook*, Gower Technical, Aldershot, 1989

The Revolution of the Automobile and Its Impact on the Transformation of Cities

The ‘second transport revolution’, i.e. which associated with the arrival of the automobile, took place parallel to the exponential growth of cities. First in the USA, where already in the 1930s millions of cars were driving the streets (over 20 million); and later, after the 1960s, in European cities (Dupuy 1995a, 17–41). In the case of Spanish cities, mass motorisation arrived somewhat later, in the seventies.

Several studies carried out from different perspectives about the effects of cars on society and cities, question the simplistic analysis that attributes direct impact of transport technology on new urban forms. Hence, for some authors, the true ‘Ford revolution’ was that of prices, i.e. the one that led to generalisation of automobiles among the middle classes (Dupuy 1995b, 31–42), which indirectly contributed to cities expanding in another way, changing from ‘street car suburbs’ (dependent on trams) to the new residential suburbs (dependent on cars).

Moreover, the impact of the automobile coincided with the increase in distance between place of residence and place of work. To a certain extent, transformations in the urban structure were not so different to those that were caused by the arrival of public transport. In both cases, the new modes of transport entailed new forms of decentralisation with the consequent reduction in densities, although cars provided more flexibility, with the subsequent occupation of intermediate spaces between the spokes of tramways or suburban railways. With all this, the new forms of occupying suburban territory were no longer isotropic, since the layout of the highway infrastructures caused a form of spatial hierarchy. As for the decentralisation of industry, this went hand in hand with a generalised use of trucks, which substituted in part the railways.

The evidence, which at first seems clear, of the advantages provided by cars in terms of convenience and speed, began to be questioned with the appearance of traffic congestion in city centres. This, however, did not prevent a massive surge in the private vehicle fleet. Despite the oil crisis, the number of cars in Spanish cities rose from 2 million in 1970 to 7 million in

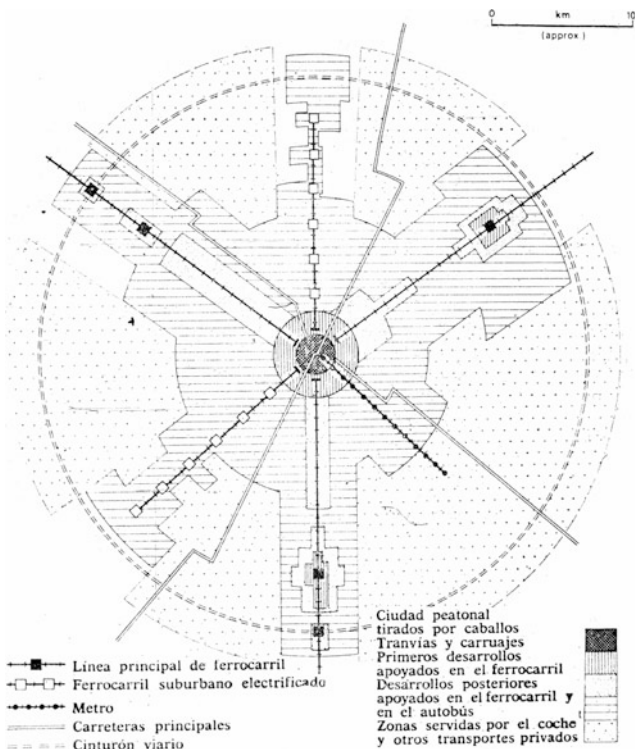


Fig. 18.2 Transport and urban form. Synthetic view of relationships between transport systems and forms of urban growth, according to C.D. Daniels and A. M. Warnes in *Movement in Cities*, 1980

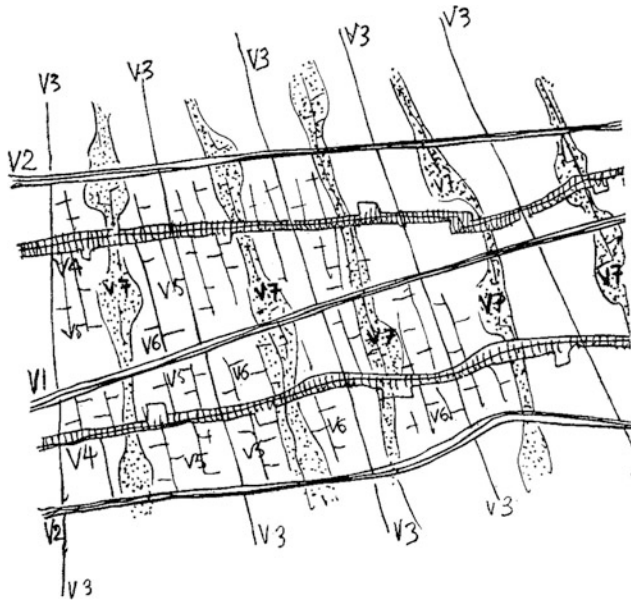


Fig. 18.3 Le Corbusier, 7W system (7 Ways), 1945

1980. Subsequent economic recovery and the priority given to private transport in all fields (with the dismantling of almost the entire tram network operating in many cities) finally led to the most optimistic forecasts being far exceeded, with over 12 million vehicles in the nineties and more than

thirty million today. As for the rate of motorisation, the 467 vehicles per 1000 inhabitants approach the European average (487), somewhat lower than in Germany (539) and France (512), but higher than in the UK (464) (2013 data).¹ It is interesting to see how some countries with higher income have lower rates, as is the case of Denmark, which could be explained by their clear commitment to public transport and restraint on automobiles.

Urban Views and Mobility Strategies

The views and strategies concerning the design of mobility in cities have changed over the century, from the fascination this produced in the early stages of modern urbanism, to gradual reconsideration over recent decades. The leading role of transport infrastructures and mobility based on cars is particularly associated with the technological dimension of urbanism and contemporary urban projects. From the Athens Charter and the proposals by Le Corbusier outlined in the 7V (7 Ways) to the studies by traffic specialists that proliferated in the sixties, different versions of the 'car city' are tested, first in North American cities and later on in European cities. In the international architectural and urbanistic culture at that time, there were many proposals which, when criticising modern tradition, advanced the introduction of more technological concepts: the visions of Team X (CIAM 1959), those by the Archigram group or those by the Metabolists relied on mega-structures, massive prefabrication, including housing, in the same way that automobiles were produced. These visions were probably not so far removed from more recent discourses, based on the potential of infrastructures, mobility or the power of decision by users.

Although it could even be included in the technological and functionalist paradigm, the famous 1963 Buchanan report accounted for a significant change of attitude, by conducting a critical diagnosis on the advantages and risks of adapting cities to automobiles, with the proposal of the famous 'environmental areas' (Buchanan 1963). From then on, some cities applied advanced urban strategies to their centres. Complete or partial pedestrianisation made progress in many European cities, led by German and Scandinavian cities, with a definite commitment to restricting private traffic and promoting public transport and bicycles.

In recent decades, attention has not focused so much on transport infrastructures or vehicular transit flows, but has been giving more importance to the analysis of constantly growing mobility, which is associated with the processes or suburban sprawl, and the appearance of new urban or

¹<http://www.nationmaster.com/country-info/stats/Transport/Motor-vehicles>.

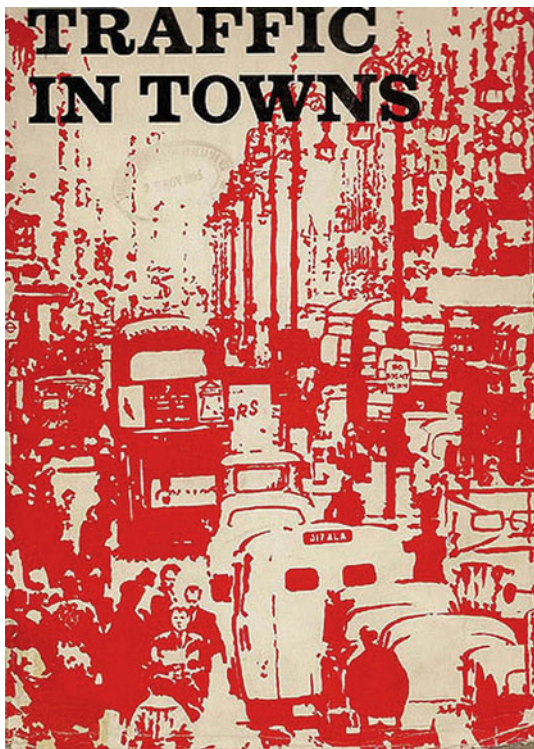


Fig. 18.4 Buchanan report, *Traffic in Towns*, 1963. Book cover

metropolitan situations (Monclús 1998). Many authors consider cars to be synonymous with de-densification, and therefore the death of the city (the case of Los Angeles is usually quoted, a city associated with car mobility, as an example of a ‘non-city’), although trams had already changed the forms of that urban agglomeration. Cars are not exclusively responsible for the obvious trend of de-concentration that can be seen in cities in the western world, although they do promote it and contribute to the appearance of new forms that are considered harmful (urban sprawl). The most relevant fact is that not only residential areas are decentralised, but so are all the facilities and other activities. In North American cities, most tertiary activities and offices have moved towards the new outskirts and ‘Edge Cities’.

Reactions and Recovery: Between the ‘Walking City’ and ‘Smart Urbanism’

Is it possible to save historical centres through pedestrianisation and relative control of mobility and transport systems? What are the options for acting in suburban areas and metropolitan peripheries by promoting public transport? A significant part of recent experiments in European cities is based on the key role of transport, accepting the relentless trends towards still greater mobility. The illusion of a ‘return to the compact city’ or that of different versions of New Urbanism give way to outstanding examples of what has been



Fig. 18.5 Buchanan report, *Traffic in Towns*, 1963. Proposal for Oxford Street, London

called ‘Smart Growth’ or better still ‘Smart Urbanism’. Away from tags, the principles of Smart Growth are based on an efficient use of land favouring access to public transport and new urban developments in areas that have already been developed or in urban voids, including brownfield developments, pedestrian-friendly developments and mixed, compact and adaptive uses (see Chap. 29). All these principles usually include a priority for the need of providing different transport options, a key aspect in any comprehensive urban strategy. It is therefore commonplace to find strategies such as Transit Oriented Development (TOD) (compact urbanisation based on public transport corridors), Bus Rapid Transit (BRT), Light rail, Heavy rail, Minibus.²

In North America, the critics of these strategies complain of their elitist nature, claiming they are only reserved for certain suburban areas. On the other hand, applying these principles to European cities maintains a long tradition of connecting infrastructure to urban development. The strategies for smart cities have been applied for some time in European cities, with the exceptional case of Copenhagen since pedestrianisation of central zones dates back to the sixties, when other cities were redesigning their centres to accommodate urban growth based on automobiles. In recent years, those strategies have changed with the rise of the bicycle as the dominant means of transport (nearly 40% of movements). That is one of the aspects of a radical process included in the regeneration and reconversion of city development, which is part of top level urbanistic tradition, as proven after successive updates of the well-known Finger Plan of 1948 developed as an alternative to the green belt strategy in new towns defined by Abercrombie for London.

²See Center for Transit Oriented Development <http://www.reconnectingamerica.org/public/todCenter>.

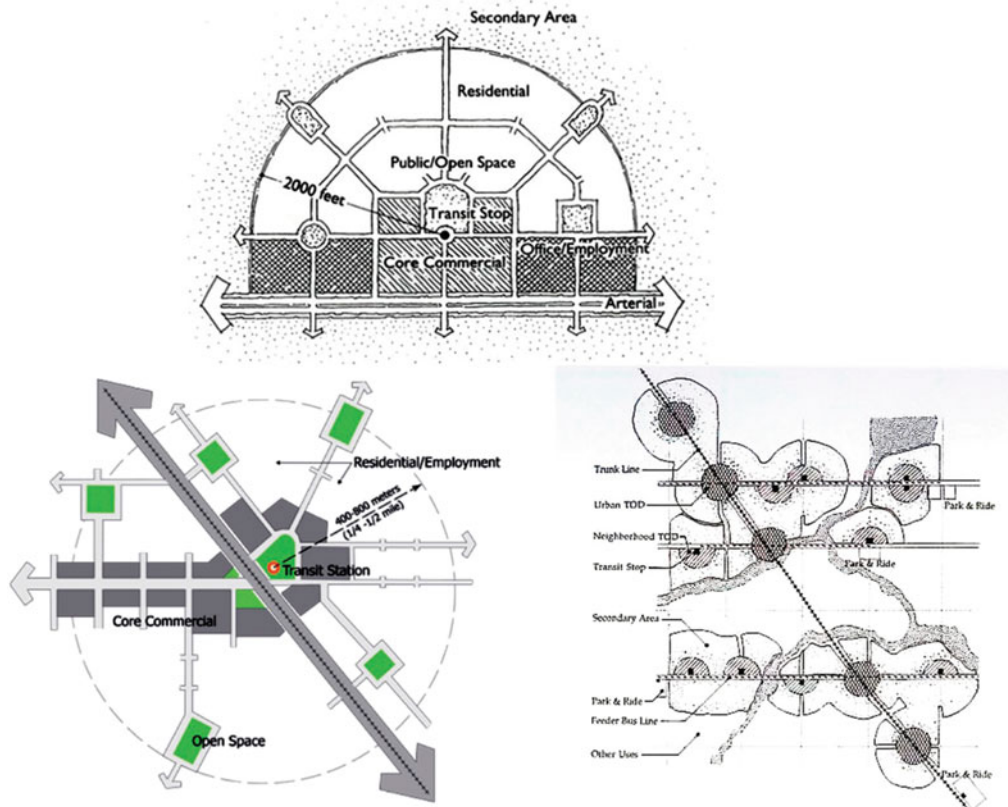


Fig. 18.6 TOD. Conceptual diagram according to Peter Calthorpe, in *The Next American Metropolis: Ecology, Community, and the American Dream*, 1993

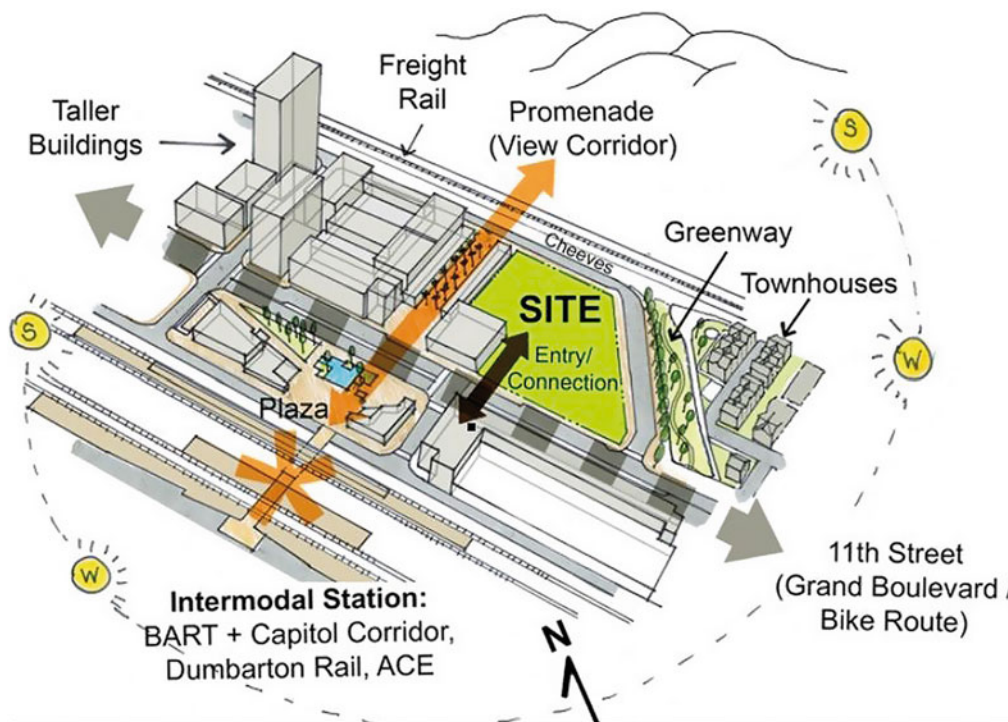


Fig. 18.7 TOD. Conceptual diagram in a station environment. Union City, 2009



Fig. 18.8 TOD. Conceptual diagram in the surroundings of the Intermodal Station, Union City, 2009



Fig. 18.10 Light Metro, Strasbourg. A mobility and public area reclassification model



Fig. 18.9 Cycle bridge over the harbour basin of Copenhagen, known as Bicycle Snake (*Cykelslangen* in Danish)

Another type of urban operation, such as those associated with major transport nodes, can also be included in this kind of strategy to boost new public transport systems in central

areas. The project for Euralille, ongoing since the nineties, represents a unique episode in this sense, developed around the *Train à Grande Vitesse* (TGV) station, as one of the most ambitious strategic European projects in recent decades. Although the most well-known item is the intermodal, high-speed train station connecting Paris with Brussels and London, the project goes much further, including urban and interurban transport, with a comprehensive urbanistic vision.

As in the case of Copenhagen, it would not be hard to find connections with different projects carried out during the ‘golden age’ of European urbanism, i.e. during the post-war period, as is the case of the British or Scandinavian new towns, always linked to transport infrastructures. Although what is now called ‘smart urbanism’ is based on higher sophistication of technology and on the will to make progress in integrating the different mobility systems, giving priority to pedestrian routes and cycle lanes. This attitude, consisting in improving efficiency based on optimising existing systems, appears to be smarter than simply trusting the panacea of Smart Cities.

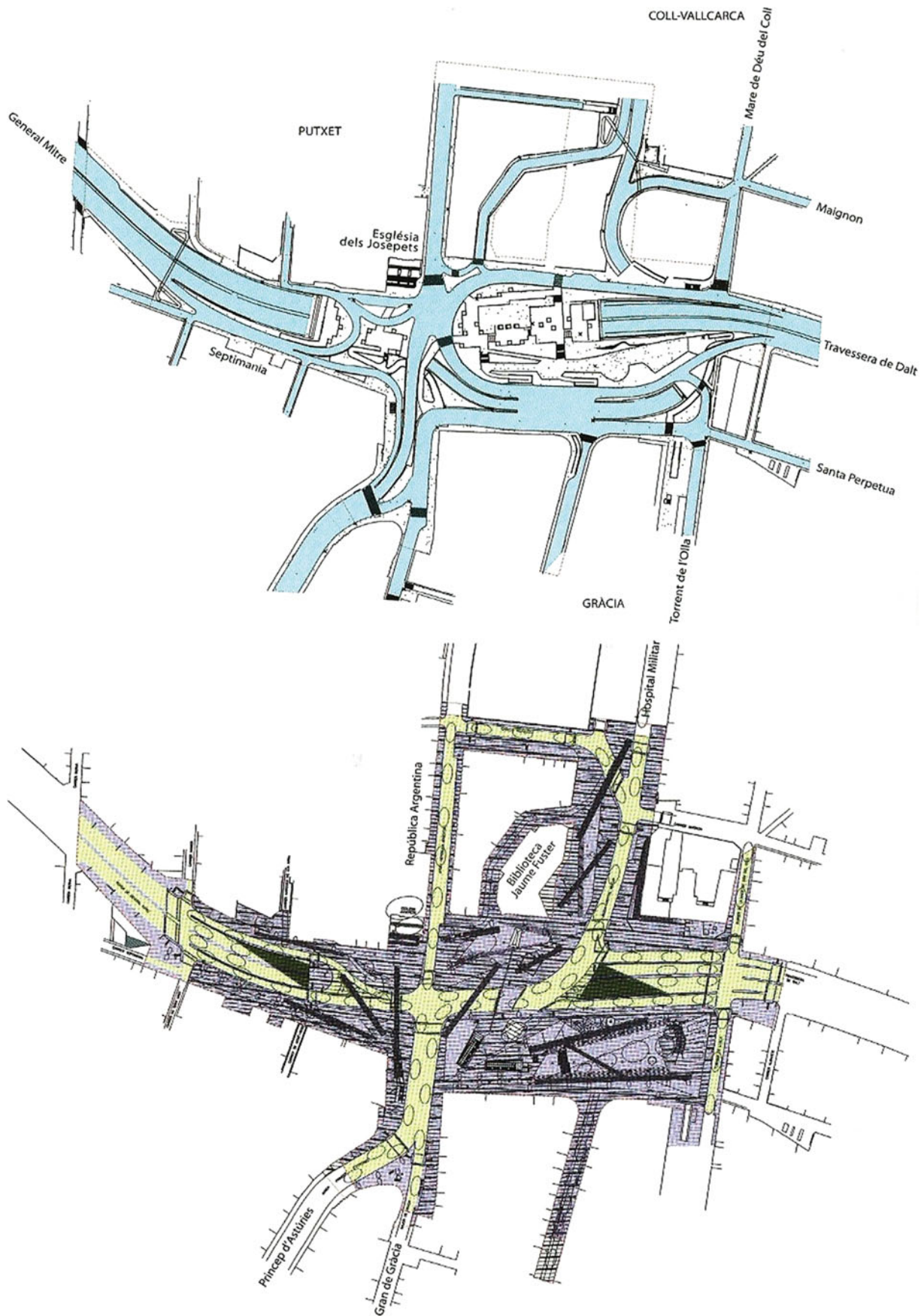


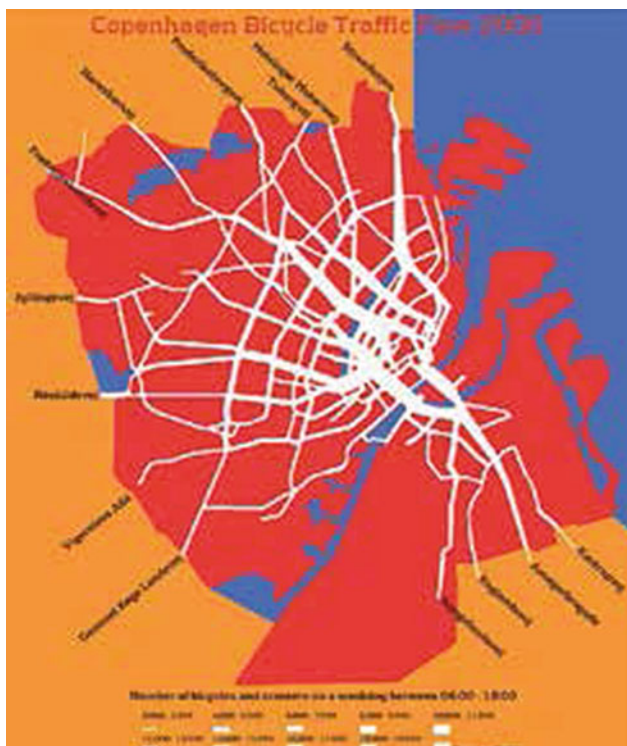
Fig. 18.11 Manuel de Solà-Morales, Plaza Lesseps. Disguised centrality, 2006

Case Studies

Copenhagen: Between a ‘Smart City’ and a ‘Human Scale City’

The commitment to a plan comprising a spoke system of tramways and local railways in Copenhagen, including green wedges, has permitted control of urban growth for over sixty years, with the population having stabilised at around 500,000 inhabitants and a metropolitan area growing from 1 million to 1.8 million in the same period. Unlike other European cities that have gradually pedestrianised their centres, adapting the flow of cars in car parks and ring roads, Copenhagen chose more radical strategies, following the directives of urbanists led by Jan Gehl, who committed to the ‘human scale’ and urban quality (Gehl 1987). The key to these strategies is the combination of measures with a comprehensive outlook, subtler than in other cities. Indeed, apart from the nearly 500 km of cycle lanes and painstaking priority of this mode of transport, with free public renting

systems (which were later adopted firstly in French cities and then in others), the area used for car parks has been reduced by 3% every year, highway junctions have been dismantled, public transport connections improved, etc., but above all, the design of public spaces at pedestrian scale has been emphasised. The objective by Gehl and his school is for all urban routes to be on foot, bicycle or on public transport, reserving the use of cars for interurban routes. The success of these approaches resides in the system attention to small scale, not only streets, but also the spaces ‘between buildings’, fighting against doors and fences in the city. The results in terms of transport have been spectacular compared to other cities: despite growth in the number of vehicles by 40% between 1995 and 2004, their use fell by 10% in the same period, whereas the use of bicycles grew by 50%. Moreover, said strategies are not limited to the historical centres, but they also extend to the new town of Orestad, a new linear city within the city, with a length of 5 km and width of 600 m, showing how major projects can be combined with micro-urbanism, one of the basic challenges of ‘new urbanism’.



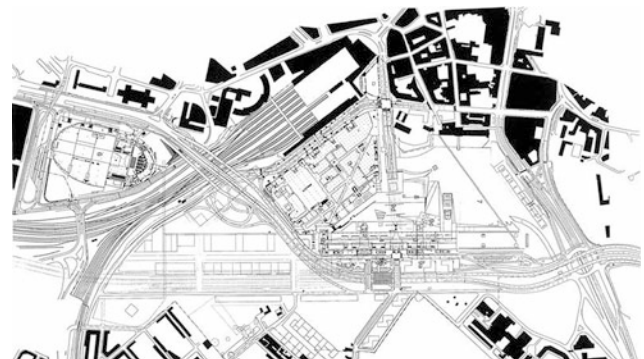
Euralille: New Transport Infrastructures in Urban Reconfiguration

The starting point for the Euralille urban project is that of acting in an urban region, namely Lille Metropole, which after being the centre of the industrial revolution in France and maintaining sustained growth during the ‘*trente glorieuses*’ (1945–75) fell into a severe crisis due to the de-industrialisation process. It is the biggest urban agglomeration in the north of France, consisting of the cities of Lille, Roubaix and Tourcoing, as well as the new city of Villeneuve d’Asq, but which extends beyond the border with Belgium to include some urban areas of the Flemish region. Public transport was the backbone of the metropolitan area until the sixties when proliferation of automobiles led to an increasing suburban sprawl.

The change in the industrial economic base to that of services was driven through different strategies, including the development of a revolutionary interurban light metro system the so-called *Véhicule Automatique Léger* (VAL) connecting Lille with Villeneuve d’Asq and its technology centre. Modernisation of the tramway system was also another strategic commitment, developed parallel to this. The third project based on transport was at another scale, consisting of locating the *Train à Grande Vitesse* (TGV) at a singular site, next to the centre of Lille. Reorienting the city towards

growing sectors of the post-industrial economy, led to specialisation of different poles. Euralille (business and commercial centre linked to the station) is the most emblematic part of the project, but it is important not to forget the other projects of this poly-central metropolis: Eurosanité, Haute Borne, Eurotéléport, Tourcoing logistical platform, etc.

The Euralille international business centre was built between 1990 and 1995 and is established as a mixed transaction with public and private investment, with a total built surface area of 300,000 m² of offices and shops, in addition to the urban park. The master plan was designed by the Rem Koolhaas office, the author of the Conference Hall (Lille Grand Palais). The rest of the projects are by Claude Vasconi, Christian de Portzamparc (Torre Credit Lyonnais) and Jean Nouvel (centre Euralille). The arrangement of the area is in line with Koolhaas’s discourse, committing to the advantages and leading role of infrastructures in contemporary cities and emphasising metropolitan congestion and ‘hyper-density’. The different volumes that are established in the programme refer to modern architectural concepts, heirs of Le Corbusier and other architectural styles. The success of the project has led to a second stage, namely Euralille 2 (190,000 m²) comprising a new entrance to the urban centre with a façade onto the ring road between the Conference Hall and the St-Sauveur station, which further increases the protagonism of the different transport infrastructures.



References

- Buchanan, C. 1963. *Traffic in Towns: A Study of the Long Term Problems of Traffic in Urban Areas*. London: Her Majesty's Stationery Office.
- Daniels, P.W., and A.M. Warnes. 1980. *Movement in Cities: Spatial Perspectives in Urban Transport and Travel*. London: Methuen.
- Dupuy, G. 1995a. *Les territoires de l'automobile*. Paris: Anthropos-Economica.
- Dupuy, G. 1995b. *L'auto et la ville*. Paris: Flammarion.
- Gehl, J. 1987. *Life Between Buildings: Using Public Space [Livet mellem husene, 1971]*. Washington, Covelo, London: Island Press.
- Hall, P.G. 2014a. *Cities of Tomorrow. An intellectual history of urban planning and design in the twentieth century [1988]*. 4th ed. Oxford: Wiley.
- Monclús, J. (ed.). 1998. *La ciudad dispersa*. Barcelona: CCCB.
- Monclús, J., and J.L. Oyón. 1996. Transporte y crecimiento urbano en España, mediados s. XIX—finales s. XX. *Ciudad y Territorio, Estudios Territoriales*, vol. XXVIII, 217–240.
- Tarr, J.A., and G. Dupuy (eds.). 1988. *Technology and the Rise of the Networked City in Europe and America*. Philadelphia: Temple University Press.

Further Readings

- Bottles, S.L. 1987. *Los Angeles and the Automobile: The Making of the Modern City*. Berkeley: University of California Press.
- de Solá-Morales, M. 2006. Centralitat simulada, centralitat dissimulada: Plaça Lesseps, Plaça Europa. *Quaderns* 249: 54–59.
- Dupuy, G. 1991. *L'urbanisme des réseaux: théories et méthodes*. Paris: Armand Colin.
- Glaser, M., M. van't Hoff, H. Karssenberg, J. Laven, and J. van Teeffelen (eds.). 2012. *The City at Eye Level. Lessons for Street Plinths*. Delft: Eburon Academic Publishers.
- Hall, P.G. 2014b. *Good Cities, Better Lives: How Europe Discovered the Lost Art of Urbanism*. Oxford: Routledge.
- Hebbert, M. 2005. Engineering, urbanism and the struggle for street design. *Journal of Urban Design* 10: 39–59. doi:[10.1080/13574800500062361](https://doi.org/10.1080/13574800500062361).
- Herce Vallejo, M., F. Magrinyà, and J. Miró (eds.). 2004. *Construcció de ciutat i xarxes d'infraestructures*. Barcelona: Ediciones UPC.
- Katz, P. 1993. *The New Urbanism: Toward an Architecture of Community*. New York: McGraw-Hill Education.
- Monclús, J. 1992. Infraestructuras de transporte y crecimiento urbano en EE.UU. *Historia urbana* 37–52.
- Monclús, J. 2016. Urbanismo y regeneración urbana. Siete temas de debate en la cultura urbanística internacional/Urbanism and urban regeneration. Seven topics in discussion in the international urban planning culture. In *Regeneración Urbana (III). Propuestas Para El Barrio Oliver, Zaragoza/Urban regeneration (III). Proposals for Oliver Neighbourhood*, ed. J. Monclús and R. Bambó, 34–55. Zaragoza: Prensas de la Universidad de Zaragoza - Ayuntamiento de Zaragoza.
- Pozueta (dir.), J., F.J. Lamiquiz, and M. Porto. 2009. *La ciudad paseable: recomendaciones para la consideración de los peatones en el planeamiento, el diseño urbano y la arquitectura*. Madrid: CEDEX.
- Sennett, R. 2012. No one likes a city that's too smart. *The Guardian*, December 4.

New Productive Uses Areas. Central Business Districts (CBD), Business Parks, Technology Parks and Corporate Cities

19

Andrés Fernández-Ges

Abstract

This chapter analyses the evolution of the urban areas specifically dedicated to tertiary uses, from the appearance of the Central Business Districts in the 1960s, related to the zoning principles of the Modern Movement, to the business parks, derived from the adaptation of garden cities to service activities. The emergence of the new information and communication technologies (ICTs) brought the specialization of these parks in places of science and technology. Finally, the concept of corporate cities also dating back to the 1950s has experienced a new boost in the last years. Recently, different companies are trying to concentrate all their workers in a specific place containing all the facilities, with the result being that the urban and architectural form usually expresses the essence and the spirit of the company in many ways. The progressive development of the new Information and Communications Technologies (ICTs), since the 1970s, also has affected the way tertiary and R&D uses have been distributed in the city, increasing the different approaches of creating and developing new productive areas. The aim of this chapter is to analyse and describe the evolution of business districts and the different typologies of new productive areas from the most significant examples.

Keywords

Central business district • CBD • Zoning • Tertiary uses • Business parks • Technology parks • Corporate cities

The zoning principles of modernist urbanism and the synergies created by concentrating tertiary uses in a specific area contributed to the emergence of urban districts dedicated exclusively to business and financial activities. These areas have undergone a major change throughout the years, even more than residential areas. On the other hand, the progressive development of the new Information and Communications Technologies (ICTs), since the 1970s, has also affected the way tertiary and R&D uses have been distributed around the city, increasing the different approaches of creating and developing new productive areas. The aim of this chapter is to analyse and describe the evolution of

business districts and the different typologies of new productive areas from the most significant examples.

Central Business Districts

Over the past century, the central areas of cities in the USA became, progressively, more specific zones of tertiary uses, while new residential areas were sprawled in the peripheral areas of the suburbia (Soja 1989). Central districts were, in most cases, the traditional market places and business areas of cities. In this way, the concentration of financial and commercial activities in these areas increased, beginning with their denomination as central business districts (CBDs) (Murphy 1972).

In Europe, the process of concentrating tertiary uses has grown steadily since the 1950s. It was a political tool used for the urban regeneration of former industrial areas, for the

A. Fernández-Ges (✉)
University of Zaragoza, Zaragoza, Spain
e-mail: andresfg@unizar.es

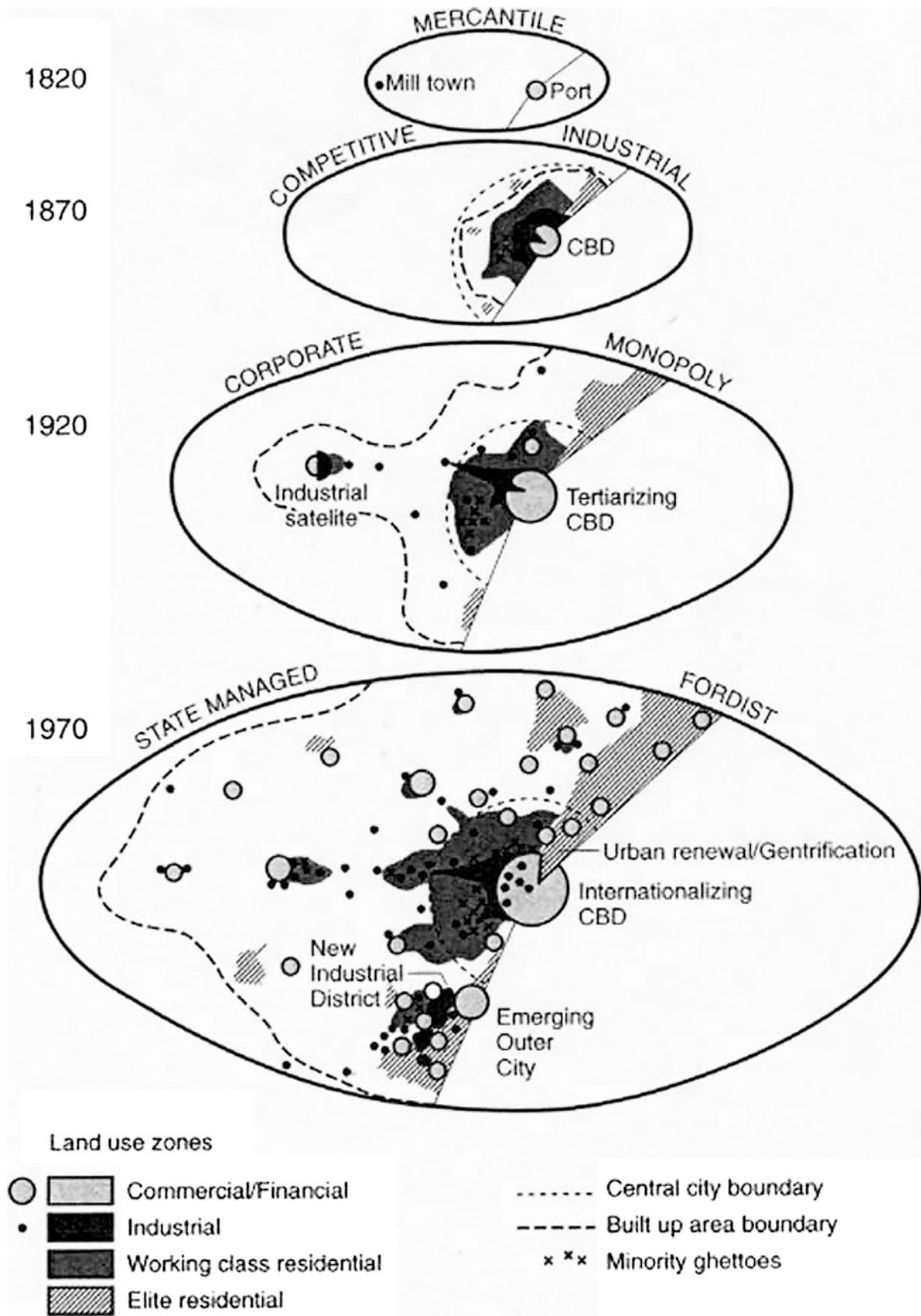


Fig. 19.1 Evolution of urban form in the USA according to Soja, in *Postmodern Geographies*, 1998, p. 174



Fig. 19.2 View of the city of London



Fig. 19.3 Model of the master plan of Canary Wharf in the Isle of Dogs, London, 1986



Fig. 19.4 Kop van Zuid development, in the south bank of Nieuwe Maas River, Rotterdam, 2016

creation of new business districts in peripheral areas and for urban renovation of degraded historical city centres (Hall 2014). La Defense, in Paris, was an example of the creation of a CBD from scratch. The strategic location at the end of the axis of Champs-Élysées justified a large public investment creating a new business district in a degraded area. The first master plan was designed in 1955 by Mailly, Camelot and Zehrfuss, and the first building in the district, the CNIT, was built in 1958 (Hein 2004). The district underwent several periods of crisis but developed considerably from

the 1990s onwards, and is still growing today, having currently become the biggest European CBD, with expansion planned through 2020.

London has two different cases. The city, the historical financial and productive centre, has undergone major urban renovation since the 1960s. The population moved to peripheral areas and several buildings were replaced by new modern office and hotel buildings in a gradual transformation that still continues in what is today one of the main financial centres of the world. The district has undergone a



Fig. 19.5 Model of Edinburgh Business Park. Richard Meier's Master plan, 1991–1993

gradual process of depopulation, having around eight thousand inhabitants and around 350,000 workers daily. In the same period, the port industries of the Docklands began to fall into decline (see Chap. 13). The industrial heritage was replaced by a second CBD in the former East Docks of Canary Wharf. The first master plan was designed by SOM in 1981, but the implementation of the area had major difficulties and began to take-off in the mid-nineties, aided by the lack of available land in the city. The project began with government funding but was developed by private investors that privatized the public space. Although it is an exclusive business district, the creation of a mall has fostered the residential activity of the nearby neighbourhoods.

During the 1970s, other cities planned new business districts in areas of expansion. For example, AZCA in Madrid, located in the prolongation of the Paseo de la Castellana.¹ The plan was designed by Perpiñá between 1957 and 1964. Other cities like Frankfurt fostered the traditional productive area of the city centre while transforming the area of Bankenviertel in one of the leading financial districts in Europe. Berlin created a new CBD in the area of Potsdamer Platz, as one of the strategic projects of reconstruction of the city after the fall of the Wall. The site was already previously a place of dense commercial activity and cultural vitality.

¹AZCA is the acronym of Compensation Mixed Association of the A Block (Asociación Mixta de Compensación de la Manzana A), which planning, and also its nomenclature come from the general master plan for Madrid led by Pedro Bidagor in 1946. From its conception, AZCA complex was not integrated in the urban grid, but located in a more peripheral area. The master plan envisaged the construction of a big office block with pedestrian circulation at ground level and vehicular traffic underground. Also, an interchange for external commuters was planned, which is actually the Nuevos Ministerios Station.

Others CBDs have been built in recent years in Europe and especially in Asia. Some of them are exclusive productive zones, such as Zuidas, in Amsterdam, or Pudong, in Shanghai. But the last generation of CBDs, in most cases, have been mixed use, seeking to create areas with more urban life. Examples of these new productive areas are Kop van Zuid, in Rotterdam, Puerto Madero in Buenos Aires or Songdo, near Incheon, planned as a nodal international hub, near the airport and conceived as a mixed use international CBD (Arbes and Bethea 2014).

Business Parks

Business parks are the result, together with the English tradition of garden cities and University campuses, of the evolution of industrial areas and their adaptation to tertiary uses. During the 1960s, a generation of parks appeared more focused on attending to the design of buildings, landscape and traffic segregation. Some of them grew near or related to existing garden cities, like Letchworth Park, near London, but most of them were designed as new productive areas in the countryside (Phillips 1993).

Location was one of the most important factors for the definition of business parks, looking for areas with specific features: near a highway or, better, in the connection with two major highways; near a large metropolitan area, preferably near a big mall and public transport connection with the city centre. If the business park had an international projection, a location near an airport was an essential feature (Phillips 1993).

Business parks were designed from the beginning with low-rise buildings with a special focus on the landscape design of green areas, often featuring lakes, sports and leisure facilities. Large parking areas were also required around the park. The main innovation of the new model is the creating of a low density work place to substitute the polluted city centre similar to the marketing experience of garden cities. Some of them have become quite large, such as Stockley Park, covering 160 ha, near Heathrow airport.

Most business parks do not stand out for their urban design. One exception is the Edinburgh Business Park, on 55 ha, designed by Richard Meier (master plan 1991–93), characterized by two rows of buildings carefully combined with green spaces and a central lake. The park has maintained the general layout but not the Meier detailed design.

Science and Technology Parks

Technology and science parks derive from the specialization of business parks for high technology and R&D companies to provide high qualification jobs that bring economic growth to

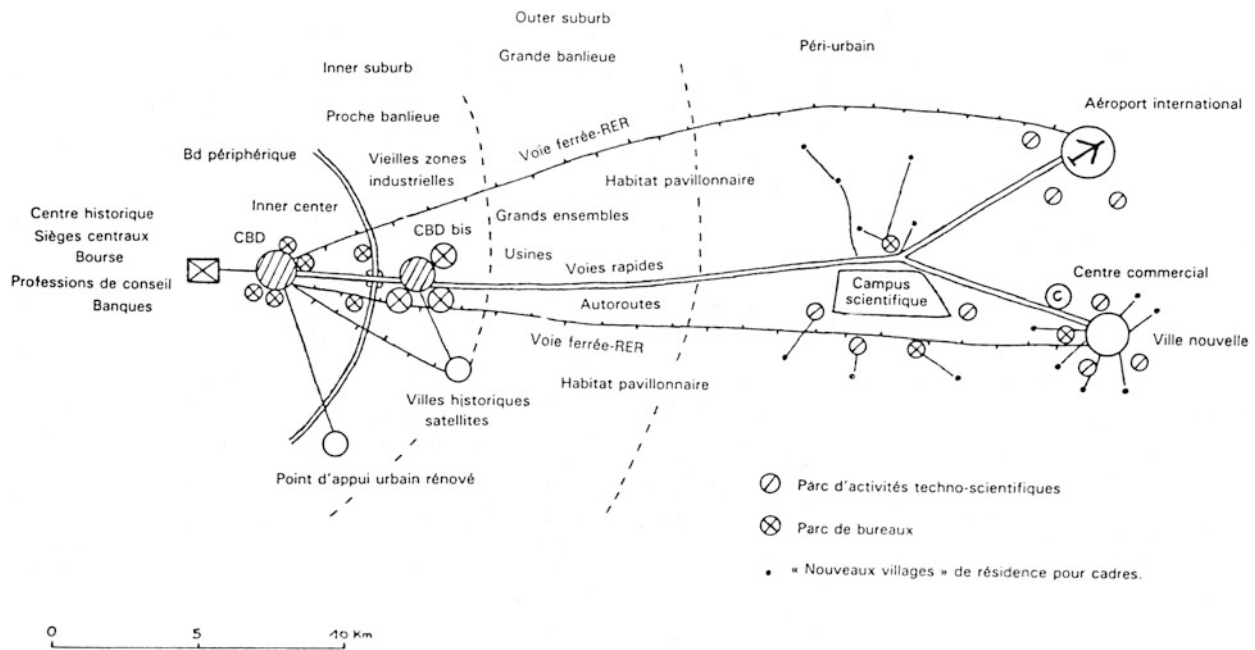


Fig. 19.6 Evolution of CBDs and productive areas in the city according to Dezert, B., Metton, A., Steinberg, J., *La périurbanisation en France*, 1991



Fig. 19.7 Technical Centre of General Motors in Warren, Michigan, 1947–56. Project by Eero Saarinen



Fig. 19.9 Ciudad BBVA, Madrid, 2009–2013–2015. Project by Herzog and de Meuron



Fig. 19.8 Distrito Telefónica, Madrid, 2004–2008. Project by Rafael de La-Hoz Castanyas

the region. The role of governments was essential for the creation of new technology parks. The strategies were varied, offering productive and attractive spaces, providing tax incentives and sometimes adapting the offer to the needs of each specific company. Greater flexibility assured more possibilities of success. While most of the science parks were promoted with public funding, their primary objective was to attract private companies to create synergies and economic activity (Castells and Esping-Andersen 1999).

Silicon Valley is the paradigm of the technology parks. The Valley extends in a vast area from Palo Alto to San Jose, to the south from San Francisco, California, concentrating high technology companies, highly qualified workers and unparalleled R&D economic growth. By the end of the 1980s, there were 330,000 high technology workers including 6000 doctors in engineering and science (Saxenian

1994). The desire to repeat the success of the Valley has spread across the world.

The area had no prior industrial base or previous entrepreneurial tradition. The technological activity started in the 1950s with the science park created around the University of Stanford. The growth of innovative enterprises in microelectronics continued in the 1960s, on the base of spin-offs from the first-generation companies. In this period, the support of the US Defence Department providing investment for research programs was crucial. The consolidation of the Valley came in the following decades with the development of semiconductors, microprocessors and personal computers with a new round of innovative divisions (Castells and Hall 1994). All these activities attracted several venture capital companies to invest in new projects and start-ups, in a synergic activity that continues today. And this brought as a consequence an economic and population growth into the area (Glaeser et al. 1995).

The successful experience of Silicon Valley is the proof of the fundamental relationship between science and economic development, in a process that emphasizes the role of universities and research centres as protagonists for this kind of progress (Hoeger and Christiaanse 2007). Many cities and regions throughout the world have tried to create new Silicon Valleys, without success. The implementation of research institutions and business parks is not enough to attract private companies because the success of Silicon Valley was not only due to the concentration of high technology but also the synergic network created between researchers and productive sectors (Castells and Hall 1994).

Corporate Cities

Some industries created corporate parks for their headquarters. These were business parks conceived as the productive space for a specific company. Following the tradition of garden cities and the landscape environment, they were primarily developed in England and USA. One of the best examples of corporate cities is the Technical Centre of General Motors, in Warren, Michigan, designed by Eero Saarinen, 1947–56, near Detroit, on an area of 128 ha. Five functions were developed in different buildings: research, process development, engineering, styling and service. Other examples of corporate cities were the Connecticut General Insurance Co. in Bloomfield, by SOM 1954–57 or the IBM offices in Stuttgart, by Egon Eiermann, 1967–72.

This concept has been developed in Europe in recent years with a new typology: current corporate cities are conceived as containers of multiple activities. These places provide full-service environments for employees in order to monopolize their activities, such as nurseries, shopping, retail and sports facilities, striving for greater efficiency, security and solace for the workers. We can find some examples of these corporate cities near the north and west highways of Madrid, such as Telefónica City, Santander City and BBVA City or in the USA, with the new Apple Campus 2 in Cupertino, designed by Foster and Partners. The urban form of these new corporate cities usually expresses the philosophy and objectives of the companies.

Case Studies

La Defense, Paris (1958–)

La Defense was a degraded peripheral area of the city in the 1950s. Planned from scratch, it is now the biggest European CBD, with an area of approximately 1400 ha, housing more than 1500 companies, and around three 3 million square metres for offices and retail activities. The site was favoured because of its strategic location in the city: at the end of the main urban axis that connects the Louvre to Champs-Elysees and Pont Neully.

The first master plan was designed in 1955, commissioned by the public company EPAD. The authors were the architects Robert Camelot, Jean de Mailly and Bernard Zehrfuss, who also designed the first building of the district: The Centre for New Industries and Technologies, CNIT,

completed in 1958. The plan underwent modifications in 1964, but maintained the previous design principles: a central linear axis of public space, in continuity with the main axis of Paris, a high-density concentration of office towers on both sides of the central space and a strict traffic separation between pedestrians, and the vast network of highways surrounding the area, clearly influenced by the principles of the Modern Movement. The public light rail network arrived in 1970. The area underwent some periods of the crisis until the end of the 1980s when construction of the Grand Arche of Johann Otto von Spreckelsen in 1989, to become the district's landmark.

La Defense is continually expanding and there are plans for growth through to 2020. Due to tertiary specialization, the bustling daily activities contrast with the lack of urban life and activity outside working hours, becoming almost entirely empty after hours.

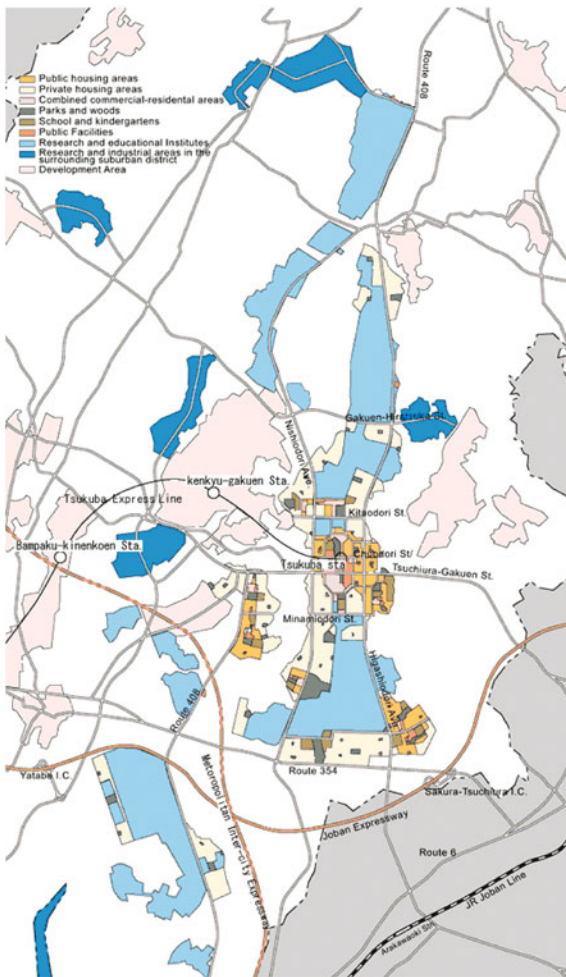


Tsukuba Science City, Ibaraki, Japan (1963–)

Tsukuba emerged, as well as other science cities built from scratch since the 1960s, as a consequence of Silicon Valley's success, trying to generate synergies of innovation by concentrating scientific activities in a specific area. In those years, Tsukuba was an economically depressed region located 50 kilometres from Tokyo and 40 kilometres from Narita international airport. These conditions allowed the Japanese Government, operating as developer, to solve different problems simultaneously: to increase the economic activity of the region, decentralize the Japanese capital that was rapidly growing, to create a new technological university near the existing ones and to respond to pressure by the Science and Technology Agency about the need to boost the weak scientific and research capacities in comparison with Europe and the USA, in a period when technology and

science were recognized as the driving force of economic development.

The science park was conceived as a university campus, surrounded by the services of a city, including housing and public facilities. The city covers a total area of 28,559 ha, of which one-tenth is known as the District of Investigation and Education. Development of the city took longer than planned, particularly in comparison to private companies. To boost the technology park the Expo of 1985 was held in Tsukuba which, due to major media attention and the improvement of infrastructures, began to attract private investors. Since then, the number of companies and inhabitants has been constantly growing. Today, the University of Tsukuba has a faculty of 2700 lecturers and more than 16,000 students, whereas the city now has a population of 220,000 inhabitants, of whom 15,000 have a doctorate degree.



Grupo Santander City, Madrid (2002–2004)

Santander Bank decided to bring together their 23 office buildings which were widely dispersed around the city of Madrid to create a corporate city on the outskirts of the metropolitan area. The new headquarters are located in Boadilla del Monte, to the north-western part of the city. It is well connected to Madrid, positioned between several highways, such as the M40, M50 and M511, that surround the metropolis.

The urban and architectural design was decided in an international competition won by Kevin Roche and John Dinkeloo. The area was built in record time, between 2002 and 2004, to ultimately accommodate nearly 7000 workers

on a total area of 250 ha, to become one of the largest corporate cities in Europe.

The headquarters comprise nine office buildings with four floors in a linear arrangement and several service buildings at the end of both wings. A central circular building is for senior executives and the board of directors, expressing the hierarchical organization of the company. The office buildings are connected by courtyards and squares, facing a large 18-hole golf course.

The complex is conceived as a city, providing all the services for the employees, such as sports facilities, a training centre, a nursery, shopping, restaurants, hairdresser and enough retail space to avoid workers having to leave the corporate city during the day, making work and personal life compatible.



References

- Arbes, R., and C. Bethea. 2014. Songdo, South Korea: City of the Future? *The Atlantic*, September 27.
- Castells, M., and G. Esping-Andersen. 1999. *La transformación del trabajo*. Madrid: La Factoría Cultural.
- Castells, M., and P.G. Hall. 1994. *Technopoles of the World: The Making of 21st Century Industrial Complexes*. London, New York: Routledge.
- Glaeser, E.L., J.A. Scheinkman, and A. Shleifer. 1995. Economic Growth in a Cross-Section of Cities. *Journal of Monetary Economics* 36: 117–144.
- Hall, P.G. 2014. *Cities of Tomorrow. An Intellectual History of Urban Planning and Design in the Twentieth Century [1988]*. 4th ed. Oxford: Wiley-Blackwell.
- Hein, C. 2004. *The Capital of Europe: Architecture and Urban Planning for the European Union*. Westport: Praeger Publishers.
- Hoeger, K., and K. Christiaanse (eds.). 2007. *Campus and the City: Urban Design for the Knowledge Society*. Zurich: Gta Verlag, ETH Zurich.
- Murphy, R.E. 1972. *The Central Business District. A study in Urban Geography*. Chicago: Aldine, Atherton.
- Phillips, A. 1993. *The Best in Science, Office and Business Park Design*. London: Quarto Publishing.
- Saxenian, A. 1994. *Regional Advantage: Culture and Competition in Silicon Valley and Route 128*. Cambridge: Harvard University Press.
- Soja, E. 1989. *Postmodern Geographies: The Reassertion of Space in Critical Social Theory*. London - New York: Verso.

Further Readings

- AA.VV. 1967. Paris dans 20 ans. *Paris Match* 951.
- Joss, S., R. Cowley, and D. Tomozeiu. 2013. Towards the 'Ubiquitous Eco-city': An Analysis of the Internationalisation of Eco-city Policy and Practice. *Urban Research & Practice* 6: 54–74. doi:[10.1080/17535069.2012.762216](https://doi.org/10.1080/17535069.2012.762216).
- Ko, Y., D.K. Schubert, and R.T. Hester. 2011. A Conflict of Greens: Green Development Versus Habitat Preservation—The Case of Incheon, South Korea. *Environment: Science and Policy for Sustainable Development* 53: 3–17. doi:[10.1080/00139157.2011.570640](https://doi.org/10.1080/00139157.2011.570640).
- Shwayri, S.T. 2013. A Model Korean Ubiquitous Eco-City? The Politics of Making Songdo. *Journal of Urban Technology* 20: 39–55. doi:[10.1080/10630732.2012.735409](https://doi.org/10.1080/10630732.2012.735409).

Innovative Uses of ICT Technologies in Recent Urban Developments and Urban Planning

20

Andrés Fernández-Ges

Abstract

This chapter analyses the influence of the new information and communication technologies (ICTs) in the emergence of the knowledge economy as a new way of productivity and economic growth for cities, and how the use of these new technologies is driving innovative uses in urban planning. The application of these new tools is taking part in two main directions. On the one hand, these technologies are being used in the development of new digital participatory processes, whereas on the other, technological devices produce a huge amount of data that can now be processed to achieve a new way to understand urban ecosystems and to know how to operate to improve the urban planning of cities, its energy efficiency and a more sustainable environment. Information and communication technologies (ICTs) have transformed the way we live, work, communicate and socialize with others. The aim of this chapter is to analyse the evolution and influence of these technologies, highlighting how this revolution is changing the economy, the society or the processes of production, as well as how the use of current technologies is leading to new approaches and tools for urban development and urban planning.

Keywords

Age of information • ICTs • Knowledge economy • Globalization • City competitiveness • Participatory e-planning • Digital participation • Big data • City modelling • Science of cities

The Age of Information and Technology

The new technological infrastructure has produced rapid changes in the processes of production, management, information and even thinking. ICTs are not the immediate cause of these changes in the social structures, but it is true that they have favoured them. Without them, the globalization of economy and communication would not exist. Although most activities are not global, the strategic dominant activities are organized in global networks of decision and exchange (Borja and Castells 1997). This

leads us to talk of our time as the ‘age of information’ (Castells 1996).

Knowledge Economy

In this era, a new economy has appeared which Castells first called ‘informational’ (Castells 1996). In the new economy, increasing productivity and economic growth are no longer based on the quantitative rise of traditional productive factors—capital, manpower or natural resources—but in the application and generation of information. These elements have become key factors in productivity and competitiveness. The result of applying this information to the management and distribution of processes and products generates knowledge (Borja and Castells 1997). The

A. Fernández-Ges (✉)
University of Zaragoza, Zaragoza, Spain
e-mail: andresfg@unizar.es

knowledge economy is based on the production of ideas and information. So, the driving force of economic growth is now related to human capital and quality of life (Simon 1998, pp. 223–243). In the search for better quality places, highly skilled people will live in cities with better opportunities in these aspects, and companies will follow them (van Den Berg 1987). Regarding the influence of these phenomena on cities, Michael Batty points out that larger cities with a highly educated workforce represent the best places where progress can be made through their inventions and application (Batty 2013).

Cities in the Knowledge Economy

The globalization and spreading of new technologies could have led to a ‘delocalization’ of activities, the rise of teleworking and the reduced significance of physical location, as some authors advocated (Mitchell 2000). However, knowledge activities have progressively tended to concentrate in big metropolises, becoming the nodal points of economy (Sassen 1991). But, while the advanced financial and productivity systems tend to concentrate, established hierarchically, the lowest paid activities have followed a delocalization trend, in a dual process. In this context, the capacity to attract human capital and to promote the knowledge economy becomes crucial, leading to competitiveness among cities. This means

that strengthening knowledge entails promoting the creation of new knowledge, to attract qualified workers and develop new growth clusters.

Van den Berg and Van Winden (2004) established the foundations for the founding and developing a city in the knowledge economy. Among the different aspects and essential needs, they listed the following:

- To generate and transfer knowledge through educational institutions and R&D activities
- To possess a dominant economy in the services sector
- To dispose of an attractive environment and a public space that contributes to create a great quality of life
- To offer a high connectivity that allows relationships with other urban knowledge centres
- To invest in urban diversity to foster growth in innovative sectors
- To think at urban scale, in the sense that size matters for attracting knowledge activities and, finally
- To consider social equity since fewer inequality favours sustainable growth.

ICTs, urban design, urban planning and, above all, the interrelationship between them has become one of the essential tools for the promotion of knowledge and the generation of innovative places, as discussed below and in the next chapter.

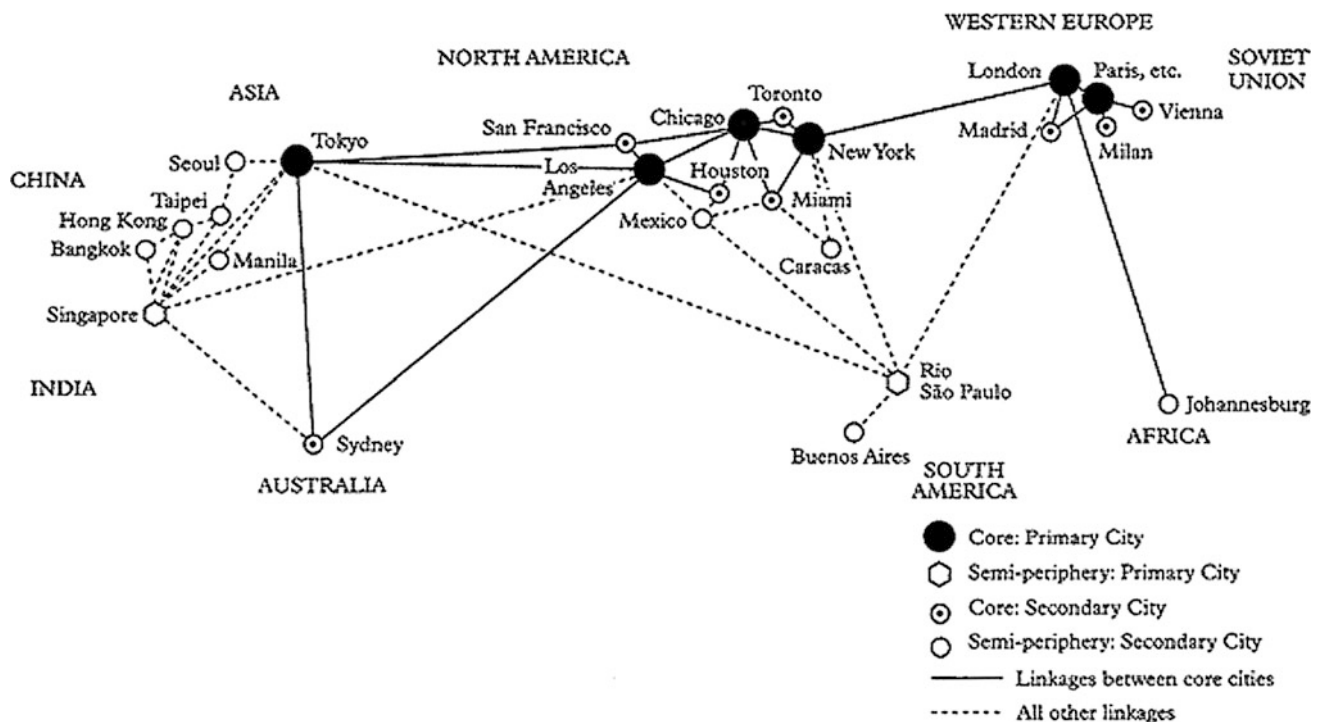


Fig. 20.1 The global cities in the world city hierarchy, according to John Friedmann in *The World City Hierarchy*, 1986



Fig. 20.2 The age of information and network society. Mapping Facebook friendship around the world in 2010, according to Paul Butler

Use of ICTs in New Urban Development and Urban Planning

The use of ICTs is having a major role in promoting knowledge and analysing, understanding and improving cities. The application of these new tools in urban development and urban planning is assuming two main directions. On the one hand, these technologies are being used to enhance relationships between planners, administrators and citizens to favour the participatory processes in city planning and design. This use is also related to an apparent willingness for social improvements and cohesion. On the other hand, technological devices produce a huge amount of data that, with the adequate technological tools, provide more information and a better knowledge of the city. This represents an important new way to understand urban ecosystems and how to improve the urban planning of cities, with greater energy efficiency and a more sustainable environment.

New Participatory Processes

Urban practices are constantly making more use of ICTs to involve citizens more in the design of cities, improving the participatory processes through new technological tools. Both the social networks and the way citizens are involved and can express their opinions have changed the way people receive and process information. This new engagement can now be applied to urban planning.

There are several examples of the way ICTs have been used in recent years to compile public opinions about specific aspects of city planning. Lisa Horelli led a team at Aalto University that explored two planning approaches in Finland. One of them was Participatory e-planning (the use of ICTs in urban planning to foster citizen participation, also including participation in the design and use of digital tools and media content). The other one was named Time planning (planning focused on the time schedules and spatial-temporal organization of people's actions) (Horelli 2013). Horelli herself had previously worked the opportunities of Internet-assisted urban planning (Horelli and Kaaja 2002), and in conjunction with Sirku Wallin and Joanna Saad-Sulonen in the design of some specific software tools for participatory urban planning that enhance communication between planners and users in a specific planning case (Wallin et al. 2010). They assumed that the complexity of urban problems required active citizen commitment, as a necessary complement to urban planning and sought collaboration among all stakeholders with the use of ICTs.

Several start-ups and technological companies have focused on processes that allow and boost citizens' participation. For example, SeeClickFix allows any citizen to report and track non-emergency issues anywhere in the world through their web page. The objective of these companies and applications is to empower citizens and help community leaders and governments to take care of their neighbourhoods. Mark Elliot, of Collabforge, led the making of Melbourne's strategic planning, Future Melbourne, an award-winning initiative as the "world's first city plan that



Fig. 20.3 Example of neighbours' engagement in the urban design process using ICTs tools combined with face-to-face methods in the Roihuvuori neighbourhood, Helsinki, 2012

anyone could edit, including the city's diverse selection of stakeholders and the general public".¹

Big Data

There is a constantly increasing amount of data created by technological devices such as computers, mobile phones, GPS, sensors, software applications and social networks. This huge amount of mainly unstructured information cannot be processed and analysed using traditional tools. This is what we call Big Data. The amount of data is exponentially increasing and only a part of this information is being analysed and harnessed. If we were able to use this data to understand and gain knowledge about cities, we would be better able to achieve a more sustainable environment.

City Modelling

Many researchers are working on analysing Big Data to generate city models and optimize processes to create a more sustainable urban design. Some of the most well-known are Michael Batty, from the Bartlett Centre for Advanced Spatial Analysis (CASA), Gerhard Schmitt, Director of the Future Cities Laboratory of ETH Zurich in Singapore, and Carlo Ratti, Director of the MIT Senseable City Lab. Gerhard Schmitt and Michael Batty explore the concept of Science

City, creating simulation and interactive platforms through urban systems software tools to produce city models that help to obtain more efficient and sustainable urban planning. According to CASA's introduction, they generate "new knowledge and insights for use in city planning, policy and design, drawing on the latest geospatial methods and ideas in computer-based visualization and modelling".² The city is not seen as an urban space, but a complex system of flows and networks and, as Batty points out, the creation of mathematical modelling and virtual simulations could replace or supplement decision-making processes (Batty 2013).

The MIT Senseable City Lab is developing several research projects involved in the representation of ICT generated data to obtain urban information. In Real Time Rome, a project developed in 2006, they analyse the use of mobile devices during a pop concert in the city, performed in a digital representation that allows predicting and organizing road traffic. In the Self-aware City project, Andres Sevtsuk proposes creating a mobile platform which calculates available parking space in the city, leading to less parking surface and less energy consumption and pollution (Sevtsuk 2006). Similar research projects conducted by MIT Media Lab are Real Time Copenhagen, where GPS displays the dynamics of people's movement at night time events, in the city and Trash Track, where they introduce sensors in waste and analyse the route of different types of waste through time. Through their research, they make the invisible infrastructure of trash removal visible, thus understanding the 'removal-chain' in

¹<http://collabforge.com/our-team/>.

²<http://www.bartlett.ucl.ac.uk/casa>.

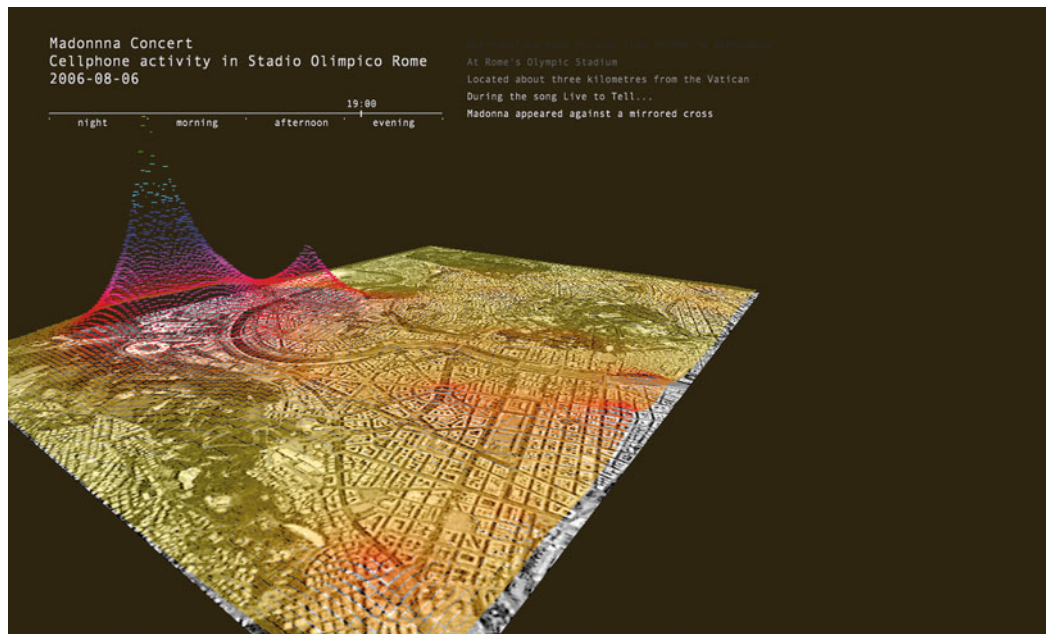


Fig. 20.4 Model of cell phone use in Rome during a Madonna concert, Project Real Time Rome, by Senseable City Lab, 2006

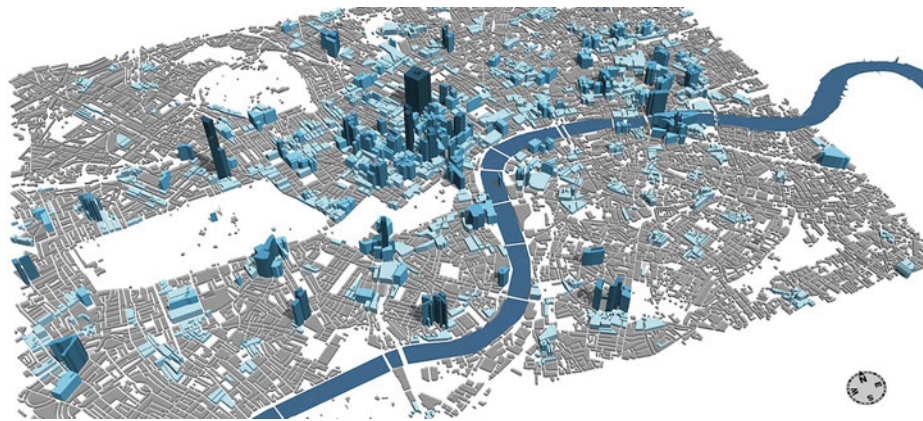


Fig. 20.5 Mapping in 3D of most tweeted buildings in London, 2013, by CASA

urban areas and making it possible to use this knowledge “not only to build more efficient and sustainable infrastructures but to promote behavioural change”.³

Innovative Places: Living Labs and Technology Campuses

As we have seen, a major part of the research about the application of ICTs in urban planning and the public realm is taking place in universities, but there is also growing interest in local administrations about the use of these tools to improve

cities. Several institutions are creating ‘living labs’, urban offices that test innovative projects in some specific sites of the city and increase the technological skills of the citizens for better engagement between the community and their city. These living labs create networks to generate synergies and joint projects, such as the European Network of Living Labs (ENoLL). According to this network, a living lab entails a multi-stakeholder participation, “including involvement by technology providers, service providers, relevant institutional players and professional or residential end users”,⁴ aiming at ‘co-creation’ between all of them. In Asian countries, such as in India or Singapore, there has also been a significant amount

³<http://senseable.mit.edu/trashtrack/>.

⁴<http://www.openlivinglabs.eu/FAQ>.

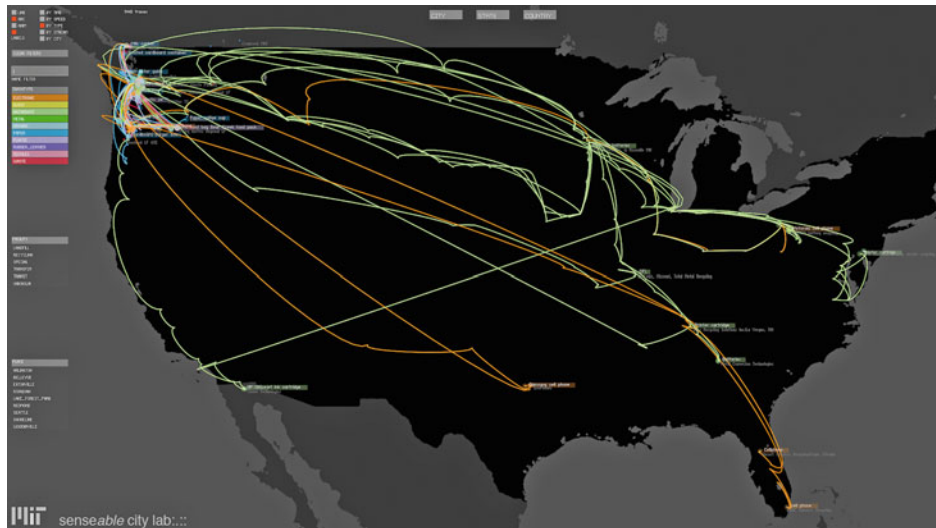


Fig. 20.6 Visualization of trash cycle of different objects travelling across USA until the end of the process. Project Trash Track by Senseable City Lab in 2011



Fig. 20.7 Googleplex headquarters in Mountain View, California. Project by Clive Wilkinson Architects completed in 2005. Aerial view

of growth of living labs in recent years. In South Korea, the new urban development of Songdo has been conceived to work as a living lab, monitoring the activities of the inhabitants through an agreement with Cisco Systems.

On the other hand, technological companies are playing a major role in the application of ICTs in the built-up environment and the creation of innovative places. The creativity of these companies is also introduced in the urban and architectural designs of their own offices. Leading Silicon Valley companies such as Google, Facebook or Apple have developed their headquarters with innovative designs that reflect the changes of the network society and new ways of working. Examples such as the Googleplex, designed by

Clive Wilkinson Architects and completed in 2005 shows a close relationship between inner and outer space designing interior spaces to boost creativity. The new Facebook headquarters, designed by Frank Gehry and finished in 2015 has one of the largest open floor plans in addition to small places to allow the teams to work together and create the sensation of a place in process. The building's large green rooftop allows both better energy efficiency while serving as a break out space for employees. Apple also has a new central office in Cupertino, called Apple Campus 2, designed by Foster and Partners, which expresses the absence of hierarchies in its design, with the prevalence of green areas for a more sustainable environment.



Fig. 20.8 Googleplex headquarter in Mountain View, California. Project by Clive Wilkinson Architects completed in 2005. Image of the inside



Fig. 20.9 New Facebook headquarters in Silicon Valley, California. Project by Frank Gehry, completed in 2015. Aerial view including the large green rooftop

Case Studies

Songdo International Business District, Incheon, South Korea (2009–)

Songdo could be the paradigm of a new international business district (IBD). In the year 2000, the Korean government created a business area near the international airport of Incheon, 64 km from Seoul, on 600 ha claimed from the sea. To develop the area, they created a public–private partnership. The master plan was designed by Kohn Pedersen Fox in 2003, the district was officially opened in 2009, and is planned to be completed around 2018. In 2014, there were around 70,000 inhabitants and it is expected to have 300,000 when finished.

Songdo is planned to be a 24/7 work district. It provides almost 10 million square metres of office, retail and

residential space. The central area is dominated by office spaces and a central park of 40 ha. The residential plots and a big mall are located in peripheral areas. The district is forty percent green spaces, including a golf course, and several public facilities. There are also two international University campuses. The district claims to be sustainable, with an automated waste system without any garbage element in the streets (Arbes and Bethea 2014). Green spaces are designed to reduce water consumption, and most buildings have solar panels and green roofs. The city is connected to the nearby airport by a long bridge and to Incheon and Seoul by public transport. The inner city is designed to promote pedestrian circulation and provides a system of cycle paths.

Songdo has signed a partnership with Cisco Systems to monitor the city with different sensors, to install a telepresence system in every house, control traffic systems and to improve the sustainability of the city.



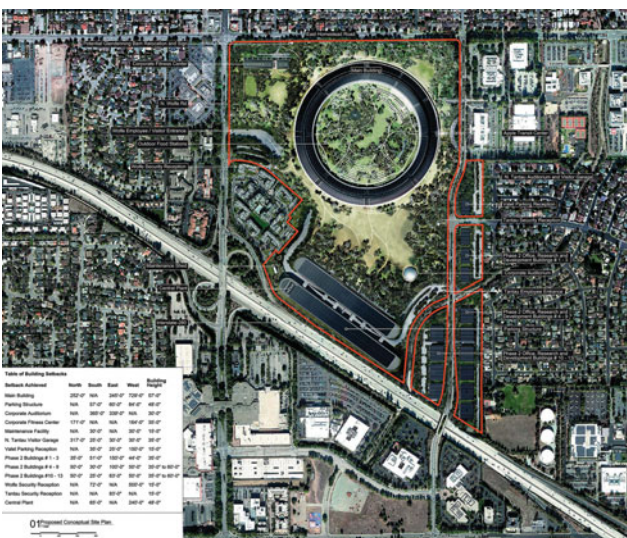
Apple Campus 2, Cupertino, Santa Clara, California (2013–)

The new project, designed by Foster and Partners, expresses a totally different approach to the traditional business and technological parks as well as other corporate cities. The current situation of the site, covering 71 ha, shows a patchwork of buildings distributed irregularly, surrounded by a diversity of small open spaces and many parking areas, with a lack of any notable public space.

The urban design principles define the philosophy of the company, planning a big ring-shaped building, four floors in height at the centre of the site, that leaves almost 80% of the total surface dedicated to open and green spaces. The perfect isometric geometrical form reflects a new concept of head-

quarters, free of hierarchies where teamwork and the exchange of ideas and knowledge reign.

The difference between the current and the new situation is clearly seen in the schemes of green areas, where the company plans landscape treatment so the employees can work in more direct contact with nature and light. The project provides traffic separation, locating the parking lots and service buildings in the peripheral areas, and two basement floors below the ring building. Only emergency and maintenance vehicles are allowed within the open area, and a broad network of pedestrian and bicycle ways are planned, with workers being encouraged to use public transport. The campus has a deep commitment to sustainability, responsible water use with appropriate vegetation and renewable energy sources.



References

- Arbes, R., and C. Bethea. 2014. *City of the Future? The Atlantic*. September 27. South Korea: Songdo.
- Batty, M. 2013. *The New Science of Cities*. Cambridge: M.I.T. Press.
- Borja, J., and M. Castells. 1997. *Local and Global: The Management of Cities in the Information Age*. London: Earthscan Publications.
- Castells, M. 1996. *The Information Age: Economy, Society and Culture. Volume I: The Rise of the Network Society*. Oxford, Malden: Blackwell Publishing.
- Horelli, L. (ed.). 2013. *New Approaches to Urban Planning. Insights from Participatory Communities*. Espoo: Aalto University.
- Horelli, L., and M. Kaaja. 2002. Opportunities and Constraints of 'Internet-Assisted Urban Planning' with Young People. *Journal of Environmental Psychology* 22: 191–200. doi:[10.1006/jevp.2001.0246](https://doi.org/10.1006/jevp.2001.0246).
- Mitchell, W.J. 2000. *E-topia: 'Urban life, Jim–But Not as We Know it'*. Cambridge: M.I.T. Press.
- Sassen, S. 1991. *The Global City: New York, London, Tokio*. Princeton: Princeton University.
- Sevtsuk, A. 2006. *The Self-aware City*. Massachusetts Institute of Technology.
- Simon, C.J. 1998. Human Capital and Metropolitan Employment Growth. *Journal of Urban Economics* 43: 223–243. doi:[10.1006/juec.1997.2048](https://doi.org/10.1006/juec.1997.2048).
- van Den Berg, L. 1987. *Urban Systems in a Dynamic Society*. Aldershot, Hampshire: Gower Publishing Company Ltd.
- van Den Berg, L., and W. van Winden. 2004. *Cities in the Knowledge Economy: New Governance Challenges*. Rotterdam: European Institute for Comparative Urban Research.
- Wallin, S., L. Horelli, and J. Saad-Sulonen (eds.). 2010. *Digital Tools in Participatory Planning*. Espoo: Aalto University.

Further Readings

- INSEAD. 2016. *The Global Talent Competitiveness Index 2017*. ed. B. Lanvin and P. Evans. Fontainebleau, France.
- Schmitt, G. 1999. *Information Architecture: Basis and Future of CADD*. Basel, Boston, Berlin: Birkhäuser.

Andrés Fernández-Ges

Abstract

This chapter analyses the evolution of residential districts and how the knowledge economy and the new information and communication technologies have influenced the rise of new mixed-use urban developments, as a better way to achieve a more vivid, sustainable and cohesive environment. During the eighties, there were two main urban movements: the revival of the urban grid as a role model for the regeneration of cities in Europe and the New Urbanism as a reaction to urban sprawl in USA. The growth of the environmental concern in the nineties derived in the emergence of ecodistricts, designed with principles of sustainability. Finally, in recent years, digital districts have been developed, areas that combine the principles of the mixed-uses, the promotion of knowledge society and concern about the design of public realm; places conceived to live in, work in and enjoy throughout the day.

Keywords

Mixed-use urban development • Digital districts • Living lab • ICT technologies • Knowledge economy • Globalization • City competitiveness • Urban marketing

The failures of exclusively residential or business districts have contributed to the emergence, in recent years, of urban districts that mix uses as a way to better quality of life in new urban areas. In this chapter, we analyse the evolution of mixed-use developments focusing on a new concept of urban districts: new areas specialized in integration and implementation of residential uses with the knowledge economy and ICT activities. We call them ‘digital districts’. The aim of this chapter is to define digital districts, to identify their distinctive elements and typologies as well as the key factors for their success.

Evolution of Residential Districts

In the 1980s, Europeans reconsidered the nineteenth-century urban grid as the model for new urban developments, as a means to combat the urban sprawl at city peripheries. This

provided a role model for the regeneration of city centres and former industrial areas. Barcelona is a paradigmatic case: Cerdà’s *Eixample* (city extension) of 1867 was used as the base for urban renewal of the waterfront and the former railway areas of the city, particularly in the degraded area that was transformed into a residential district for the Olympic Village of the 1992 Olympic Games. This concept was also featured in the urban manifesto of the IBA in Berlin in 1987 and over the following decades in other European cities (see Chap. 11).

In the USA, one of the reactions to urban sprawl in the same period was the New Urbanism, a movement led by Calthorpe, Duany and Plater-Zyberk in Florida. The model is a variation of the traditional garden city with a higher density, street and architecture design at a human scale a, traffic segregation with pedestrian priority and the creation of a city civic centre with public facilities. It uses the traditional concepts of urban design: plaza, boulevard, etc. on a pedestrian scale, considering the city with a clear centre and an edge (Fishman 2005). The concept had more influence in the theoretical field, with limited implementation in practice.

A. Fernández-Ges (✉)
School of Engineering and Architecture (EINA),
University of Zaragoza, Zaragoza, Spain
e-mail: andresfg@unizar.es



Fig. 21.1 Solar City Linz-Pichling, Linz (Austria), Project by Roland Rainer, 1995–2004. Aerial view



Fig. 21.2 Ecociudad Valdespartera, Zaragoza, Urban Planning Department of Zaragoza City Council, 1999. Project almost implemented in the year 2008. Aerial view

Seaside, Florida, built in 1981, provides the clearest paradigm where the urban concept coexists with historicist architectural solutions. Most critics regard these projects as a residential theme park that treats the city as a dream, the result of our postmodern society (Sorkin 1992; Amendola

1997). These features are brilliantly portrayed in *The Truman Show* film.¹

¹The film was directed by Peter Weir in 1998.



Fig. 21.3 Kronsberg, a new ecodistrict associated to the Hannover 2000 World Expo



Fig. 21.4 Ecodistrict Bo01 in Malmö, Project by Klas Tham, 2001. Aerial view

The increasing concern about sustainability during the 1990s had a major influence on urban planning. New urban projects were designed with bioclimatic criteria to foster energy efficiency, leading to the creation of ‘ecodistricts’. Among the most important bioclimatic principles are the attention to appropriate building orientation for better solar exposure, the consideration of existing topography, the

application of passive energy techniques, the centralization of energy sources: electricity, water, heating and the treatment of waste, among others. One of the first ecodistricts designed with these principles was Solar City in Linz-Pichling, Austria (Roland Rainer, 1995–2004). Other examples are Kronsberg, in Hannover (Amaboldi, Cavadini, Hager, 1994–2000), Valdespartera, in Zaragoza (Town Planning Department,



Fig. 21.5 Edge city Tyson's corner, Virginia, Nevada, 2010. Aerial view

1999–2008), and more recently, Bo01, in Malmö (Klas Tham, 2001), Hammarby Sjostad, in Stockholm (Jan Inge-Hagström, 2003) and Masdar, in Abu Dhabi (Foster and Partners, 2007).

Mixed-Use Developments in the USA: Edge Cities

The influence of zoning during the Modern Movement zoning principles influenced American urban planning for decades. Most of the new urban projects maintained retained zoning concepts with clearly separated uses. We can find an example of this situation in the Edge Cities, a concept described by Joel Garreau in 1991. Developed mainly in the USA since the 1990s, an Edge City consists essentially of a concentrated cluster of business and retail program, surrounded by low density residential areas (Garreau 1988). They operate as huge suburban hubs between freeway junctions. Therefore, although located far from metropolitan areas, they remain well connected. Some early examples are Tyson's Corners in Virginia, near Washington D.C, and Clayton, near Saint Louis, Missouri, both of which have grown exponentially since the 1960s.

The Rise of Mixed-Use Urban Developments

In many cases, traditional business districts lack any after-hours urban activity. The new productive areas, led by the rise of the knowledge economy, demand a new

kind of space with more vital areas than a mere Science Park or Central Business District (CBD) (see Chap. 19). To attract talented employees and their companies, it is necessary to create an attractive environment that provides a variety of activities, such as retail, leisure, housing and a detailed public realm (Florida 2008). This attraction is more likely found in major economic hubs but is not so easy to achieve in cities outside the reach of the global networks and without a developed knowledge economy. Some policies help to attract knowledge growth to a city that is not a nodal point of economy. One of them is the digital district.

What Is a Digital District?

A digital district is an urban area focused on the development of the knowledge society. It is not a technology park but is designed as a city: a place to live, to work and to learn 24/7. They are places of creativity (Landry 1998) or "hubs of innovation" (Da Cunha and Selada 2009). There are two typologies of digital districts, those in former industrial areas and those conceived as an urban renewal of central areas with significant production activity.

Digital districts rise from the confluence of different concepts and situations: the rapid spread of new information and communication technologies (ICT) (see Chap. 20); the development of the knowledge economy; the society of flows (Castells and Hall 1994) and the globalization associated with these phenomena (Sassen 1991). Following the

example of the residential and business districts, they try to avoid the excessive zoning of earlier urban models to create more complex neighbourhoods with a higher quality public realm. They are the implementation in a particular area of the smart city concept, understood as a city “in which ICT is merged with traditional infrastructures, coordinated and integrated using new digital technologies” (Batty et al. 2012).

Primary among the objectives of digital districts are the desire to enhance innovative applications of ICT’s to achieve new efficiencies, to increase social cohesion, to avoid social and economic degradation and to make an innovative and sustainable city (Fernández-Ges 2009). Digital districts are emerging all over the world, but mainly in Asia and Europe. Some examples of urban projects conceived as digital

districts are Arabianranta in Helsinki (Tukiainen 2003); 22@ in Barcelona (AA.VV. 2000); Orestad in Copenhagen; Seoul Digital Media City; Media City UK in Salford Quays, Manchester; Digital Mile in Zaragoza (AA.VV. 2006); Masdar City, in Abu Dhabi and Ciudad Creativa Digital, in Guadalajara, Mexico.

Main Elements of a Digital District

The main element of a digital district is the public realm. Green areas ought to be well designed and centrally located, but must also provide an intense use of public space. Art, interactivity and instant information should characterize the digital public space. High density of uses and

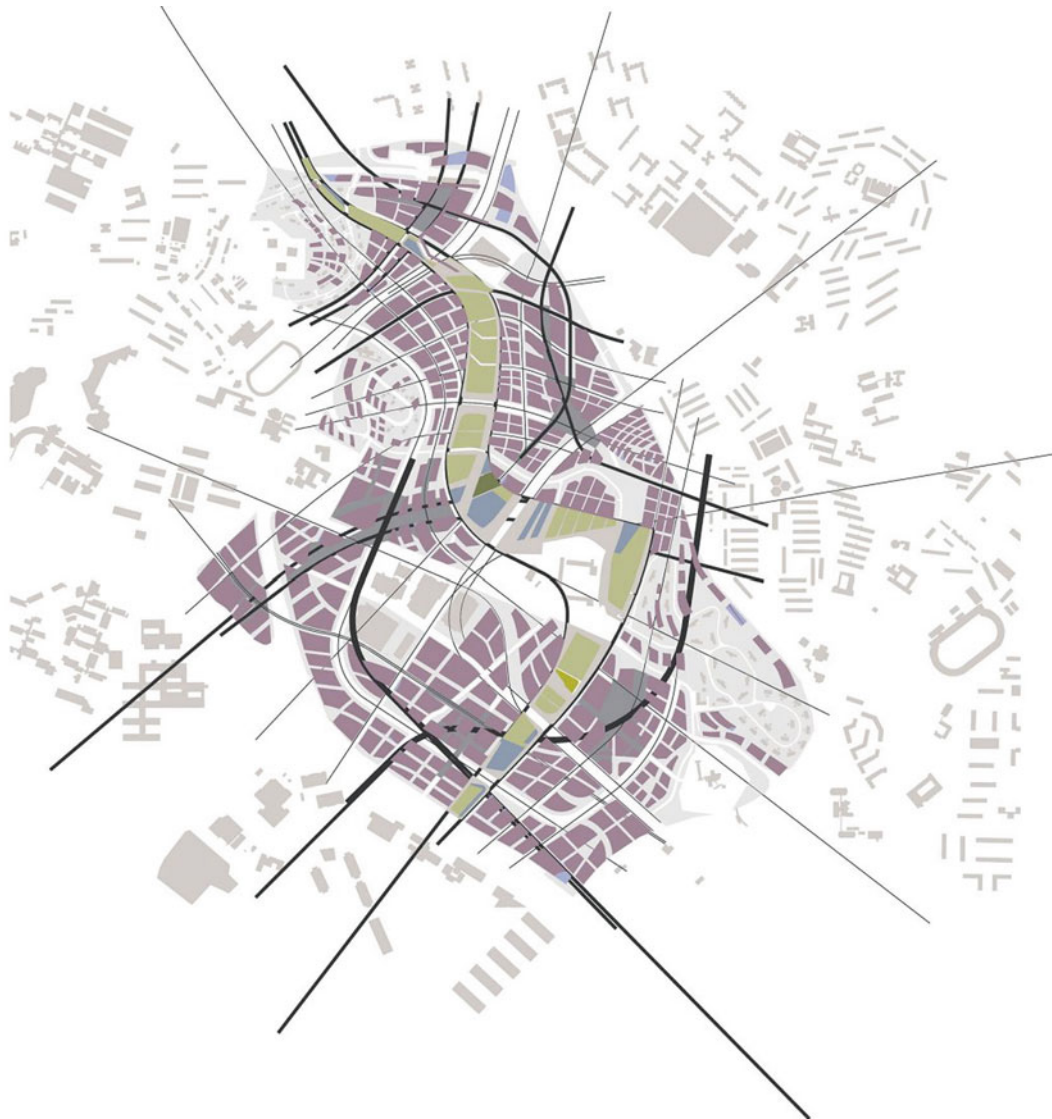


Fig. 21.6 Sketch of One North Master Plan in Singapur, Zaha Hadid Architects, 2001



Fig. 21.7 Milla digital, Zaragoza, 2007. Infography defining the mixture of uses



Fig. 21.8 Media city UK en Salford Quays, Manchester, UK, 2011. Aerial view

activities is more relevant than size, in proportion with the city itself.

The guiding principle is the diversity of uses, combining tertiary with residential, retail and public facilities. The grain of these uses, as the concept defined by Kevin Lynch (1981), should be as fine as possible, mixing every activity and

avoiding any kind of zoning. The inclusion of research and cultural institutions is an important factor, and even more so the connection between knowledge, innovation and business.

The district should provide an ICT infrastructure for total connectivity. It must be highly connected to the rest of the city and to the world. A cutting-edge telecommunications



Fig. 21.9 Visualization of Ciudad Creativa Digital of Guadalajara, México, in the city centre and Morelos Park, 2012

network is vital to provide connectivity, to attract talent and economic activity. These networks should be oriented in turn to better processes of public participation by the community and to a better understanding of how the city works.

Sustainability is another requisite. The infrastructure design must give priority to energy efficiency and responsible management of natural resources for the achievement of a sustainable district. This also applies to an efficient and green public transport network. The district should also be well connected physically with the rest of the city.

There are other elements that may help the evolution and development of a digital district. The existence of an industrial tradition increases the sense of the place as productive. And the creation of a motor is convenient to activate the momentum for the district. This motor could be related to an ICT company, a social or cultural institution, or both, located next to a public space with special significance (Fernández-Ges 2009).

Key Factors for a Successful Digital District

Digital districts are very recent. Many of them are emerging or have just begun to be built. So, it is difficult to evaluate these new urban areas. Nevertheless, some of them have

been working for a decade so we can find some key factors that lead a digital district to success.

Political involvement, through a strong commitment by local and regional authorities, is fundamental. Public institutions are the only players capable of providing the support of cultural, educational and research facilities, such as university and R&D centres, converting the site into an attractive, creative environment. In this regard, a public–private partnership is also needed between government, real estate developers, educational and research institutions and committed ICT companies to develop the district.

The aspiration to generate a focused urbanity through knowledge-based economies and producing urban complexity, through the high density of program, must be accompanied by a great quality of public space, as a catalyst social cohesion, public commitment and participation. Cultural landmark facilities help to enrich the life of citizens and attract technological companies and knowledge-based economy workers (Fernández-Ges 2009).

The interaction of all these elements creates synergies and networks of knowledge between workers and citizens, ultimately forming a ‘living lab’ that boosts the development of the social and human capital to put the city at a global level (see Chap. 20).

Case studies

Arabianranta, Helsinki (2001–)

Located five kilometres north from the city centre of Helsinki, on an area of 85 ha, Arabianranta is one of the first European digital districts. There was a former ceramic industry on the site that has been reconverted into cultural and educational facilities, preserving the heritage of the site. The first master plan from 1992 was promoted by the public company Arts and Design City Helsinki, Ltd., with 64% publicly owned land. The first workers and inhabitants arrived in 2001, quickly growing to 13,000 students, 10,000 residents and 8000 workers in 2010. In the year 2006, there were 300 companies located in the district, two-thirds of which were knowledge-based companies and incubators.

The district is conceived and functions as a living lab, with a cutting-edge telecom network, where the ICT companies test their innovations with the local inhabitants. There are several academic institutions and artistic venues, contributing to the cultural character of the site manifest through artistic collaborations in housing development.

Arabianranta's urban design has three linear strips: the first strip is near the shoreline of the sea and consists of collective housing on a slight slope with generous landscaping; the central strip is occupied by the former industries and public facilities; in the third strip, there are mainly single-family houses. It is characterized by being a mainly residential district, so there is a lack of retail or leisure facilities and less density than a typical vibrant urban area.



22@, Barcelona (2005–)

The district is located in the former textile industrial zone of the city. The area is a large part of Cerdà's *Eixample* (city extension) of Barcelona, including 119 blocks of the urban grid with an area of nearly 200 ha. A modification of the master plan of the city in 1999 increased the buildable surface to accommodate knowledge activities, called @ activities, and more housing. The area should be developed by special plans of at least one block, and could include more, but without broader impact on the whole district.

The first workers and inhabitants arrived in the year 2005. By 2008, there were 25,000 students, 32,000 workers, and 1100 companies in the district. A quarter of the companies were related to ICT and around another quarter to companies such as Energy, ICT, Design, TecMed and Media. The area is expected to have a total of 150,000 workers and 8600 new homes.

The district is contributing to the renewal of an important area of the Eastern part of the Barcelona *Eixample* and the recovery of technological activity in the city, taking advantage of its central location in the existing urban grid. The project includes the comprehensive renovation of the area, with an urban, economic and social program, with many social and educational projects related to ICT learning. The diversity of plans for each block helps to create a mix of housing typologies and social cohesion but also suffers from a too heterogeneous design, and a lack of a network of public facilities.



Masdar City, Abu Dhabi (2007–)

Masdar belongs to a new generation of urban developments that combines the characteristics of an advanced ecodistrict with the concepts and technology of a digital district. It is located in a strategic position, just west of the International Airport in the direction of city centre, and south of other large urban developments in Abu Dhabi such as Yas Marina or Saadiyat Island.

Unlike Yas Marina, designed as a luxury resort that includes different theme parks and a big mall in addition to the marina and Formula 1 circuit, and Saadiyat Island, conceived as a place of luxury residential suburban areas, golf courses and main cultural landmarks, among others a new Louvre and Guggenheim museums, Masdar focuses on energy efficiency, science and technology.

The master plan was designed by Foster and Partners in 2007 and the construction of the district began one year later. It covers a total surface of around 600 Ha, and the design blends concepts of traditional Islamic urban design and architecture, in a compact city of narrow streets. The treatment of shadows, ventilation and the fragmented layout helps to adapt to the severe climate. The Masdar Institute of Science and Technology, just built, is the landmark facility, surrounded by other mixed-use. It is a zero waste and emissions district with a cutting-edge automated transport system that has been designed to link the district to the city centre. The economic crisis has slowed down its implementation, and it is now due to be completed by 2025.



References

- AA.VV. 2000. Modificació del PGM per la renovació de les àrees industrials del Poblenou. Districte d'activitats 22@ BCN.
- AA.VV. 2006. *Zaragoza Milla Digital: Un Nuevo Espacio Público para el Siglo XXI/Designing a New Century Public Realm*. Zaragoza: MIT School of Architecture and Planning: City Design and Development, Urban Studies and Planning, Smart Cities and Media Laboratory.
- Amendola, G. 1997. *La città postmoderna: Magie e puaure della metropoli contemporanea*. Roma-Bari: Laterza.
- Batty, M., K.W. Axhausen, F. Giannotti, A. Pozdnoukhov, A. Bazzani, M. Wachowicz, G. Ouzounis, and Y. Portugali. 2012. Smart Cities of the Future. *The European Physical Journal Special Topics* 214: 481–518. doi:[10.1140/epjst/e2012-01703-3](https://doi.org/10.1140/epjst/e2012-01703-3).
- Castells, M., and P.G. Hall. 1994. *Technopoles of the World: The Making of 21st Century Industrial Complexes*. London-New York: Routledge.
- Da Cunha, I.V., and C. Selada. 2009. Creative Urban Regeneration: The Case of Innovation Hubs. *International Journal of Innovation and Regional Development* 1: 371–386. doi:[10.1504/IJIRD.2009.022728](https://doi.org/10.1504/IJIRD.2009.022728).
- Fernández-Ges, A. 2009. Are Digital Districts An Answer To The Challenges of the Knowledge-based Society? In *City Future Congress*. Madrid.
- Fishman, R. 2005. *New Urbanism: Peter Calthorpe vs. Lars Lerup*. University of Michigan.
- Florida, R. 2008. *Who's Your City? How the Creative Economy is Making to Live the Most Important Decision in Your Live*. New York: Basic Books.
- Garreau, J. 1988. *Edge City: Life on the New Frontier*. New York: Anchor Books.
- Landry, C. 1998. *Helsinki: Towards a Creative City. Seizing the opportunity and maximizing*. Comedia-Bourmes Green: Potential.
- Lynch, K. 1981. *A Theory of Good City Form*. Cambridge: MIT Press.
- Sassen, S. 1991. *The Global City: New York, London, Tokio*. Princeton: Princeton University.
- Sorkin, M. 1992. *Variations on a Theme Park: The New American City and the End of Public Space*. New York: Farrar, Straus and Giroux.
- Tukiainen, J. 2003. *ICT Cluster Study Helsinki Region*. Helsinki: University of Helsinki, Department of Economics.

Further Readings

- Barceló, M., and A. Oliva. 2002. *La ciudad digital*. Beta Editorial: Pacto Industrial de la Región Metropolitana de Barcelona. Barcelona.
- Frey, H. 1999. *Designing the City: Towards a More Sustainable Urban Form*. London: E & FN Spon Press.
- Millán Vázquez, L. 2009. Una aproximación a los mimbres imprescindibles. In *Innovación para el empoderamiento de la ciudadanía a través de las TIC*, 95–99. Bubok Publishing.
- Vegara, A., and J.L. de las Rivas. 2004. *Territorios inteligentes*. Madrid: Fundación Metrópoli.

Pablo de la Cal and Miriam García

Abstract

This chapter analyses the concept of resilience and its influence on the renewal of disciplines such as urban planning and design. The concept and its ecological framework deal with the ability of a system to absorb and learn from the disorder it is subject to, managing to progress without undergoing substantial changes in its structure. The contemporary literature on regional and community planning and management relates resilience to other aspects such as flexibility, adaptability, self-management and durability. Everything seems to indicate that it will play an important role in the future of cities, especially when facing the uncertain perturbations related to climate change, de-industrialisation, unemployment, poverty or terrorism. Among other strategies resilient approaches seek to restore the loss of functionality of natural systems and cultural heritage in the regions.

Keywords

Resilience • Resilient cities • Ecology • Ecological resilience • Resilient world

The concept of resilience emerged in the early twenty-first century, as a renewed way of dealing with urban planning and design. It stems from a global context where human beings are no longer passive accessories, but are seen as protagonists. Effectively, the concept of resilience is linked to the awareness that we are living in a geological era marked by the action of man on the planet: the Anthropocene. Nevertheless, at the start of the 1970s, in *Resilience and Stability of Ecological Systems* (1973), the Canadian ecologist Crawford Holling advanced the idea of ‘*ecological resilience*’, applied to natural systems and social

systems alike, and understood as the ability of a system to absorb and learn from the disorder it is subject to, managing to progress without undergoing substantial changes in its structure (Holling 1973). Not by chance does the term ‘resilience’ originate from Latin *resilio*, which means to bounce back.

To a certain extent, resilience is presented as the opposite of the concept of vulnerability. Working from the perspective of resilience means reducing, and even eliminating the vulnerability of certain areas and communities. It therefore has a physical, social, economic and environmental scope.

In their recent publication on this subject, Brian Walker and David Salt afford a useful definition of the concept ‘*resilient world*’. To apply it to planning and management of

P. de la Cal (✉)
Urbanism at the School of Engineering and Architecture,
University of Zaragoza, Zaragoza, Spain
e-mail: pdelacal@unizar.es

M. García
University of Zaragoza, Zaragoza, Spain
e-mail: miriamgarcia@landlab.es

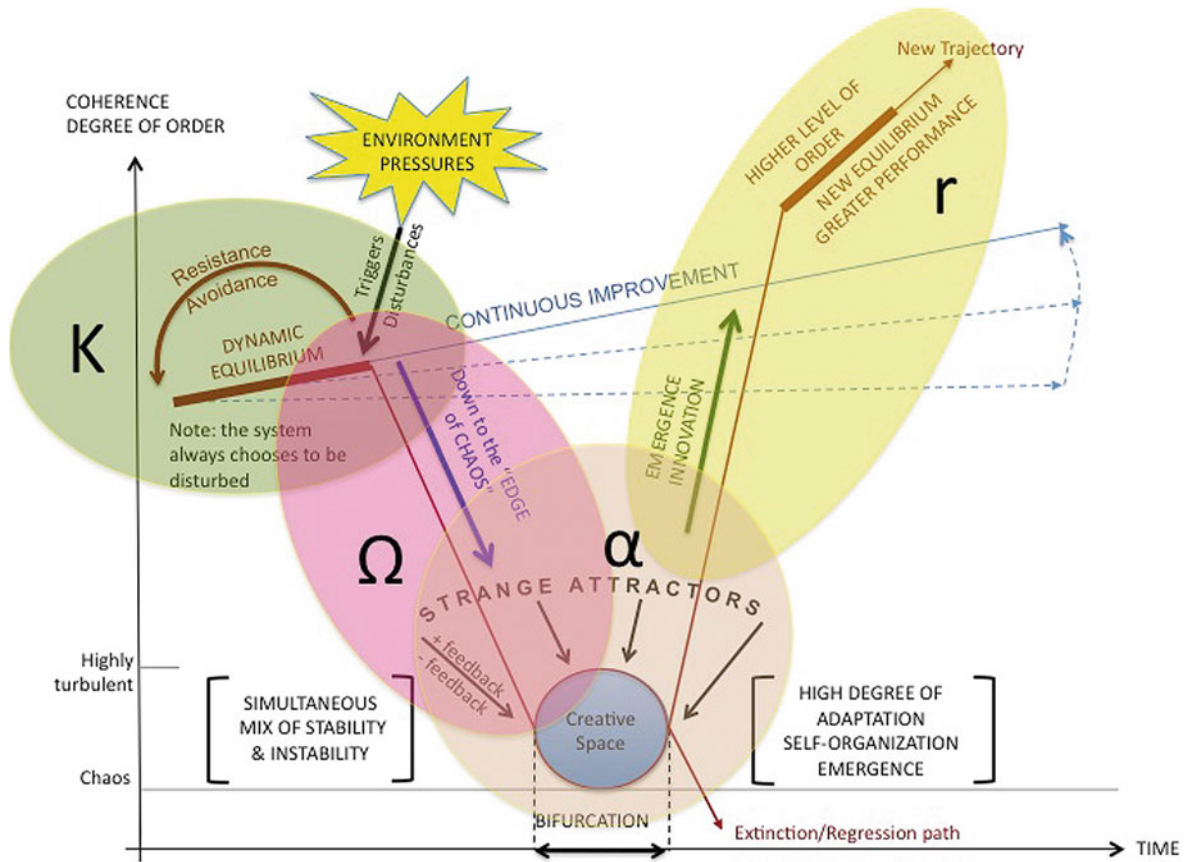


Fig. 22.1 Adaptive resilient cycle, according to Beatrice Benne in *Adaptive Cycles Over CAS Adaptive Process*, 2012

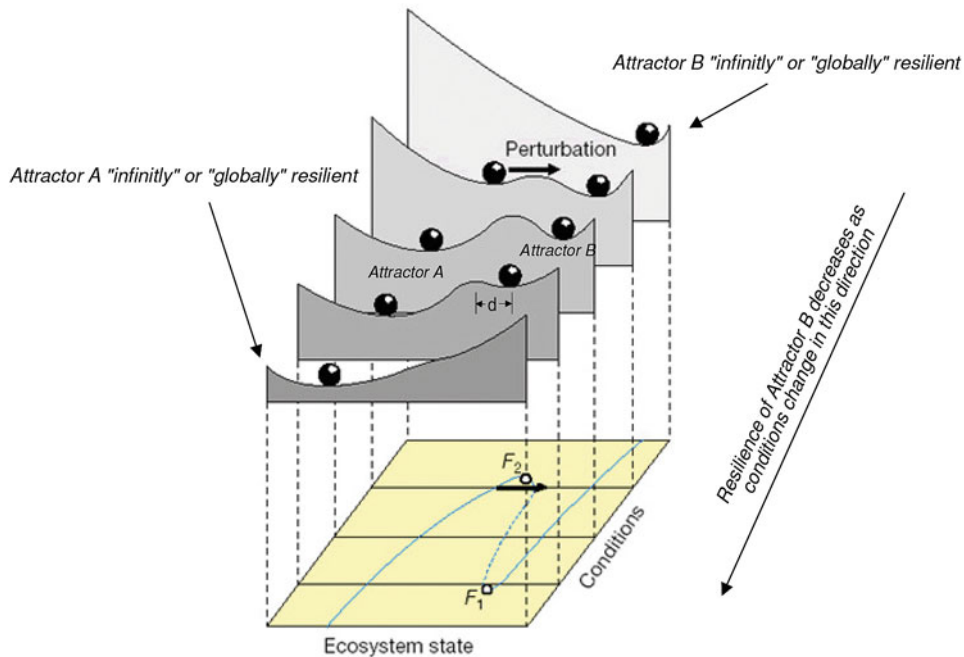


Fig. 22.2 View of the ‘multiple stable statuses’ concept. The external conditions influence the resilience of multi-stable ecosystems, affecting their balance curves to conditions of disorder. Graph published in Scheffer, M., Carpenter, S., Foley, J., Folke, C., Walker, B., et al., *Catastrophic shifts in ecosystems*. *Nature*, 413 (2001): 591–596

space at all scales *they advise bearing nine aspects in mind* (Walker and Salt 2006, 146):

- **Diversity:** A resilient world should promote and sustain diversity in all forms (biological, landscape, social and economic).
- **Ecological Variability:** A resilient world should embrace and work with ecological variability (rather than attempting to control and reduce it).
- **Modularity:** A resilient world should consist of modular components. The modular concept refers to the ability to formalise wider structures or systems based on modules or structured that are connected but not superimposed. Each of these modules must be flexible and capable of adapting to external conditions, without the disorder dragging away the ecosystem as a whole.
- **Acknowledging Slow Variables:** A resilient world should have a policy focus on 'slow', controlling variable associated with thresholds. In general, these conditions or ecological processes are useful to stabilise changes. An example of this would be the frequency of hurricanes.
- **Memory:** A resilient world should be aware of the particularities of its history and act accordingly. For example, learning quickly that the loss of coastal wetlands favours flooding can help us to think about new strategies.
- **Social Capital:** A resilient world should promote trust, well-developed social networks and citizen involvement in leadership, since resilience is strongly connected to society's ability to respond and adapt.
- **Innovation:** A resilient world should place an emphasis on learning, experimentation, locally developed rules and embracing change.
- **Overlap in Governance:** A resilient world should have institutions that have 'overlap' in their governance structures and a mix of public and private property with shared access rights.
- **Ecosystem Services:** A resilient world should quantify all the ecosystem services as it develops proposals and assessments. This need is evident in the coastal planning strategies based on reclassification of wetlands, connection and extent of waterfronts, particularly if the projects have included leisure use in them. These interventions do not only entail defence against the effects of climate change, but also an improvement in the functionality and ecological diversity, as well as the aesthetics and quality of life.

More specifically, the contemporary literature on regional and community planning and management relates resilience to other aspects such as flexibility, adaptability, self-management and durability. Increasingly frequent natural phenomena such as hurricanes or flooding have brought to light the need to be ready to adapt and foresee these new

challenges as opportunities to transform our environments and cities. This has become particularly evident in wealthier, more densely populated areas, where the impact of natural phenomena has had greater consequences. Hurricane Katrina caused material damage in New Orleans (USA) in 2005 amounting to more than 80 billion dollars is just one example, among others such as the floods caused by major rivers such as the Mississippi in the USA or the Danube in Europe.

In this context, we should not forget that the concept of resilience differs from mitigation in that it focuses on creative adaptation, in regenerating a new culture and new processes inherent to the communities and regions through progressive adaptation. It is not so much about avoiding, but evolving. In other words, a new way of thinking is required, which Brian Walker and David Salt called '*resilience thinking*'.¹ This connects ecological and social systems in a more complex, adaptive way. Certain transformations arise this way, leading to new circumstances, which in turn provide new benefits. As the same authors describe, it would be something like thinking in the farm/farmer/business/region system as an adaptive system that is constantly changing and adapting to a world in constant flux. This ability to evolve, to absorb changes, without transforming the essential is what maintains identity.

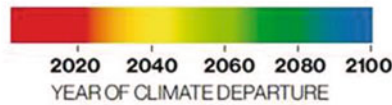
In recent years, the concept of urban or regional resilience frequently appears in international bibliographies, and everything seems to indicate that it will play an important role in the future (Spirn 2012; Pickett et al. 2013). Organisations such as Resilience Alliance, Community and Regional Resilience Institute, Network on Building Resilient Regions are just some examples of associations that promote and study this concept in a global context. Their interest does not lie strictly in the application of the concept to the study of its environmental connotations, but also in the study of the forces that drive urban ecosystems and which determine their success, contending with factors such as de-industrialisation, unemployment, poverty or terrorism.

In view of these problems, particularly if they arise drastically and suddenly, leading to an unexpected crisis situation, resilience represents the capability of the urban managers to deal with this decline, to adapt to the new situation and to redefine new development. 'Resilient cities' therefore are superior to others where, in similar circumstances, the managers have been unable to adapt to new

¹"A resilient socio-ecological system is a 'desirable' state (such as a productive agricultural or industrial region), has greater capacity to continue providing us with the goods and services that support our quality of life while being subjected to a variety of shocks" (Walker and Salt 2006, 32).

CLIMATE CHANGE DEPARTURE WHEN CITIES WILL FEEL THE EFFECT

With no cuts in greenhouse gas emissions, the shift into new climate territory for different cities in the world will occur in different years, give or take about five years say scientists.



The global mean year of climate departure is 2047. The mean for the tropics (shown in hatched area) is 2038, compared to 2053 for all other latitudes



Fig. 22.3 Calendar of the effects of climate change in the world’s cities published in *The Independent*, 2013. Climate change will be noticed in tropical cities in 2038 and in other latitudes by 2053

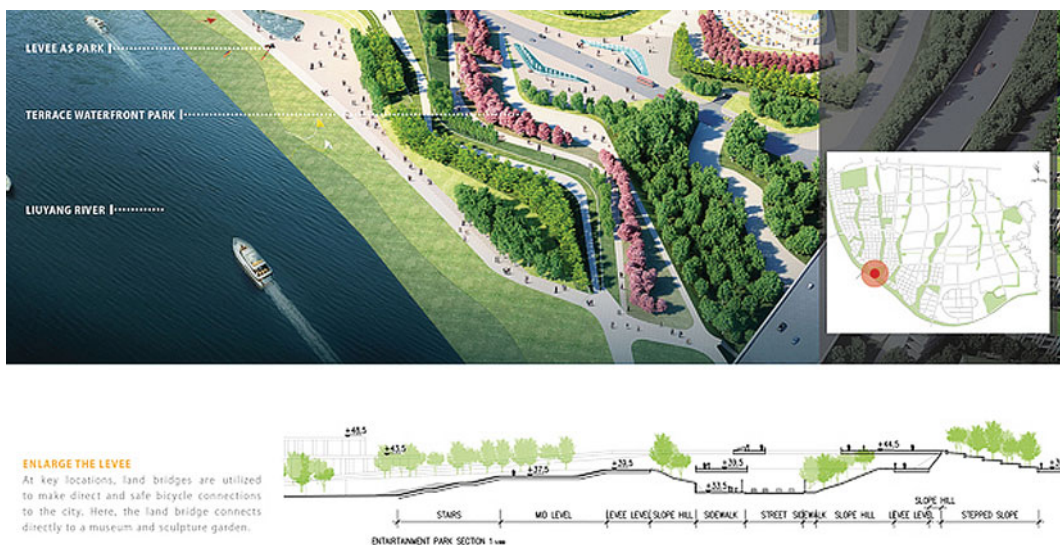


Fig. 22.4 River Liuyang in Changsha (China). Project author: SWA Group, 2013. Commission: Changsha FuRong Urban Construction Investment Company. Cross section and perspective view of the new river park

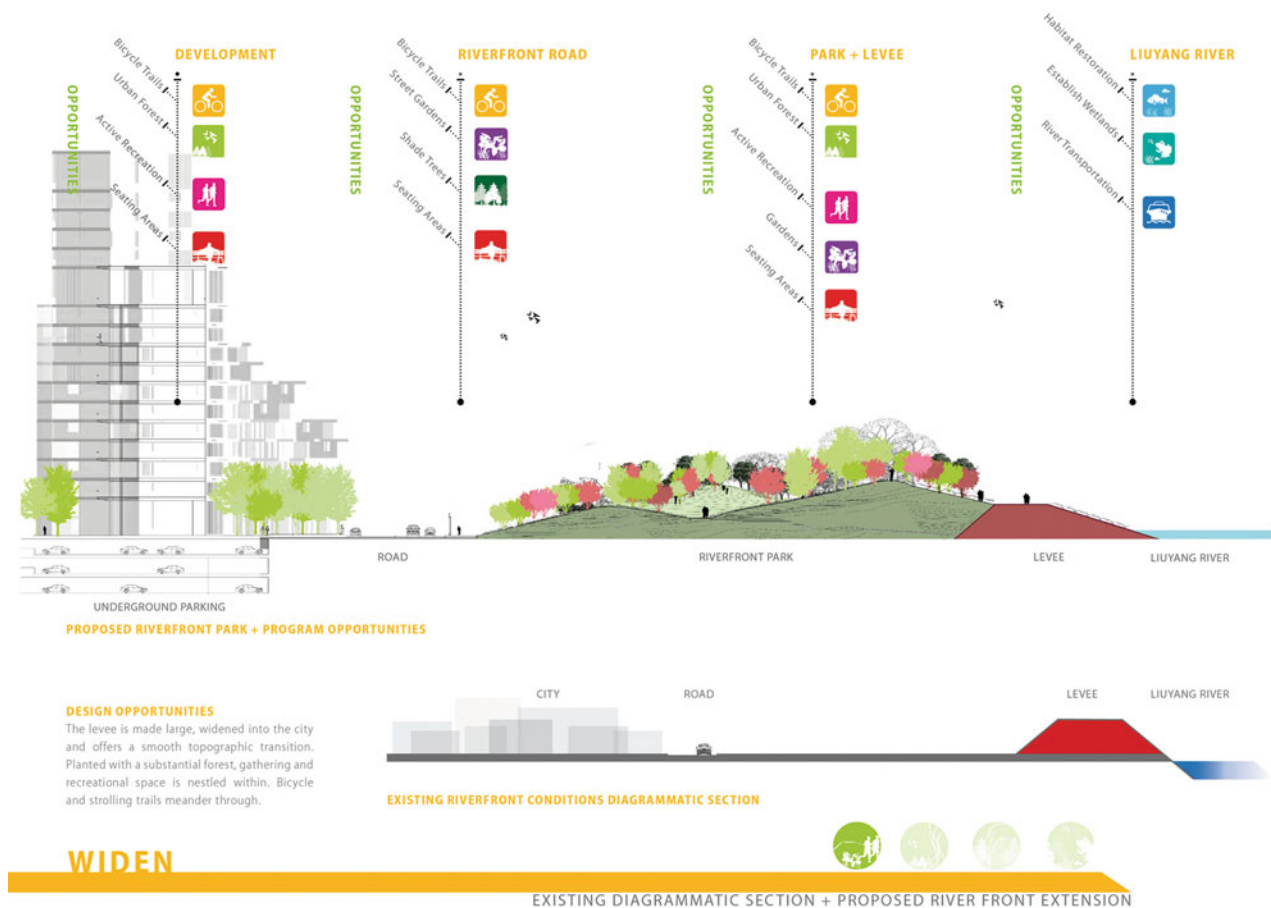


Fig. 22.5 River Liuyang in Changsha (China). Project author: SWA Group, 2013. Commission: Changsha FuRong Urban Construction Investment Company. Existing conditions and intervention proposal along the river banks. The ‘defence moat’ as a design argument for a river park

conditions that could be used to drive renewed urban models.

Obviously, cities that have anticipated this sort of situations in their management will confront these risks more successfully. And so, will do others that have incorporated ecological infrastructures able to understand ecology as a technical method to ensure that living forms have their own life and are able to contribute to keeping habitable environments in good conditions.

In this sense, the work of over 120 interventions carried out between 1989 and 1999 within the framework of the International Architecture and Construction Exhibition (IBA) in Emscher Park were pragmatic pioneering examples for other international activity.² In this major territorial recycling project, the environmental conditions of the urban areas, their industrial and mining environments, and the

ivers and canals, exhausted from over one hundred and forty years of industrial exploitation, required new perspectives and new rules to rebuild this urban system. The answer lay in redesigning the industrial containers, reusing the transport facilities and introducing new cultural and artistic programs.

As a result of this experience in the Ruhr Valley, internationally there has been a greater commitment to interventions engaged with specific ecological criteria. There are many examples of recovery of polluted rivers where certain strategies have driven projects adapted to new conditions. The linear park designed by Dlandstudio in the Gowanus Canal in Brooklyn (New York) (Drake and Kim 2009, 23–28) reinterprets the natural history of the Gowanus basin as a marshland, proposing a filtering system, which not only has a cleaning effect based on phytodepuration techniques, but also reproduces the laminar effect of the former wetlands in this region and their role of protecting against floods (see case study at the end of this chapter).

²See <http://en.landschaftspark.de/the-park/evolution/iba>.



Fig. 22.6 Cycle lane in Bogotá, Colombia. Next to Sao Paulo, Bogotá has the largest network of exclusive cycle lanes in any Latin American city, implemented at the end of the nineties, and now covering over 350 km. Bogotá is also known for its intensive use of public transport, which has drastically reduced the number of cars, traffic and pollution. Transmilenio, the massive transport system in Bogotá and Soacha, is a system of rapid transit buses (BRT) in a closed type corridor system, branch-fed, with a raised platform and capsule stops where the fare is paid before boarding. Since it was built in 1998 carbon emissions have been reduced by over 1.7 million tonnes (only between 2006 and 2009)

In other contexts, resilient approaches try to restore the lost function of natural systems or regional cultural heritage. China offers well-known examples where after periods of exponential growth, local governments changed their attitude to the environment. In the case of Quan'an, the combination of pollution and the channelling of the Luan and Sanlihe rivers have caused environmental deterioration, increasing the risk of flooding, leading to the appearance of numerous severely degraded areas and seriously affecting life in the city. Local authorities decided to convert the Sanlihe River into a resilient green river, by substituting the channels that dumped effluent in the river, with a passive, natural system leading to an ecological recovery (Turenscape webpage 2016) (see case study at the end of this chapter).



Fig. 22.7 Michel Desvigne, proposal for urban development of Biesbosch, Holland, where the rivers Rhine and Meuse merge. Rotterdam Biennial, 2005. Aerial photograph

The recent action on the Liuyang riverfront in Changsha, China, covering a length of 10 km, has been celebrated throughout the professionals (American Society of Landscape Architects (ASLA) 2016). The proposal for the riverbanks to mix city and park through a green tapestry transforms a strictly defensive moat from the river into a wider riverside park. This strip now provides overflow lagoons and extends a system of green fingers towards the inner city, interspersed with built-up developments. As a result, the city and its residents are reunited with their cultural heritage, based on alliance between the river and the city with measures of protection familiar to the local population.

At a territorial scale, considering riverbeds from the perspective of resilience as urban infrastructure and new ways of inhabiting territory, is gaining an increasingly leading role. The joint work by urban planners, geographers, landscape architects, etc., is indispensable to this new outlook.

In this sense, the contributions of the French landscaper Michel Desvigne are particularly noteworthy. He has



Fig. 22.8 Michel Desvigne, proposal for urban development of Biesbosch, Holland, where the rivers Rhine and Meuse merge. Rotterdam Biennial, 2005. Scenario without existing dikes



Fig. 22.9 Michel Desvigne, proposal for urban development of Biesbosch, Holland, where the rivers Rhine and Meuse merge. Rotterdam Biennial, 2005. Site of the new residential growth zones

worked on several large-scale projects, which he calls ‘great landscapes’. His proposal for Biesbosch Stad in Rotterdam in 2005 has been widely published.³ Located at the meeting of the Rhine and Meuse rivers, it is an area of agricultural land exposed to periodic flooding, with a large number of dikes that permit cultivating the surrounding areas. The proposal modifies the dike system, allowing water to flood into the small river beds again. In this flood-prone area, Desvigne tries to give space to water and re-naturalise the delta, but at the same time seeks a mechanism for the urban growth of Rotterdam in the future. In an exercise of

‘inverting terms’, he puts forward a new system of land occupation for the residential expansion of the city. The footprints left behind by the original river beds are now occupied, designing ‘river bed districts’ that are built over the dikes instead of under them.

These examples, like many others executed in recent years, show how resilient thinking responds to the global challenges of urban ecology, (climate change, flooding, air, land and water pollution, production resources, etc.). In short, an unwavering approach in our cities and territories to guarantee global sustainability.

³Proposal submitted to the International Biennale Rotterdam, 2005. Authors: Michel Desvigne, Bas Smets, Sophie Mourthé and Enrico Ferrari (Basdevant 2008).

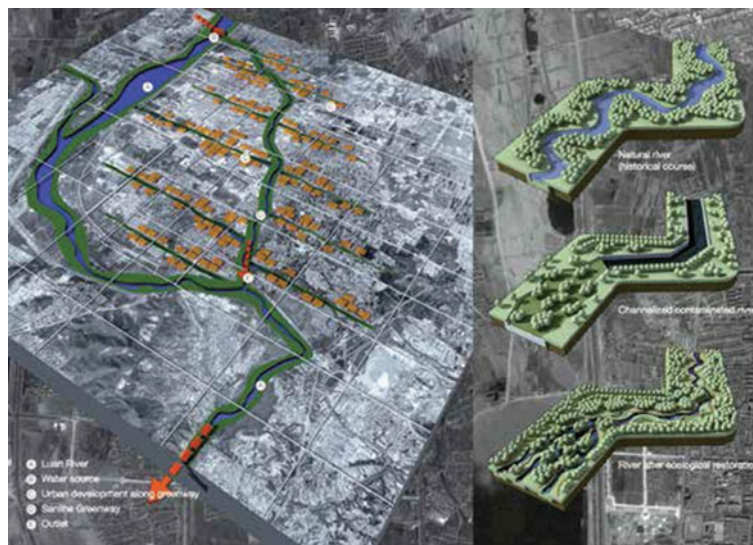
Case Studies

Qian'an Sanlihe, Qian'an city ecological corridor, China (2007–2010)

This project in the city of Qian'an, located at the foot of Mount Yanshan, on the banks of the Luan River, was executed between 2007 and 2010. The project, covering an area of 135 ha, was developed by the Turenscape team. It is an internationally recognised project that has won several awards, including the World Architecture Festival, Landscape Category Winner, 2011 and the ASLA Honor Award, 2013.

The combination caused by pollution and the channelling of the Sanlihe and Luan rivers brought environmental deterioration of the area, increased flood risk and severely degraded areas affecting the quality of life in the city. It was then that the local council decided to regenerate the Sanlihe River and convert it in a green, resilient infrastructure, replacing drains for passive, natural filtration methods, improving ecological quality. At the same time, the river was recovered as a leisure area with footpaths and cycle paths.

The landscape work carried out on the River Sanlihe has reduced the ecological and social vulnerability of the city, thus enhancing its resilience. By creating these ecological and sensory benefits, the projects have catalysed sustainable development in the entire region.



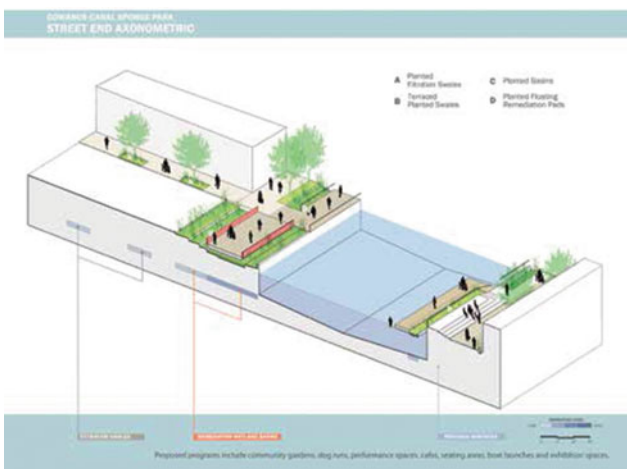
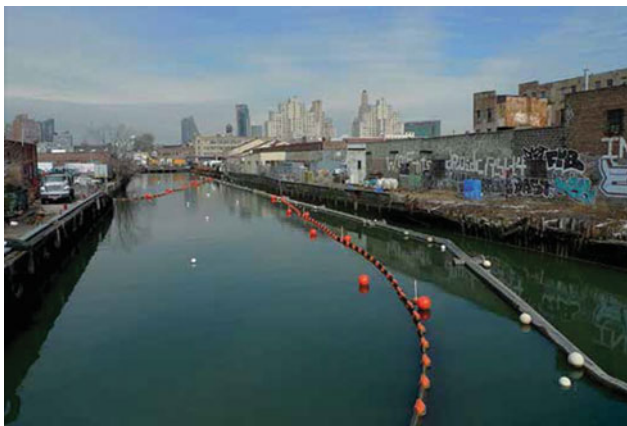
‘Sponge Park’ in Gowanus Canal, Brooklyn, New York (2008–2015)

The Gowanus Canal (Kings County, Brooklyn), approximately 3 km long and 30 km wide, was built in the middle of the nineteenth century for barges and, by the end of the twentieth century, had reached alarming levels of pollution, both in the water itself and the surrounding land.

Sponge Park, designed by the Dlandstudio landscaping team, owes its name to the filtering system based on phytodepuration which features the interaction between selected plants, soil and the organic and inorganic compounds in the contaminated land. The overall action of the vegetation and the underground cisterns, located in three differentiated

strips that work in different situations (heavy rain, medium storm, etc.) help to eliminate the contamination from the water and the soil, thus improving water quality and increasing animal biodiversity.

Dlandstudio acknowledges the natural history of the Gowanus basin as marshland and applies resilient thinking to reproduce the ‘sponge effect’ and the natural cleaning strategy of wetlands in natural areas, using them effectively against flooding. At the same time the plan proposes an urban weaving strategy, connecting adjacent public and private land to the water, involving many agents in construction to design a new type of public space. The project has won numerous awards, including the 2011 AIA (Honor Award, Regional and Urban Design, 2011).



References

- American Society of Landscape Architects (ASLA). 2016. <https://www.asla.org/>. Accessed September 29.
- Basdevant, M. (ed.). 2008. *Intermediate Natures: The Landscapes of Michel Desvigne*. Basel, Boston, Berlin: Birkhäuser Verlag AG.
- Drake, S.C., and Y.K. Kim. 2009. Sponge Park, New York City: A flexible stormwater management project in Brooklyn to clean up a waterway and improve public access. *Topos—The International Review of Landscape Architecture and Urban Design* 68: 23–28.
- Holling, C.S. 1973. Resilience and stability of ecological systems. *Annual Review of Ecology and Systematics* 4: 1–23. doi:10.1146/annurev.es.04.110173.000245.
- Pickett, S.T.A., M.L. Cadenasso, and B. McGrath (eds.). 2013. *Resilience in Ecology and Urban Design: Linking Theory and Practice for Sustainable Cities*, vol. 3. Future City. Dordrecht: Springer. doi:10.1007/978-94-007-5341-9.
- Spirn, A.W. 2012. Ecological urbanism: A framework for the design of resilient cities. In *Resilience in Ecology and Urban Design*, ed. S. Pickett, M. Cadenasso, and B. McGrath. Dordrecht: Springer Netherlands.
- Turenscape Webpage. 2016. <http://www.turenscape.com/>. Accessed October 3.
- Walker, B., and D. Salt. 2006. *Resilience Thinking: Sustaining Ecosystems and People in a Changing World*. Washington, DC: Island Press.

Further Readings

- Hough, M. 1995. *Cities and Natural Process: A Basis for Sustainability*. London: Routledge.
- Méndez, R. 2012. Ciudades y metáforas: sobre el concepto de resiliencia urbana. *Ciudad y Territorio, Estudios Territoriales*, vol. XLIV, 215–232.
- Mostafavi, M., and G. Doherty (eds.). 2010. *Ecological Urbanism*. Cambridge: Harvard University Graduate School of Design—Lars Müller Publishers.

Raimundo Bambó and Miriam García

Abstract

This text mainly centres on how cartography becomes a research, analysis and creative prospecting tool to develop cities. The text also deals with the evolution of urbanism and the relationship of cities with nature through its opening to other fields of interest such as ecology and landscape through improved mapping techniques. In this context, mapping urbanism has evolved from drawing the morphology of cities to mapping the metabolic relations among the different elements and agents that build the city. From this cultural position, mapping urbanism has become an interdisciplinary tool that recognises the combination of conditions and agents (human and non-human) that intervenes in them. The selected works feature a series of open maps that reveal aspects, sites and urban relationships that are unexpected and unexplored thus helping the discipline to evolve.

Keywords

Urban cartography • Mapping • Landscape urbanism • Urban metabolism • Resilient cities

In the field of design, a map is more than a tool to represent reality; it is a way of answering questions that arise during the design process and are even an inherent part of the process.¹ This text focuses primarily on how to think of the city through its cartography or mapping but also deals with the evolution of urbanism and the relationship of cities with nature. Maps reflect the way societies recognise their environment. The things that are valued, and sometimes even those that are sensed, are drawn and annotated. That is how cartography becomes a research, analytic and creative tool.

¹“To map is in one way or another to take the measure of a world, and more than merely take it, to figure the measure so taken in such a way that it may be communicated between people, places or times” (Cosgrove 1999, 2).

R. Bambó (✉)
Urbanism at the School of Engineering and Architecture (EINA),
University of Zaragoza, Zaragoza, Spain
e-mail: rbambo@unizar.es

M. García
School of Engineering and Architecture (EINA),
University of Zaragoza, Zaragoza, Spain
e-mail: miriamgarcia@landlab.es

Gilles Deleuze and Felix Guattari identified this issue when comparing the idea of a ‘map’ with that of ‘tracing’: “What distinguishes the map from the tracing is that it is entirely oriented toward an experimentation in contact with the real. The map does not reproduce an unconscious closed in upon itself; it constructs the unconscious. (...) The map is open and connectable in all of its dimensions; it is detachable, reversible, and susceptible to constant modification” (Deleuze and Guattari 2004, 13).

We could, therefore, say that cartography is something that is constantly evolving, as is the discipline itself. In this sense, it is perhaps important to emphasise how the opening of urbanism to other fields such as ecology and landscape has also updated urban mapping techniques.

From the cities of the modernist urbanism, conceived as machines and infrastructure, to the growing contemporary recognition of cities as landscapes, i.e. as active, dynamic and operational systems, there is an interesting path that can also be followed through cartography. From this outlook, when we talk about cities, we are actually addressing the uncertainties of socio-ecological systems in the framework of complex adaptive systems (CAS). In this context, mapping urbanism has evolved from drawing the morphology of

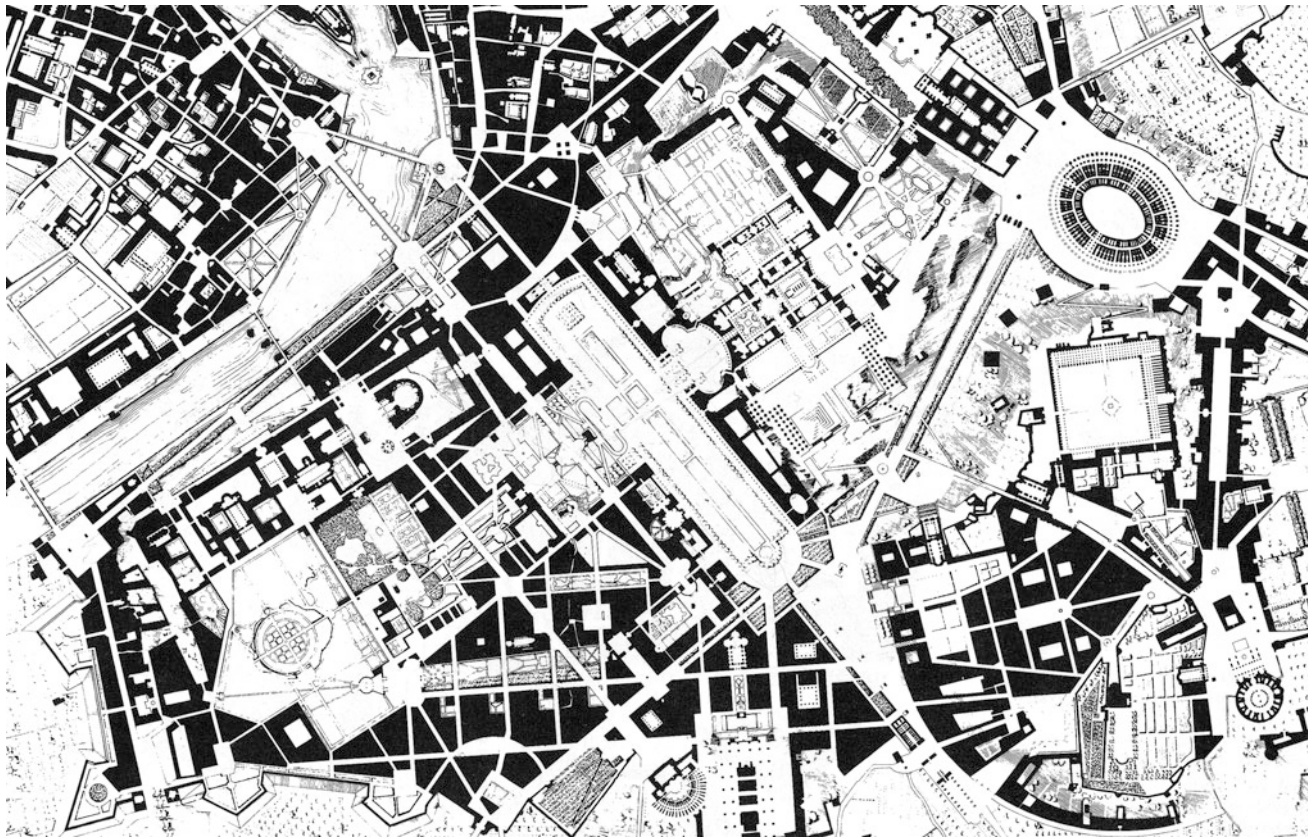


Fig. 23.1 *Roma interrotta* competition, 1978. *Urban Collage* depicting the proposal by Colin Rowe

cities to mapping the metabolic relations among the different elements and agents that build the city. As such, mapping urbanism has become an interdisciplinary tool that allows society to draw up a new resilient framework from which it can tackle the challenges of our century.²

The use of mapping processes as operative tools, not only for communication but also for urban analysis and design, is not recent. In this respect, the case of *Pianta Grande di Roma* (1736–48) by Giambattista Nolli is paradigmatic. Far from being limited to drawing the form of the city—although that itself would have been an advancement compared to the usual way of depicting Rome, from a bird’s eye view or in perspective—Nolli’s plan suggested a number of interesting questions relating to architecture and its context, including the definition of public spaces or the variety and complexity of its uninhabited landscape (Tice et al. 2016). The *Pianta Grande* was symptomatically revisited in 1978 for the *Roma Interrotta* exhibition, where twelve architects, including Aldo Rossi, Venturi & Rauch and Michael Graves, among others, designed different proposals for the city based on Nolli’s plan (Graves 1979, 3–4), at a time when these

issues centred the architectural debate (Larrumbe 2014), opposing the complexity the urban project with the poverty of the master plan. Colin Rowe, another of the participants at the exhibition, had played a key role in the revival of figure/ground techniques for the representation of cities. These techniques would be used by other architects such as Louis Arretche, Michel Mart, Bernard Vitry and Maurice Minosts in the conservation plan of the Parisian district of Le Marais in 1965; Joseph-Paul Kleihues in his project for the Berlin IBA in 1987; or more recently, the British collective URBED, using this kind of map as a tool for communication and citizen participation when preparing different urban proposals (Hebbert 2016).

Beginning with an analysis of the recent evolution of urban mapping, this chapter focuses on contemporary scientific paradigms that defend cities as nature, as complex, self-organised systems. In this way, mapping today centres its efforts on conceptualisation and interpretation, beyond purely formal issues. It pursues recognition of the combination of conditions and agents (human and non-human) that intervene in cities. A city is not only recognised by its ground plan but also needs complementary, innovative diagrams and notations to identify items, processes and relationships that are in constant evolution. That is precisely why mapping

²“(…) the function of mapping is less to mirror reality than to engender the re-shaping of the worlds in which people live” (Comer 1999, 213).

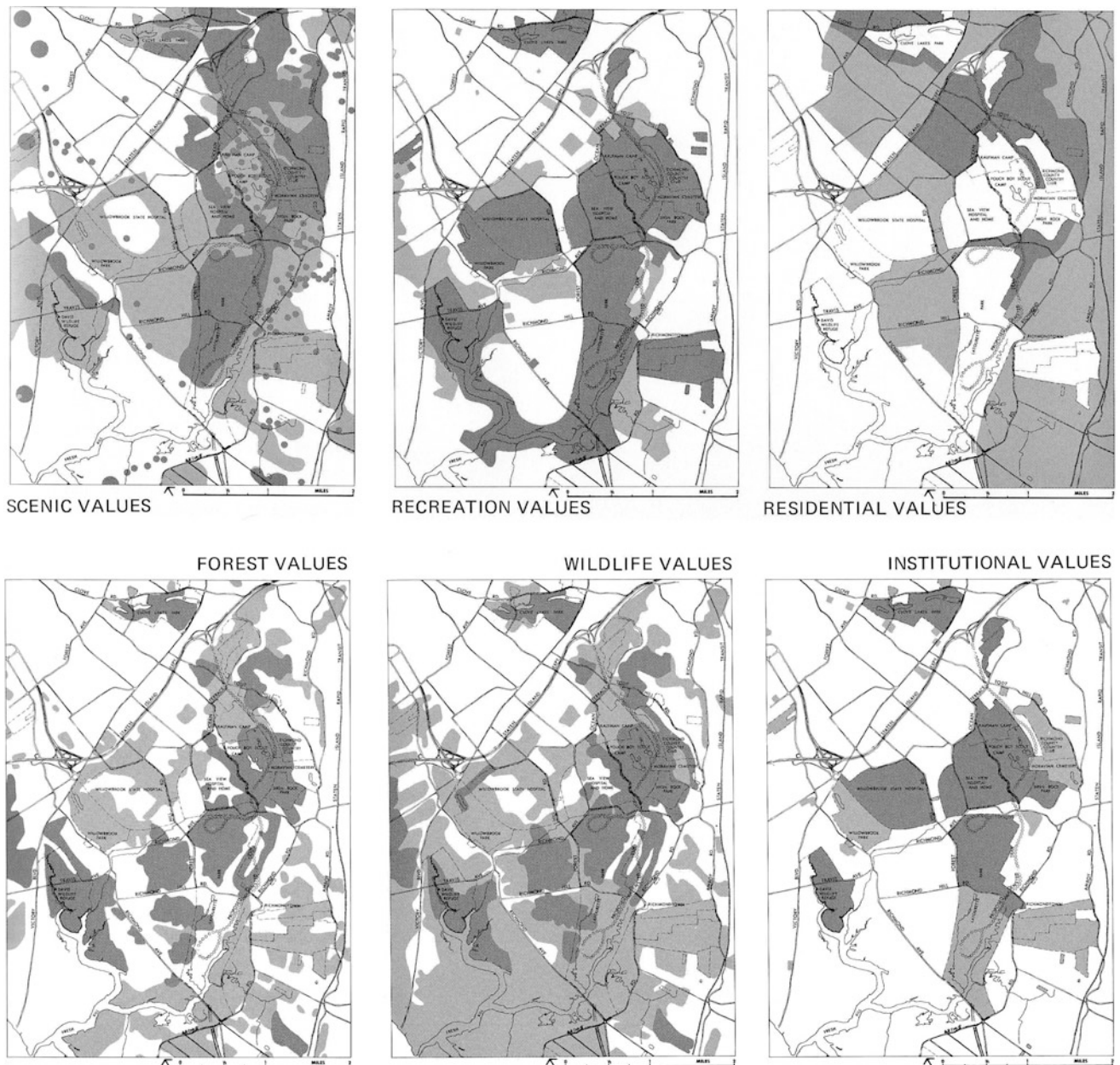


Fig. 23.2 Mapping techniques by Ian McHarg

emphasises the creative and time-developmental agency of ecology in the formation of urban life as opposed to envisaging an ideal equilibrium between nature and city.

The evolution of the idea of landscape as a metaphor to rejuvenate urban conditions has been developed in recent years by maps that show the dynamic quality and the relevance of infrastructural conditions. These also include social, ecological and performative issues of cities, in order to develop holistic, contextualised responses which often lead to ongoing planning processes. This model relies heavily on diagrams of phasing, animal and human habitats, planting systems and water systems, attempting to explain

the complex site conditions and potentials and the way they are inter-related. It develops a “space-time ecology that treats all forces and agents working in the urban field and considers them as continuous networks of inter-relationships” (Corner 2006, 30). This type of map works at all scales, tending bridges between landscape architecture, urban planning and regional and landscape planning.

It is clear when researching urban theories and the mapping techniques to communicate them that they are products of continuity. For example, Ian McHarg’s mapping analysis techniques are clearly built upon Patrick Geddes’ methods in for regional planning from several years earlier.

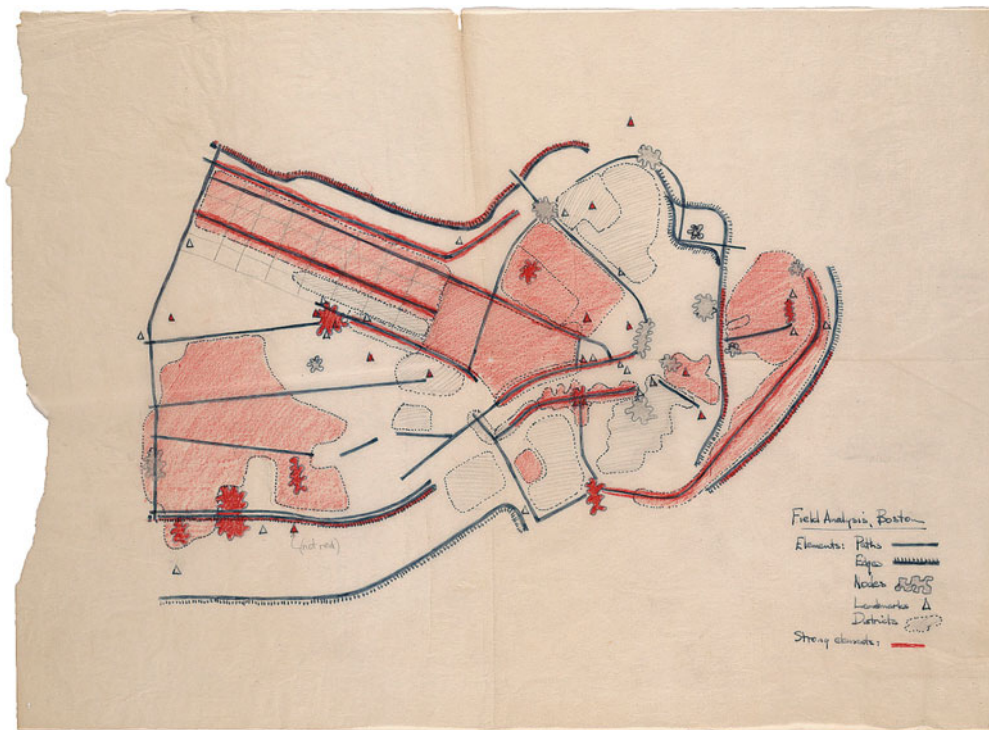


Fig. 23.4 Kevin Lynch, collective map—or collective image, in the words of its author—of Boston, made from oral interviews with some of its inhabitants, 1960

energy, fresh water, biomass and food; waste, sand and sediment; information and transport of goods and people. These flows affect the daily life of the population, and the functioning of the urban socio-ecological system as a whole, each of them being indispensable for the functioning and well-being of the city. During the exhibition, the study led by FABRIC, a team consisting of James Corner's studio Field Operations and TNO, mapped the results of the study of sustainable urban development in Rotterdam, based on metabolism. Nonetheless, all these conditions refer to places, and that is precisely why their mapping is important, since, from the design of the landscape and the city, space and time qualities are affected, altering not only their visible appearance but also the increasingly important environmental aspect. Cities as landscapes, the landscape as an environment and mapping as a tool to read and write new relationships.

In addition to these contributions, it is important to mention other research that uses mapping techniques based on sensitivity, perception and identity. Kevin Lynch, who proposed an urban analysis method in *The Image of the City* (1960) based on mapping collective perceptions of its inhabitants, or Jane Jacobs in *The Death and Life of Great American Cities* (1961), who saw cities as ecosystems that had their own logic and that could be altered through their use and activation, are two of the most representative examples (see Chap. 9).

These maps can be paired to those of other disciplines, tangential with architecture and urbanism to a greater or lesser extent, aiming to reveal phenomenological and performative aspects of the city. Among others, different works by the Situationist International in the fifties (Paquot 2010, 51–55; Wood 2010, 185–200); the Free-Flux tours (1976) or group walks through forgotten places in Manhattan, organised by George Marcunas and the Fluxus group; the municipal compositions by John Cage, generated from random graphics on plans of different cities; or different Land Art interventions confined to the urban area, such as the work by Robert Smithson *A tour of the Passaic monuments, New Jersey* (1967). Transcending time, activating space and recognising the ability of new technologies as a meeting point for different communities, distant from each other, is another of the challenges cities face, and hence, their mapping. The hidden potential behind the development of different applications (apps) to connect cultural fabric or activism means that mapping must be recognised as an open-ended tool and a collective means of communication. The work by Urban Gallery carried out by Raoul Bunschoten and CHORA, belong to this scenario, as described in one of the following case studies. All of them feature a series of open maps that reveal aspects, sites and urban relationships that are unexpected, unexplored and even repressed, highlighting, as observed by Paul Éluard that there are other cities, and they are in this one.

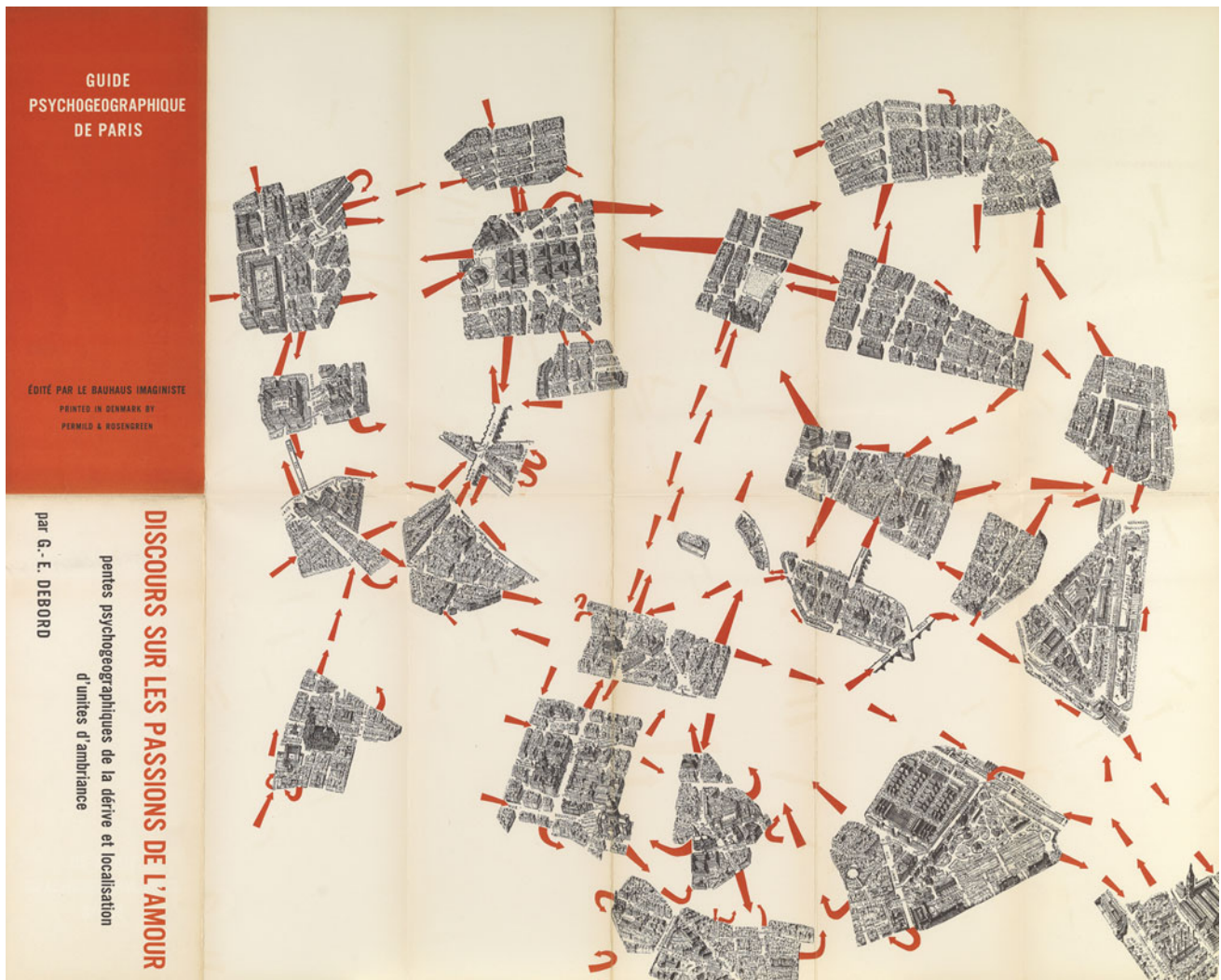


Fig. 23.5 *Guide Psychogéographique de Paris: Discours sur les passions de l'amour*, Guy Debord and Asger Jorn, 1956

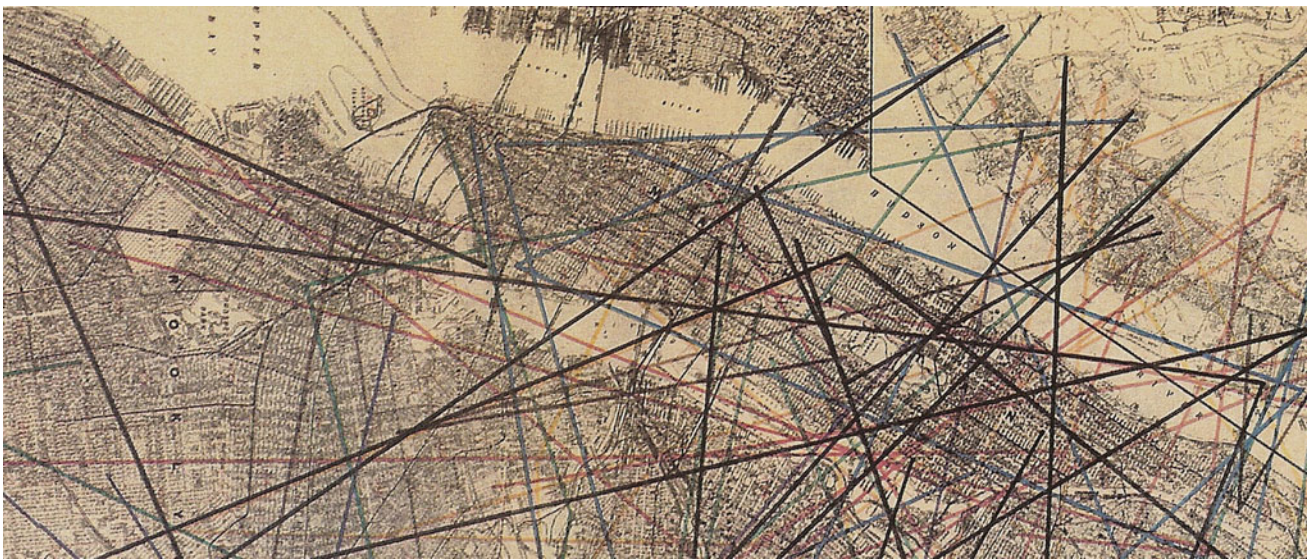


Fig. 23.6 Plan-score of the composition by John Cage *49 waltzes for the 5 Boroughs*, as published in the *Rolling Stone* magazine in October 1977



Fig. 23.7 Urban Metabolism. 2014 International Architecture Biennale of Rotterdam

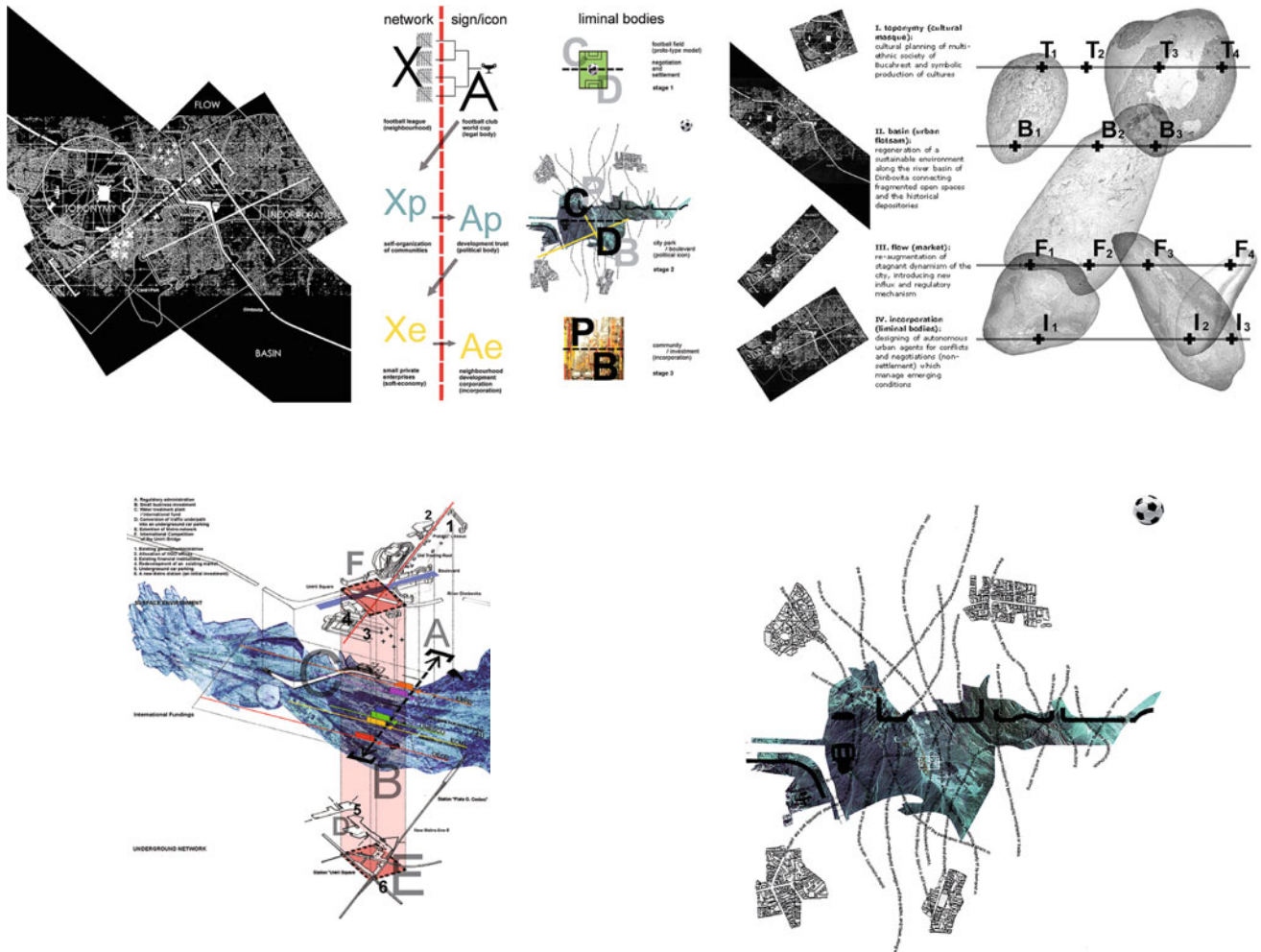
Case Studies

Bucharest Plan, Romania (1996)

CHORA is a small group of architects headed up by Raoul Bunschoten, who has been linked to the Architectural Association of London. They use the term ‘Chora’ to refer to the thresholds between local and global conditions. As James Corner says, Bunschoten is interested in the performative possibilities afforded by cartography to develop or to catalyse future scenarios (Corner 1999, 240–244).

In the 1996 Bucharest Plan, Bunschoten uses the Black Sea river system as a dynamic model, assuming that the underlying geomorphology of the earth is related to the organisational structure of the cultural relations on the surface (Bunschoten et al. 2001). A schematic look at the places

reveals that they are structured on different levels: Toponymy, Basin, Flow and Incorporation, linked to a part of the city. The intermittent matching between layers and scales is carried out through metaphoric stepping-stones that enable small implementations to occur and cause changes across all scales and on other layers. Both of them, the model and the game, must cope with the precedent and future urban conditions of the ‘first skin’ (the physical crust where we live) and the ‘second skin’ (the different changing conditions and flows wrapping said skin). “The increasing complexity of the second skin calls for the definition of a new practice—and with it a new tool box—for the construction and management of cities”. In this context, when a part of the city is designated as a ‘meta space’ it then becomes an ‘Urban Gallery’, a public fluid space that evolves over time and enables different forms, uses and mechanisms for participation.



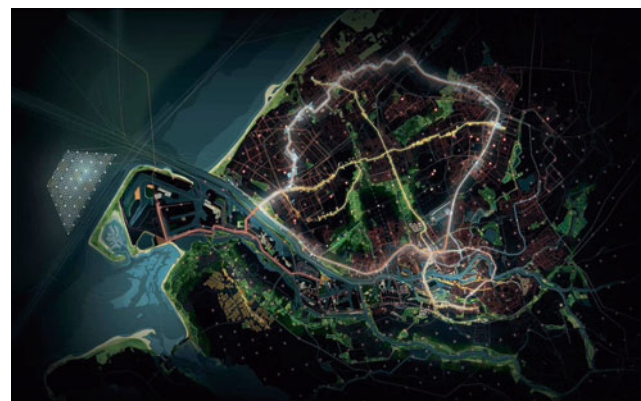
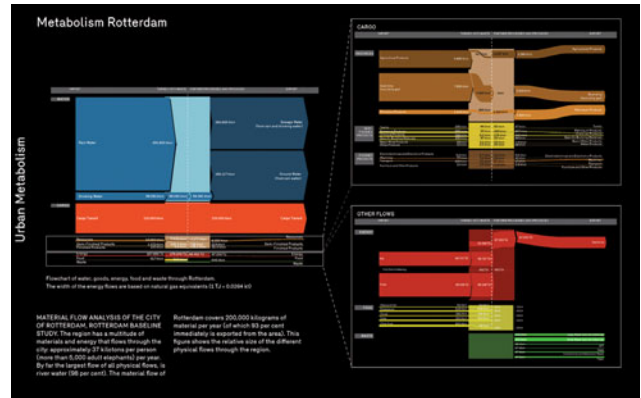
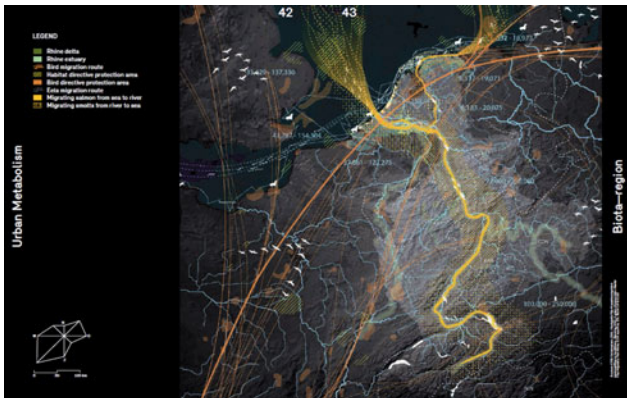
Sustainable Development of Rotterdam (2014)

The city consists not only of elements but also of relationships and flows between them. Of course, human flows, but also flows of goods, water, heat, energy and information that are processed, assimilated and valued, which can be considered to be goods or waste, as applicable. This innovative way of looking at and mapping cities was carried out in 2014 by FABRIC, James Corner Field Operations and TNO at the Atelier Rotterdam Project, not only taking the city into account, but also the entire region, in a search for a series of instruments to achieve the resilient city of the future (Gemeente Rotterdam et al. 2014).

The project uses innovative mapping techniques to analyse the different flows through Rotterdam. At the same time, the research focussed on the influence of those flows on the quality of life, and on how they affect the

development of space. To achieve it, the study and cartography were developed at both regional and local levels. This project is an example of research through design methodology, where mapping systems, their relationships and flows are the starting point, not only of the design but also of the planning and management of complex urban landscapes.

Thinking about urbanism has always entailed thinking in terms of inner worlds, where urban problems were dealt with by closing them in. Nevertheless, in today's era, known as the Anthropocene, the human environment encompasses the entire urban landscape, and it is there where urban problems must be resolved. Cities and their environments are interconnected by flows, and the metaphor of their metabolic functioning makes them more legible. Only by understanding cities in their contexts and learning to use their structures and metabolisms will it be possible to achieve a more resilient future city.



References

- Brugmans, G., and J. Strien (eds.). 2014. *IABR 2014 - Urban by Nature*. Rotterdam: IABR.
- Bunschoten, R., H. Binet, and T.H. Chora. 2001. *Urban Flotsam: Stirring the City*. Rotterdam: 010 Publishers.
- Corner, J. 1999. The Agency of Mapping: Speculation, Critique and Invention. In *Mappings*, ed. D. Cosgrove, 214–252. London: Reaktion Books.
- Corner, J. 2006. Terra Fluxus. In *The Landscape Urbanism Reader*, ed. C. Waldheim, 21–33. New York: Princeton Architectural Press.
- Cosgrove, D. 1999. Introduction: Mapping meaning. In *Mappings*, ed. D. Cosgrove, 1–23. London: Reaktion Books.
- Lynch, K. 1960. *The Image of the City*. Cambridge: M.I.T. Press.
- McHarg, I. 1969. *Design with Nature*. Garden City–New York: Natural History Press.
- Paquot, T. 2010. Le jeu de cartes des situationnistes. *CFC* 204: 51–55.
- Rotterdam, G, IABR, FABRIC, JCFO, and TNO. 2014. Urban Metabolism. In *Sustainable development of Rotterdam*, ed. N. Tillie, O. Klijn, E. Frijter, J. Borsboom, and M. Looije. Rotterdam.
- Tice, J., E. Steiner, and A. Ceen, ed. 2016. The Nolli Map Website. University of Oregon. <http://nolli.uoregon.edu/default.asp>. Accessed September 16.
- Wood, D. 2010. Lynch Debord: about two Psychogeographies. *Cartographica* 45: 185–200.

Further Readings

- Corner, J. 2003. Landscape urbanism. In *Landscape Urbanism: A Manual for the Machinic Landscape*, ed. M. Mostafavi, and C. Najle, 58–63. London: Architectural Association.
- Corner, J., and A.S. MacLean. 1996. *Taking measures across the American Landscape*. New Haven - London: Yale University Press.
- Deleuze, G., and F. Guattari. 2004. *A thousand plateaus: capitalism and schizophrenia [Mille Plateaux, 1976]*. London–New York: Continuum.
- Girof, C. 2006. Visions in motion: representing landscape in time. In *The Landscape Urbanism Reader*, ed. C. Waldheim, 87–103. New York: Princeton Architectural Press.
- Graves, M., ed. 1979. AD Profiles 20: Roma Interrotta. *Architectural Design* 49.
- Hebbert, M. 2016. Figure-ground: history and practice of a planning technique. *Town Planning Review* 87: 705–728. doi:10.3828/tpr.2016.44.
- Larumbe, T. 2014. El lenguaje posmoderno de Nolli. Apuntes de un viaje a través del tiempo. In *El dibujo de viaje de los arquitectos. Actas del 15 congreso internacional de expresión gráfica arquitectónica*, ed. Á. Melian, 827. Las Palmas de Gran Canaria.
- Leonard, S. 1994. The valley section concept of Patrick Geddes and aspects of his regional planning work. In *Proceedings of the European Conference of Landscape Architecture Schools, Edinburgh, 11th–13th August*. Edinburgh: Edinburgh College of Art.
- Mostafavi, M., and C. Najle (eds.). 2003. *Landscape Urbanism: A Manual for the Machinic Landscape*. London: Architectural Association.
- Waldheim, C. 2006. *The Landscape Urbanism Reader*. New York: Princeton Architectural Press.

Javier Monclús and Carmen Díez Medina

Abstract

The debate on suburban sprawl, dispersed or disseminated cities, etc., is intensifying now in European cities, at least half a century after it started in North America. Contemporary cities have created a multitude of situations in which empty spaces are predominant over filled spaces, compared to what used to be the case of traditional, compact cities. This does not only happen in the ‘new suburbs’ but also in relatively central or peri-central areas. This text addresses the issue of vacant urban lots that have appeared in recent decades on the outskirts of cities because of unprecedented expansion, and it explains the basis for the space syntax method as a basic tool for quantifying ‘spatial accessibility’.

Keywords

Urban voids • Interstitial spaces • Underused spaces • Vacant lots • Residual landscapes • In-between landscapes • Middle landscapes • Terrain vague

Urban Voids, Inheritance and Opportunity for Contemporary Cities

No man’s land, vacant lots, residual spaces, in-between landscapes, middle landscapes... *terrain vague*. The interest in understanding and analysing contemporary urban phenomena led Ignasi Solà Morales to reflect on this term, which he defined as follows:

“An area without clear borders, generally unused, difficult to recognise...”. Like this the author refers to this expression and its Latin roots: “... *vague* derived from *vacuus*, vacant, vacuum in English, i.e. empty, unoccupied; but also, free, available, unengaged... The relationship between the absence of use, activity, the sense of freedom, of expectations is fundamental to understanding the evocative potential that *terrain vague* has assumed in cities in recent years.

J. Monclús (✉) · C. Díez Medina
School of Engineering and Architecture (EINA),
University of Zaragoza, Zaragoza, Spain
e-mail: jmonclus@unizar.es

C. Díez Medina
e-mail: cdiezme@unizar.es

Empty, therefore, as absence, but also with promise, as an encounter, as a possible space, expectation (...). There is a second meaning that superimposes ‘vague’ from French, as vacant. This is from the term *vague*, from Latin *vagus*, vague also in English, in the sense of indeterminate, imprecise, blurred, uncertain (...) are obsolete places where only certain residual values appear to be maintained despite complete disaffection from activity in the city. They are, in short, external, strange places, that are off the circuits of productive structures. From an economic point of view, industrial areas, railway stations, ports, unsafe residential areas, contaminated sites, have become areas where it could be said the city is no longer found there” (Solà-Morales 1995, 181–193).

The definition by Solà Morales suggests that the creation of these sites is coherent with the essence of the contemporary metropolis: complex, in permanent evolution, fragmentary and ongoing. A subproduct of this contemporary urbanisation in recent decades is the proliferation of urban voids. The phenomenon is partly associated with processes of deindustrialisation that many European and North American cities have undergone since the last decades of the twentieth century. But it is important to understand that these

residual or in-between areas are also produced as a result of major urban decentralisation processes that are taking place in so many cities, particularly in metropolitan regions. Decentralisation of production or tertiary activities, and residential areas, has led to land and facilities becoming abandoned, thus creating empty or unused spaces. Other unused areas have arisen parallel to the construction of railway lines. Moreover, the urban approach itself, through zoning mechanisms, creates different areas between urban sections, 'vacant' or 'reserves' with low usage rates.

The immediate question is how a contemporary city can make sense of these spaces, initially considered as urban voids, banal areas, wasteland, residual landscapes or slag landscapes. The enormous artistic potential of these areas has been explored by film directors, photographers, sculptors and performance artists, who have found in them the opportunity to delve into visual urban anthropology. Nevertheless, the responsibility of architecture and urbanism is more committed, with consequences that are not easily reversed. In view of one of the great opportunities in cities today, the challenge consists of finding a suitable response to the specifics of each site, in the wide range of possibilities from the violence of radical intervention to the conservation of memory frozen in time.

In-between Landscapes: The Debate on Voids Created by New Urban Forms

The debate about suburban sprawl, dispersed or disseminated cities, etc., is intensifying now in Europe, at least half a century after it began in North America. This phenomenon can be explained by the time lag between the processes in each continent. European cities did not reach similar levels of motorisation as their pre-WWII North American counterparts until the 1960. In the case of southern European cities, this was even later. And this phenomenon went hand in hand with residential suburbanisation, the construction of shopping malls and the implementation of industrial and tertiary activity in the new suburban areas (Monclús 1998). Studies on North American cities have allowed us to understand the different components of the suburbia phenomenon and the so-called in-between landscapes. The new artefacts that construct the landscapes of cities and their suburban areas, either in the form of housing, shopping centres, work places, infrastructures or motorways, are implemented in the territory creating voids or in-between landscapes of varying characteristics (Rowe 1991).

Some authors, such as Thomas Sieverts, start off with an analysis of German cities in order to explore the specific



Fig. 24.1 Wasteland in Berlin, in an area near the Wall. Frame from *Der Himmel über Berlin* (Wings of Desire), directed by Wim Wenders in 1987



Fig. 24.2 Empty space of the Les Halles market in Paris. Frame from *Touche pas la femme blanche*, directed by Marco Ferreri in 1974

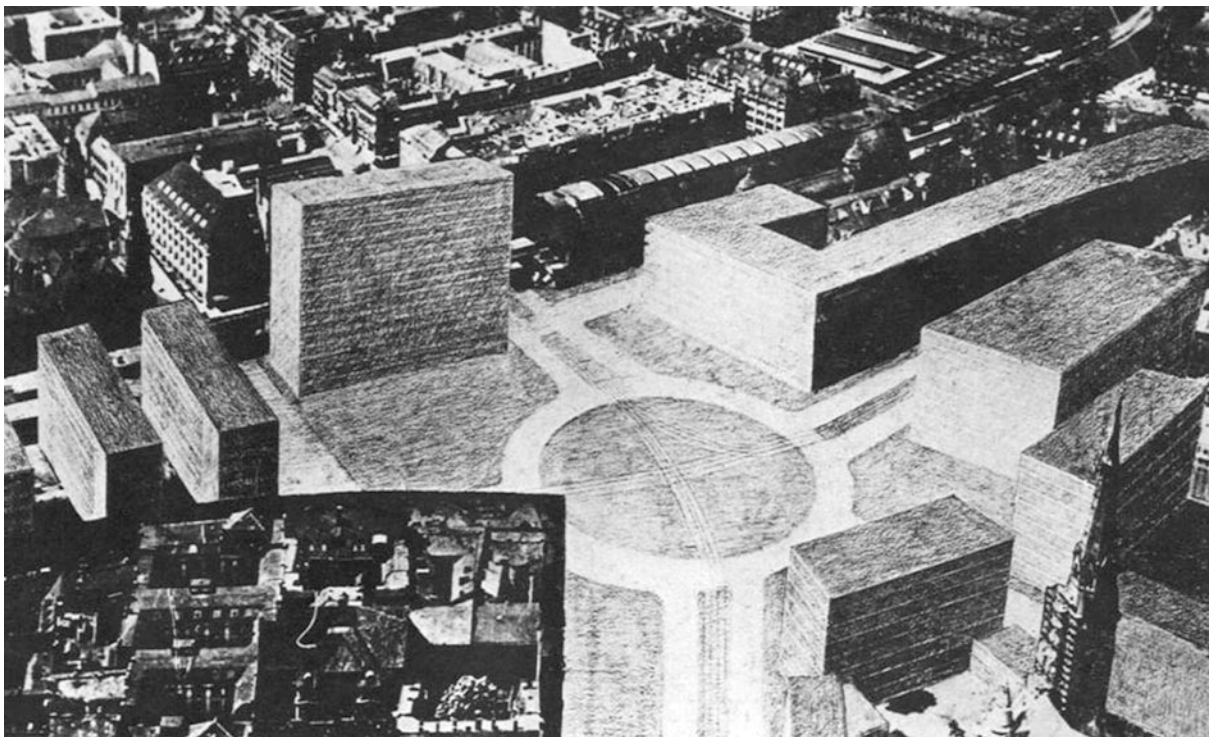


Fig. 24.3 *Terrain Vague*. Mies van der Rohe, project for Alexanderplatz, Berlin, 1929



Fig. 24.4 Banal areas, wasteland. Intersection in Houston, junction of the interstates 610/I'. Houston, Texas



Fig. 24.5 Shopping malls and car parks. Typical shopping mall in Yorktown, Illinois, USA

decentralisation processes in Europe, which, as is true in North America, give rise to new urban and metropolitan landscapes. He has coined the term '*Zwischenstadt*', a word whose ambiguity is coherent with the imprecision of the concept he is attempting to define: "This *Zwischenstadt*, which is neither city nor landscape, but which has characteristics of both neither has a suitable name nor is it concrete."¹ (Sieverts 2003, 3).¹ Sieverts's neologism, which tries to explain the new realities associated with the logic of urbanisation and suburbanisation, is added to many others that have recently appeared: metropolis, exopolis, edge city, post-suburbia, post-metropolis, rurbanisation, peri-urbanisation, city sprawl, dispersed city, metapolis, hypercity... Sieverts avoids aligning with those who condemn the 'cancerous' growth of cities or those who uncritically hail the 'fractal wealth' and the 'anarchic dynamics' of *Zwischenstadt* (Sieverts 2003, 49). His reflection on the subject entails a major effort to make it intelligible, confronting disintegrated cities with the social and cultural problems burdening them, and those are part of their essence. His contribution to the debate, both analytical and purposeful, affords new interpretations and perspectives for projects.

Some of the most novel aspects of the recent debate stem from the increased awareness of the environment and landscape. On the one hand, these new attitudes have served to channel criticism of the waste resulting from the exponential increase in the consumption of suburban, natural or agricultural land, with the subsequent abandonment or underuse of urban areas. In this sense, becoming aware of this rapidly growing situation, for some practically irreversible, has also been a

determinant factor. Like other 'organisms', cities produce waste that needs to be managed and reused. New terms, such as 'drosscape' coined by Alan Berger, refer to the potential of residual urban areas. In the adapted use of these 'waste landscapes', Berger sees one of the great challenges that today's urbanism faces, giving architects and urbanists the chance to creatively design space and urban landscapes (Berger 2006). However, there are also renewed versions associated with the metabolism and the city seen as an ecosystem, with the aim of integrating those outlooks in architecture, urbanism and ecology landscape (Mostafavi and Doherty 2010).

Representation of Empty Spaces

Contemporary cities have created a multitude of situations in which empty spaces are predominant over filled spaces, compared to what used to be the case of traditional, compact cities (C. Rowe and Koetter 1978). This does not only happen in the 'new suburbs' but also in relatively central areas. The choice of the most suitable mapping and cartography systems to represent a specific reality is fundamental when exploring the complexity of cities and responding to the questions they put forward. Maps are much more than a representational tool; they help us to think and plan cities (see Chap. 23). In order to understand the current 'emptying' processes of city centres, and particularly the new suburbs, simple representations of 'empty' and 'full' can be very expressive. The well-known system of 'figure/ground', so important since Baroque times, and which Colin Rowe converted into a key technique in the 1960 to represent the understanding of urban space, permits a more immediate reading of the empty spaces created by contemporary cities than traditional cartography or representations by the Italian morpho-typology architecture. In 1970, Kleihues prepared an atlas on the morphological history of the Charlottenburg and Kreuzberg districts of

¹It is significant the difference between the translations of the term *Zwischenstadt* (literally 'city in-between'): 'Cities without cities' in the English edition, '*paisajes intermedios*' in the Spanish edition, whereas in the text in both editions the expression 'intermediate cities' is used. Sieverts means the concept in the sense of 'urban periphery' or 'urbanised countryside' (Sieverts 2003, 88).



Fig. 24.6 Offices and car park (18,000 parking places on 140 ha). National Security Agency (NSA), Maryland, USA



Fig. 24.7 Suburbia and in-between landscapes. West Coast 1, South Africa, 2015. Photograph by Matthew Niederhauser & John Fitzgerald

Berlin, using 'figure/ground' representation to show the loss of urban fabric. And when he was commissioned to take charge of the Internationale Bauausstellung (IBA) in Berlin in 1984 to commemorate the 750th anniversary of the city, the comprehensive map showing all the interventions was also made using this technique. Some recent representations of the city, such as the *Schwarzpläne*, continue to use the still valid figure/ground technique.

Despite the visual effectiveness and immediateness of the figure/ground system, graphic simplification by definition omits other aspects intrinsic to urban history referring to issues as important as property, power, social status, uses, traffic or culture.³ In fact, the figure/ground technique appears to reach its limits when attempting to depict contemporary cities. "However, this method of imposing and interpreting structure while representing the figure-background seems to reach its limits when dealing with the modern semi-urban reality. (...) The new city can no longer be interpreted with the resources of the existing city or architecture, but we must start again effectively from zero, with the subconscious..."⁴ It is there where photography and cinema give us richer, more complex views. The case of cinema directors such as Wim Wenders is paradigmatic. In an interview by Hans Kollhoff, Wenders stated he was aware of that commitment: "Film as the absolute art form of the XX century has the more important

task to bring up the real world rather than to let it be forgotten. I think film wasn't really invented for that, but instead, to point out the real world" (Wenders 1988, 70). He also refers to the magic of empty plots in Berlin. "I think the most extraordinary thing about Berlin is that it still contains these little wild areas (...) Potsdamer Platz used to be fantastic. Now they've laid out green areas—everywhere—they've 'prettied it up', it's nothing, there isn't anything there anymore. Before, it was a kind of 'wilderness'. I don't believe anyone will ever be able to make any city council understand that from an urbanistic point of view, the most attractive parts of the city are precisely those areas where nobody has ever done anything. I believe a city, by definition, wants to have something done in those areas. That is the tragedy" (Wenders 1988, 70). Wenders, like so many other directors and photographers, recognises the value of those places, due not only to their availability as strategic territory for transformation. In view of the excessively pragmatic outlooks, which more often than not end up filling in these voids, the vision of the cinema and photography help to preserve the memory of those sites in the collective imagination.

The Value of Voids: Challenges and Debates on the New Forms of Urbanity

The future of cities, particularly, but not exclusively, in Europe, depends on considering the multiple variables that must be appropriately analysed with the view to defining urban strategies and decision-making. Along these lines, managing urban spaces is one of the major challenges that today's urbanism faces. Instead of simply understanding them as a problem, we have to assess the opportunities they offer in order to improve the structure of our urban landscape. The possibilities afforded by innovative techniques of representation, such as advanced cartographic recognition,

²In the previous decade, Rowe had co-founded with Robert Slutzky the group Texas Rangers at Texas University. Their interest was to research the exterior space and how this could be represented 'digged' or 'carved' in the solid mass of the façades.

³"Figure-ground imagery is parsimonious. Its simplification of the city to a pattern of solids and voids omits all the variables of interest to social science—ownership, power, status, human agency, gender, exchange, mobilities. Also missing are aesthetics, visual culture, skyline dominance, likewise biosphere and ecosystem variables." (Hebbert 2016).

⁴Neumeyer, "Im Zauberland der Peripherie: Das Verschwinden der Stadt in der Landschaft", quoted in Sieverts (2003, 88–89).



Fig. 24.8 *Zwischenstadt*. Area under development at Gelsenkirchen-Bismark, Ruhr area, Germany, 2011

permit systematising the options for dealing with urban voids.

One of the major resources for regenerating contemporary cities consists of activating and recovering degraded, obsolete areas that are spread throughout cities, from the consolidated urban fabric to the suburbs. More and more projects are intended to recover obsolete environments, including urban voids. Tenders of the scale of the one called in 2006 by the Van Alen Institute and the Association of Urban Parks in Philadelphia, with the objectives of working on over 40,000 'vacant' areas in the city, are proof of its relevance. Participants were encouraged to send in proposals to provide long-term solutions inspiring change and contributing to restructuring and rethinking the landscape of the entire city.

The pressure of the increasing ecological awareness, along with the appearance of the new concept of cultural urban landscape, can illustrate that the challenges are not necessarily 'filling' all the urban voids, but acknowledging that there are different situations that need to be valued and clarified (Berruete 2015).

Whichever the case, as Manuel Castells rightly suggests, it is necessary to delve deeper to understand the sites and their flows and identities (Castells 1996).⁵ Specialist literature provides some interesting reflections by authors who, like Rem Koolhaas, pay attention to the evolution and

metamorphosis of cities.⁶ Clearly, most major urban transformation is taking place both in those 'inner' voids and in the new 'suburbs', as these places afford excellent opportunities. And that, to quote Sieverts once again, requires a serious rethinking of the type of urbanism capable of dealing with these issues. Ignorance or failing to understand those processes by limiting efforts to 'occupying' urban voids can simply be a way of neglecting the problem. It is imperative to pay attention to these new realities if we want to minimise the environmental costs and control the suburban sprawl, in addition to considering the possibility of new ways of urbanity, beyond traditional forms.

⁵According to Castells, the spatial dimension of networks expresses itself in the space of flows, unlike what is meant by space of places.

⁶"Outside, in the real world, the 'art planner' spreads Junkspace's fundamental incoherence by assigning defunct mythologies to residual surfaces and plotting three-dimensional works in leftover emptiness. Scouting for authenticity, his or her touch seals the fate of what was real, taps it for incorporation in Junkspace" (Koolhaas 2002, 189).

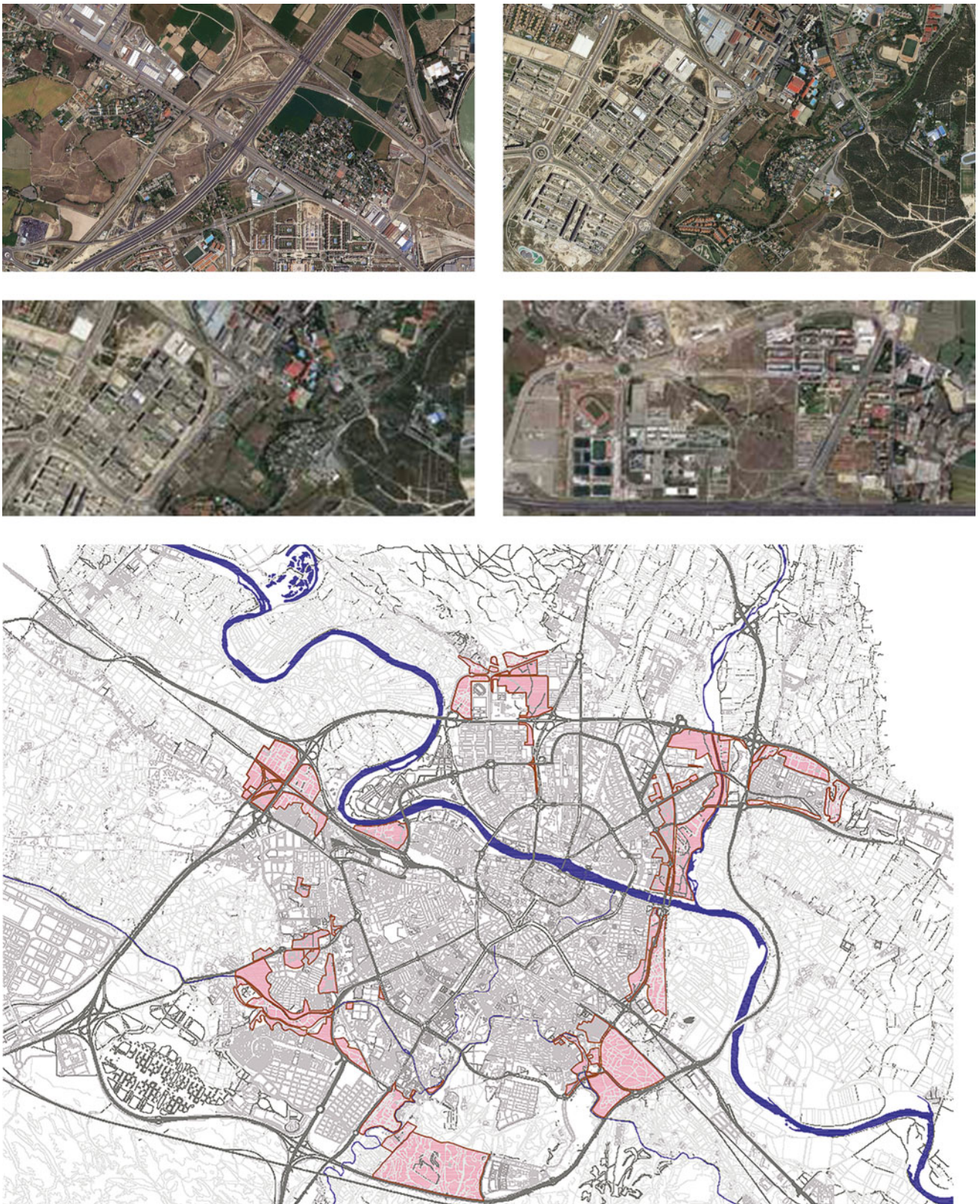
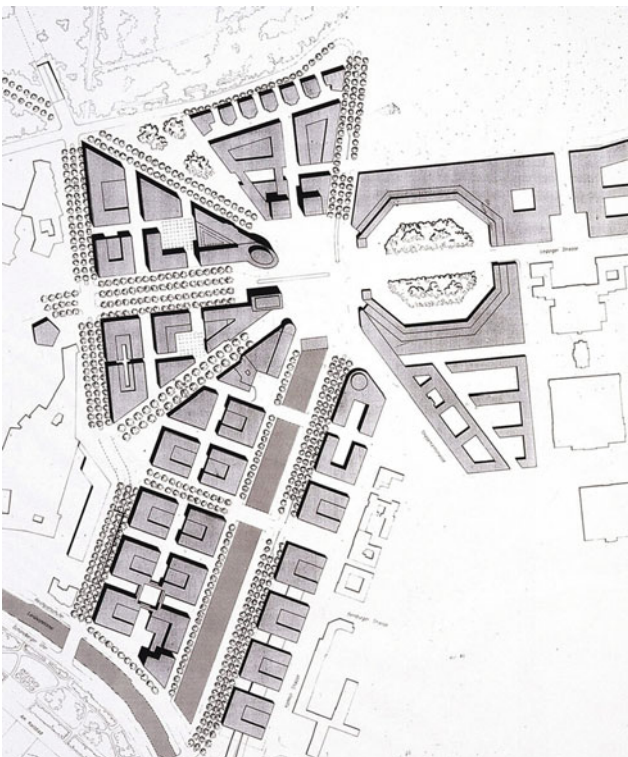


Fig. 24.9 Plan and aerial views of the general layout of Zaragoza, representing the existing voids in outlying areas

Case Studies

Potsdamer Platz, Berlin (1990–2000)

After the fall of the Berlin Wall in 1989, the urban voids in Berlin played a starring role in urban development, making this an exceptional case. The city, paradoxically, became a top-level urbanistic laboratory, and at the same time substantially changing the outlook by the IBA of 1987 (see Chap. 9). Berlin had actually been the test site for modern urbanism in the early decades of the twentieth century, particularly in some of the emblematic sites such as Alexander Platz or Potsdamer Platz, although none of the projects actually materialised.



The Potsdamer Platz urban renovation projects in the 1920—as commented by Franz Hessel in *Spazieren in Berlin* (Walking in Berlin 1929)—such as Martin Wagner’s from 1929, aimed to reconcile the demands of urban traffic with the intention of creating modern public spaces through new forms of open composition. Conversely, the recent intervention in this area is conceived for an urban void that had lasted since the bombings as a desolate area without any use for nearly five decades. The competition in 1991 (encompassing Potsdamer Platz and Leipziger Platz) is included in the strategy of reconstruction of the metropolis in the framework of globalisation and the growing significance of the real estate sector, in line with the trends characterising major ‘global cities’ such as London, Paris and New York. Major private investors, such as Daimler-Benz or Sony, bought the plots and built a new centre. The winning project, by Heinz Hilmer and Christoph Sattler, served as the basis for the Building Plan and likewise was the basis for a second tender, the International Execution Tender, called by Daimler-Benz AG in 1992.



Now Factory Creative Office Park, Jiading, Shanghai (2011–2014)

The rapid urbanisation processes in China in recent decades far surpass the speed of development of European and North American cities, although perhaps not so far removed from the dynamics associated with nineteenth century industrialisation in the West. The quantity and speed of construction has also created a significant number of urban voids. Although the general image of Chinese cities could appear to be chaotic and 'generic' (in the sense of Koolhaas), certain urban projects indicate new forms of efficiency, vitality and renewed urbanity.

'Urban infill' is a strategy that is being used more and more to activate wasteland or obsolete areas, and to

establish connections between urban fragments between existing infrastructures and centres. Some of the most innovative projects are those carried out by URBANUS, with offices in Shenzhen and Beijing. In addition to the projects developed in that pilot city and economic engine of the Pearl River Region, Now Factory is a renovation project on the outskirts of Jiading, an ancient city located to the northeast of Shanghai. The project aims to give cultural vitality to an area of textile industries where the over-density of the factories is converted into museums, markets, central plaza and public areas. In addition to opening up existing structures to achieve urban integration, four large containers are added as the venue for different activities.



References

- Berger, A. 2006. *Drosscape: wasting Land Urban America*. New York: Princeton Architectural Press.
- Berruete, F. 2015. Vacíos urbanos en la ciudad de Zaragoza (1975–2010). Oportunidades para la estructuración y continuidad urbana. Madrid: Universidad Politécnica de Madrid.
- Castells, M. 1996. *The Information Age: Economy, Society and Culture. Volume I: The Rise of the Network Society*. Oxford—Malden: Blackwell Publishing.
- Hebbert, M. 2016. Figure-ground: History and Practice of a Planning Technique. *Town Planning Review* 87: 705–728. doi:[10.3828/tpr.2016.44](https://doi.org/10.3828/tpr.2016.44).
- Koolhaas, R. 2002. Junkspace. *Obsolescence. A special issue*: 175–190.
- Monclús, J., ed. 1998. *La ciudad dispersa*. Barcelona: CCCB.
- Mostafavi, M., and G. Doherty, ed. 2010. *Ecological Urbanism*. Cambridge: Harvard University Graduate School of Design—Lars Müller Publishers.
- Rowe, C., and F. Koetter. 1978. *Collage City*. Cambridge: M.I.T. Press.
- Rowe, P.G. 1991. *Making a Middle Landscape*. Cambridge: M.I.T. Press.
- Sieverts, T. 2003. *Cities without cities: an interpretation of the Zwischenstadt [Zwischenstadt, 1998]*. London: Spon Press.
- Solà-Morales, I. de. 1995. Terrain Vague. In *Anyplace*, ed. C. Davidson, 118–123. Cambridge: M.I.T. Press.
- Wenders, W. 1988. La ciudad: conversación entre Wim Wenders y Hans Kollhoff/The city a conversation between Wim Wenders and Hans Kollhoff. *Quaderns* 177: 42–78.

Further Readings

- Ábalos, I. 2009. *Naturaleza y artificio: el ideal pintoresco en la arquitectura y el paisajismo contemporáneos*. Barcelona: Gustavo Gili.
- Bélanger, P. 2010. Redefining infrastructure. In *Ecological Urbanism*, ed. M. Mostafavi and G. Doherty, 332–349. Cambridge: Harvard University Graduate School of Design—Lars Müller Publishers.
- García Vázquez, C. 2000. *Berlín Potsdamer Platz: Metrópoli y arquitectura en transición*. Barcelona: Arquia.
- Neumeyer, F. 1995. Im Zauberland der Peripherie: Das Verschwinden der Stadt in der Landschaft. In *Die verstädterte Landschaft Ein Symposium*, 31–44. München: Aries.
- Solà-Morales, I. de. 1996. Presente y futuros. La arquitectura en las ciudades. In *Presente y futuros. Arquitectura en las grandes ciudades*, 10–23. Barcelona: Col·legi Oficial d'Arquitectes de Catalunya—Centre de Cultura Contemporània.
- Solà-Morales, M. de. 2006. Centralitat simulada, centralitat dissimulada: Plaça Lesseps, Plaça Europa. *Quaderns* 249: 54–59.
- Trienal de Arquitectura de Lisboa. 2007. *Vazios Urbanos*. Lisboa: Caleidoscopio.

Part IV

Landscape Urbanism

“The promise of landscape urbanism is the development of a space-time ecology that treats all forces and agents working in the urban field and considers them as continuous networks of inter-relationships.”

James Corner, “Terra Fluxus”, in C. Waldheim (ed.), *The Landscape Urbanism Reader*, 30.

Javier Monclús

Abstract

This chapter provides a general outline of the emergence of landscape urbanism from texts and past and recent projects, and highlights how the convergence between the ecological paradigm and landscape tradition in urban planning and architectural culture is behind what is known as landscape urbanism, where discourses and comprehensive strategies converge, and in which the landscape takes the role of the main organiser, ahead of architecture.

Keywords

Ecological landscape • Landscape urbanism • Ecological urbanism • Landscape projects

In his landmark text *The Culture of Cities* (1938), Lewis Mumford offered one of the most expressive, intense visions about relationships between nature and cities: “The city is a fact in nature, like a cave, a run of mackerel or an ant-heap. But it is also a conscious work of art ... With language itself, it remains man’s greatest work of art” (Mumford 1996, 5). It is interesting to compare and contrast that vision with the one by James Corner, a contemporary landscape architect who played a leading role in the Landscape Urbanism movement: “Cities and infrastructure are just as ‘ecological’ as forests and rivers” (Corner 2006, 29).

Landscape Urbanism

Thinking about infrastructures as ‘ecological’ elements, whether forests or rivers, could be an exaggeration and perhaps a little provocation, particularly among urban ecologists. Is this a change in paradigm or a ‘re-appearance’ and reinterpretation of Mumford and those others who focussed their urbanistic and landscaping proposals on harmonic integration of cities and nature? Despite the trend to present the Landscape Urbanism movement as an original approach, it can be linked to well-consolidated traditions in the field of

urbanism and the field of landscaping. Corner himself acknowledges the factors that are at the base of this renewed attention to landscape in recent years.

“The reappearance of landscape in the larger cultural imagination is due, in part, to the remarkable rise of environmentalism and global ecological awareness, to the growth of tourism and the associated needs of regions to retain a sense of unique identity, and to the impacts upon rural areas by massive urban growth. But landscape also affords a range of imaginative and metaphorical associations, especially for many contemporary architects and urbanists” (Corner 2006, 23).

From Frederick Law Olmsted’s vision at the middle of the nineteenth century, to Patrick Geddes Regional Planning in the first decades of the twentieth century, on to the ‘urbanistic regionalism’ of the Regional Planning Association of America (RPAA, with Mumford, Geddes’ disciple at the head), or the visions of certain architects and urban planners attentive to landscape (Frank Lloyd Wright, Ludwig Hilberseimer, etc.), to designs by Ian McHarg and the North American school of Ecological Landscape Planning after the sixties (McHarg 1969), it is not hard to recognise the advance of the organic, environmental paradigm. Along parallel lines, from the field of architecture, we also find some convergence with ‘critical regionalism’ by Kenneth Frampton, or even in the Rem Koolhaas’s questioning of contemporary programmatic architecture (Thompson 2012). When the North American regionalists started to jointly consider the urban and landscape dimensions of cities more comprehensively,

J. Monclús (✉)
School of Engineering and Architecture (EINA),
University of Zaragoza, Zaragoza, Spain
e-mail: Jmonclus@unizar.es

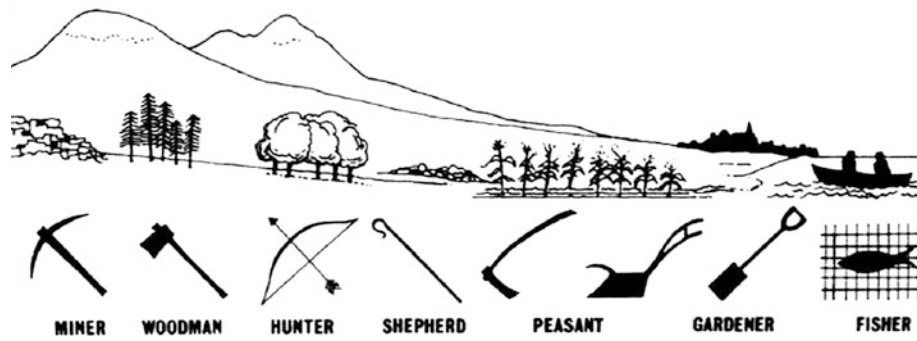


Fig. 25.1 Patrick Geddes, The valley section, 1915

both were already sufficiently established in some major North American cities (Luccarelli 1995). This was no less true in other urban fields that had seen themselves transformed in the second industrial era at the start of the twentieth century. In recent times the key terms have changed: acceleration of urban growth and increasing environmental awareness are calling for new integrated approaches that not only tackle urbanistic and landscape aspects, but also city growth and transformation processes. These have led to complex urban realities that require renewal of forms, particularly as a result of the suburban sprawl processes and the formation of ‘new suburbs’ and other factors behind the

formation and transformation of urban metabolism. In short, the hybrid nature of contemporary cities means a transversal, integrating outlook is required to understand them. And at the same time, projects that pay more attention to processes rather than end scenarios, as has been the case in traditional architecture, including landscape architecture.

Landscape Urbanism still has a little way to go until it becomes a kind of sub-discipline, distinct from planning and urban projects and from landscaping and landscape architecture, although the factors comprising the basis of the process are fairly clear: on the one hand the rise of environmentalism and awareness of global ecology; and also the

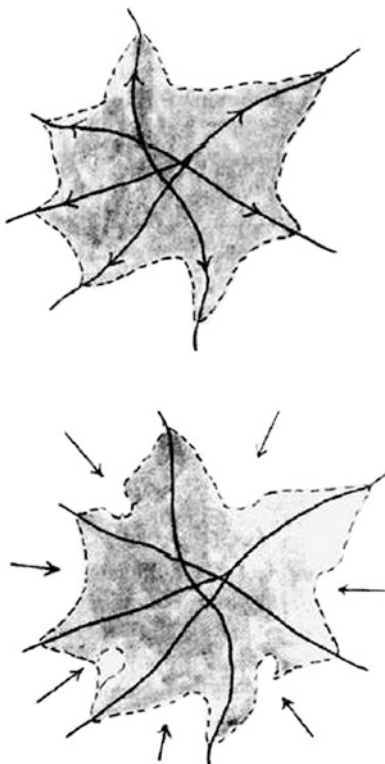


Fig. 25.2 Patrick Geddes, city/countryside integration diagrams, in *Cities in Evolution*, 1915

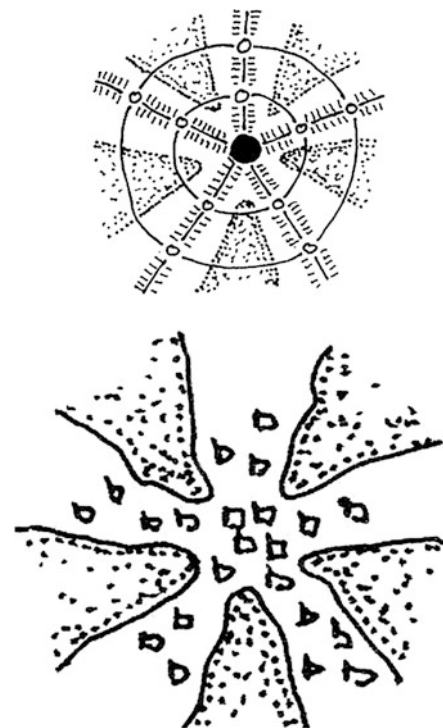


Fig. 25.3 Kevin Lynch, diagrams and organic models: radial growth and green belts, in *A Theory of Good City Form*, 1981

specific phenomena of suburban sprawl, with the consequent consumption of rural land and transformation of natural reserves. Moreover, other processes related to the growth of tourism and the proliferation of ‘genetically modified’ landscapes (Domingues 2013) are also determining factors.

Ecological Landscape Planning and Ecological Urbanism

Although attitudes towards the landscape based on visual criteria should not be belittled—some related to notions of the picturesque or Townscape, present in the work of Gordon Cullen or Kevin Lynch—and nor the renewed interest in Landscape Design, it is true that they have paid less attention to the environmental aspects of the landscape (Gregotti 1966; Jellicoe and Jellicoe 1975; Ábalos 2009). At the same time, it is important to acknowledge the existence of a powerful landscape tradition that seeks a better relationship between built object and nature, a culture that dates back to the nineteenth century with Olmsted and Mumford, substantially renewed in McHarg’s work. McHarg’s approach is fundamental in the emergence of Ecological Urbanism, which is not so different from ‘ecological landscape planning’, set forth in his book *Design with Nature* (1969), an essential work for the contemporary landscaping culture. The point of departure here is different from the architectural tradition, whereas its continuity with North American landscaping is clear. “The idea of ‘wilderness’, inherent to North American culture, affords a different substrate for adhesion to natural phenomenon, stronger and closer to a comprehensive interpretation of the landscape” (de las Rivas 2013). It is not by chance that it is the USA where the different ‘landscaping disciplines’ have been most developed, including landscape planning, landscape ecology, landscape architecture, landscape design, landscape urbanism.

The convergence of ecology and the landscaping tradition in urbanistic and architectural culture is the basis of landscape urbanism. Some authors, in fact, such as Charles Waldheim, insist that “landscape supplants architectural’s historical role as the basic building block of urban design” (Waldheim 2006, 37). And while these may be slogans aimed at promoting less conventional points of view, the blurring together of these two traditions is obvious. As James Corner states, among the renewed directions seen in landscape architecture and urbanism, many are simply extensions or new formulae of central subjects of these disciplines: place, geometry, relationships between urbanisation and nature (Corner 1999, 22). In fact, what these more recent landscape urbanism visions confer, as the meeting point between ecology, engineering, design, programming and other relevant strategies for integration, is greater concern for the quality of the new metropolitan landscapes. This entails a search for mutual benefit between the



Fig. 25.4 Ludwig Hilberseimer, *The City in the Landscape*, 1944



Fig. 25.5 Ernst May and Leberecht Migge (landscape architect), *Römerstadt, Nidda Valley, Frankfurt am Main, 1929*

different disciplines to tackle complex urban situations, with growing emphasis on infrastructures. As will be seen in the following chapters, green and grey infrastructures tend to be integrated in new urban and landscape projects. Many of the most outstanding recent urban projects, whether or not they are qualified as landscape urbanism, are related to integrating infrastructure landscapes or ‘roadscape’ in new metropolitan landscapes (a discourse present in Rem Koolhaas’s projects), which is not far removed from certain visions and strategies put forward by Mumford in the middle of the 20th century, *The Highway and the City* (1968), where the author reflects on the role played by highways.

Since the end of the twentieth century, there has been a marked increase in new paradigms and approaches with a wide inter-disciplinary field and landscaping. They are actually combinations of existing disciplines and traditions: ecology, environmental science, architecture, landscape studies, and ecological design. In any case, despite the convergence between national traditions, there is a certain degree of contrast between Anglo-Saxon, Central European and Southern

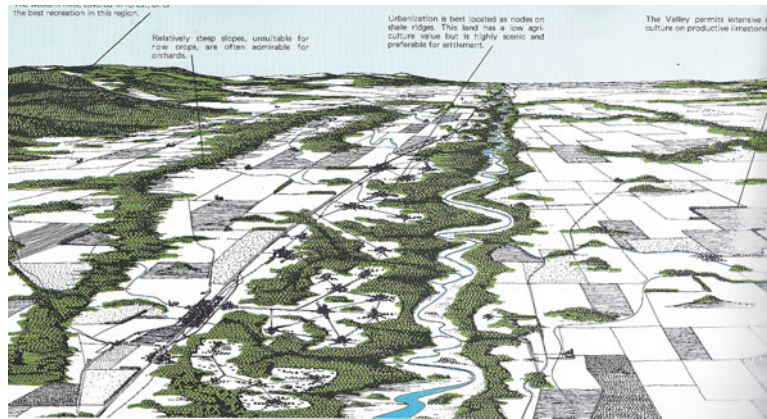


Fig. 25.6 Ian L. McHarg, The great valley, 1969



Fig. 25.7 Michel Corajoud and Renzo Piano, landscape project on the banks of the Rhône river and Cité Internationale. Lyon, 1991–2001



Fig. 25.8 Enric Batlle and Joan Roig, Trinitat traffic interchange, Barcelona, 1990–93



Fig. 25.9 Elías Torres and José Antonio Martínez Lapeña, 2004 Forum site and surrounding area. Barcelona, 2004. Master plan

European urbanistic culture. In the former, the specific weight of a more deeply-rooted landscaping tradition can be seen, whereas in the latter, the recent landscaping projects are more closely associated with urban projects. Bearing in mind the complex processes of cultural and methodological natures that form the basis of different attempts at integrating urbanism and ecology, these differences seem inevitable.

Remaking Landscapes with Landscape Projects

Under the title *Remaking Landscapes*, the International Biennial of Landscape Architecture was held in 1999 focusing on work with existing landscapes, developed land or urban voids (brownfields) (AA.VV. 2000). In discussions, the processes involving the destruction of natural landscapes through mining/quarrying activities were shown to lead to another type of environment, in visual, functional and aesthetic aspects. Different types of quarries provoke processes of destruction and construction of specific landscapes. In some cases, the quarried landscapes are converted in aesthetically pleasing elements, which, when suitably

exploited, provide welcome new landscapes. These are regeneration processes that go far beyond simple episodes of technical renewal. All of them reveal the potential for working on desolate, industrially obsolete landscapes. From strictly technical work, such as converting embankments to work of a more artistic nature, widely documented in Land Art, all of this contributes to re-qualifying and rebuilding obsolete landscapes. As some authors point out, in the end the most important thing is working on the void, where the object disappears to become topography; and where the layout of the existing landscape is intensified to give way to 'landscape infrastructures' that comprise the support for new transformations which aren't easily determined with conventional planning tools.

This type of integrating action is especially convincing in some projects where deteriorated environments have been recovered. This is the case of the successful projects by Field Operations or other North American studios, whether in strictly urban environments, such as the renewal of obsolete railway infrastructure, namely the High Line in New York, or at a territorial scale, Freshkills Landfill Park, an abandoned dump, also in New York (Staten Island). Freshkills had an extremely important local precedent,



Fig. 25.10 Elías Torres and José Antonio Martínez Lapeña, 2004 Forum site and surrounding area. Barcelona, 2004. Aerial view



Fig. 25.11 Hamburg, IBA-IGA 2013. A paradigmatic series of intervention where urbanistic and landscape visions are integrated

Flushing Meadows Park, which was carried out from the thirties to the sixties (with two international fairs in between).

Rather curiously, along with the abundance of professional and academic publications concerning examples in North America, which specifically appear linked to these new visions, there are many European projects of urban renewal, or integrated infrastructures, that are not formally related to those movements, yet serve as important references at different scales. The most notable, spectacular example is undoubtedly the reconversion project associated with the Internationale Bauausstellung IBA of Emscher Park (1989–99) (case study 1). It is interesting to point out the coexistence and structuring of major projects and occasional work at this point, such as the case of Landschaftspark Duisburg-Nord, in Duisburg, which is part of an ambitious renewal project of abandoned industrial and mining land on an 80 km stretch of the Emscher river. Certain infrastructure integration or renewal projects of deteriorated environments in Europe could also be considered paradigmatic examples of Landscape Urbanism. Different Dutch landscape urbanism projects (Adriaan Geuze/West 8, Patrick Schumaker, Alex Wall, etc.) were already important references at the ‘foundational’ Landscape Urbanism fair held at University of Illinois in Chicago, in 1997. The ring-roads of Barcelona, the Trinitat Park, designed at a major highway intersection, or the renewal of the Garraf landfill site, also in Barcelona, both projects by the architects Batlle i Roig, are other successful examples widely acclaimed in international literature (case study 2).

We could therefore say that at the dawn of the twentieth first century, there is a coexistence and convergence of different urbanistic and landscape discourses and strategies that

have led to integrating visions. A new attitude towards nature that both Landscape Urbanism or the ‘greener’ versions of Ecological Urbanism (Mostafavi and Doherty 2010, 210) try to tackle at different scales, from open spaces ‘between buildings’ to infrastructures and territorial scale work, where many factors are taken into consideration. In short, both Landscape and Ecological Urbanism try to overcome the classical dichotomy between city and nature through integrating strategies in which time processes play an essential role.

One of the challenges in renewing deteriorated areas entails successfully designing the landscaping to the appropriate scale and territorial scope. Moreover, it is necessary to understand and manage sectoral as well as specific projects in a coordinated fashion. Macro or micro-urbanism, remaking the landscape, regenerating suburban areas: it is all about discovering the regeneration possibilities of degraded areas that could be recovered through the implementation of small projects with a global vision, associated with actions that serve catalysts for these urban and landscape improvement processes.

Indeed, the most important challenge of landscape urbanism is the requisite convergence and integration in urban planning. This is a process that can be approached in two, complementary ways: either by including the instruments in more flexible urbanism, more aware of landscape components, or, ensuring more standard landscaping, not so dependent on singular, exceptional landscaping projects. The task is so broad and complex that both perspectives are likely to be required to develop the necessary strategies in these unavoidable processes of remaking old and new urban and metropolitan landscapes.

Case Studies

IBA Emscher Park, Ruhr Region, Germany (1989–1999)

The IBA Emscher Park materialised in the industrial region of Emscher in Germany, in the heart of the Ruhr region, characterized until the 1970s, by inhospitable, polluted coal mining landscapes. The enormous scope of intervention covers 17 towns, in an area 70 km long and 15 km wide, where a multitude of urbanistic and landscaping themes were engaged in an absolutely novel way.

It was in this context that a formidable landscape recovery operation took place, which was carried out through a number of projects which were also urban renewal projects. The project was named Emscher

Landscape Park, consisting of more than 200 smaller projects, all of them complementary to reconvert what was once an ‘open air sewer’ in a new restored landscape (with horizon in 2020). A hundred projects, encompassed in an integrating Master Plan, with specific objectives and deadlines, defined the urban and landscape renewal process. Abandoned industrial areas were reconverted in spaces for new production or recreational activities, and tourism. Housing was also built, and other buildings were restored. Half of the projects driven in this initiative were developed in Emscher Landscape Park.

In the 90s the Emscher Park IBA was the paradigm of urban, landscape and environmental renewal. Although the project was implemented in the Ruhr region of Germany, it also had substantial implications for other urbanised territories in Europe.

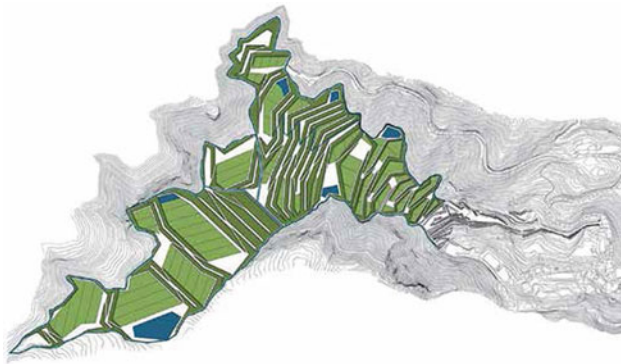


Garraf Landfill Site, Barcelona (2001–)

Along landscape and ecological urbanism lines, strategies and projects have been carried out in Barcelona aimed at recovering derelict areas that are now showing their true landscape potential. One of them is the former landfill site to the south of the city in Garraf (Vall d'en Joan), where a large amount of the Barcelona's residues and garbage were deposited. The poor location of a landfill site in a karstic zone caused contamination of the aquifers as well as several ravines, which moved the authorities to act. The multi-disciplinary technical team that undertook this recovery work, combined environmental engineering, geology, landscape architecture and agronomy, to create this new place.

This project is greatly indebted to the landscape project by the architects Enric Batlle and Joan Roig, along with Teresa Galí, an agricultural and landscape engineer, author of many projects encompassed in so-called 'landscape urbanism'.

The Garraf project integrates different technical solutions for closing and sealing the landfill site, resolving the complex technical problems related to this kind of action: unstable terrain, a new leaching treatment plant, and also a bio-gas power plant. It is important to point out that the objective of the project was not full recovery of the landfill site, i.e. returning it to its original status, which would have been an impossible task. It was understood rather as a restorative process, taking advantage of the singular, powerful environment of the nature park where it was located.



References

- AA.VV. 2000. *Rehacer paisajes/Remaking landscapes. Catálogo de la 1a Bienal del paisaje 1999*. Barcelona: Fundación Caja de Arquitectos.
- Ábalos, I. 2009. *Naturaleza y artificio: el ideal pintoresco en la arquitectura y el paisajismo contemporáneos*, ed. I. Ábalos. Barcelona: Gustavo Gili.
- Corner, J. (ed.). 1999. *Recovering Landscape: Essays in Contemporary Landscape Architecture*. New York: Princeton Architectural Press.
- Corner, J. 2006. Terra Fluxus. In *The Landscape Urbanism Reader*, ed. C. Waldheim, 21–33. New York: Princeton Architectural Press.
- de las Rivas, J.L. 2013. Hacia la ciudad paisaje. Regeneración de la forma urbana desde la naturaleza/Towards the landscape city. Urban regeneration from nature. *Urban NS05*: 79–93.
- Domingues, Á. 2013. Paisagens Transgénicas/Transgenic Landscapes. *ZARCH: Journal of interdisciplinary studies in Architecture and Urbanism* 1: 14–35.
- Gregotti, V. 1966. *Il territorio dell'architettura*. Milan: Feltrinelli.
- Jellicoe, G., and S. Jellicoe. 1975. *The landscape of man: Shaping the Environment from Prehistory to the Present Day*. London: Thames and Hudson.
- Luccarelli, M. 1995. *Lewis Mumford and the Ecological Region: The Politics of Planning*. London—New York: Guilford Press.
- McHarg, I. 1969. *Design with Nature*. Garden City—New York: Natural History Press.
- Mostafavi, M., and G. Doherty (eds.). 2010. *Ecological Urbanism*. Cambridge: Harvard University Graduate School of Design—Lars Müller Publishers.
- Mumford, L. 1996. *The Culture of Cities (1938)*. New York: Harcourt, Brace and Co.
- Thompson, I.H. 2012. Ten Tenets and Six Questions for Landscape Urbanism. *Landscape Research* 37: 7–26. doi:[10.1080/01426397.2011.632081](https://doi.org/10.1080/01426397.2011.632081).
- Waldheim, C. 2006. *The Landscape Urbanism Reader*. New York: Princeton Architectural Press.

Further Readings

- Monclús, J. 2011. Paradigmas urbanísticos y proyectos integrados. Entre el urbanismo arquitectónico y el ecourbanismo paisajístico. In *Proyectos integrados de arquitectura, paisaje y urbanismo*, ed. J. Monclús (dir.) and R. Sánchez Lampreave, 42–59. Zaragoza: Institución Fernando El Católico.
- Monclús, J. 2012. Repensar Canfranc desde el urbanismo paisajístico y los paisajes culturales. In *Repensar Canfranc. Taller de rehabilitación urbana y paisaje 2012*, ed. J. Monclús, B. López-Mesa, and P. de la Cal, 14–27. Zaragoza: Institución Fernando El Católico - Prensas de la Universidad de Zaragoza.
- Monclús, J. 2013. En la frontera: proyectos urbanos y urbanismo paisajístico. In *Sesiones internacionales de arquitectura y ciudad 2012. Paisaje urbano y paisajismo contemporáneo*, ed. C. Díez Medina and L.C. Pérez Moreno, 64–73. Prensas de la Universidad de Zaragoza.
- Monclús, J. 2014. El Proyecto LIFE + Teruel como estrategia de regeneración urbana e integración paisajística/The Teruel LIFE+ Project as an Urban Regeneration and Landscape Integration Strategy. In *LIFE + TERUEL Recuperación del entorno de Las Arcillas/TERUEL LIFE + Recovery of Las Arcillas environment*, ed. J. Monclús (dir.), C. Díez, and R. Lampreave, 14–35. Urban Workshops n.3. Teruel: Ayuntamiento de Teruel - Prensas de la Universidad de Zaragoza.
- von Petz, U. 2006. ¿Resucita el ave fénix de sus cenizas? La Exposición Internacional de Construcción (Internationale Bauausstellung-IBA) del Parque del Emscher. *Urban* 11: 44–69.
- Seltman, G., and A. Kolkau. 1994. La IBA de Emscher Park. *Ciudad y Territorio, Estudios Territoriales* 100–101: 463–486.
- Shane, D.G. 2003. The Emergence of 'Landscape Urbanism'. Reflections on Stalking Detroit. *Harvard Design Magazine* 19.

Javier Monclús

Abstract

This text introduces the genealogy of green belts and green infrastructure in urban planning during the latter half of the twentieth century. It emphasizes the changes and continuities in the shift from the original models to renewed conceptions of green systems, environmental networks and green infrastructure, which are linked to more recent and sophisticated systems.

Keywords

Park systems • Green belts • Green infrastructures

Park Systems, Green Belts. Cross-Influences Between Europe and North America

‘Green Belts’ are surely one of the most successful and widespread concepts of international urban and landscaping culture. The initial objective of the green belt was to control suburban sprawl through strips or belts without buildings (Amati 2008, 1). But they are also understood as ‘park systems’, developed, above all, in the North American cities. They offer an interesting example of cross-influences, of exchanges between Europe and the USA. Hence, knowledge of European cities, particularly Paris, had a considerable influence on the parks designed by Frederick Law Olmsted in Boston (in the famous Emerald Necklace, for example) (see Chap. 30) and other North American cities. At the same time, the ambition and sophistication of those systems represent a general standard for many initiatives implemented in European cities during the twentieth century.

The formation process of these park and green belt systems dates back several centuries, particularly in European capitals. Since the eighteenth century, with Royal Parks and parks for the aristocracy, then later with the proliferation of

public parks in the second half of the nineteenth century and well into the twentieth century, open urban spaces have continued to increase, playing an increasingly important role in the structuring of cities. The movement based on the ‘park system’ idea appeared in the USA in the middle of the nineteenth century, led by Frederick Law Olmsted and Calvert Vaux. But this is not exclusive to North America, and at the same time proposals were developed to introduce green areas in European cities, with Parisian boulevards and parks, or London’s squares and parks (visited and admired by Olmsted). Nevertheless, it is true that park systems emerged as a fundamental component of urbanism in North American cities. The Chicago Park System began with projects in 1871. The most well-known system, that of Boston, started in 1881 and ended in the 1890s. Other cities (such as Buffalo, New York, etc.) continued with this idea of connection between parks with parkways and boulevards as an urban structuring strategy.

With the advancement of the City Beautiful movement, and above all with the institutionalisation of Town Planning in the early years of the twentieth century, the layout of parks and open spaces acquired a key role in urban zoning and structuring proposals. Some works give an idea of their importance in modern town planning, such as the work by

J. Monclús (✉)
School of Engineering and Architecture (EINA),
University of Zaragoza, Zaragoza, Spain
e-mail: jmonclus@unizar.es

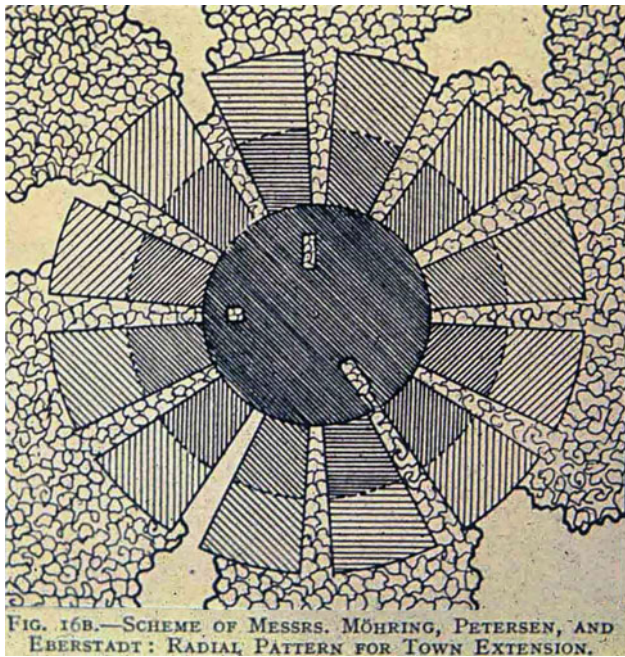


Fig. 26.1 Bruno Möring, Richard Petersen, Rudolf Eberstadt, proposal for urban growth through green belts, in *Town Planning Conference*, London, 1910

Jean-Claude Nicolas Forestier, *Grandes Villes et Systèmes de Parcs* (1908), on the back of the major operations in Paris. In Germany, work such as the fundamental *Der Städtebau* (1890), by Josef Stübben, paid special attention to green areas and parks, although its potential as a system was not considered until the early twentieth century. In England, the succession of public park projects represents the basis of different theories based on nature in cities, with the designs of Garden Cities by Ebenezer Howard, *Tomorrow: a Peaceful Path to Real Reform* (1898) as a milestone leading to new urbanistic and landscaping proposals (Hall 2014, 90–148) (see Chap. 30). Among these proposals, aside from Garden City, Howard's decentralising idea was dominant, during that period. In the same way that garden suburbs cannot really be considered born from garden cities, neither is there a single link between that idea and the green belts that were proposed for English or German cities. But it is true that the proposals to surround the central urban area with other satellite centres, separated by green strips are found in the basis of several schemes: not only the one by Howard, but also that by Theodor Fritsch, presented in his book *Die Stadt der Zukunft* (The City of the

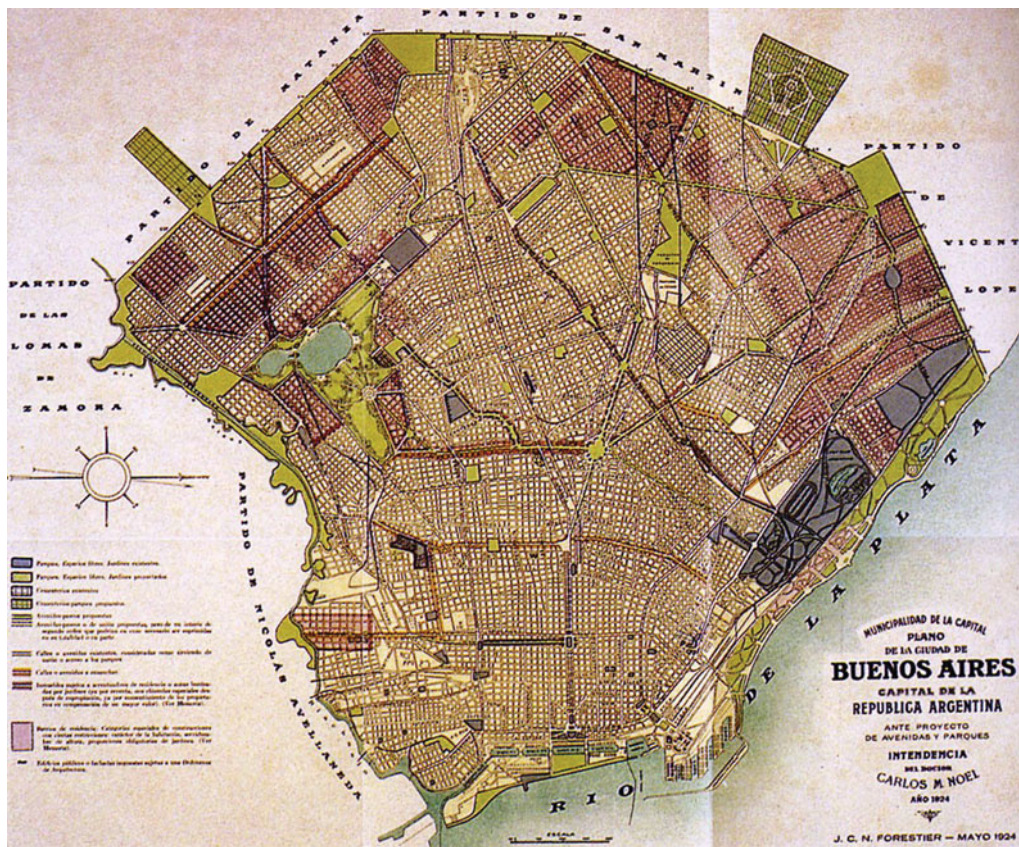


Fig. 26.2 Buenos Aires Park System. J.N. Forestier, *Grandes villes et systèmes de parcs*, 1924

Future, 1896). Indeed, in Berlin, the idea of the green belt dates back to the work by Peter Joseph Lenné, with his plan for parks and gardens of 1840 based on those in Paris. As early as 1874, the idea of limiting the expansion of the city by creating an ‘outer green belt’ was associated with the right of inhabitants to enjoy access to open countryside without travelling for more than half an hour from their homes (Kühn and Gailing 2008, 188). But it was at the start of the twentieth century when the green belt gained strength with the tender for the Great Berlin Plan (1909). It is interesting to see the two winning proposals. The one by Hermann Jansen features a ‘belt of forest and prairie’ around Berlin. The other by Eberstadt, Möhring and Petersen rejects the concept of closed, concentric belts and proposes a radial system of growth, following railway lines with green wedges between them. The case of Berlin is significant because, from the open area programmes by Martin Wagner in the twenties, to the proposals for ‘organic urban landscape’ by Hans Scharoun in the forties, throughout the twentieth century these two models are either opposed or complemented by radial and concentric urban growth, as happens in a number of European cities.

In addition to the connections with the Garden City movement, it is true that green belts emerged in force in the middle of the twentieth century, at the same time as functionalist urban planning, corresponding to the idea of strict segregation of uses that forms part of the modern paradigm. The fundamental reference was the Greater London Plan of 1944, when the green belt system was definitively implemented. The renowned London Green Belt has its roots in the preservationist campaigns, including those mentioned by Patrick Abercrombie in 1926: the local authorities, the owners, farmers, inhabitants, countryside users, preservationists of the ‘Commons’ (free spaces for public use) and countryside tracks, fauna and trees. Architects, engineers, town planners, etc., also took part. It was in that plan that Howardian ideas converged with the creation of the New Towns as updated alternatives to Garden Cities, with regulation proposals for modern town planning, with strict zoning of green areas. The international popularity of green belts is largely due to the success of their implementation in the London Plan, becoming widely extended the world over, to become a paradigmatic case as had been the case of Paris. Its influence lasted at least until the seventies, when the principles of modern town planning entered a crisis (Ward 2002, 172).

In the planning of many cities, green belts had been used to preserve open spaces for agriculture, woodland or nature reserves nearby. These areas have also been used for more utilitarian purposes, such as quarries or incinerators, or other not entirely legal uses. The strategy that was put forward in the initial designs was clear: to refuse planning permission in view of the strong pressure that was often present. In other

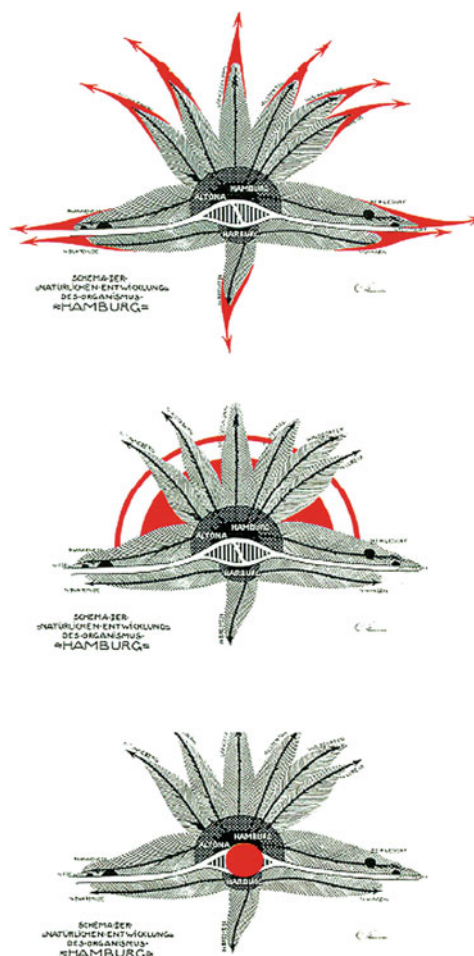


Fig. 26.3 Fritz Schumacher, outline of the Hamburg plan, 1920

countries, there are interesting variations of the green belt idea, such as green ways or green wedges, i.e. linear green areas that structure urban areas instead of perimeter rings around them. The case of the U Green in Stuttgart is one of the most significant examples of connection strategies and enhancement of the park system, from the centre out towards the metropolitan suburbs.

From Green Belts and Corridors to Green Urban Infrastructures

The development of green belts in the UK is the result of a continuing strategy with local authorities led by different groups and movements, such as the Campaign to Protect Rural England (CPRE) which came about in the late fifties. Nevertheless, although their popularity and success allowed them to survive until the eighties, with town planning deregulation by Margaret Thatcher, they became questioned for their rigidity and role in relation to metropolitan suburban housing. Hence, the demand for greater flexibility and

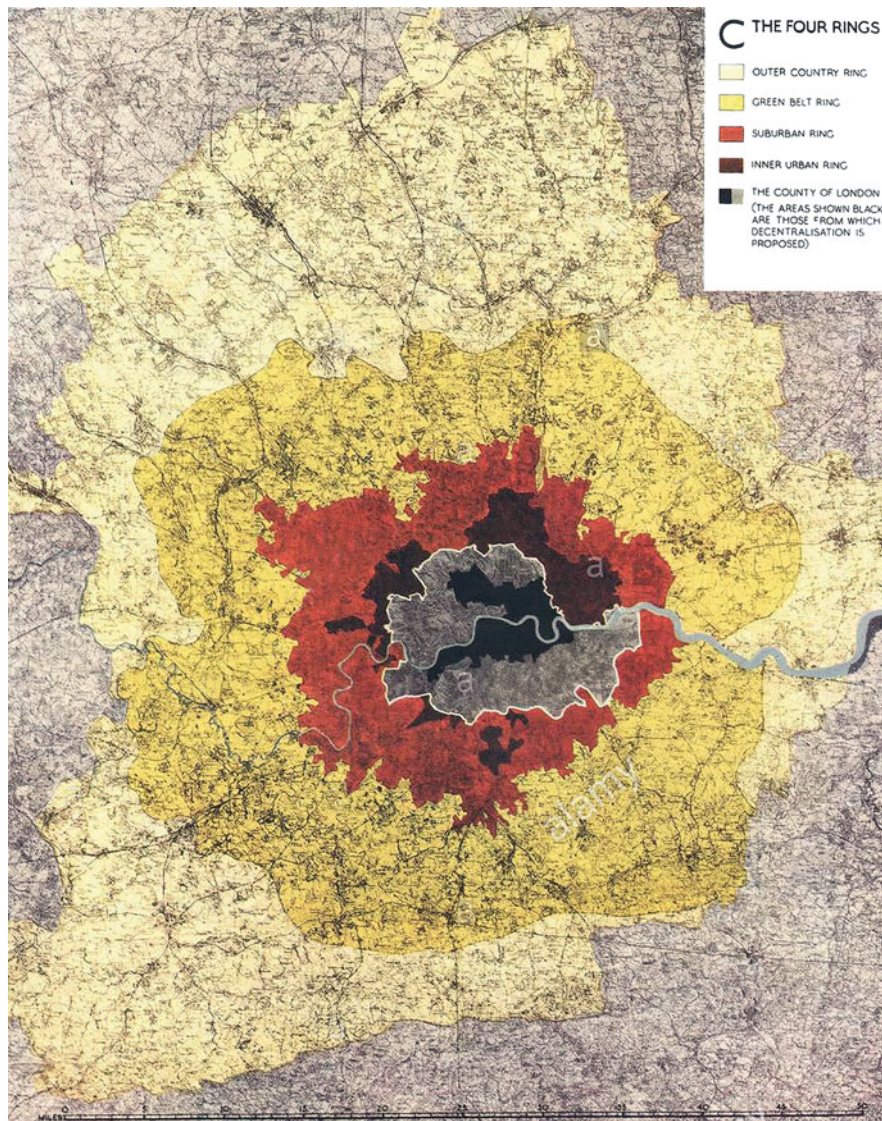


Fig. 26.4 Patrick Abercrombie, Greater London Plan with the four rings or belts: inner urban ring, suburban ring, green belt ring, the outer country ring, 1944

adaptation to the complex processes of recent growth and suburbanisation has increased.

It is interesting to see the changes and continuities from the historical green belts to the renewed green systems, environmental networks or green infrastructures, based on the initial town planning strategy to contain urban sprawl on a broad swath of agricultural land or countryside. In the case of London, the changes in language do not hide the obvious continuity from Green Belts to the so-called London Green Grid (Greater London Authority 2012). With this conceptual renewal, the change from a grey infrastructure to a green

infrastructure was promoted, with the aim of ensuring environmental, social and economic benefits. It also sought to strengthen the identity of each part of the metropolitan territory, improving their environmental and landscape conditions. In essence, many of the new names are nothing more than upgrades in line with new, more or less coherent, discourses or strategies aimed at promoting sustainable growth to tackle the challenges of climate change and improve the quality of life.

In any case, the green belt and conventional park system models have been surpassed by other more sophisticated

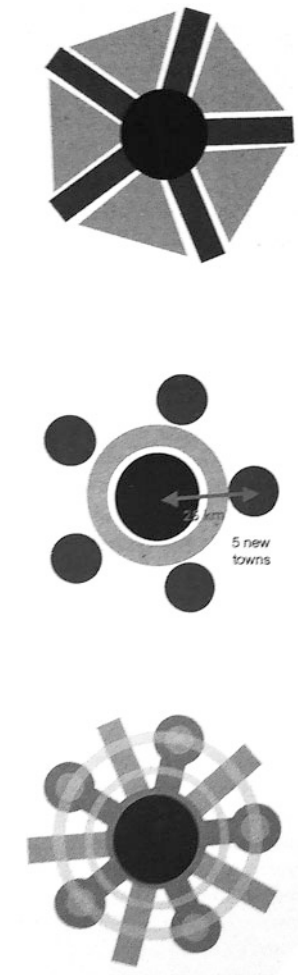


Fig. 26.5 Nicolas Laruelle and Corinne Legenne, The three models: 'the finger plan', 'the polycentric metropolis', 'the mix'

concepts based on green way connection strategies and others means of conferring natural and landscape value which permit structuring and integrating rural or woodland areas with urban areas. These corridors are actually protected open spaces around urban areas of different natures and sizes, which aim to protect natural, rural areas from urban development, and also, in some cases, to avoid different cities from merging together.

The radical differentiation strategy of urban use compared to rural use and natural land, comprising the main feature of the first green belt generation, gave way to more complex outlooks in which concern for the environment was predominant. Hence, the function of the 'urban divider' was replaced for the role of a key ecological component. This way, green belts no longer only served to contain urban

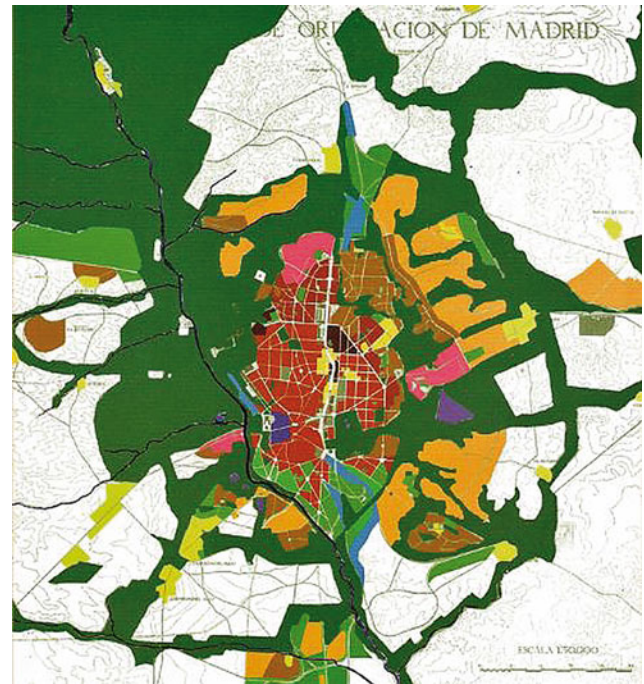


Fig. 26.6 Green belt in Madrid plan general, 1946

sprawl, but became open area systems serving ecological ends that had gained importance in regional planning.

Once again, we can see an intense exchange of ideas between the USA and Europe in relation to the concept of Green Infrastructures, a new term, although not a new idea. Its roots are actually found in the North American environmentalist movement that began over a century and a half ago. But more specifically, two different outlooks were combined: on the one hand the connection between parks and other green areas as a strategy for urban improvement; and on the other, preservation and connection of natural areas in benefit of biodiversity and the wish to lessen the fragmentation of natural habitats (Benedict and McMahon 2002). In a somewhat similar way to the park systems movement, this concept was widened to include other fronts, green or non-green, with the objective of improving the urban system.

The importance and implementation in Europe of the concept were led by D.G. Environment by the European Union (Narbona 2016). It is this concept of green infrastructures that is now being fairly strongly imposed with the decisive boost by the European Union (see Chap. 28). As in the park systems, it aims to increase open, green networks. But, unlike them, there is strong emphasis here on the management of natural and semi-natural areas with complex

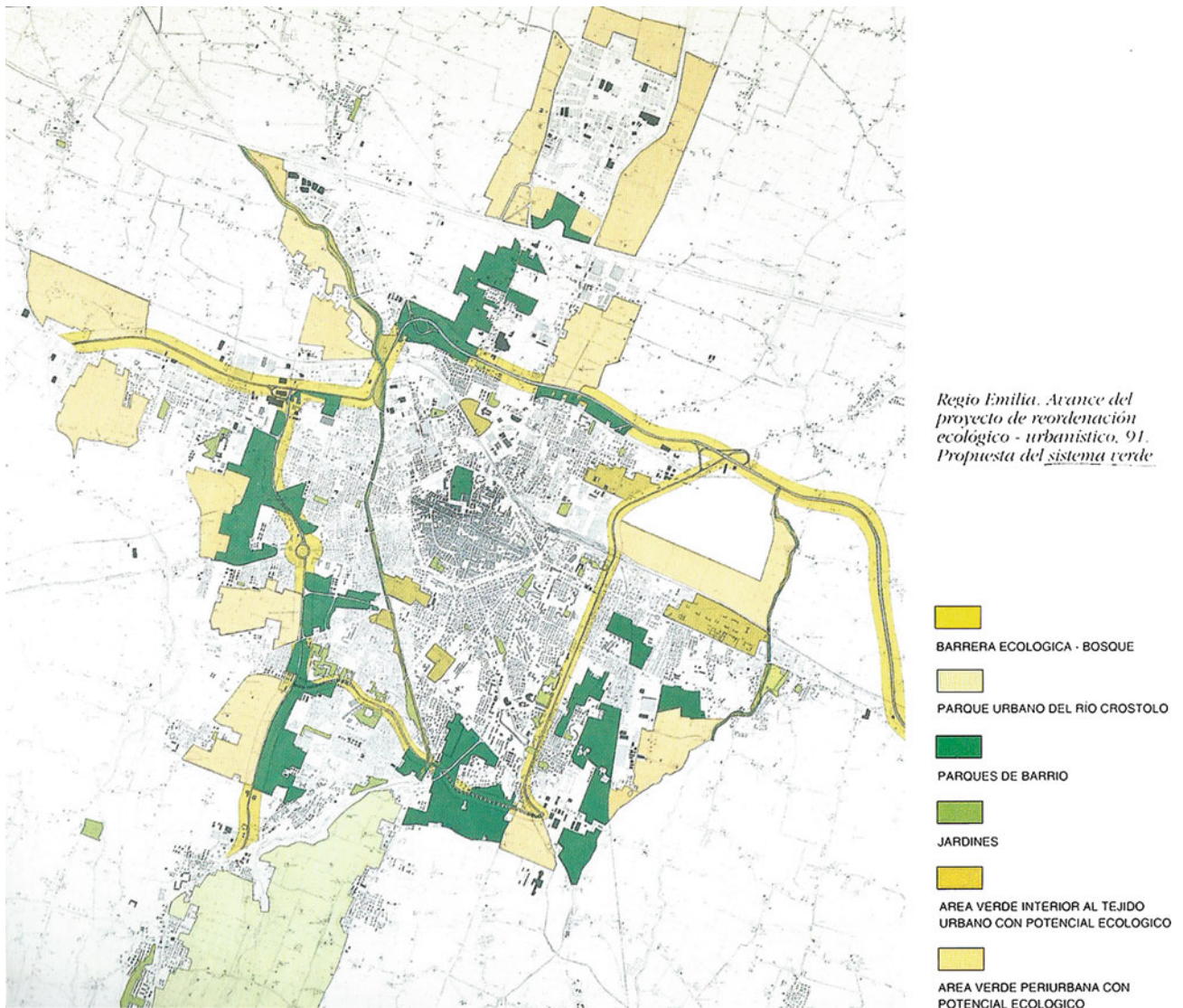


Fig. 26.7 Giuseppe Campos Venuti, Federico Oliva (dirs.), Reggio Emilia ecological/urbanistic renewal project. Environmental system, 1991

functions in the urban ecosystem, also featuring ‘blue’ spaces, by giving special importance to the water cycle, including river systems and coasts. We consequently move on from the initial defensive strategies based on restrictive zoning, to other more strategic ones with the aim of promoting a change in the model towards a low-carbon, efficient economy, investing in the natural capital that has been

abused over decades of only relatively planned urban growth. In any case, it seems obvious that advancement in green infrastructures would have been unthinkable without the previous experience, sometimes parallel, of the green belts and park systems that played such an important role in North American and international urban development throughout the twentieth century.

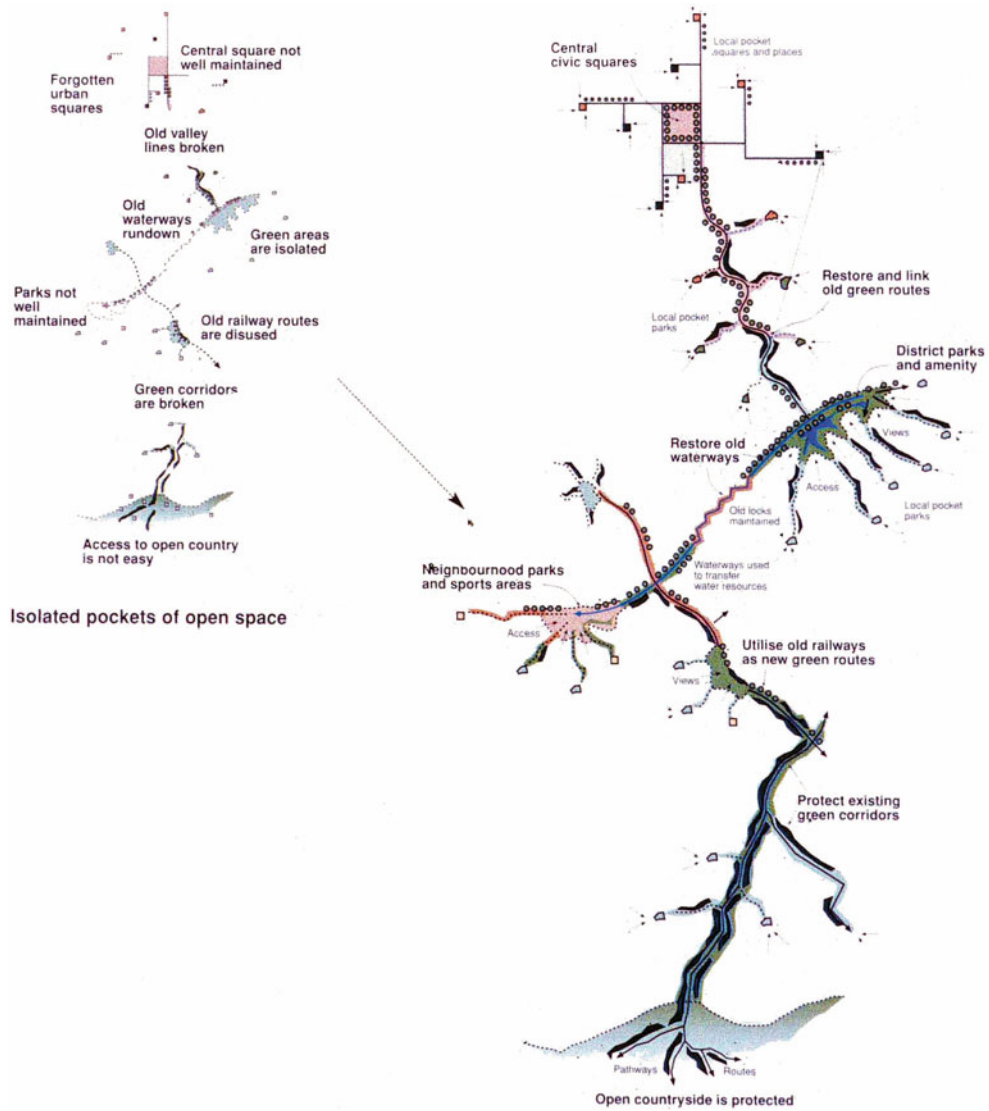


Fig. 26.8 Urban task force, proposal for a system of free spaces to link dwelling areas with green corridors, 1999

Vitoria Green Belt (1990s–2000s)

The idea of a Green Belt arose in the 1990s with the aim of providing a comprehensive solution to the suburban problems of Vitoria-Gasteiz (Spain) and the general state of decay in the area. The Vitoria Green Belt defines a system of parks, urban walkways and sustainable natural systems for water management surrounding the city and connecting it to the countryside. The recovered suburban wetlands serve to effectively retain and purify water. Unlike other green belt projects, fundamentally designed as strategies to contain urban growth, this plan was based on a critical diagnosis of certain destructive processes outside the city in an effort to restore value to areas that were clearly residual and undervalued.

The idea of creating a system of outlying green areas found support in the planning framework established in

the General Town Planning Plan of 1986 because it proposed extending the urban green infrastructures to the outskirts of the city. In this way, the objectives and strategies of the Green Belt emphasised aspects of the environment and landscape, promoting the preservation of natural, suburban enclaves and the renewal of recoverable outlying areas, creating a zone of natural continuity around the city of 600 ha. The initial stage of the project consisted of establishing the principal components of the Green Belt whilst recognising the unsuitability of fixing specific limits, since it dealt with an area subject to constant modification. It is worth emphasising the constant revision of the initial goals, with the ‘closure’ and final layout of the Green Belt to resolve connectivity problems, both ecological and for public use, that still continues today.



References

- Amati, M. 2008. Green Belts: A 20th-century Planning Experiment. In *Urban Green Belts in the Twenty-first Century*, ed. M. Amati, 1–18. Hampshire: Ashgate.
- Benedict, M.A., and E.T. McMahon. 2002. Green Infrastructure: Smart Conservation for the 21st Century. *Renewable Resources Journal* 20: 12–17.
- Greater London Authority. 2012. *Green Infrastructure and Open Environments: The All London Green Grid*. Greater London Authority: Supplementary Planning Guidance. London.
- Hall, P.G. 2014. *Cities of Tomorrow. An Intellectual History of Urban Planning and Design in the Twentieth Century [1988]*. 4th ed. Oxford: Wiley-Blackwell.
- Kühn, M., and L. Gailing. 2008. From Green Belts to Regional Parks: History and Challenges of Suburban Landscape Planning in Berlin. In *Urban Green Belts in the Twenty-first Century*, ed. M. Amati, 185–202. Hampshire: Ashgate.
- Narbona, R. 2016. La infraestructura ¿verde? urbana. In *Caminando hacia la infraestructura verde. Presente y futuro*. Zaragoza.
- Ward, S.V. 2002. *Planning the Twentieth-Century City: The Advanced Capitalist World*. New York: Willey.

Further Readings

- Centro de Estudios Ambientales. 2016. Anillo Verde de Vitoria-Gasteiz. <http://www.vitoria-gasteiz.org/we001/was/we001-Action.do?idioma=es&accionWe001=ficha&accion=anilloVerde>. Accessed Dec 10.
- Fariña Tojo, J. 2012. *Infraestructura verde urbana*. Urbanismo, Territorio y Paisaje: El Blog de Fariña.
- Jellicoe, G., and S. Jellicoe. 1975. *The Landscape of Man: Shaping the Environment from Prehistory to the Present Day*. London: Thames and Hudson.
- Laurelle, N., and C. Legenne. 2008. The Paris-Ile-de-France Ceinture Verte. In *Urban Green Belts in the Twenty-first Century*, ed. M. Amati, 227–242. Hampshire: Ashgate.
- Ozcáriz Salazar, J., L. Andrés Orive, B. Marañón, A.I. Velasco, and A. Sarasua. 2014. Vitoria-Gasteiz. European Green Capital 2012. Hacia un sistema urbano más sostenible. *planur-e* #03.
- Pastor, T., A. Prieto, P. Alonso Martínez, M. Ros, S. Villacañas, C. Maté, C. Echave, M. Insausti, A.I. Velasco, and B. Marañón. 2014. Infraestructuras verdes urbanas y periurbanas. In *12th Congreso Nacional del Medio Ambiente (Conama 2014)*.

Carlos Ávila

Abstract

The landscape project entails a necessary understanding of the space in which action is taking place. It also requires the interiorisation of processes and structures that necessarily fall outside the scope of the project but which have an unmistakable influence over it. Hence, it is of great importance to work constantly on the change of scale in order to understand to what extent our intervention affects the system, and how this simultaneously influences our space of action. However, this game of physical scale is not enough. The concept of temporary scape should be incorporated as an aspect inherent to the actual materiality of any land. Understanding that landscape is the result of processes taking place over time is essential in order to approach any intervention project coherently.

Keywords

Scale • Landscape • Identity • Complexity • Limits

Working at project level, whether in architecture, town planning, or landscape, inevitably entails a deep reflection about the site where the project is to be implemented. This reflection will undoubtedly feature the key elements of the surrounding area, successfully adapting the project to its site. In any case, it is essential to use project tools to understand the site, with the idea of identifying those *genius loci* that are frequently mentioned in texts and manuals, but which are difficult to define (García 2013). In the words of Rafael Moneo: “The site is always expectant, waiting for the arrival of the event that will allow it to play an active role in the course of history” (Moneo 1992).

Understanding the Site

Designing a project conscious of the features of the site requires humility and, above all, being prepared to relate to the environment and not impose oneself upon it. This attitude allows to decipher the details of an evolutionary process

that has converted the site to what it is. The challenge consists of revealing the key factors and using them to benefit the project.

The negative consequences on design of considering the site a blank piece of paper came to light in the 1960s with the Structuralist architect Herman Hertzberger, who described the creative process as something based on reinterpreting what was already existing. In his own words, “Designing cannot be anything but continuing to build on something hidden and obstructed so to speak. The thought of ever being able to proceed from a blank white sheet of paper and unavoidably covering it with unreal and sterile constructions is absurd and also has negative consequences” (Hertzberger in Weilacher 2009, 94).

It seems reasonable for a project to begin with an analysis of the different aspects of the site, in order to identify which elements can contribute to its coherence. That is why this analysis must take into account the tangible factors (physical, biological, historical, etc.) and other more intangible qualities, related to the legacy of its past and present inhabitants. The intangibles, which on many occasions are ignored, help to keep the identity of the place alive and

C. Ávila (✉)
School of Engineering and Architecture,
University of Zaragoza, Zaragoza, Spain
e-mail: cavila@unizar.es

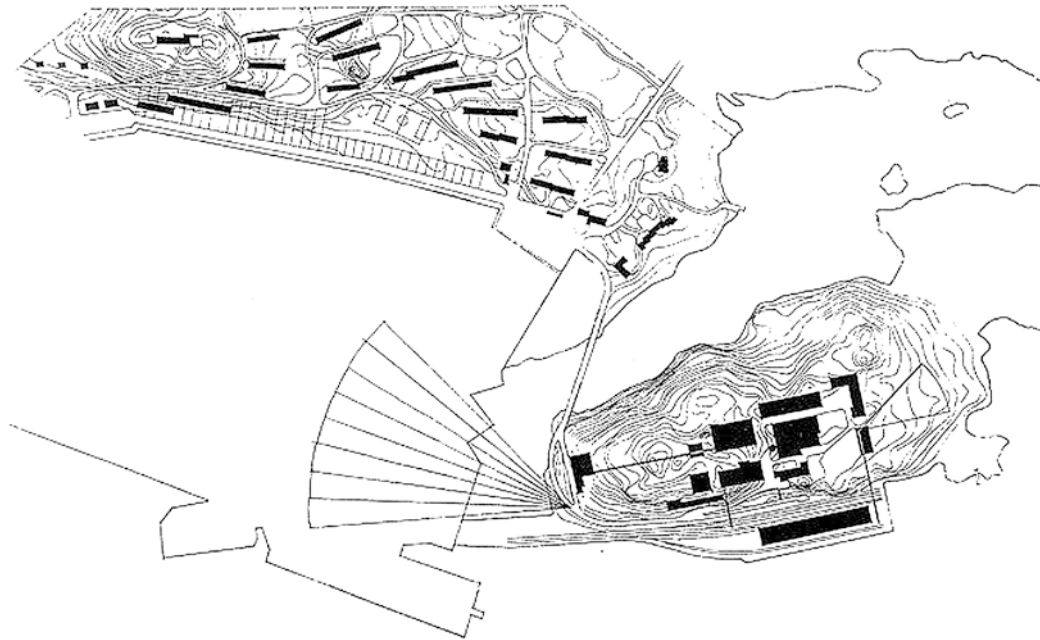


Fig. 27.1 Alvar Aalto, Sunila Pulp Mill, Pyötenen Island, Kotka (Finlandia), 1935–37. The project integrates in the environment. The situation of the buildings shows a special sensitivity for the topography

provide resources to enrich our work, linking the project specifically to its site.¹

Undertaking Complexity

Nevertheless, understanding a site goes far beyond discovering the *genius loci*. It entails knowing the role the project will play in the territorial puzzle. The site is not a limited space, without connections to its surrounding area. Therefore, the designer should be sensitive to the dynamics and relationships established between the different components where failure to respect these processes will cause distortion to the system. Ultimately, this implies perceiving its complexity.

The working philosophy by Ian McHarg in his book *Design with Nature* (1969) is based on these principles, in which he proves the difficulty and the challenges of working on a territory, and the need to take the dynamic processes into account as a resource essential to the project itself.² His diagnosis of the territory to determine its potential was a new

¹Fortunately, there are increasingly more professionals who carry out their work following these intangible landscape footprints, permitting the identity of the site to be conserved through their action. In Spain, among other contributions of interest, the work of Rosa Barba, establishing the bases for this sensitive approach to landscape, stand out and were subsequently developed at a large scale in the Catalonia Landscape Catalogues.

²Publication of this book accounted for a true conceptual revolution in the way projects were tackled in a territory.

model for designing projects in a more coherent, sustainable way. The work developed by Richard T.T. Forman adds to this understanding of territorial complexity, using the idea of patterns and connections leading to what would become a new discipline, the Ecology of Landscape. This discipline would be capable of overcoming the traditional conflict between human intervention and natural spaces, between projects and conserving nature, reinforcing the thesis developed by McHarg years earlier (Forman and Godron 1986).³

Reflecting on the Limits

The conflict arises when trying to analyse that complexity of structures and dynamics, sticking to our project limits, because those patterns respond to working scales that usually exceed the scope of intervention. Aligning the mental limits and the scope of reflection to fit within the limits of the project brings negative consequences to its development.

Michel Corajoud, in his paper *Les neuf conduites nécessaires pour une propédeutique pour un apprentissage du projet sur le paysage* (Nine rules of a foundation course for learning landscape design, 2000), establishes the need to explore the limits and legitimately exceed them to avoid the

³The footprint left in Spain by Richard T.T. Forman through his work on the Emerald Network in the metropolitan area of Barcelona brought deeper knowledge to the bases of his methodology by many professionals in our country linked to territorial planning and urban and landscape planning.

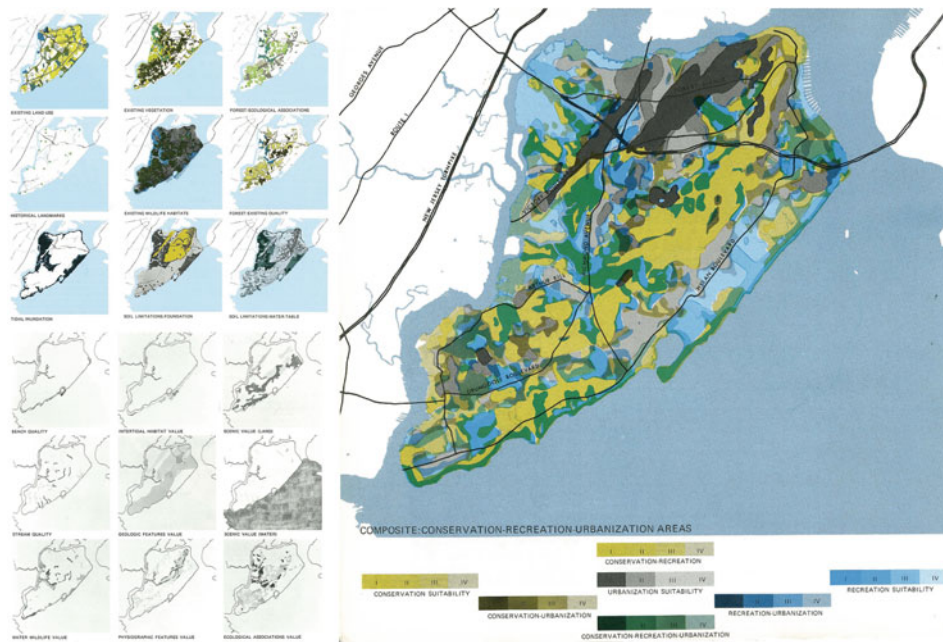


Fig. 27.2 Ian McHarg, diagrams of the analysis of Staten Island, in *Design with Nature* (1969), chapter “Processes understood as values”. McHarg shows a working methodology that is capable of decoding the complexity of a territory, thus permitting working out the capacity it has to host different uses of the space, in areas as diverse as the island located to the south of Manhattan



Fig. 27.3 ‘No Entry’, so ridiculous as to try to put gates to the countryside. Something similar to what restricting reflections on projects to the administrative limits would be in a designer’s work

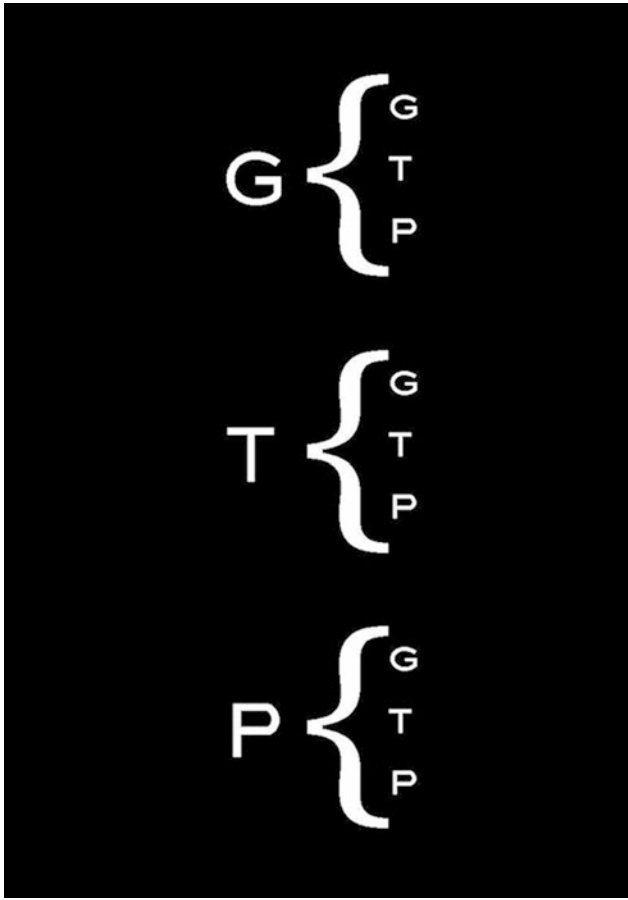


Fig. 27.4 Henri Lefebvre, diagram of scales, in *The Production of Space* (1991), showing a system of interwoven levels between different scales

landscape becoming fragmented in multiple terrains of action, blind to each other (Corajoud 2000).⁴ It is that need to understand the role the project plays in a context where hierarchies and relationships on a much larger scale are already established that forces us to break away from the administrative limits of the intervention to properly design a project and execute it. By widening our point of view, it is possible to understand certain items and their dynamics: water, green areas, topography, etc.; thus, being able to develop all their potentials and avoiding the risks we run by ignoring them. Identifying and strengthening existing geographical structures in areas where action takes place will allow us to find support from the existing systems that relate

⁴Michel Corajoud was awarded the National Urbanism Prize in France in 2003 and has carried out his teaching career in conjunction with his professional activity. He is very approachable for students, and in this text, he talks about the keys to properly address a landscape project.

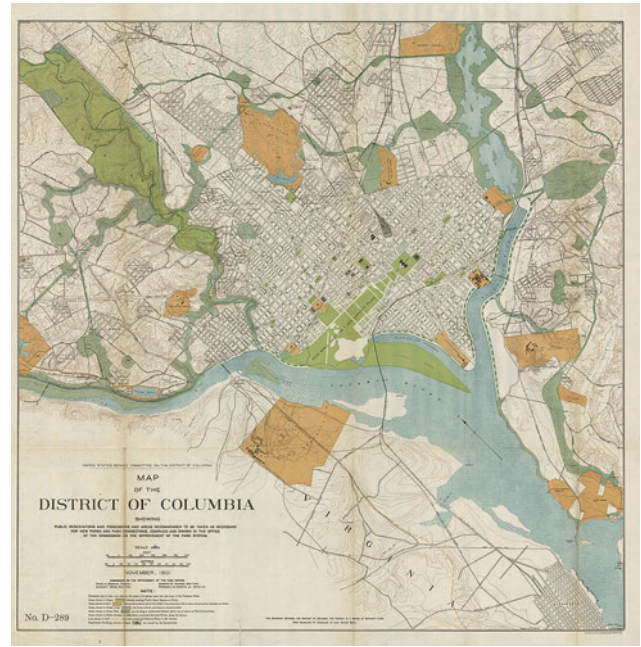


Fig. 27.5 Park System of Washington, D.C. proposed by Plan McMillan (1901). The plan is based on the Metropolitan Park System of Greater Boston by Frederick Law Olmsted. His namesake son (Frederick Law Olmsted Jr.) took an active part in elaborating this park system for the capital of the USA

to their environment and which are capable of anchoring us to the territory in a natural way.

Michel Desvigne⁵ constantly reflects on this approach to projects, basing his work on experiences of green systems developed by Frederick Law Olmsted in the nineteenth century in the USA, putting forward the notion of ‘Extended Geography’ to show the opportunity of supporting our work with geographical elements and developing them with the aim of establishing coherent relationships with the environment and increasing the use of processes inherent to these structures (Basdevant 2008).

Scale

The advisability of surpassing, even if only mentally, the limits of intervention, brings a very different level of perception. Ultimately, it requires constantly comparing and

⁵A disciple of Corajoud, Michel Desvigne was awarded the National Urbanism Prize in France in 2011. The most American of the French landscapers, as Corajoud defines him, admires Olmsted’s work, who he admits has a visionary attitude by working on the most notable geographical items as the basis for creating urban green systems.

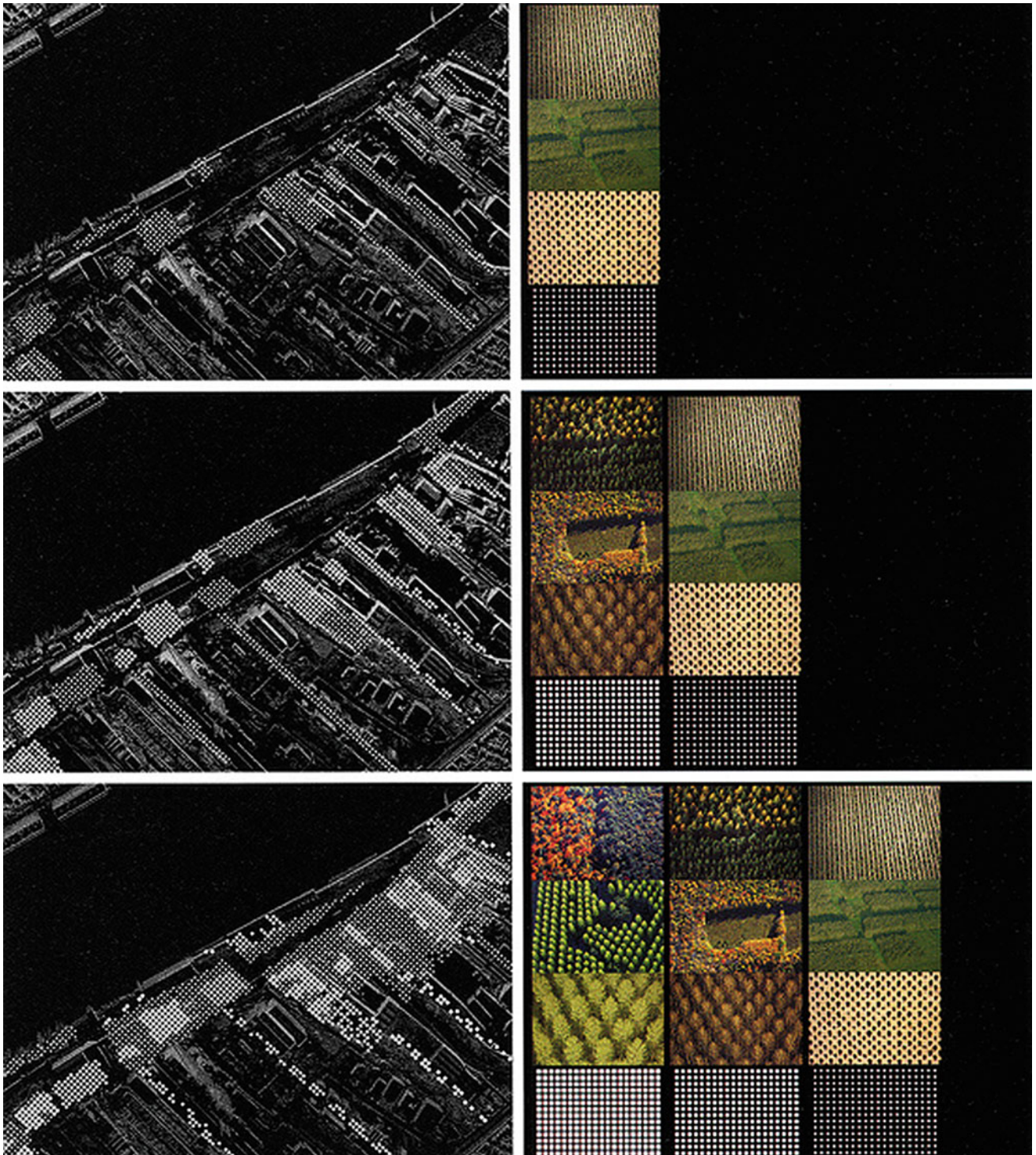


Fig. 27.6 Michel Desvigne, proposals for the right bank of the River Garonne, Bordeaux (2004). The proposal consists of a forest on a section that gradually occupies the areas abandoned by former industry

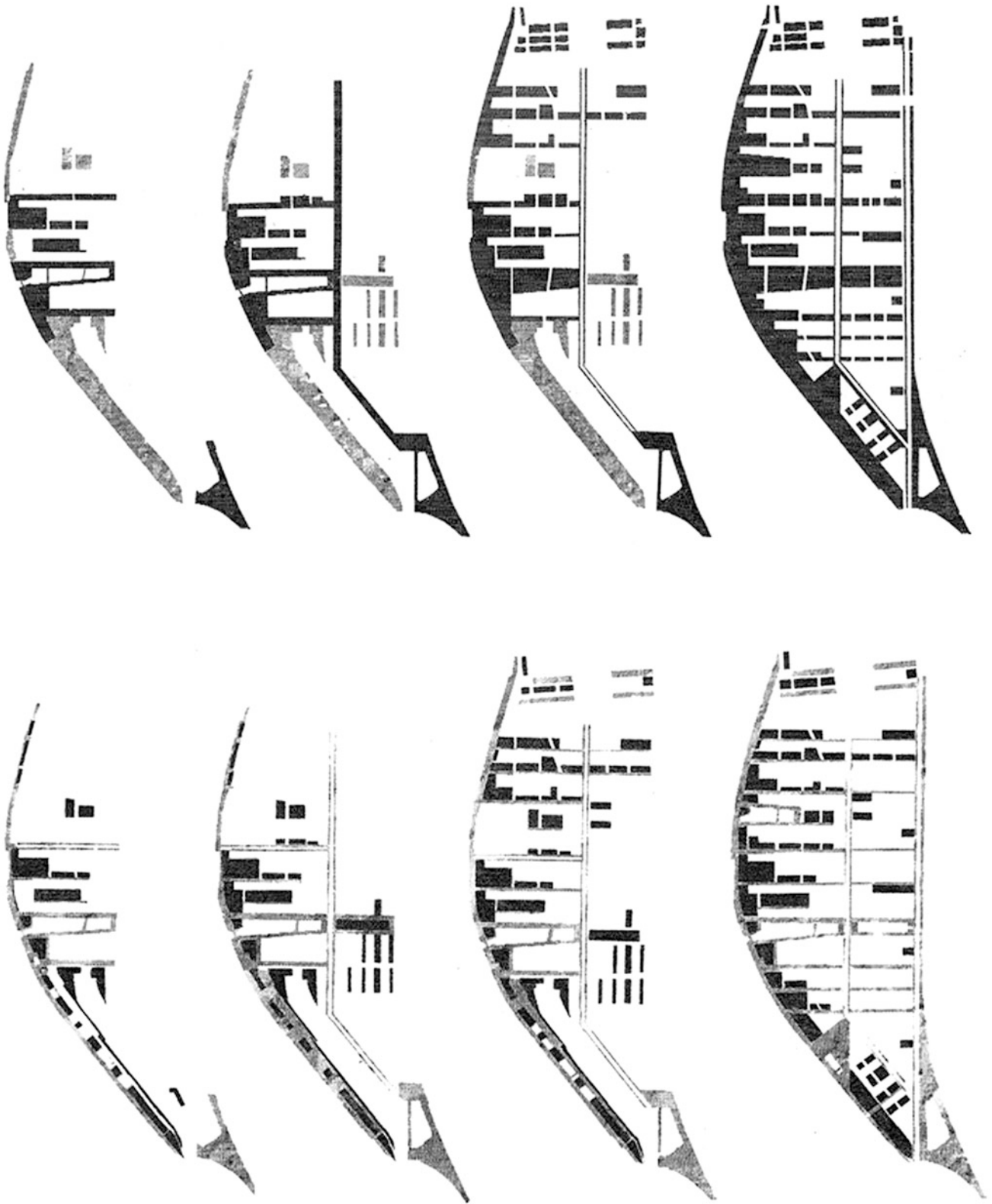


Fig. 27.7 Michel Desvigne, proposal for Lyon Confluence (2004). In view of the slowness of the processes necessary to set up this ambitious urban renewal plan in this area, Michel Desvigne puts forward a landscaping strategy that is capable of starting a slow, gradual process of occupation and transformation of the site

contrasting scales, between the smaller scale of the project and the local territorial structure.

Scale, in a project, should mean planning, hierarchy, priority, search for opportunities, causes, etc. It is important to educate one's mind to take on-board that constant change of zoom, with the intention of identifying the key to certain design criteria within the bigger picture, or sometimes discovering the opportunity to reflect on what is global from the exact intervention on a specific site. Calibrating the way one sees, permits adjusting and readjusting the project, identifying any inconsistencies or disorders, questioning each step of the approach, to reach a balanced proposal that is adapted to the reality of the environment of the site. The analysis by Henri Lefebvre in his book *The Production of Space* (1991) on the hierarchy of scales, based on his study of Japanese social space, is an excellent reference concerning the importance of different scales in a project. This analysis translates as a strategy which, to a certain extent suggest it is possible to work with several scales in a project, each, in turn, being readjusted within its own scope (Lefebvre 1991, 155).⁶ This is an interesting, although somewhat perverse game if one does not manage to properly control it. As Michel Desvigne so wisely remarks "perceiving scale and providing the right response at the right dimension is the key to success of a territorial renewal project" (Desvigne 2012, 10).⁷

Time Scales

But a landscape town planning project cannot exclusively contemplate the work at a physical scale but must also include the concept of the time scale as an inherent aspect to the project. The aforementioned complexity refers to the dynamics and processes that act on the model, and it is

therefore important to consider the time factor to determine the strategy that should regulate transformation of the project over the years.

Along these lines, in his evolving project models, James Corner, through ecological strategies, is able to conceive dynamic, changing landscapes that are capable of producing a diverse, stable structure over time.⁸ A good example of this type of intervention is Fresh Kills Park: a former dump covering around 900 ha, located on Staten Island, closed after the debris of the Twin Towers were dumped there.⁹ In addition to being a project resource that permits evolution adapted to territorial pace, this model simplifies management of urbanistic processes (sometimes complex outside the technical approaches and considerations), by being modulated and easily adjustable to new circumstances imposed on the political changes to the approach.

Urban landscape projects must, therefore, be conceived, not as a fixed permanent image, but rather as a strategy capable of providing added value to a site, at all stages of development, putting forward criteria in line with the new scenarios in a coherent manner and meeting the objectives for which they were designed. On these lines, Michel Desvigne develops two major projects in the French cities of Bordeaux and Lyon, implementing the concept that he calls '*natures intermédiaires*' (intermediate natures) that permit catalysing urban transformation processes without resorting to long-lasting processes or unfinished images of spaces.¹⁰

Tackling this kind of project coherently with successful results is not an easy task. Nevertheless, correct analysis of the place is undoubtedly essential, as is understanding its relationship with the territory, where it is located and the complexity of the dynamics structuring it, including the correct use of both physical and time scales. These are all indispensable tools for any landscape project.

⁶Although the conceptual basis of Henri Lefebvre's scheme does not exactly match the criteria expressed here, it does provide us with an exercise of constant readjustment of scales according to the demands of landscape projects.

⁷For Michel Desvigne, finding the right scale is an obsession which is constant and obvious in his work.

⁸James Corner works with processes as an inherent part of his creative activity, imagining short, medium and long-term scenarios.

⁹'Field Operations' winning Lifescape project is described on the competition boards as a 'reconstituted matrix of diverse life forms and evolving strategies'. This matrix supports the integration of physical design with geological, hydrological and biological processes at multiple scales" (Pollack 2007, 107).

¹⁰Bordeaux Rive Droite and Lyon Confluence, along with Millenium Park in London, are two of the most important projects, where Michel Desvigne develops his idea of time forms as a means to achieve urban mutations.

References

- Basdevant, M. (ed.). 2008. *Intermediate natures: The landscapes of Michel Desvigne*. Basel, Boston, Berlin: Birkhäuser Verlag AG.
- Corajoud, M. 2000. Les neuf conduites nécessaires pour une propédeutique pour un apprentissage du projet sur le paysage. In *Le Jardinier, l'Artiste et l'Ingénieur*, ed. J.-L. Brisson. Paris: Editions de l'Imprimeur.
- Desvigne, M. 2012. El paisaje como condición previa/The Landscape as a prerequisite. *Paisea* 23: 8–17.
- Forman, R.T.T., and M. Godron. 1986. *Landscape ecology*. New York: Wiley.
- García, M. 2013. Written at the place. The intangible values of the landscape/Escrito en el lugar. Los valores intangibles del paisaje. *ZARCH. Journal of interdisciplinary studies in Architecture and Urbanism* 1: 36–47.
- Lefebvre, H. 1991. *The production of space [La production de l'espace, 1974]*. Oxford: Blackwell Publishers.
- McHarg, I. 1969. *Design with nature*. Garden City, New York: Natural History Press.
- Moneo, R. 1992. *The murmur of the site*. Yufuin, Japan: In Anywhere Conference.
- Pollack, L. 2007. Matrix landscape: Construction of identity in the large park. In *Large Parks*, ed. J. Czerniak, and G. Hargreaves, 86–119. New York: Princeton Architectural Press.
- Weilacher, U. 2009. Learning from Duisburg Nord. *Topos—The International Review of Landscape Architecture and Urban Design* 69: 94–97.

Further Readings

- AA.VV. 2002. *Jardines insurgentes/Gardens in arms. Catálogo de la II Bienal Europea del Paisaje*. Barcelona: Fundación Caja de Arquitectos.
- Jellicoe, G., and S. Jellicoe. 1975. *The landscape of man: Shaping the environment from prehistory to the present day*. London: Thames and Hudson.
- Masbouni, A., and D. Mangin. 2009. *Agir sur les grands territoires*. Paris: Éditions du Moniteur.
- Pollack, L. 2006. Constructed ground: Questions of scale. In *The landscape urbanism reader*, ed. C. Waldheim, 125–139. New York: Princeton Architectural Press.

Carlos Ávila

Abstract

The developmentalist processes of recent decades have brought our planet to a critical situation from an environmental perspective. Large urban areas play a basic role in this, given that they act as large-scale systems that devour resources and produce waste and pollution. This is why the role of open spaces in cities should change radically by adding a strong environmental component to its aesthetic and leisure functions that are able to alleviate such effects. These new urban ecosystems should effectively incorporate the planning and structuring of the city, integrated the existing cycles into the natural setting. This will bring about an improvement in the environmental qualities of our cities and make them more liveable places.

Keywords

Urban metabolism • Green infrastructures • Green city • Third landscape • Sustainability

Cities and Sustainability

The concept of sustainability, somewhat discredited because of the way the term has been abused in recent times, encompasses our need to develop socio-economic development policies whilst maintaining some indispensable conservation criteria regarding natural resources, so as to guarantee survival of the planet for future generations. This situation is far from being carried out efficiently since the ecological limitations of the planet have been greatly exceeded. At the moment, the global consumption of resources is 56% higher than the planet can sustain, according to the calculations by the Global Footprint Net-

work,¹ and if we continue with the current development model, by 2050 we will need more than two planets Earth to supply our needs.

This situation is worsened by changes in the world's population distribution model. According to a recent survey by the Department of Economic and Social Affairs (DESA) by the United Nations, under the title *World Urbanization Prospects*, in 2014, 54% of the world's population lived in cities, with an anticipated increase to 66% by 2050 (United

¹Global Footprint Network is a non-profit organisation, established to enable a sustainable future where all people have the opportunity to live satisfying lives within the means of one planet. It aims to accelerate the use of the Ecological Footprint—a resource accounting tool that measures how much nature we have, how much we use and who uses what. The Ecological Footprint is a data-driven metric that tells us how close we are to the goal of sustainable living. Footprint accounts work like bank statements, documenting whether we are living within our ecological budget or consuming nature's resources faster than the planet can renew them. See: http://www.footprintnetwork.org/en/index.php/GFN/page/footprint_basics_overview/.

C. Ávila (✉)
School of Engineering and Architecture,
University of Zaragoza, Zaragoza, Spain
e-mail: cavila@unizar.es

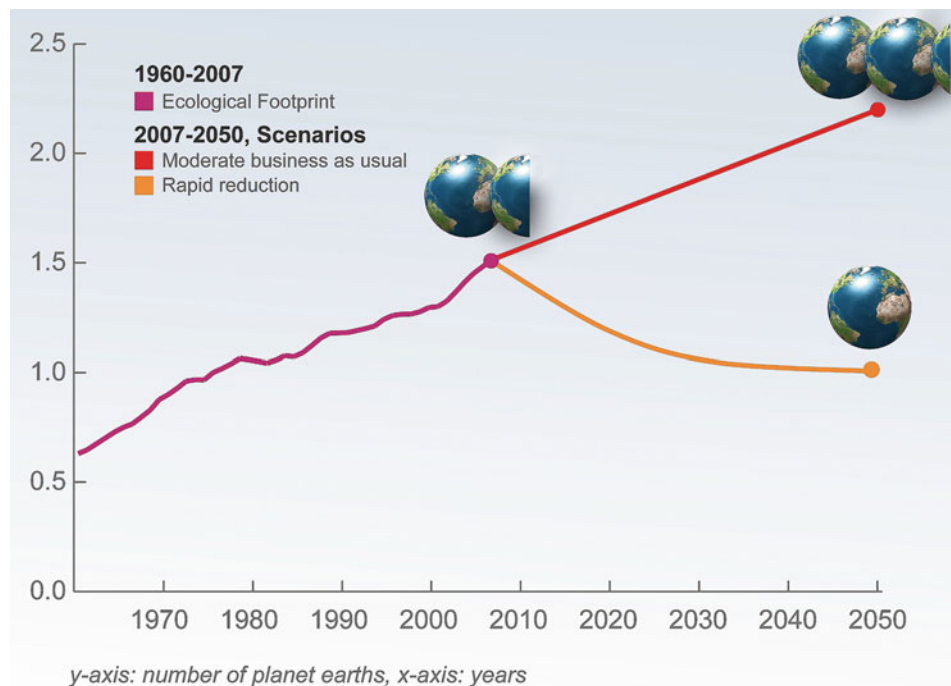


Fig. 28.1 World ecological footprint, diagram of its evolution at current development parameters or applying the necessary measures to contribute to sustainability of the plan

Nations et al. 2014).² These data show the important role that cities and towns play in the planet's environmental balance, and the need for new policies that permit these urban structures to work as sustainable systems, avoiding the current negative consequences for the global environment, mainly in terms of consumption of resources (land, water, energy, nutrients, raw materials...) and production of contaminating waste (solids, liquids and gases).

The scenario projected in the next four decades begs for a deep reflection on the model of cities we need to implement and how green systems must play a fundamental role in correct functioning of urban ecosystems, favouring greater metropolitan biodiversity and ensuring a better balance in the natural cycles (biotic and abiotic) that take place in our cities. As indicated in the world urbanisation perspectives by the United Nations, in the 2014 revision: "As the world continues to urbanize, sustainable development challenges will be increasingly concentrated in cities, particularly in the lower-middle-income countries where the pace of urbanization is

fastest. Integrated policies to improve the lives of both urban and rural dwellers are needed" (United Nations et al. 2014, 1).

Green Urban Areas

If we analyse the structure of today's cities, the overall green areas appear, in the collective imagination, as a paradigm of nature within urban centres and can be compared to an 'oasis of nature' in the city. Nevertheless, the potential of these green areas has scarcely been developed, if we bear in mind the multi-purpose role they could assume and the possibilities if they were seen as an extensive green system. For this reason, management of these areas must go beyond creating beautiful, pleasant spaces where the population can carry out different recreational activities. Our focus should be on how to exploit their potential as an environmental reinforcement of the urban ecosystem.

In the words of Enric Batlle: "This new open space must necessarily be complex, because it must include the traditional values of public usage and beauty, and at the same time must be coherent with the laws of ecology and environmental problems" (Batlle 2011, 23). Consequently, the design and distribution of these areas must be governed by city structuring parameters. It is important to take them both into account in town planning, with a view to understanding the importance of the green system as a frame configuring

²The report shows the trends in urban growth processes at world level, analysing the evolution of megacities and large cities compared to the rest of the cities on the five continents. On the back of this, it describes the political implications that this situation generates, emphasising the fact that city dwellers must be able to enjoy the positive aspects cities offer (access to education, health care, public transport, housing, water, electricity...) but in conditions of social equality and environmental sustainability.

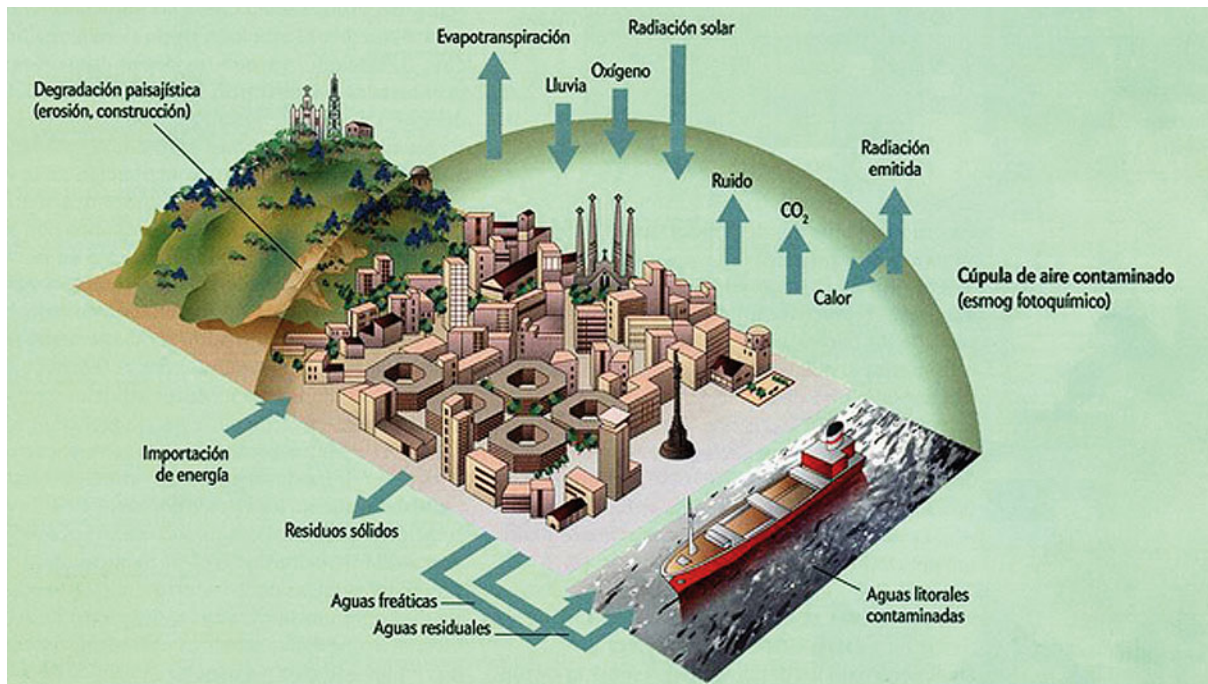


Fig. 28.2 Jaume Terradas, Teresa Franquesa, Margarita Parés and Lydia Chaparro, Urban metabolism of Barcelona. A study that began in 1980 and showed the negative consequences of the city on its environment

Urban ecosystems generating local and direct services, relevant for Stockholm.

	Street tree	Lawns/parks	Urban forest	Cultivated land	Wetland	Stream	Lakes/sea
Air filtering	X	X	X	X	X		
Micro climate regulation	X	X	X	X	X	X	X
Noise reduction	X	X	X	X	X		
Rainwater drainage		X	X	X	X		
Sewage treatment					X		
Recreation/cultural values	X	X	X	X	X	X	X

Fig. 28.3 Per Bolund and Sven Hunhammar, environmental benefits of green zones. The table shows the positive environmental and social repercussions

the urban layout, not only giving it shape, but also permitting its functioning in the social and environmental aspects.

Along these lines, at the end of the last century reflections on the environmental role played by green urban areas intensified considerably. Certain parameters have served as the basis for subsequent implementation of new models and new functions of this kind of open areas. In their article “Ecosystem services in urban areas”, Per Bolund and Sven Hunhammar highlight the aforementioned conflict that arises with a mostly urban population, but one which requires natural resources to survive. The paper analyses seven

different urban ecosystems in Stockholm, in order to illustrate the ecological role they play in the city (streets with trees, parks, urban woods, crop land, wetlands, lakes/sea and streams). Despite the advantages described in that study, the authors themselves consider the following reflection to be important: “It should however be remembered that it is only the effects of these problems that are decreased, not the cause of the problem that is solved. It is necessary to work to both ends” (Bolund and Hunhammar 1999, 300).

Hence the need to go one step further, so that the green systems can be articulated as effective, fundamental parts of

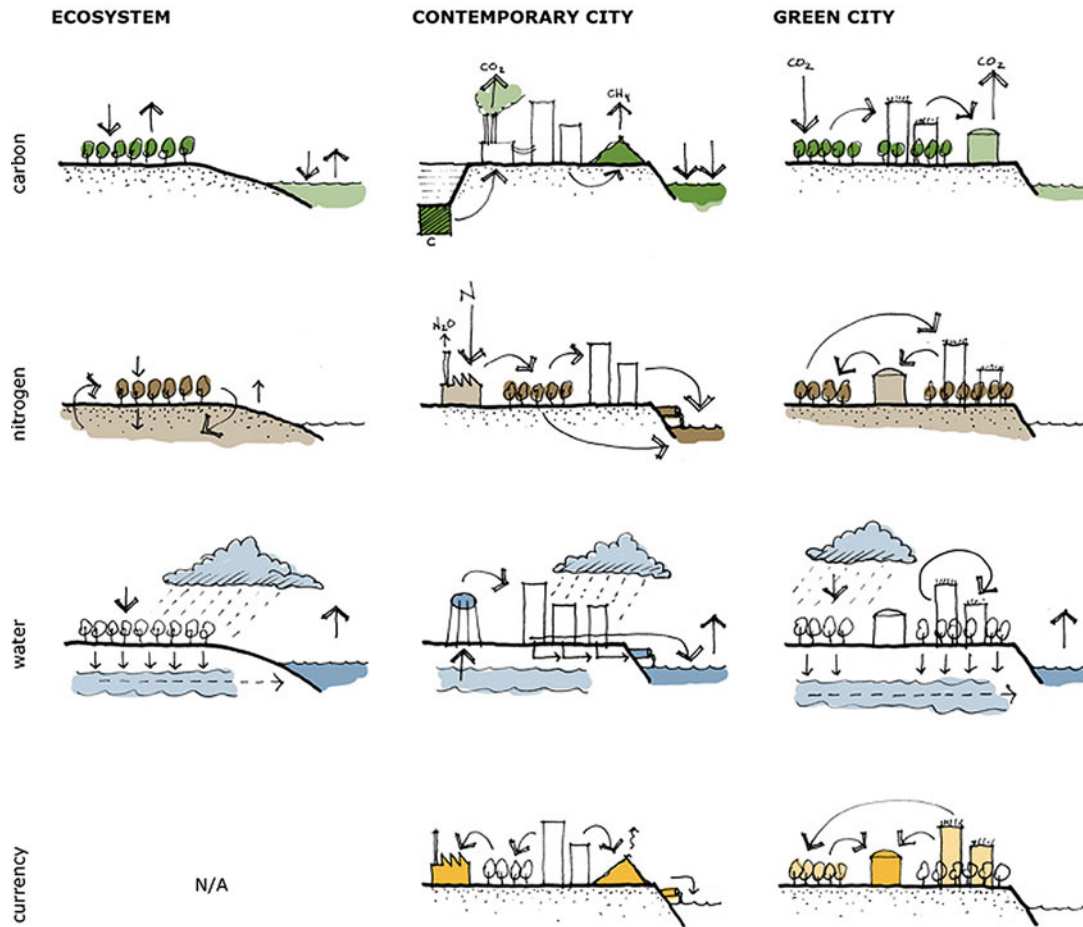


Fig. 28.4 Carl Sterner, comparative analysis of interrelations that are established in some natural cycles, between the environment, traditional cities and Green Cities. The author includes the cycle of economic transactions in these natural cycles

a city's environmental machinery permitting better balance between the exchanges that are created in the urban metabolism (Kennedy et al. 2007, 43–59) and reconstitution of water and nutrient cycles, whether gaseous (oxygen, carbon, nitrogen...) or sedimentary (calcium, sulphur, phosphorous...). As Carl Sterner claims, “A Green City preserves the natural resources, as well as the processes that create and maintain them. The second defining characteristic of a Green City is a cyclical or biomimetic metabolism that mimics the cyclical flows of nutrients in a natural ecosystem, creating outputs that can be reused in other biological systems” (Sterner and Solla-Yates 2014).

New Strategies: Green Infrastructures

With respect to the aforementioned parameters, new projects for open urban spaces are currently materialising. These areas use different strategies linking form-use-function, in the

framework of a new city model that must adapt to the challenges of the twenty-first century: a model that is conditioned by the exponential growth of the population (and its preference for urban environments), the accelerated consumption of natural resources and creation of serious contamination problems causing climate change. In this context, the concept of Green Infrastructures is conceived that the European Commission defines as “a strategically planned network of natural and semi-natural areas with other environmental features designed and managed to deliver a wide range of ecosystem services such as water purification, air quality, space for recreation and climate mitigation and adaptation. This network of green (land) and blue (water) spaces can improve environmental conditions and therefore citizens' health and quality of life”.³

³http://ec.europa.eu/environment/nature/ecosystems/benefits/index_en.htm.

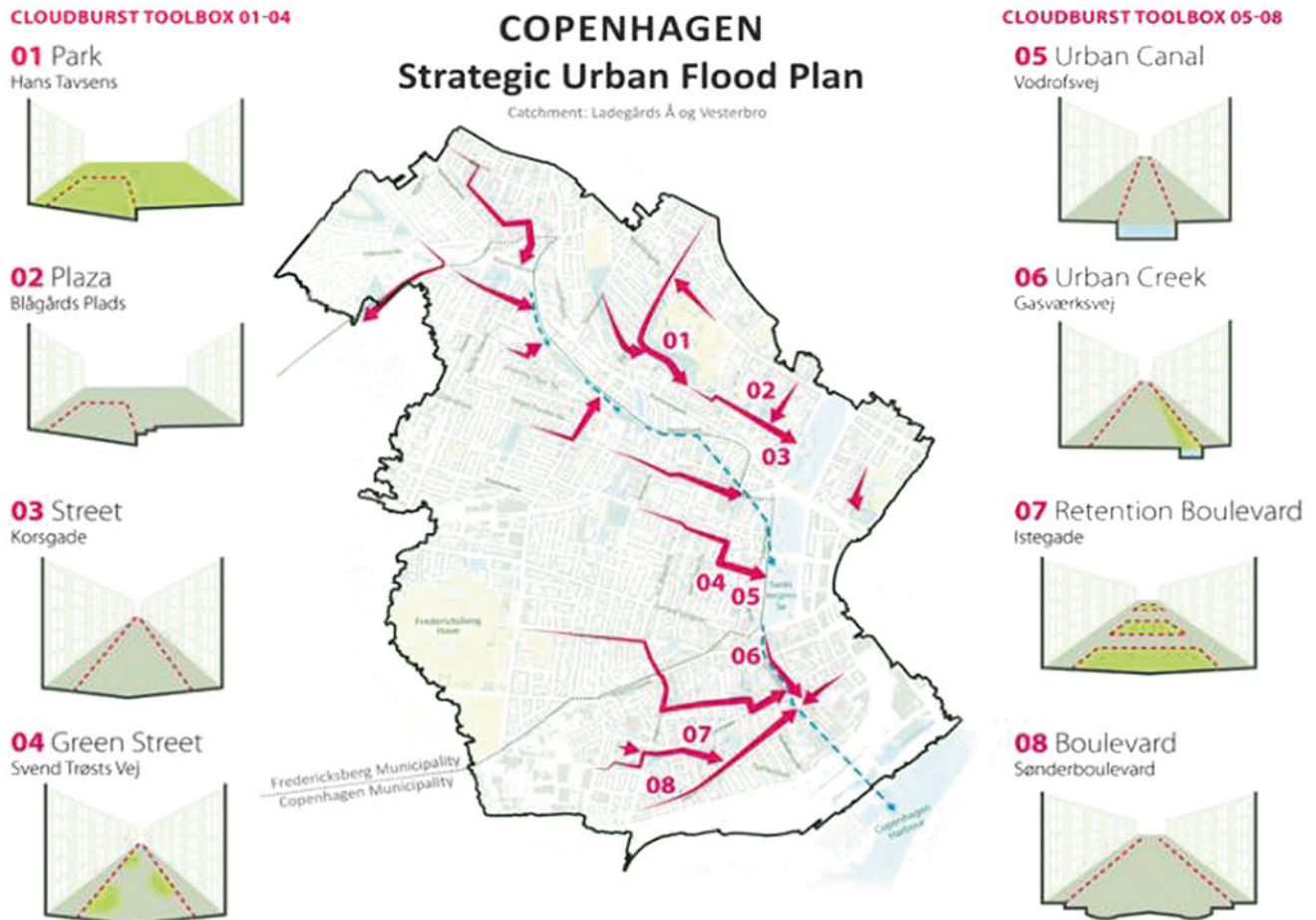


Fig. 28.5 Atelier Dreiseitl, Cloudburst Plan, 2012. Different strategies for sustainable drainage proposed in the master plan, applied to urban areas in Copenhagen

Therefore, these green infrastructures can and must help us rethink our cities, starting off with knowledge about their metabolism and placing special emphasis on the fundamental items that allow these processes to be managed (European Commission 2013). Some of them have already been employed in traditional cities, and we are all aware of the benefits green systems have on air quality, reducing the levels of CO₂ and suspended particles, whilst increasing the levels of oxygen and environmental humidity.

Nevertheless, it is important to reinforce the role of green infrastructures on the water cycle, creating areas capable of retaining or absorbing the maximum amount of rainfall or mitigating the effects of river or sea overflows and flooding, and at the same time promoting the decontaminating role of vegetation filters to avoid hazardous spillages into rivers and seas. There are many examples of projects of this kind, where open spaces have been designed to meet these criteria, beyond local interventions, and in some cities, they have been applied in their planning policies by designing structures capable of effectively responding to these challenges at an urban scale, such as the Cloudburst Plan (Strøbaek and



Fig. 28.6 MMBB Arquitetos São Paulo, Watery Voids, 2008. Green/Blue structure for managing rainwater in Sao Paulo

Nielsen 2013) in Copenhagen (Denmark)⁴ or Watery Voids (de Mello Franco et al. 2008) in Sao Paulo (Brazil).⁵

Likewise, the green infrastructures must avoid any loss of land. Uncontrolled development or urbanising processes have led to a high level of surfacing of natural land, producing a damaging effect for cities (heavy run-off water, increase in the temperature of urban centres, etc.), and a major loss of productive land, with consequences that are more often than not undervalued. The analysis by Paolo Pileri⁶ is interested in his research on the side effects of these massive surfacing procedures in the Lombard region of Italy. In addition to largely unknown data—with an estimate that around 30% of the planet's biodiversity is found in the soil, and that 500 years are required to produce 2.5 cm of surface soil (it is precisely that slow process of regeneration that has led to the expression 'sealed = lost')—Pileri reports figure that incite deep reflection: one hectare of soil can produce food to feed six people; it retains 0.025 t of CO₂ and is capable of treating 2–3000 m³ of water. On that basis, the rate at which soil is lost in that Italian region (between 1999 and 2007) was around 15 ha per day. Simple maths shows us the consequences of surface sealing processes.

Therefore, green infrastructures must act as true reserves of land, capable of conserving its natural properties and promoting activity. Within this scope, the experience in the URBAN SMS (Soil Management Strategy) is particularly relevant⁷ as implemented in several European cities. "The general goal of soil management in areas under urbanization pressure is to secure the sustainable use of soil resources considering soil quantity and quality in order to maintain healthy environment conditions and sound ecosystems" (AA. VV. 2012). As mentioned previously this soil acts as a productive substrate for agricultural, forestry and/or livestock

farming, which must be incorporated in the green metropolitan system. Like this, the well-known environmental benefits add to the production of nearby raw materials, balancing the necessary inputs to enhance urban metabolism and to create new, evocative images in the city landscape.

On the other hand, by reinforcing these new images of urban landscape that were previously exclusive to green areas, it is interesting to analyse the potential of open spaces in cities that have no specific use. The concept of *terrain vague* [see Chap. 24] takes on a new dimension and presents a number of previously scorned opportunities, which will reengage it in an important way to urban metabolism. These potentials are described by Gilles Clément in his manifesto "The Third Landscape", where he claims that the Third Landscape consists of sites abandoned by man where there is biological diversity that is not valued as wealth. In the author's own words, "The Third Landscape refers to a third status (and not to the Third World). Areas that cannot express either the power of or submission to power".⁸ And applies them in an emblematic project called Île Derborence in Henri Matisse Park in Lille.⁹

Finally, we should not forget that cities are inhabited by people, and therefore the social role of the green infrastructures is fundamental. And it is not only fundamental when understanding them as spaces that favour enjoyment of recreation, sustainable mobility or social relations, but also in their ability to generate processes of citizen participation and involvement permitting the inhabitants to recognise these areas, appropriate them and develop comprehensive management in accordance with the models of life in each city. That is the challenge: new urban landscapes that lead to more sustainable, but above all, more habitable cities.

⁴Designed by Atelier Dreiseitl, this plan sought to mitigate the effects of flooding caused by heavy rainfall, adapting to the new environmental conditions caused by climate change through the implementation of a number of sustainable urban drainage systems. This will permit the green-blue network in a city that had traditionally implemented pioneer strategies in planning green systems (Finger Plan).

⁵The Watery Voids proposal, by the Brazilian architects at MMBB Arquitetos São Paulo, proposes creating a green system capable of managing large volumes of water that needs to be drained away during period of torrential rainfall. The project proposes a network of laminar ponds and green routes that connect them, thus integrating those sites on the outskirts with the urban fabric of Sao Paulo. The 'Favelas' are deprived of any safe, accessible public spaces. The project deals with this need on the basis of the hydrographic formation of the site, managing to lay out places to meet and for social interaction.

⁶Paolo Pileri is an associate professor of Urban, Territorial and Environmental Planning and Projects and Milan Polytechnic. His research centres on the use and consumption of land and its environmental consequences, caused by urban development, including ecological, agricultural and landscape matters in urban and territorial planning.

⁷The project URBAN SMS is implemented through the CENTRAL EUROPE. It is a programme co-financed by the European Regional Development Funds (ERDF).

⁸"Tiers paysage renvoie à tiers—état (et non à Tiers—monde). Espace n'exprimant ni le pouvoir ni la soumission au pouvoir" (Clément 2004). This professional all-rounder, born in France (engineer, landscaper, entomologist, gardener, writer...), is the creator of concepts such as Garden in Movement, Planetary Garden or the Third Landscape. He bases his work on observing natural processes and implements them in the projects he develops, at small and large scales.

⁹The author himself defines the project as a forest, deprived of supervision, without water or treatment, which he shows to gardeners and scientists—the only people authorised to visit it—the possibilities of managing the same species on 7 ha around a vast grassland treated as a meadow.



Fig. 28.7 Agnes Denes, *Wheatfield—A Confrontation*, Battery Park Landfill, downtown Manhattan, summer 1982. Two acres of wheat were planted and harvested in this project



Fig. 28.8 Giles Clément, *Île Derborence, Matisse*, Euralille Park, 1996–2003. This inaccessible forest is planted on a natural prairie comprising an artificial plateau 7 m high where a specific ecosystem develops outside all human control

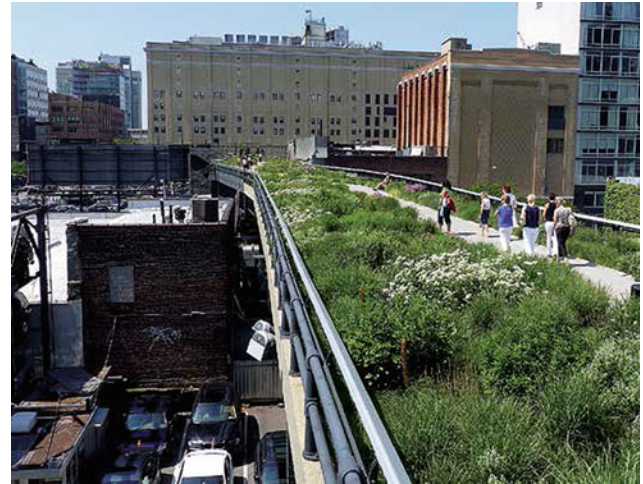
Case Studies

High Line Park (sections 1 and 2), New York (2004–2011)

High Line Park emerged on the former railway infrastructure created in 1934 around the Meatpacking District, to permit better goods access to the Hudson river. It fell into decline and was eventually abandoned in the eighties. The power of the project in images, as stunning as they are evocative, has overshadowed the process of its creation. After the nineties, the new residents who occupied the districts around the park started to consider the conservation of the historical railway line. Consequently, the association Friends of the High Line was created, which decided to call an international

competition, which was won by the team consisting of James Corner Field Operations and Diller Scofidio+Renfro. Afterwards, some of the municipal departments joined the initiative, creating a public/private structure which eventually launched the project (Gerdt 2009).

The landscaping of the project was entrusted to the horticulturist Piet Oudolf, who carried out hybridisation work between native and non-native plant species. This triggered a process of plant evolution that recreated images recalling the abandoned rail tracks where nature is trying to recover its space. It is precisely this combination of citizen appropriation, recovery and recycling of obsolete infrastructures and the creation of natural dynamics in the heart of a city like New York that makes this project a model of new urban landscaping.

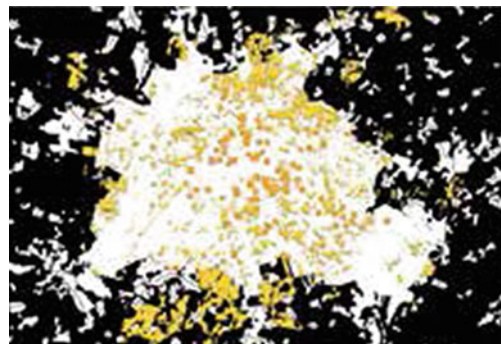
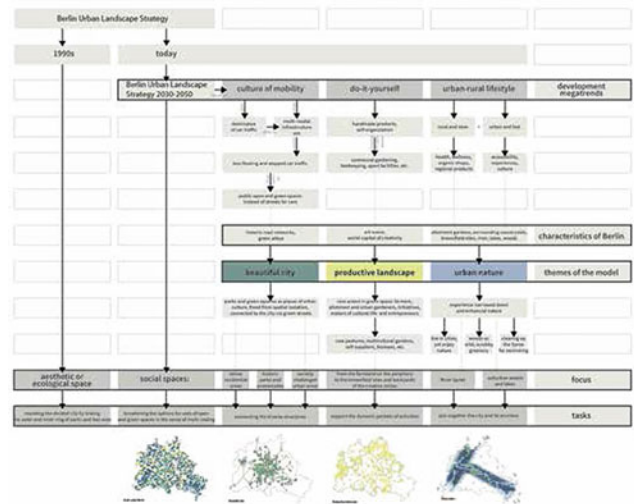


Berlin Urban Landscape Strategy (2030–2050)

The city of Berlin, with 45% of its surface area in green zones and open spaces, is searching for a new model through this strategy, to change the past benchmarks (green zones that are aesthetically pleasing and environmentally functional), to give protagonism to citizen appropriation in different fields. The new social trends identified in the city are the basis for the strategy baseline, comprising three major concepts (Becker and von Borries 2010). Mobility: the use of the car is gradually being replaced by multi-modal systems (combining walking with public transport and owned or rented bicycles). Therefore, space used for cars must be gradually replaced by public space; Do-it-yourself: there are new ways of appropriation of public spaces for which answers are required (community gardens, open-air cinemas, urban bee-keeping, bars...); Urban–rural lifestyles: the wish to introduce aspects and images of rural life in the city (urban vegetable gardens, presence of animals, rural landscapes vs. urban parks...).

With these parameters, the strategy proposes working on three major lines. Beautiful city: the roadway network is no longer exclusively seen as a way for transport, but rather an open space that must meet certain quality criteria allowing for new uses; Urban nature: nature must invade the city to

give its inhabitants new sensory experiences, without revoking the benefits of major cities; Productive landscapes: new, pioneering initiatives in terms of agricultural and livestock production with strong social involvement (such as the Green Guerrillas movement in the United States) must be carried out in an urban context.



References

- AA.VV. 2012. *Soil in the City. URBAN Soil Management Strategy*. Stuttgart: City of Stuttgart—Department for Environmental Protection.
- Battle, E. 2011. *El jardín de la metrópoli. Del paisaje romántico al espacio libre para una ciudad sostenible*. Barcelona: Gustavo Gili.
- Becker, C.W., and F. von Borries. 2010. Berlin Urban Landscape Strategy 2030–2050. *Topos—The International Review of Landscape Architecture and Urban Design* 73: 42–47.
- Bolund, P., and S. Hunhammar. 1999. Ecosystem services in urban areas. *Ecological Economics* 29: 293–301. doi:[10.1016/S0921-8009\(99\)00013-0](https://doi.org/10.1016/S0921-8009(99)00013-0).
- Clément, G. 2004. *Manifeste du tiers paysage*. Paris: Sujet—objet.
- European Commission. 2013a. *Building a Green Infrastructure for Europe*. Luxembourg: Publications Office of the European Union. doi:[10.2779/54125](https://doi.org/10.2779/54125).
- Gerds, N. 2009. The High Line New York City. *Topos—The International Review of Landscape Architecture and Urban Design* 69: 16–23.
- Kennedy, C., J. Cuddihy, and J. Engel-Yan. 2007. The Changing Metabolism of Cities. *Journal of Industrial Ecology* 11: 43–59. doi:[10.1162/jie.2007.1107](https://doi.org/10.1162/jie.2007.1107).
- de Mello Franco, F., M. Moreira, and M. Braga. 2008. Vazios de água/Watery voids. *arq.urb revista eletrônica de Arquitetura e Urbanismo* 1: 119–140.
- Sterner, C.S., and L. Solla-Yates. 2014. Toward the Green City: Biodigesters as a catalyst for a new urban form. *Carl S. Sterner website*. http://www.carlsterner.com/research/2010_toward_the_green_city.shtml. Accessed September 13.
- Strøbaek, N., and C.N. Nielsen. 2013. Managing Cloudbursts. An opportunity to set new standards for city planning. *Topos—The International Review of Landscape Architecture and Urban Design* 84: 72–76.
- United Nations, Department of Economic and Social Affairs, and Population Division. 2014. *World Urbanization Prospects: The 2014 Revision, Highlights (ST/ESA/SER.A/352)*. New York: United Nations.

Further Readings

- AA.VV. 2011. *Green Infrastructure: Design and Placemaking*. Edinburgh: Scottish Government.
- AA.VV. 2014. *Strategie Stadtlandschaft Berlin: natürlich urban produktiv*. Berlin: Senatsverwaltung für Stadtentwicklung und Umwelt.
- Czerniak, J., and G. Hargreaves (eds.). 2007. *Large Parks*. New York: Princeton Architectural Press.
- European Commission. 2012. *The Multifunctionality of Green Infrastructure*. Bristol.
- European Commission. 2013. *Green Infrastructure (GI)—Enhancing Europe's Natural Capital*.

Pablo de la Cal

Abstract

Traditional urban planning considers greenfield and brownfield sites as two antagonistic positions that produce opposing urban models. Recent regeneration urban strategies in England are focused on brownfield sites that have been transformed or developed, and it entails the danger of converting greenfields in untouchable spaces to be revered as nature reserves, fetishes, with excessive protection. By contrast, the role of brownfield sites in the context of Latin—Mediterranean countries has not been so relevant, due to different factors. This chapter explores that simplification of greenfield vs. brownfield and presses for considering all the growth and development possibilities of brownfield and greyfield sites, using criteria to strengthen the consolidated structures, whilst at the same time, reconsidering their integrating role in terms of green infrastructures and the importance of associated factors such as biodiversity or urban resilience.

Keywords

Greenfield • Brownfield • Greyfield • Backland developments • New city extensions

The Garden City movement [see Chap. 2] found considerable support in England and the USA among certain professionals and groups that formalised theories of decentralisation and sought to apply the brake to the ‘growing stain’ of large conurbations, leading to early regional planning.¹ The New Towns Group was founded in England in 1918 with the objective of including these initiatives, which had initially been driven by the private sector, in national policies. And some years later, the well-known Barlow Report pointed out the need for a regional policy, regulating industrial activity and the transport system, and the commitment to de-congesting those cities in which traffic congestion was seen as a threat to the economy and society.

These strategies were applied officially for the first time in a major city in a complete planning document with the *The County of London Plan of 1943*, developed by Patrick Abercrombie and John Henry Forshaw, in which emphasis was placed on preserving the countryside. One year later, Abercrombie developed the Greater London Plan. Both plans included the idea of the Metropolitan Green Belt, which had been proposed in 1935 around the city [see Chaps. 2, 6, 26]. In this way, the concerns of the protectionist associations bore fruit, as did the preliminary reports that had applied pressure so that London’s growth would not cause the loss of landscape, cultural and production values of the English countryside.

The commitment to a decentralised urban system was accompanied by a legal framework set down in the Town and Country Planning Act of 1947, imposing restrictions on urban growth in the large areas that separated the different planned satellite towns. With these instruments, the state prepared infrastructure and planning operations for new cities, an unprecedented event in the history of town

¹“If the garden city was English out of America, then the regional city was undoubtedly American out of France via Scotland” (Hall 2014, 151).

P. de la Cal (✉)
University of Zaragoza, Zaragoza, Spain
e-mail: pdelacal@unizar.es

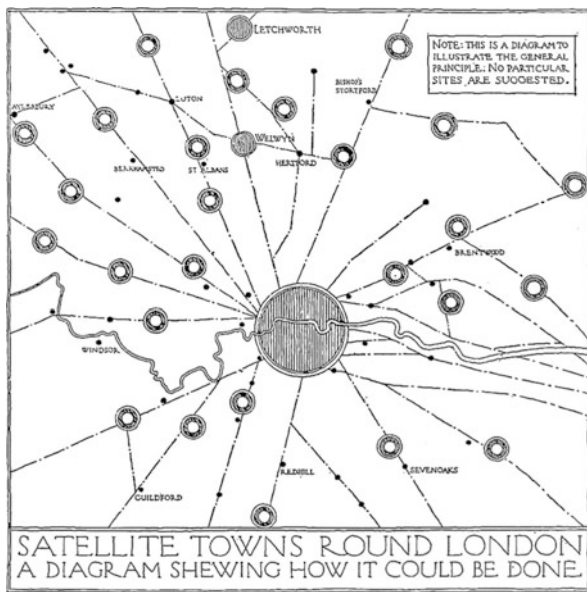


Fig. 29.1 Satellite Towns round London, by Charles Benjamin Purdom (GCTPA, Garden Cities and Town Planning Association 1920)

planning.² Indeed, the construction of the new towns in the fifties went hand-in-hand with the creation of large areas separating the central metropolitan cities from them.

The construction of these new urban developments generally took place on former agricultural land, hence the definition ‘greenfield’ sites. On the other hand, protecting the established green buffers around the cities, these green belts were delimited to avoid the city growing onto them and eroding agricultural land, i.e. avoiding suburban developments on greenfields. Obviously, halting suburban development throughout the twentieth century was only partly successful. The difficulty the administrations had to avoid construction on greenfields has been a recurring one, and despite the planning instruments, the green areas have been subject to a continual process of erosion. This question has been analysed by many authors. Among them, William Whyte, who, in *The Last Landscape* (1968) stated that the preserved open areas had to be productive, seen and appreciated by the population, and basically had to have a

positive function. Open space cannot be an empty space: ‘Land is either used or it is lost’ (Whyte 1968). Whyte defended that open space could restructure towns, but to do so, it relies on an articulated system in which the most important elements already exist: nature has drawn out a regional layout of water currents and valleys that supply magnificent natural links that reach the very heart of urban areas (Whyte 1968).

The same approaches were drawn up by Lewis Mumford in *The City in the History* (1961), who pointed out that the town planner should not choose between green belts or green verges, which in his opinion is a false alternative, but should maintain the ‘green matrix’ by preventing uncontrolled growth of urban fabric from razing that matrix and unbalancing all ecological guidelines of the city and countryside (Mumford 1961, 1045).

This need for a balanced tension between urban developments and green areas separating them has been repeatedly emphasised in the Anglo-Saxon tradition. In his recent book *Shaping London. The patterns and forms that make the metropolis* (2010), Terry Farrell points out that this condition has allowed the British to believe that ‘making a pact with the countryside, to bring the countryside into the town, is a necessity of urban life’ (Farrell 2010, 239). However, suburban sprawl and the decline of urban centres has led to a commitment to more compact cities in the last two decades in England, particularly in London, at least in the theory.³

The architect Richard Rogers had already defined this approach in a very pedagogic manner in his book *Cities for a Small Planet* (1997). The British government took years to give preference to more compact development within London, more specifically on ‘brownfields’ or land that had previously been used for abandoned industry, railways or port facilities. In essence, the book searches for a more balanced model, trying to renew precisely the most run-down spaces and poor areas. Rogers advocates avoiding the antisocial model of partial growth based on developments exclusively driven through economic interests, which have proved to be inadequate for the city (Rogers 1997).

The focus therefore became brownfield sites, i.e. terrain in the city that has been transformed or developed, and the potential for urban development of that land is identified to improve the living standards in deteriorated areas, thus

²From Stevenage, a new town designed in 1946, 45 km from London, a programme for new towns was driven from which the creation of new towns became generalised in London (Harlow, Milton Keynes, etc.) and was soon implemented in other much larger regions in Europe. In Scandinavia, for example, the new towns developed around Stockholm are noteworthy, linked to the development of the metro (Vällingby, Farsta, Skärholmen), or around Helsinki, with the outstanding example of TapiolaErvi, Aarne(Aarne Ervi, 1953) [see Chap. 6].

³Between 1965 and 1986 Greater London was jointly managed by the Greater London Council (GLC) and 32 local town councils, along with the historical City of London Corporation. The conservative government dissolved the GLC in 1986, and at the end of the nineties, the Labour government established the Greater London Authority (GLA), with competences largely transferred by the central government (Simmons 2000, 40–43).

Green Belt and major urban areas in England

Green belt areas are based on 2006 data and digitised to a hectare square grid.

Comparator Areas are 5km zones around major urban areas which are not designated Green Belt.

Region	
Major Urban Area	Swindon
Comparator Areas	Oxford
Green Belt	Oxford

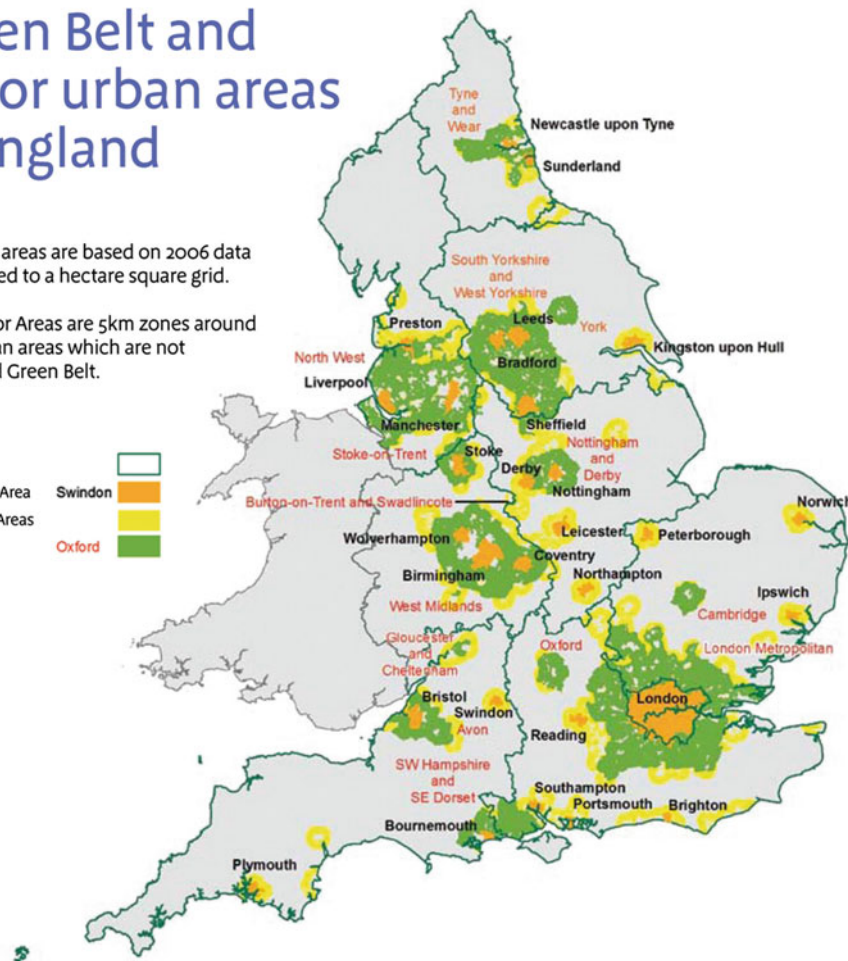


Fig. 29.2 Green Belts around London and other British towns

facilitating integration in the city.⁴ The proposal by the British government in 1998 was for 60% of new houses that needed to be built in England, to be built on brownfield sites. To achieve these objectives and strengthen districts and urban centres, redirecting most of the growth towards brownfield sites, the government commissioned Richard Rogers to direct an Urban Task Force, which in 1999 drafted an extensive final report under the title *Towards an Urban Renaissance*.⁵ A second report was drafted in 2005 called *Towards a Strong Urban Renaissance* which analysed the implemented policies and their results. That report proposed

new measures for the housing demand that London required, establishing the minimum density in urban developments to be 30 homes/ha (Urban Task Force 1999; 2005).

The truth is that the objective established in 1998 had been fulfilled, and even surpassed, just ten years later, with approximately 80% of the housing built in England between 1998 and 2008 being built on brownfield sites. The ease of meeting the objective was due to several factors, among them the reduced growth of greenfield sites owing to legal restrictions, and the densification on brownfield developments, with the loss of open areas, and on many occasions, a loss of urban quality inside the city.⁶

⁴*Brownfield* has a more complex meaning in Britain and is included in the technical term “Previously Developed Land” (PDL). In more recent definitions, such as the one by the *National Planning Policy Guidance* in 2012 used in England and Wales, the terms “brownfield” and “previously developed land” are interchangeable. For a more accurate definition, please see: <http://planningguidance.communities.gov.uk/blog/policy/achieving-sustainable-development/annex-2-glossary/>.

⁵Many of the wordings are based on *Cities for a small planet* (Rogers 1997).

⁶The article by Cecilia Wong and Andreas Schulze Bäing “Brownfield residential redevelopment in England. What happens to the most deprived neighbourhoods?” analyses the brownfield developments in London in detail during the 1988–2008 period, and rates the impact of these residential developments on the deprived areas in the city in accordance with the following qualifications: *escalator*, *gentrifier*, *isolate*, *transit*. (Wong and Schulze Bäing 2010, 5).



Fig. 29.3 Anglo-Saxon urban planning becomes more widespread in many European countries in the fifties, which led to the implementation of Green belts and protection strips in many general plans. This is the case of the agricultural protection belt proposed for Zaragoza (Spain) in the General Plan of 1959

In fact, this issue was put forward by Peter Hall in the 2005 final report, where he warned that the neighbourhood conditions where work of this kind took place could worsen.⁷ Hall had developed his argument in two recent publications (Hall 2005; 2006), in which he was critical with the ‘backland developments’, i.e. those spaces that are susceptible to housing new homes, but not always improving the existing quality.⁸ More specifically, he warned that by converting greenfields into untouchable spaces revered as nature reserves, fetishes, with excessive protection, could lead to notable impoverishment of living conditions in the existing city, ‘with increasingly damaging consequences—for the properly sustainable development of London and the reasonable housing aspirations of the very many in the

⁷“I am therefore concerned that the proposals on brownfield and densities, however well-intentioned, would—if implemented—deepen the well-documented housing crisis that faces us and our government” (Hall in Urban Task Force 2005, 19).

⁸It is about a definition by Llewelyn Davies (1997), that makes reference to build in back yards (Hall 2006).

region’ (Hall 2006, 84), densifying it and blocking views, making noisier environments where these developments are built. In the last decade, the average density had increased in all urban developments in London, being particularly significant in areas that had previously been logistic, industrial or commercial areas, changing from 46 to 71 homes/ha (Wong and Schulze Bäing 2010, 12).

Clearly, it is not just a question of density. The key resides in the urban project which in many cases has not only to consider development on empty land, but also renewal of the existing residential buildings. The modern housing estates have also given rise to environments that require renewal, because they have become obsolete for different reasons, in some cases because of disconnection with the centre and their condition as an isolated enclave, in other cases because they have become social ghettos. On other occasions, the decline is due to the architectural conditions, which are excessively monotonous, rigid and incapable of adapting over time⁹ [see Chap. 7].

The question of urban recycling is not just limited to residential estates, but also applies to large vacant spaces. In the USA, a new term has been coined, namely that of ‘greyfield’ referring to spaces that have been previously developed, such as malls with large parking facilities, and that have left enormous unused and obsolete spaces. But unlike brownfields, these greyfields are usually found on suburban sites.¹⁰

In the context of Latin—Mediterranean countries, the role of brownfield sites in recent years has not been so relevant, partly because industrialisation took place later than in Anglo-Saxon countries. On the other hand, residential developments on greenfield sites have much higher densities

⁹Montaner, J.M. 2015. El legado de la vivienda colectiva moderna/The legacy of modern collective housing. *ZARCH: Journal of interdisciplinary studies in Architecture and Urbanism* 5: 24–39.

¹⁰The term ‘greyfield’ or ‘grayfield’ was coined in 2001 at the Congress for the New Urbanism, New York, June 2001: “Here is what CNU calls a greyfield. It was a shopping centre. This shopping centre is no longer functional. It is closed down. It runs off a flea market right now. And CNU has extraordinary models for greyfield rehabilitation—for how you put whole villages back into these wonderful empty sites because these sites are rich in infrastructure”. CNU IX Opening Session: “From Neighbourhood to Region”, 7 June, 2001, 4. This term refers to the “so-called dead malls, often characterised by the vast empty asphalt parking lots that surround them.” At that moment, of the 2000 American regional malls, it was estimated that nearly 20% were greyfield malls or in danger of becoming one. Just in the USA, there are more than 200 obsolete shopping mall sites ready to be recovered. In these cases, the redevelopment costs are high, and in general, there are no social benefits from redeveloping them, in terms of improvements on the existing neighbourhoods.

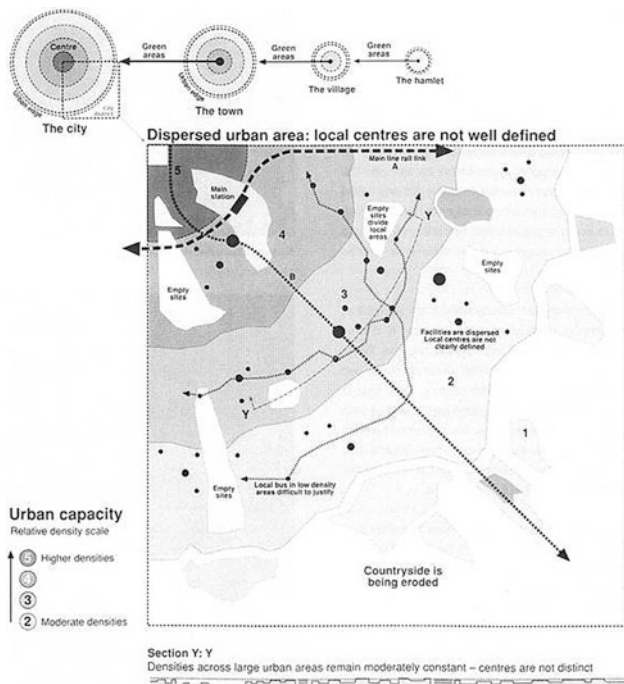


Fig. 29.4 Richard Rogers, urban structure of a dispersed town, in *Towards an Urban Renaissance*, 1999

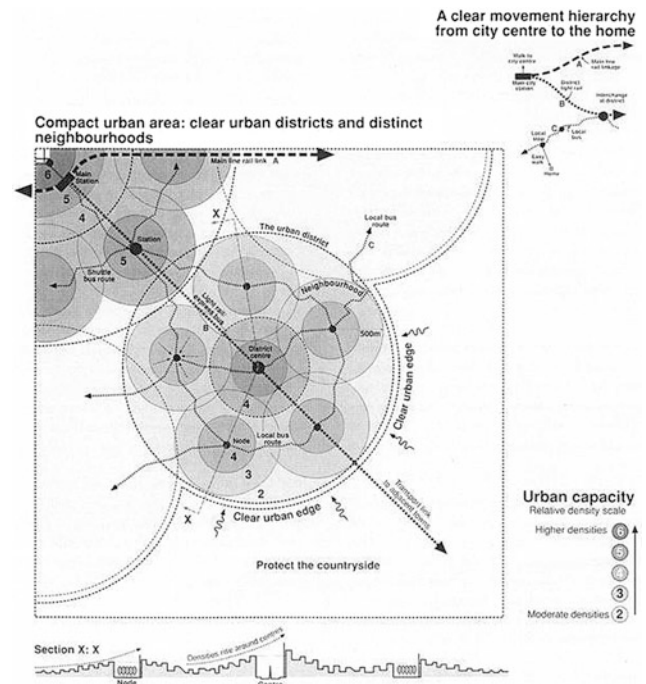


Fig. 29.5 Richard Rogers, urban structure of a compact city, in *Towards an Urban Renaissance*, 1999

than in London (with a maximum density of 20–25 homes/ha), with an average of 75 homes/ha.¹¹

In Madrid, the role of the main ring-roads (such as the M-40 and M-50 roads) has made it possible to develop residential sites in the city's outlying areas. Hence, the development plans designed residential extensions with more moderate densities (around 40–50 homes/ha) and typologies more similar to nineteenth century town planning (closed blocks, smaller than in the *ensanches* or city extensions) with boulevards and urban plazas. These are the

¹¹In Spain, the big estates of the sixties and seventies built on Greenfield sites were designed within the framework of the first Land Law in 1956 (Law 12 May 1956 pursuant to Land and Town Planning), giving rise to high-density housing estates, in terms of number of buildings per hectare. The density of residential sector was limited in Article 75 of the 1976 Land Law (Amended text of the Land and Town Planning Law, approved by Royal Decree 1346/1976 of 9th April) which established a maximum of 75 homes per hectare which, exceptionally and justifiably, could be raised to 100 homes per hectare. But it was the Planning Regulation for Development and Application of the Land and Town Planning Regime of 1978 (approved by Royal Decree 2159/1978, of 23rd June) that actually regulated the “land reserves for areas in partial plans” taking the planned number of homes in the development area as the reference. The different legislative document developed subsequently by the Regional Authorities generally adopted the determinations of Regulation '78 as the baseline (López de Lucio 2013, 212).

so-called *nuevos ensanches* (new city extensions),¹² that make up the fragmented regional landscape, isolated from the main metropolitan infrastructures. Important developments have also been built on brownfield sites, associated with transformation work driven by the administration (on railway, port, riverbank areas, etc.) and also inner renewal more localised with lesser impact on the long-term ‘land project’, such as renewal of the Poble Nou district in Barcelona.

The commitment to sustainable construction in our cities requires rethinking growth in each case. It is important to consider all the growth and development possibilities of brownfield and greyfield sites, using criteria to strengthen the consolidated structure, whilst at the same time reconsidering their integrating role in terms of green infrastructure and the importance of associated factors such as biodiversity or urban resilience. Moreover, minimising growth on

¹²The architects Ramón López de Lucio and Agustín Hernández-Aja have studied these plans for Madrid in depth. The results of these were the ‘*nuevos ensanches*’ where the blocks with lower building impact, and open interior spaces with low commercial use of the ground floors have led to residential developments with low social complexity and almost zero urban activity, with this condition being emphasised further due to the consolidation of habits related to malls.

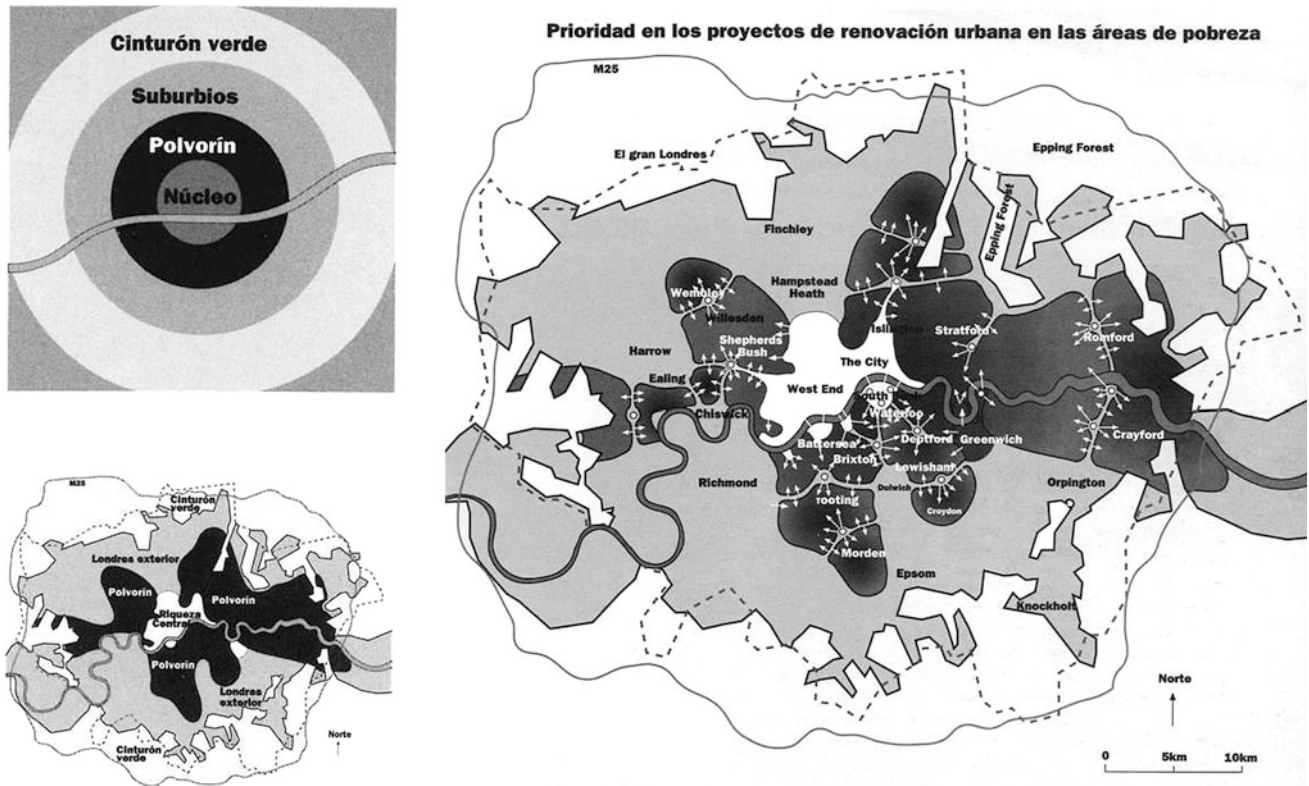


Fig. 29.6 Diagrams of London published in Richard Rogers, *Cities for a small planet*, 1977. Left diagram of concentration of poverty (14 of the 20 poorest districts in England) in the inner ring. Right diagram of how urban renewal projects could contribute to improving the quality of life in deprived areas

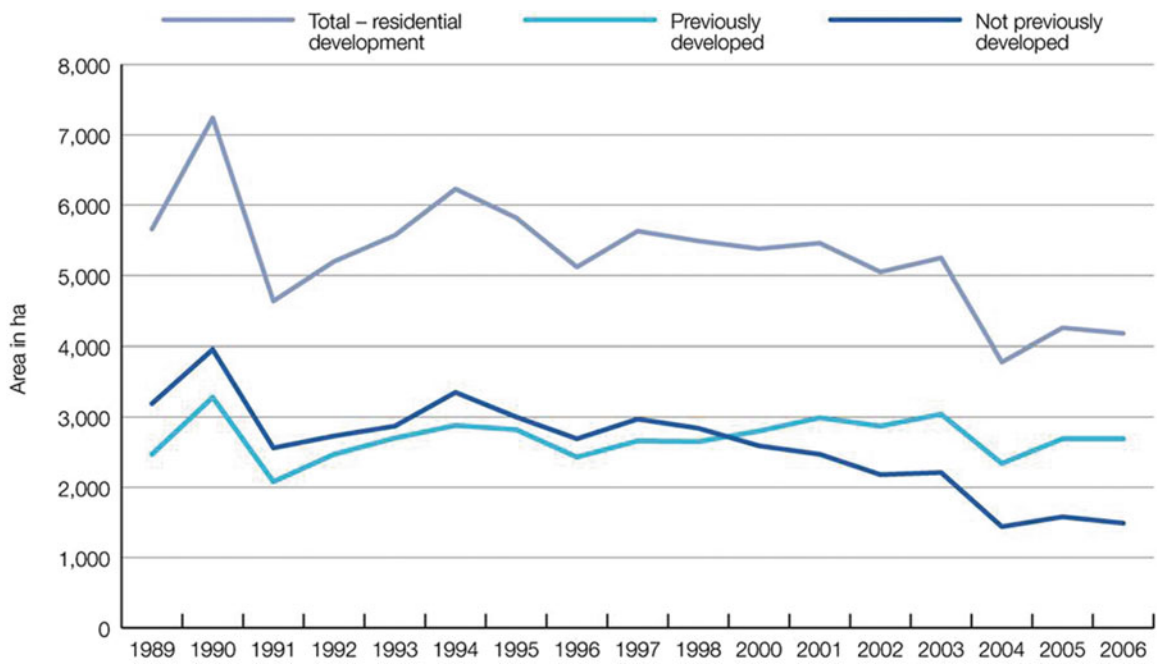


Fig. 29.7 London, land changed to residential use, in Wong and Schulze Bäing 2010

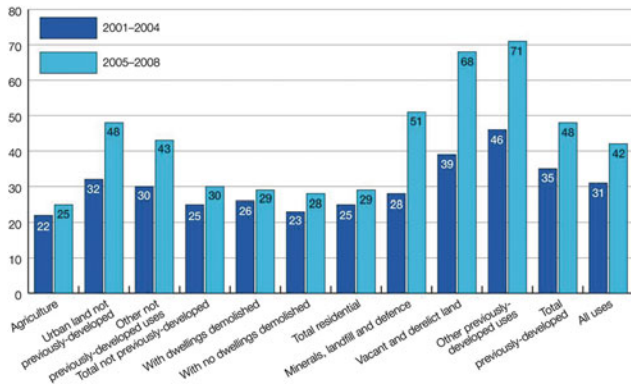


Fig. 29.8 London, average dwelling density per hectare by land types, in Cecilia Wong and Andreas Schulze Bäing, ‘Brownfield residential redevelopment in England. What happens to the most deprived neighbourhoods?’, 2010, 12



Fig. 29.10 Madrid. South Metropolitan, in the Plan Regional de Estrategia Territorial de Madrid (Regional Territorial Strategy Plan for Madrid), 1995



Fig. 29.9 Terry Farrel, Community Parklands, 2008

greenfield sites works to preserve the areas that perform ecological functions. Ultimately, we must avoid low densities that are incapable of building urban fabric.

We often see approaches that feature greenfield and brownfield sites as two antagonistic models, opposing positions held by planners and politicians. Nevertheless, we can see how innovative work in territorial renewal exceeds the simplification of greenfield vs. brownfield, and engages the specific conditions of each site, establishing detailed categories in order to better define operating plans.¹³

As Whyte and Mumford put forward decades ago, the challenge lies in articulating urban spaces and region. A space’s suitability for development depends on their role in the territorial make-up, considering a long-term vision with respect to ecology, sustainability and resilience. Giuseppe Dematteis claims that the two ways of western European suburbanisation—the Anglo-Saxon and Latin-Mediterranean—have led to the formation of a ‘city without a centre’, ‘diffused city’ and ‘reticular city’ (Dematteis 1996, 32–33). And nevertheless, it is encouraging to see how, in some regions with efficient territorial government and clear strategies, the greenfield/brownfield dialectic is not an issue and both elements are capable of providing suitable articulation, and contributing to a remedy for the deteriorated urban areas (Heid 2004). They are also capable of labelling themselves ‘sustainable cities’, as Richard Rogers pointed out, i.e. a beautiful, creative, ecological city that favours contact—both compact and poly-centric, with diversity (Rogers 1997, 169).

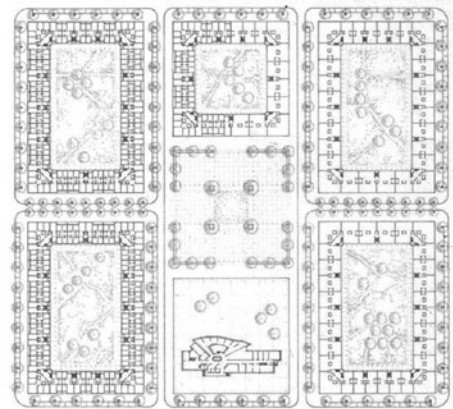
¹³Terry Farrell, in his 2008 proposal for renewal of the Thames estuary, *Parklands: One Vision—A Thousand Projects*, establishes several categories—‘blue landscape’, ‘green landscape’ (parklands, agricultural land, green grid) and ‘brown landscape’, depicting urban areas and new communities.

Case Studies

Valdebernardo Nord, Madrid (1989–2003)

The expansion of the metropolitan region of Madrid in the nineties underwent a spectacular phase of development. To a large extent expansion took place by developing agricultural land, through plans designing estates renamed '*nuevos ensanches*'. They are developments located away from the city's historical centre, separated from the surrounding urban fabric by major highways. The use of orthogonal highway grids to arrange them, with avenues or boulevards, and the use of quadrangular residential blocks as a generalised composition, mainly comprising 'super-blocks', are evidence of a return to town planning of alignment, determining

the form of residential container functions. The Valdebernardo North PAU (Urban Development Plan) (José María Ezquiaga, 1989–2003 with 5000 homes and a density of 62.5 homes/ha), is an excellent example of these urban expansion developments. The professor and town planner, López de Lucio, acknowledges that, although they are obviously urban estates that have not managed to rebuild the density of urban life, animation or the vital warmth of the historical expansions, they have to a certain degree solved the problems afflicting the estates built on the fifties, sixties and seventies. The real estate boom of 2000 gave way to a subsequent generation of much larger urban developments (the Urban Development Plans of Vallecas, Sancharro or Carabanchel, for example), further away from the city centre, and with lower densities (between 20 and 34 homes/ha).

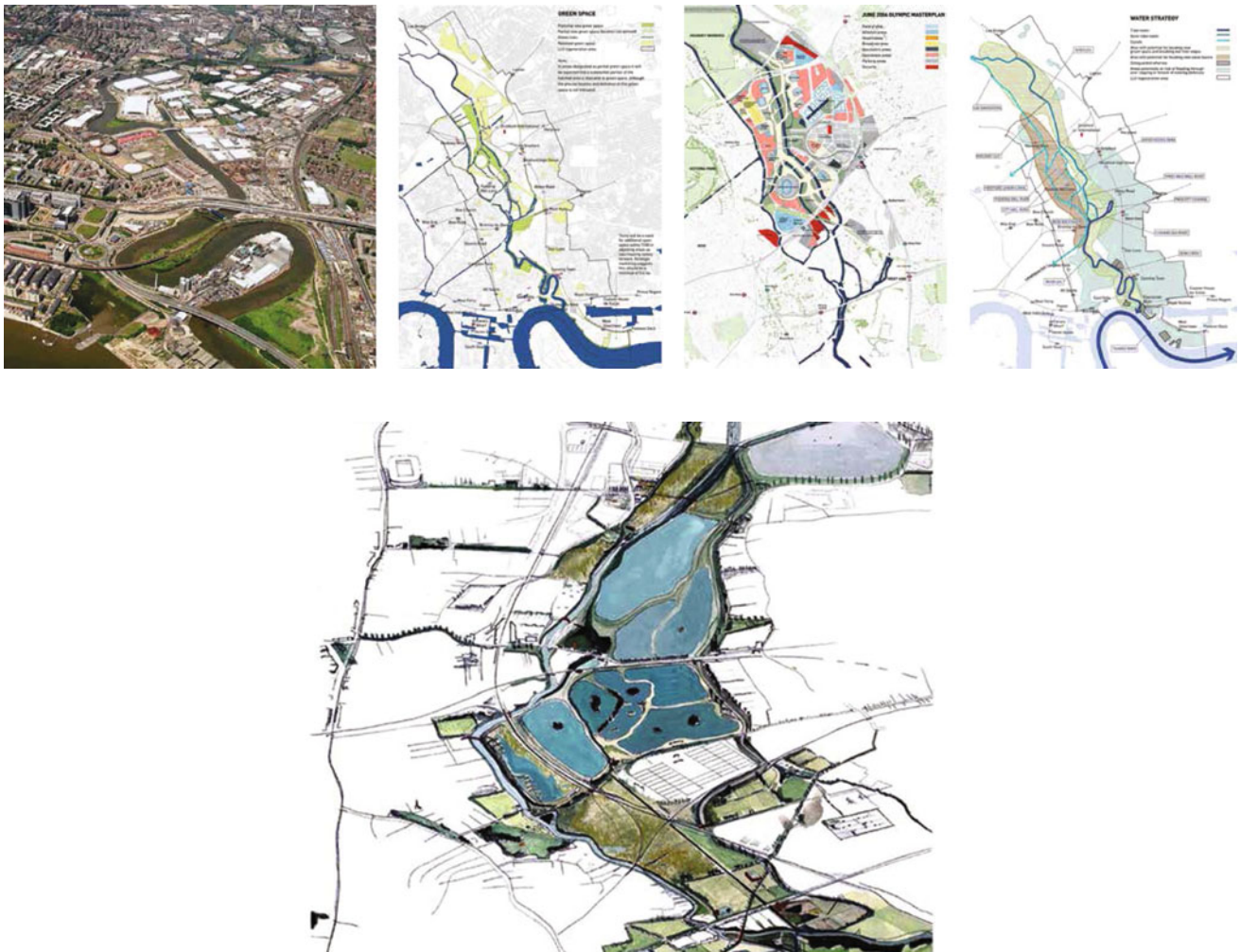


Regeneration of Lower Lea valley, London (2012–2026)

With London named host of the 2012 Olympics, the River Lea corridor, to the east of London, was designated as the site for the games. The opportunity of renewing some industrial land in a socially and environmentally deteriorated area was then given serious consideration. The action at the Olympic site (according to the Master Plan by Alejandro Zaera in 2006) had a huge impact in the architectural field, but territorial and landscape transformation in the valley as a whole involved a more important, long-term project (through 2026).

The approaches to the work were defined in the All London Green Grid strategy. The landscape project at the upper end of the river was commissioned to the landscape

architects Witheford Watson Mann Architects and Jonathan Cook Landscape Architects. These two teams structured the work in three areas: Walthamstow Wetlands, Central Lee-side and Forest to Green Belt. The drawings show the Lea River in 2026 capable of articulating spaces that had traditionally industrial, and through these interventions, the area was transformed into an attractive, integrated part of the metropolitan green grid. Emphasis on open spaces, on the network of paths, the water strategy (with run-off retaining systems and flood prevention) revealed an ambitious renewal strategy, articulating open areas instead of built-up areas and ‘hard’ pieces, typical in conventional town planning.



References

- Dematteis, G. 1996. Suburbanización y periurbanización. Ciudades anglosajonas y ciudades latinas. In *La ciudad dispersa: suburbanización y nuevas periferias*, ed. J. Monclús, 17–33. Barcelona: CCCB.
- Farrel, T. 2010. *Shaping London. The patterns and forms that make the metropolis*. London: Willey.
- Hall, P.G. 2005. Aux Armes—Against Housing Disaster. *Town and Country Planning* 74: 288–290.
- Hall, P.G. 2006. The Land Fetish: Densities and London Planning. In *London: Bigger and Better?*, ed. B. Kochan, 84–93. London: London School of Economics.
- Hall, P.G. 2014. *Cities of Tomorrow. An intellectual history of urban planning and design in the twentieth century [1988]*. 4th ed. Oxford: Wiley-Blackwell.
- Heid, J. 2004. *Greenfield Development Without Sprawl: The Role of Planned Communities*. ULI—The Urban Land Institute: Washington D.C.
- López de Lucio, R. 2013. *Vivienda colectiva, espacio público y ciudad. Evolución y crisis en el diseño de tejidos residenciales 1860–2010*. Buenos Aires: Nobuko.
- Mumford, L. 1961. *The City in the History: Its origins, its transformations and its prospects*. San Diego: Harcourt, Brace & World.
- Purdom Charles Benjamin. 1920. *Satellite towns round London*. GCTPA, Garden Cities and Town Planning Association.
- Rogers, R. 1997. *Cities for a small planet*. London: Faber and Faber Ltd.
- Simmons, M. 2000. El caso de Londres. Gobierno y sistemas de gestión del planeamiento. *Urban* 5: 40–49.
- Urban Task Force. 1999. *Towards an urban renaissance: The report of the Urban Task Force chaired by Lord Rogers of Riverside*. London: Spon Press.
- Urban Task Force. 2005. *Towards a Strong Urban Renaissance: an independent report by members of the Urban Task Force chaired by Lord Rogers of Riverside*. Edited by J. Bennett. London: Urban Task Force.
- Whyte, W.H. 1968. *The Last Landscape*. Garden City, New York: Doubleday.
- Wong, C., and A. Schulze Bäing. 2010. *Brownfield residential redevelopment in England. What happens to the most deprived neighbourhoods?* York: Joseph Rowntree Foundation.

Further Readings

- Arias, P. 2003. *Periferias y nueva ciudad. El problema del paisaje en los procesos de dispersión urbana*. Sevilla: Universidad de Sevilla.
- EPA United States Environmental Protection Agency. 2002. *Land & Community Revitalization: Brownfields: Program Summary & Success Stories*. National Service Center for Environmental Publications (NSCEP).
- Greater London Authority. 2011. *Green infrastructure and open environments: The All London Green Grid*. Greater London Authority: Supplementary planning guidance. London.
- Vegara, A., and J.L. de las Rivas. 2004. *Territorios Inteligentes*. Madrid: Fundación Metrópoli.

Miriam García

Abstract

This chapter explores the contemporary renewal of the concept of landscape and its application to regional and town planning. Its utility has to do with the ability to analyse and design territories, ecosystems, networks and infrastructures at all scales. At the same time, landscape becomes both a medium and a management tool to restore deteriorated territories and activate abandoned areas based on the idea of enhancing the ecological potential of places. Ecology is used to generate the necessary processes to develop strategies to achieve future sustainability over time by accommodating or even catalysing change (natural or man-made). As a result, landscape perspective integrates synthetic nature with an open, dynamic, adaptable and flexible decision-making system for complex spaces.

Keywords

Landscaping • Ecological processes • Resilience • Sustainability

The new landscapes perspectives that have arisen in recent years are the result of reflection and committed attitude to the times we live in, establishing the potential for a creative lifestyle, while aware of its limits. In the current era, known as the Anthropocene, the planet's resources are increasingly limited, whereas the vulnerability of regions and cities has increased. The economic crises, the effects of climate change, migration, epidemics and wars have increased the risks to the planet. This risk is no longer related to political or economic power since it depends on unpredictable, global phenomena. This new perspective necessarily changes the way we approach work and calls for a complete overhaul of the practice of modern urbanism, in order to be in harmony with the Earth.

It was in this context that a renewal of the concept of landscape and its application to regional and town planning took place. Its utility has to do with the opportunities it reveals compared to current town planning, and the ability to analyse and design territories, ecosystems, networks and infrastructures at all scales. Its potential, furthermore, resides in the possibilities it confers to become a medium, a

management tool to restore deteriorated territories and activate abandoned areas. In short, to transform the environment and convert it into a design project.

From the discipline of landscape architecture, design strategies are put forward based on the idea of enhancing the ecological potential of places. Some, such as James Corner, call this strategy 'Lifescape'. He developed projects such as Fresh Kills Park or in his joint proposal with Stan Allen and Nina-Marie Lister, for the Downsview Park in Toronto, in a tender calling for bids in 1999. It consists of working with a landscape as a process based on a series of flexible, continuing stages, a readable landscape, designed to promote diversification and succession over time (Corner 2005, 14–21). The aim is to build a diverse, resilient landscape on the basis of existing natural conditions. With these objectives, an ecological process of environmental restoration and renewal on a large scale is designed, not only recovering the healthy biodiversity of ecosystems, but also enabling dynamic cultivation of other ecologies that include much wider scopes: human programmes and activities; financing, management and adaptive handling; environmental technology, renewable energy and education; or new forms of interaction between citizens, nature and technology over time (Field Operations and Planning 2006).

M. García (✉)
University of Zaragoza, Zaragoza, Spain
e-mail: miriamgarcia@landlab.es

Ecology then becomes a key tool, in the matrix used to generate these strategies, with a view to achieving sustainability over time. This matrix consists of several coordinated systems that encompass the habitat (landscape) and programmes (areas or facilities) and transit (paths and roads). These systems, arranged in layers, organize the space, creating the landscape framework for the project. This underlying framework is sufficiently flexible, coherent and durable to accommodate change (natural or man-made) that may take place in the future. From this perspective, rather than deleting the past or recreating a natural environment lost through time, growth is proposed that emerges from the past and present towards an identity-based future. The result will be integrating, synthetic nature, while being wild and cultivated, renewed and built. This must undoubtedly entail changes in the way we design and experiment with these recovered landscapes in territories and cities (Corner 2005, 14–21).

Other authors, such as Anita Berrizbeitia and Linda Pollak, join this trend, claiming that project design strategies must follow natural, dynamic processes, thus becoming open, dynamic, adaptable and flexible decision-making system for our complex contemporary cities and metropolises (Berrizbeitia 2007, 175–198; Pollack 2007, 87–120). In order to study these spaces, we must take the future repercussions of each process into account, as well as the historical processes that have made and sustained them. The latter is important since many spaces where intervention has taken place are vast, abandoned sites, former industrial areas, wasteland and even dumps, and therefore, the cultural dimension and social perception also become an important part of the project. With this type of action in mind, today we are faced with many spaces and urban parks of apparent stable development that are actually artificially maintained ecological conditions. Ecosystems undergo transformation and disturbance on a regular basis, both in short- and long-term cycles; therefore, this landscape perspective provides an operational and programming dimension that facilitates the emergence and evolution of self-managed ecological systems, or resilient ecosystems. The latter is a basic requirement for long-term sustainability (Corner 2005, 14–21; Lister 2007, 35–58; Pollack 2007, 87–120).

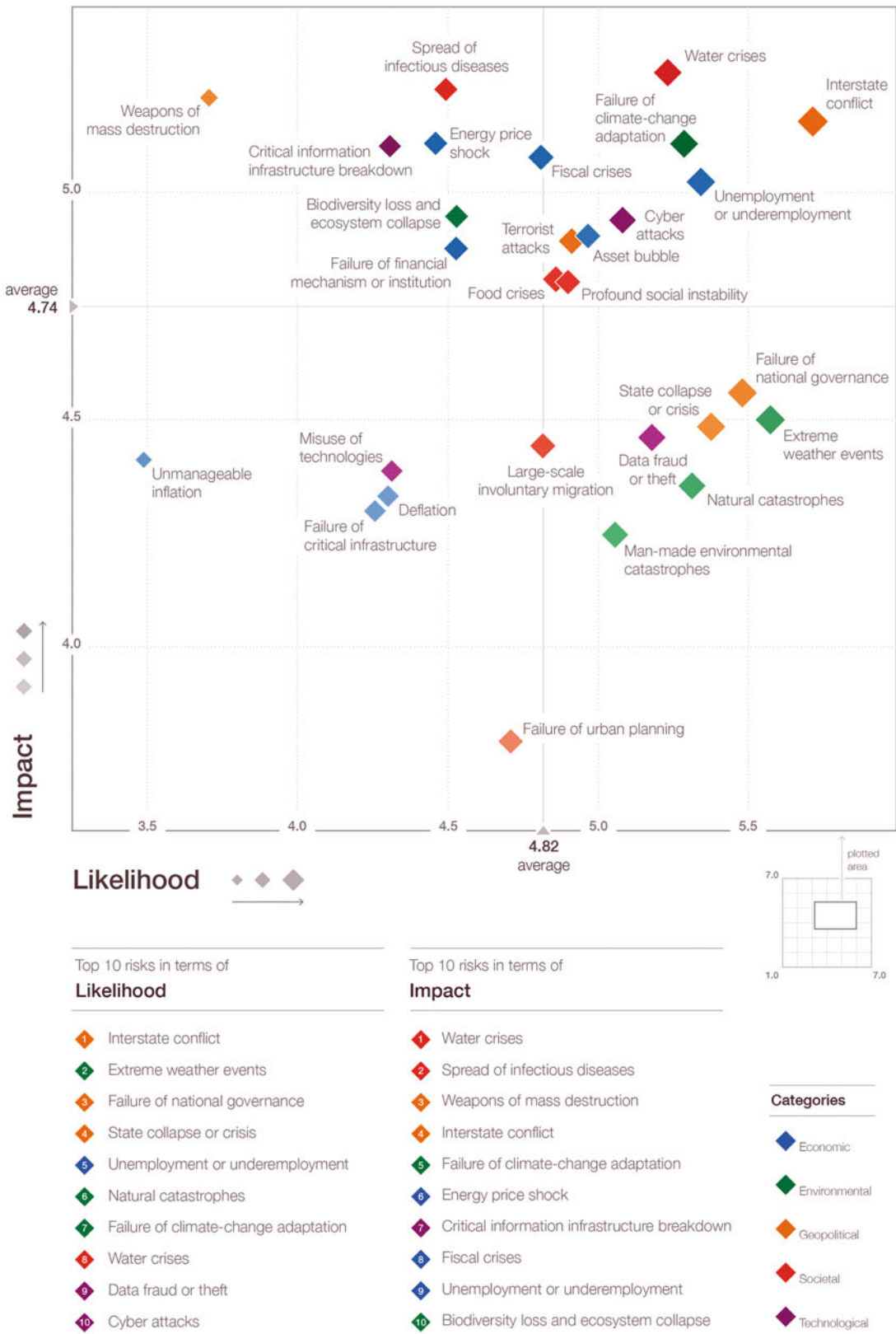
“There is a common tendency to focus on natural features (e.g. rivers and trees) rather than the processes that shape and structure them (e.g. flow of air, water, and materials; plant reproduction and growth). Ignoring natural processes leads to harmful consequences, including the failure of planners to accommodate dynamic change, their failure to make connections among seemingly unrelated issues and phenomena and to realize opportunities” (Spirm 2003, 204–205). As Anne Whiston Spirm claims in this text, the key is thinking how human activities, their forms and structures interact with air processes (flows and transference), the earth (geology and soil), water (cycles and flows), life

(reproduction, growth, behaviour) and ecology (energy, information, material flows, succession and behaviour). It is not about imitating forms, or using local materials, so much as it is about adapting the form to processes. If we pay attention to the finer details of these items, to the form and structure of the environment, designers and planners will be able to accompany and integrate change and dynamism, to establish relationships between apparently unrelated items and create new opportunities (Spirm 2012, 6).

Back in the 1960s, Ian McHarg called for a ‘design with nature’, giving structure to a conceptual framework that authors such as Frederick Law Olmsted, Jens Jensen and Aldo Leopold had advanced through their research and projects. We could, therefore, consider that, since Olmsted, the landscape perspective has sought to integrate design with the ecology of places through planning processes, promoting a unity between nature and society. That is precisely the approach that Dirk Sijmons proposes for the sixth edition of the Rotterdam Architectural Biennial: nature as a spatial intervention to contribute to developing more resilient cities and environments for a sustainable world (Sijmons 2014).

These theories have recently been renewed with ecological town planning, promoting urbanism which, in addition to paying special attention to ecological variables, features techniques and technology inherent to this subject (Mostafavi and Doherty 2010). It is an approach that is more metabolic than morphologic. There are many authors, too many in fact to cite in this short text, who have highlighted the potential of this perspective as a useful tool for planning space. From Ian McHarg to James Corner, Alan Berger or Chris Reed to name but a few. In fact, Reed, in a recent paper under the title of “Projective ecologies”, emphasizes the relevance this change of paradigm has for planning, governed by a dynamic understanding of systems and their changes. This question is related to its adaptability, resilience and flexibility (Reed and Lister 2014, 14–21).

In short, the introduction to landscape thinking in planning and design has been present since the middle of the last century in many different fields and on different scales: landscape architecture, townscape, landscape planning, ecological town planning, ecological design, green architecture, green infrastructure, green town planning, environmental art and many others. Theorists, scientists, researchers and designers have been reinforcing this field of thought through science, art and humanities in a time that is characterized by the need to hybridise culture and nature. This chapter’s title “New Landscape Perspectives” has the aim of bringing attention to the proposals that converge in these approaches to form resilient thought, understood as a tool for creativity in multi-scale planning and design based on ecological processes. The potential of landscape as a resource, in the words of Charles Waldheim, as a machine, as defined by Mohsen Mostafavi, or as a field of operations,



Source: Global Risks Perception Survey 2014.
 Note: Survey respondents were asked to assess the likelihood and impact of the individual risks on a scale of 1 to 7, 1 representing a risk that is not likely to happen or have impact, and 7 a risk very likely to occur and with massive and devastating impacts. See Appendix B for more details. To ensure legibility, the names of the global risks are abbreviated. Also see Appendix A for the full name and description.

Fig. 30.1 Global risks, in WEF Global Risks Report, 2015

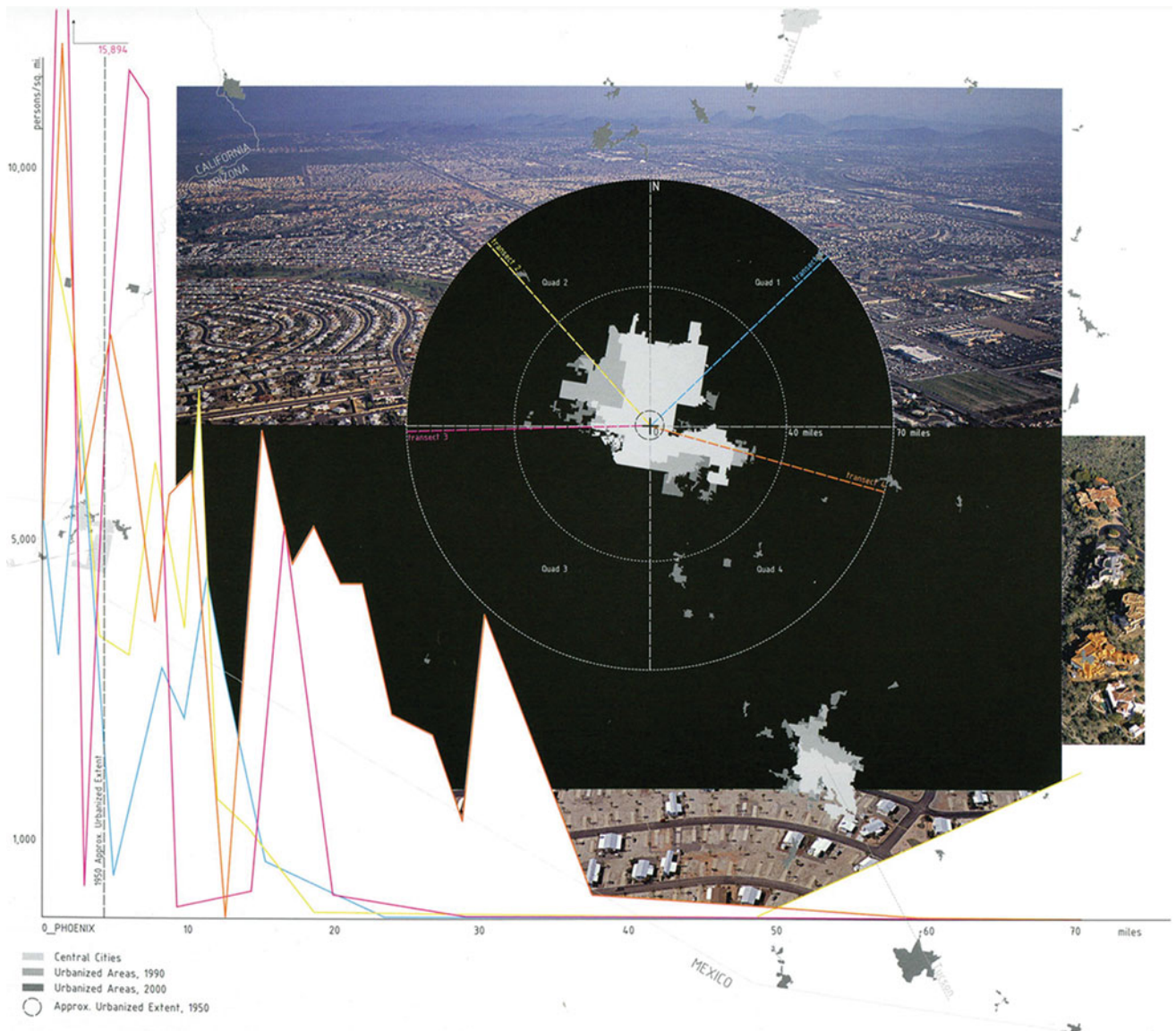


Fig. 30.2 Pohenix, Arizona. Allan Berger, in Drosscape: Wasting Land 2007

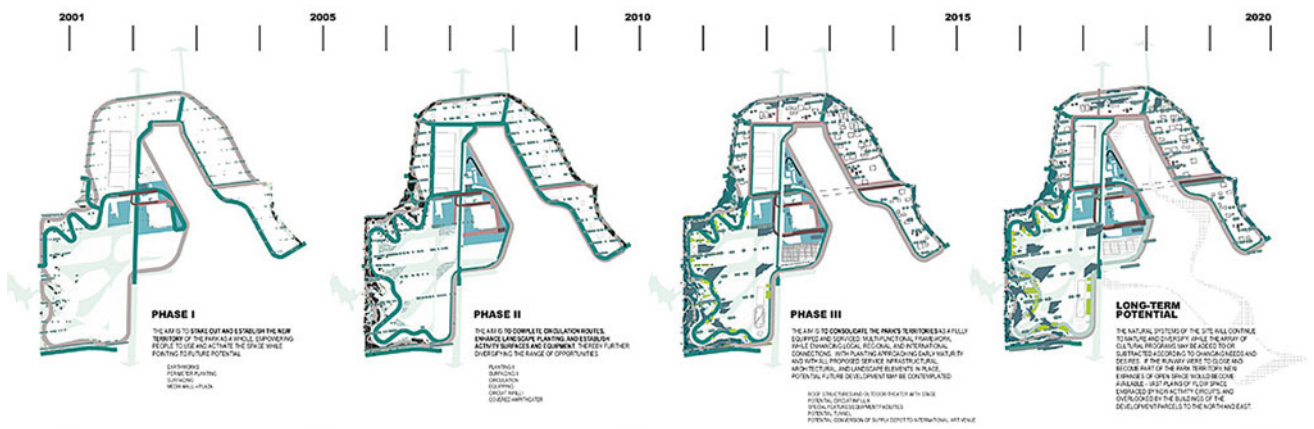


Fig. 30.3 James Corner, Stan Allen and Nina-Marie Lister, Emergence through Adaptive Management. Downsview Park Competition, Toronto, Canada, 1999

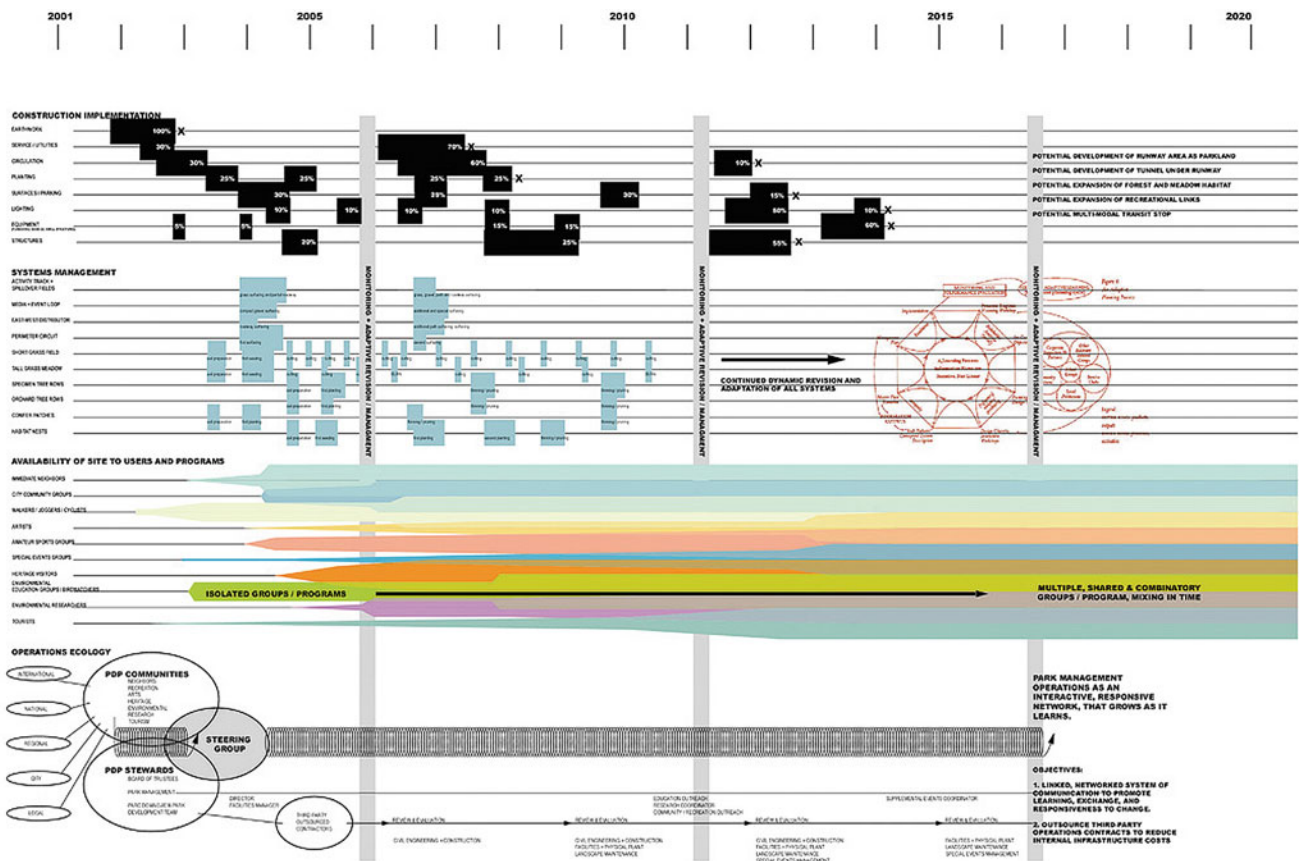


Fig. 30.4 James Corner, Stan Allen and Nina-Marie Lister, Downsview Park Competition, Toronto, Canada, 1999

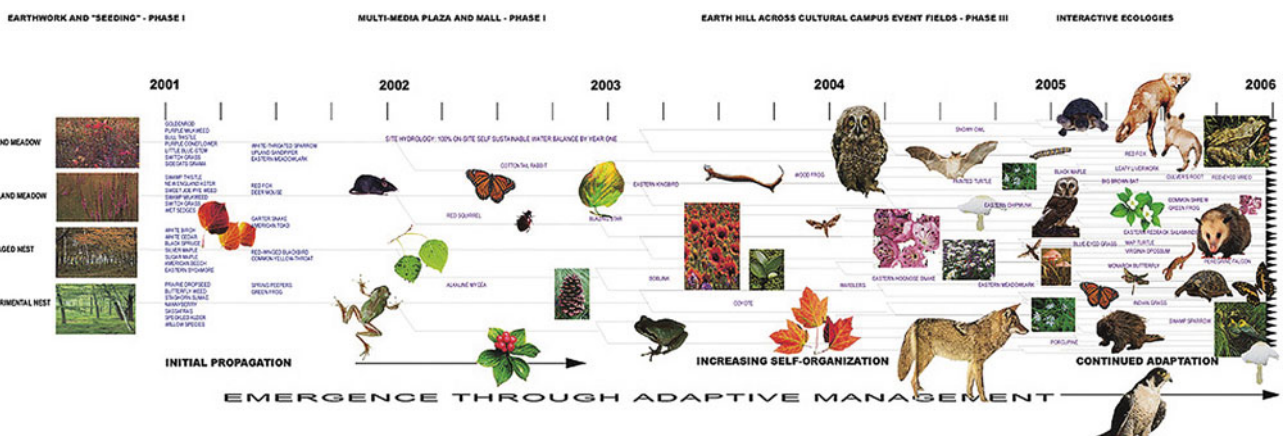


Fig. 30.5 James Corner, Stan Allen and Nina-Marie Lister, Downsview Park Competition, Toronto, Canada, 1999

according to James Corner, opens a new framework for planning and design at all scales.

Using the scheme proposed by R. Weller in “Global Landscapes” (2013), the two cases presented here are only a sample of how this approach from landscape permits working at all scales, relating the design process with the instrumental processes provided by ecology, and thus developing all its potential.

Therefore, we could claim that if, during the twentieth century, cities and urban design were the focus of attention, now is the evolution of the landscape concept and its re-emergence as a useful instrument for planning that has placed it at the centre in the twenty-first century. Designing from the perspective of landscape entails establishing the necessary relationships between nature, place and society, through ecology, science and art.



Fig. 30.6 FABRIC and JCFO, Urban Metabolism for IABR Project Atelier Rotterdam, 2014. The FABRIC and JCFO design offices mapped the inbound and outbound material flows to and from the city of Rotterdam and the Delta, analysing how those flows interacted on the territory and the space, and exploring how they can have a positive impact on environmental management of the city both individually and as a system

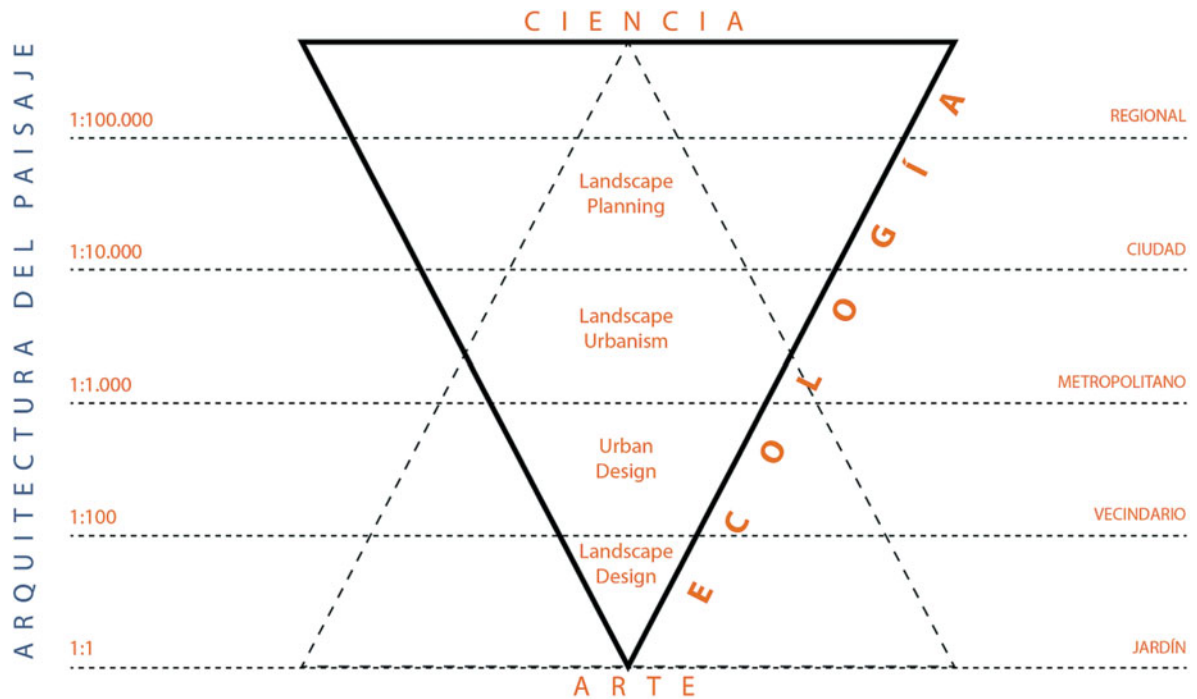


Fig. 30.7 Richard Weller, diagram depicting the scope of landscape architecture today and its relationship with design and planning throughscales, in Weller, R. "Global Landscapes", 2013

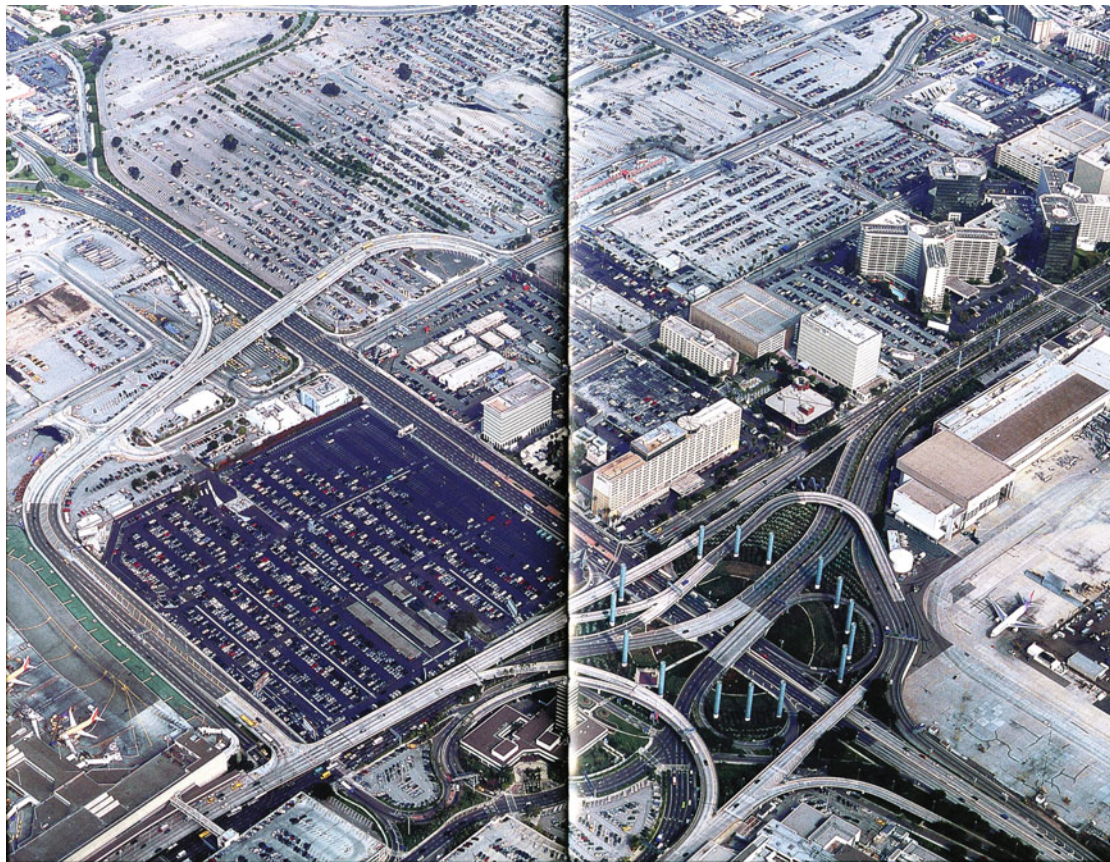


Fig. 30.8 Parking lots at Los Angeles international airport

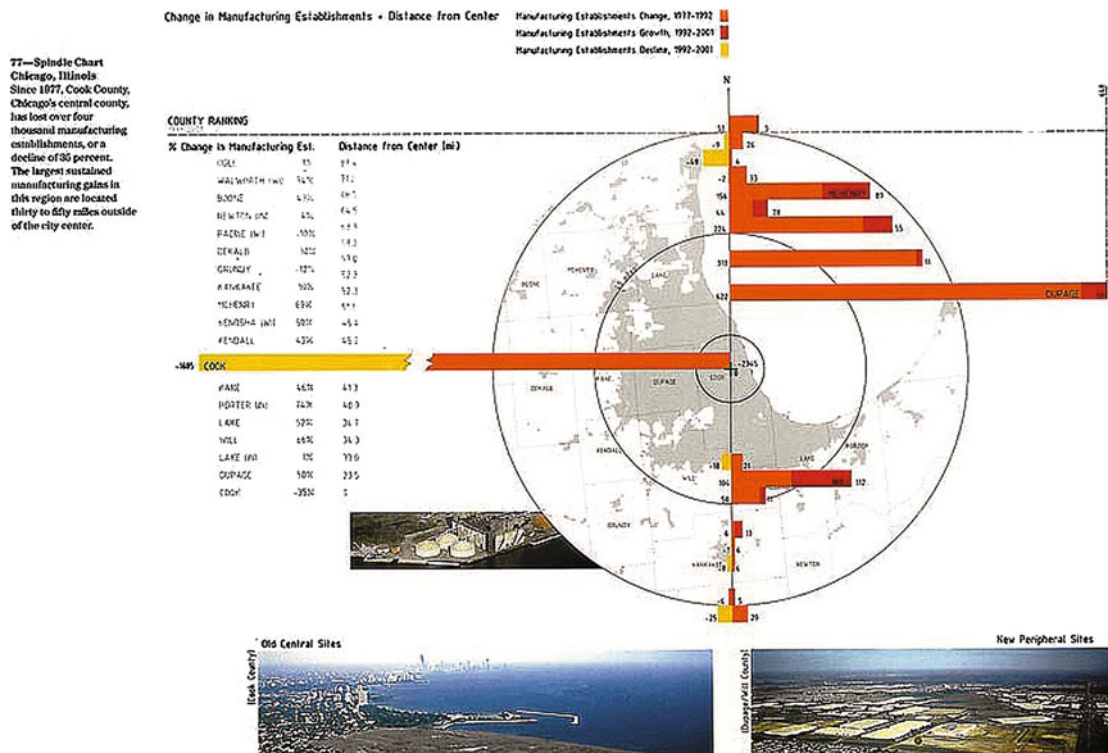


Fig. 30.9 Allan Berger, in Drosscape: Wasting Land in Urban America, 2007. Berger develops the idea of waste landscapes in American cities, including ‘how’, ‘where’ and ‘why’ they were created and also ‘what’ and ‘when’ for any possible re-development of them

Case Studies

Emerald Necklace, Boston (1884–1910s)

The park system designed by Frederick Law Olmsted in 1884 for the city of Boston, known as the Emerald Necklace covers a length of over 12 km and 450 ha. It is a green infrastructure that connects parks, lakes and river areas in a complex system. The project, considered a pioneer in implementing green infrastructures in the USA, emerged in 1875 with approval by the Boston Municipal Council through a Parks Law favouring access to nature by inhabitants in the city which at the time was undergoing strong development as a result of the Industrial Revolution. This project continues today, through the restoration of Muddy River.

Olmsted, aware of the limits and repercussions of growth and intensive development of the city, promoted public health, the use of passive transport and the reduction of flooding along Muddy River through ecological recovery of the landscape and leisure use. He restored Back Bay, a former swamp that had been used as a dump, as well as the banks of the Muddy River, as an element to structure connect the parks system, thus resolving the existing health problem and recovering lost biodiversity. Moreover, the project served to retain rainwater, mitigating flooding and at the same time separated heavy traffic from pedestrian walkways and renewed contact with nature.

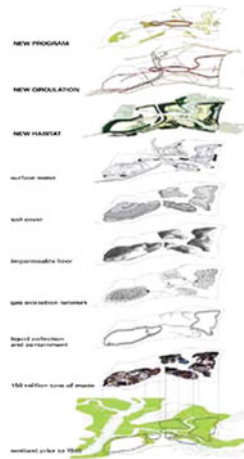


Fresh Kills Park, New York (Project, 2001. Development 2006–2036)

The project, developed by James Corner (Field Operations) for New York in 2001, consists of recovering the Fresh Kills dump, the largest in the world, as a public park, located to the west of Staten Island in the River Hudson estuary.

Because of its scale and complexity, the project develops the idea of Lifescape, as described previously. The strategy proposes a series of flexible, continuing stages, a landscape in process, designed to promote diversification and succession over time. The project is subdivided into five parks, to be developed in three stages, each spanning a ten-year period. It features establishing new habitats, based on improving the

properties of the soil through agriculture and recovering the wetlands. Once the soil has been improved, there will be a process of establishing pioneer plant communities. Native species will be used for the most part, as well as a collection of different species adapted to the prevailing conditions of the site, susceptible to improving the development conditions of the different habitats. The use of small-scale plantations provides a variety of species in each of the habitats, testing their adaptability to the conditions of the park. Thus, a diverse landscape is achieved, self-manageable and resilient, which recovers its ecological value, introducing a programme for public use, while purifying polluted water, reducing the need for park maintenance and acting as a buffer zone from the storm waves, as could be seen during Hurricane Sandy.



FRESH KILLS PARK
Habitat Diversification Over Time



References

- Berrizbeitia, A. 2007. Re-placing Process. In *Large Parks*, ed. J. Czerniak and G. Hargreaves, 175–198. New York: Princeton Architectural Press.
- Corner, J. 2005. Lifescape—Fresh Kills Park. *Topos—The International Review of Landscape Architecture and Urban Design* 51: 14–21.
- Field Operations, and New York City Department of City Planning. 2006. *Fresh Kills Park: lifescape. Draft Master Plan*. New York.
- Lister, N.M. 2007. Sustainable parks: Ecological design o designer ecology? In *Large Parks*, ed. J. Czerniak and G. Hargreaves, 35–58. New York: Princeton Architectural Press.
- Mostafavi, M., and G. Doherty (eds.). 2010. *Ecological Urbanism*. Cambridge: Harvard University Graduate School of Design-Lars Müller Publishers.
- Pollack, L. 2007. Matrix landscape: Construction of Identity in the Large Park. In *Large Parks*, ed. J. Czerniak and G. Hargreaves, 86–119. New York: Princeton Architectural Press.
- Reed, C., and N.-M. Lister (eds.). 2014. *Projective Ecologies*. New York: Actar, Harvard Graduate School of Design.
- Sijmons, D. 2014. IABR-2014: Urban by nature.
- Spirn, A.W. 2003. Urban Ecosystems, City Planning, and Environmental Education: Literature, Precedents, Key Concepts, and Prospects. In *Understanding Urban Ecosystems: A New Frontier for Science and Education*, ed. A.R. Berkowitz, C.H. Nilon, and K. S. Hollweg, 201–212. New York: Springer.
- Spirn, A.W. 2012. Ecological Urbanism: A Framework for the Design of Resilient Cities. In *Resilience in Ecology and Urban Design*, ed. S. Pickett, M. Cadenasso, and B. McGrath. Dordrecht: Springer Netherlands.

Further Readings

- Berger, A. 2006. *Drosscape: Wasting Land Urban America*. Princeton Architectural Press.
- Corner, J. 1997. Ecology and Landscape as Agents of Creativity. In *Ecological Design and Planning*, ed. F. Steiner and G. Thompson, 80–108.
- Corner, J. (ed.). 1999. *Recovering Landscape: Essays in Contemporary Landscape Architecture*. New York: Princeton Architectural Press.
- Corner, J. 2001. Fresh Kills: Landfill to landscape. *International Competition*.
- Corner, J. 2006. Terra Fluxus. In *The Landscape Urbanism Reader*, ed. C. Waldheim, 21–33. New York: Princeton Architectural Press.
- Rottle, N., and K. Yocom. 2011. *Ecological Design*. Lausanne: AVA Books.
- Waldheim, C. 2006. *The Landscape Urbanism Reader*. New York: Princeton Architectural Press.

Miriam García

Abstract

The article explores the identity mark registered as personal and collective memory and intangible heritage in the places from a cultural, perceptive, emotional and phenomenological perspective. These landscape values, which can be called intangible, reveal realities of huge importance for culture and for urban planning. Among other techniques, the article focuses on the cartography of values such as tranquillity or the aesthetic emotion, aimed at understanding and designing places. These maps drawn from a deep knowledge of the places are a powerful tool that can be used to claim contemporary landscape as a dynamic, socio-ecological system. Mapping then becomes a process of understanding, evocation and design in itself, through which projects can be integrated in the site.

Keywords

Landscape • Intangible • Mapping • Perception • Identity • Site

Landscape plays an essential role in creating the feeling of a place; it establishes identity and a sense of belonging between man and his environment. This holistic conception is the one that inspired the definition coined at the European Landscape Convention held in Florence 2000, where it is understood as “(...) an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors” (Council of Europe 2000). Because, as the geographer Joan Nogué points out, landscape is, “at the same time a physical reality and the representation that we make of it culturally; the external and visible appearance of a certain portion of the land and the individual and social perception that it generates; a geographical tangible and its intangible interpretation (...) but they are also

historical legacies, continuities, continuances, the overlapping strata of the remains of ancient landscapes”.¹

From this point of view, it could be said that all places have that identity mark registered ‘the traces of the place’, as personal and collective memory, intangible heritage, although sometimes it is invisible. According to the Safeguard Intangible Cultural Heritage Convention, this is the root of our cultural diversity, and at the same time a guarantee of creativity. There is a reason why intangible cultural heritage is defined in the second article of the Convention, where landscape is understood as “(...) the practices, representations, expressions, knowledge, skills—as well as the instruments, objects, artefacts and cultural spaces associated therewith—that communities, groups and, in some cases, individuals recognise as part of their cultural heritage” (UNESCO 2003, Article 2). In other words, intangible cultural heritage is the response by each society to an

M. García (✉)
University of Zaragoza, Zaragoza, Spain
e-mail: miriamgarcia@landlab.es

¹“(...) a la vez, una realidad física y la representación que culturalmente nos hacemos de ella; la fisonomía externa y visible de una determinada porción de la superficie terrestre y la percepción individual y social que genera; un tangible geográfico y su interpretación intangible (...) pero además son las herencias históricas, las continuidades, las permanencias, los estratos superpuestos de restos de antiguos paisajes” (Nogué 2007, 19–20).

REPRESENTATIVE LIST OF THE
INTANGIBLE CULTURAL HERITAGE
OF HUMANITY

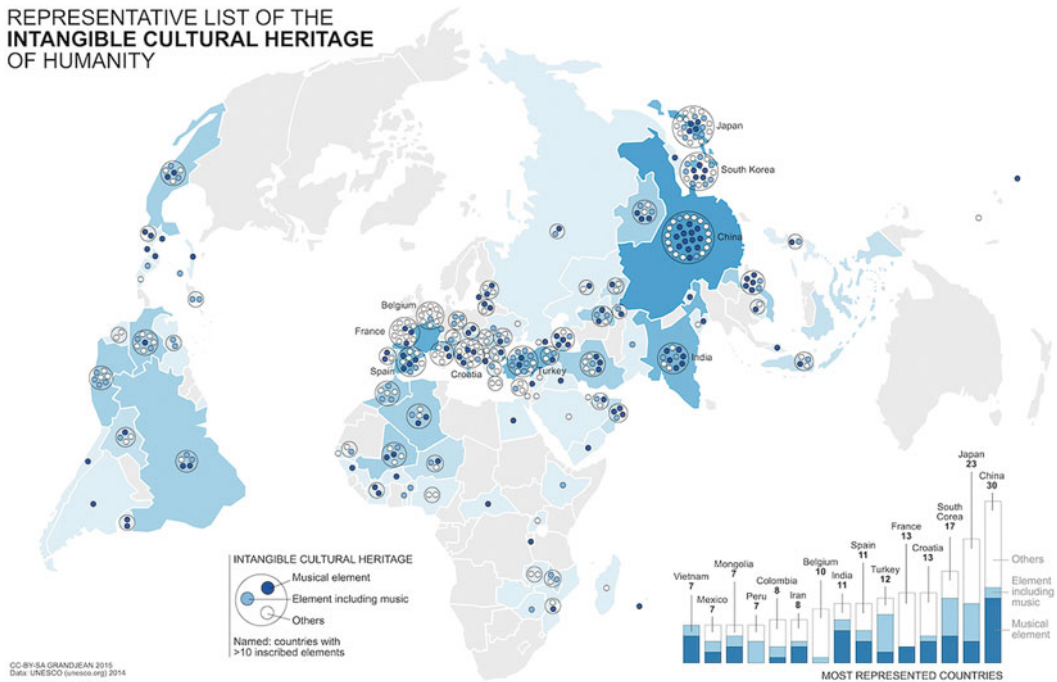


Fig. 31.1 UNESCO, map of intangible cultural heritage, 2014

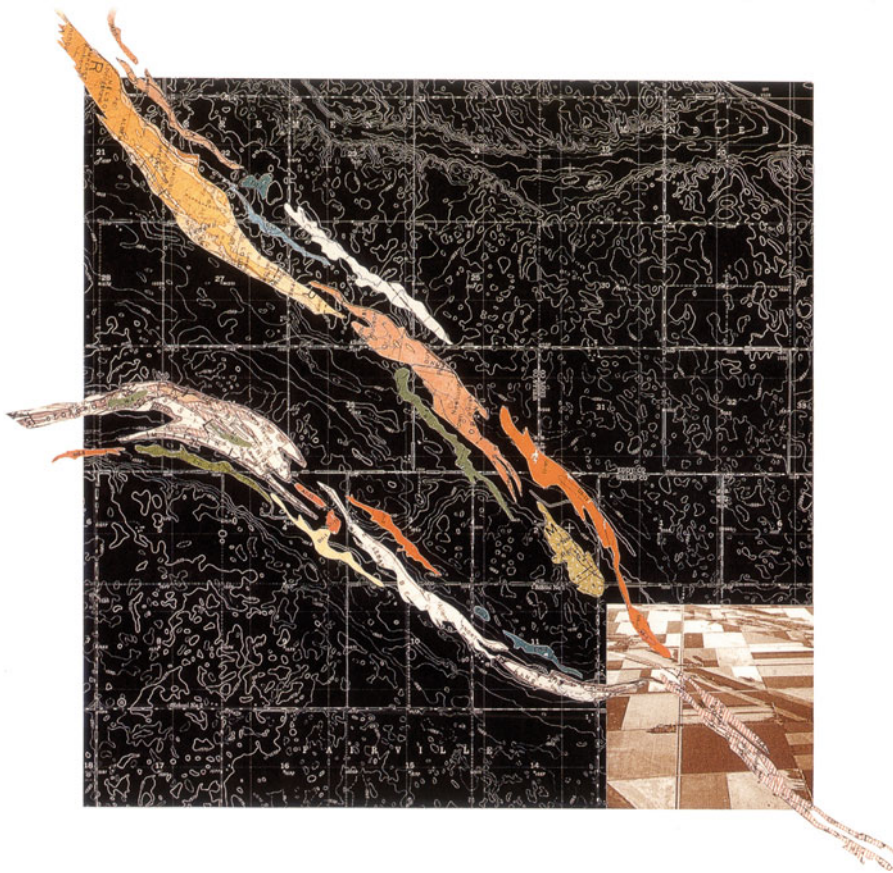


Fig. 31.2 James Corner, Pedological drift. Fairville, North Dakota, 1996. Corner's 'collage maps' can be interpreted, instead of simply being used as an illustrative tool. They feature a certain degree of indetermination, by drawing a space of possibilities that is found somewhere between interpretation and reality

WHAT MAKES A GREAT PLACE?

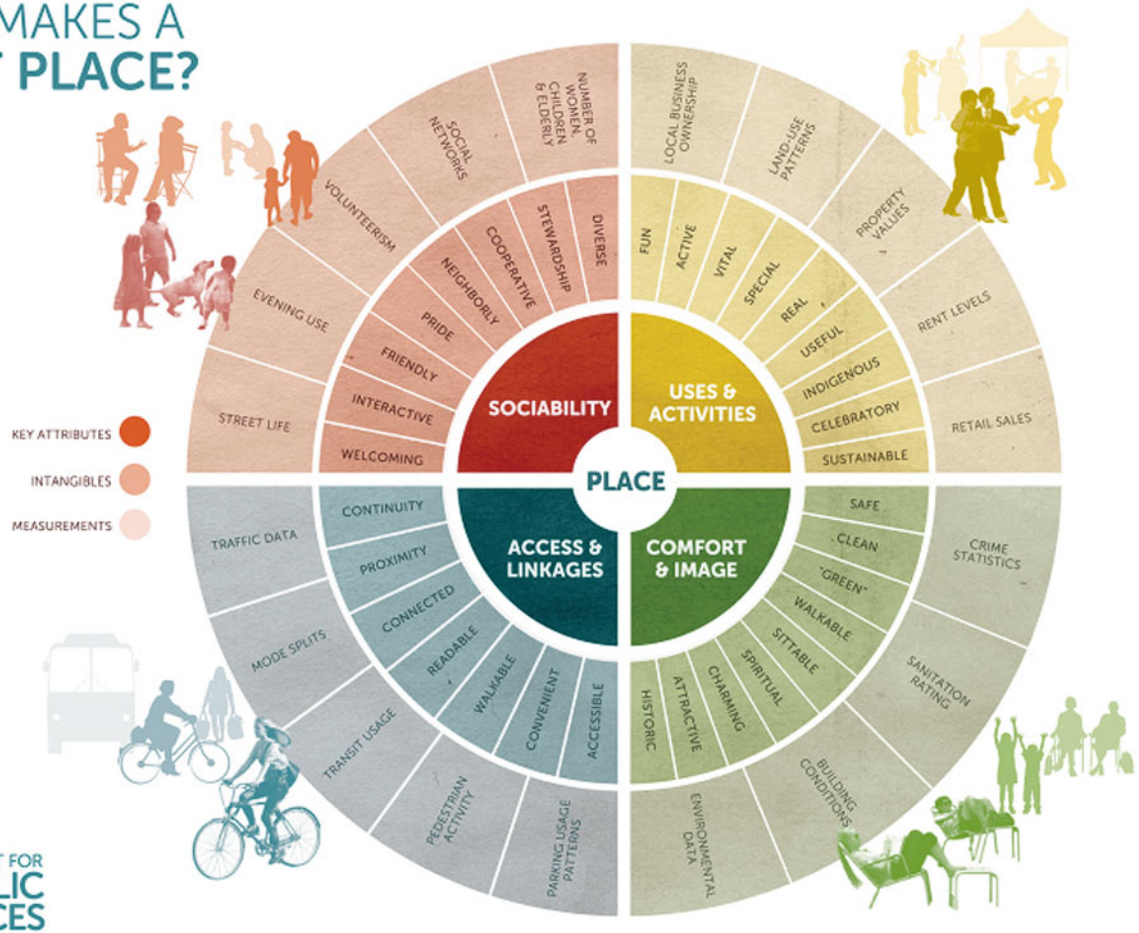


Fig. 31.5 Project for Public Spaces (PPS). By assessing thousands of public spaces around the world, PPS has found that those that are successful, generally, share the following four qualities: they are accessible; people are involved in activities there; the space is comfortable and has a good image; and finally, they are sociable places. This has led to the diagram being a tool to assess the quality of public use

environment, one that is always dynamic is being constantly created, providing identity and continuity. It is, therefore, necessary to pay attention to all landscape dimensions, planning transformation and favouring future, collective scenarios and private, global and local ones.

It could be said that the concept of landscape has undergone a first stage aimed at its protection, separating the natural and cultural aspects, and a second stage dedicated to understanding territory as a system, primarily physical and secondarily as an ecological system, in opposition to architecture and the city. Nevertheless, today cultural, perceptive, emotional and

phenomenological values claim integration in the conception and planning of landscape at every scale (García 2012).

These landscape values, which can be called intangible, are usually questioned since they are ephemeral (at least more than others, such as geomorphological and biophysical aspects) and are tainted by a certain degree of subjectivity since they are linked to perception and experience. But that does not mean they do not exist. Their cartography reveals important realities for culture and submerges us in the intimacy and depth of human beings, our memories, wishes and emotions, in short, in our identity.

Some of those cartographies are centred on the relationship between landscape and well-being, placing emphasis on factors such as context, its magnitude and the feeling of affinity by the population. Since the last century, the psychologist Kart Lewin was one of the first to study environmental psychology through the interaction between human conduct and the environment. Since then, many authors base their theories on environmental and cognitive psychology, arguing that two of the components of tranquillity are aesthetic pleasure and a moderate feeling of fascination, and that both of them are essential in therapy and therefore for quality of life (Fuller et al. 2008, 311–334). Along the same lines, the work in the UK on Tranquillity Maps has been one of the few examples since the early nineties that show proven methodology, where emotional aspects of the environment, such as tranquillity, have been put into practice in plans related to the quality of the rural environment or the construction of infrastructures.

But undoubtedly, the feeling that is most difficult to map is the aesthetic one. Therefore, if we analyse the maps that try to depict this aesthetic emotion in detail, we can see that they are not purely descriptive maps, or in other words, the description of the aesthetic values of that landscape is not thorough, but more synthetic, aimed primarily at understanding and designing the place. This means that these maps have some creative aspects, as suggested by James Corner in his article “The Agency of Mapping: Speculation, Critique and Invention”. Hence, for example, in his book *Taking Measures Across the American Landscape* (1996), Corner draws a series of maps/drawings, where by means of ‘collage’, taken from art, he captures the expression of places, featuring time, memory and processes, and selects, deletes or emphasises their singularities, as per each case. They are maps that maintain a dialogue between scientific knowledge and phenomenological knowledge, combining ‘intuition’ and ‘reason’. But we should not forget that these are maps drawn from a deep knowledge of the ecological and cultural conditions of the places, capable of showing the potential of each site. It is precisely that evocative power of mapping that provides a potent tool to claim contemporary landscape as a dynamic, socio-ecological system. Mapping then becomes a process of understanding, evocation and design in itself, through which projects can be integrated with the site.

In this context, and within the framework of cities, the work by the Situationist movement of the 1960s can be said

to acknowledge intangible landscape values, in the sense that there was a will to claim an emotional experience from cities, both individually and collectively, through specific channels: an haphazard, somewhat vague movement, where perception and play are united in an act of discovery of places, in contrast to those that are institutionally established (see Chaps. 8 and 23). For Guy Debord, the city can also be the result of a psycho-geographical perception, the fruit of empathy, illusion and passion. Today, these tactics have been revisited to stimulate strategic interventions in public spaces, where the right to the city is being claimed. To do so, we must first recognise the authentic nature of social life and the network of relations with the environment.

At the regional level, maps depicting aesthetic values and patterns from the French and English landscape atlases, or those from Catalonia landscape catalogues are a useful approach to the task of compiling these items that recreate that artistic imaginary, even though their value is not always recognised. Nevertheless, comparisons with tangible values (physical, usage, etc.) open up new possibilities for planning, recording the interrelations of areas with different natures, connected to each other through emotional narratives. The interest, therefore, resides in the process of elaboration and in the methodology used to describe them. One example is the work by Cristian Nold focuses on the emotional reaction by citizens towards places. Of particular interest in his work, and other similar works, is the way they recognise a series of items and ‘situations’ that jointly reveal the legibility of places.

As an alternate to urban exploration techniques, cartography has become a strategic tool for designers and planners, not only to identify and understand but more importantly to transmit the values and the potential of places, working as a catalyst for creativity. Studying the landscape has therefore become a continuing dialogue between the tangible and the intangible, between permanent and ephemeral conditions, between appreciation and creativity. When the landscape is analysed, many methodological decisions are made that also involve an account of the values and possibilities of the landscape. It is then, in contexts of complexity and uncertainty, where participation becomes a new tool for ‘rationality’ that legitimation and consistency of these processes takes shape from citizen involvement, since it is the citizens who are committed, or not, to the assigned values. What is not known and what is not appreciated, remains invisible. ‘Revealing’ thus becomes an exercise that



Fig. 31.6 Map of aesthetic values, items comprising the landscape catalogue of the regions in Girona. Drafted by Centre de Recerca i Projectes de Paisatge at the Polytechnic University of Catalonia, Department of Geography at Girona University and Observatori del Paisatge

is claimed collectively, at the same time being creative, where the physical and phenomenological aspects complement each other, re-establishing the existing breach between professionals and citizens.

In this sense, the study by Project for Public Spaces (PPS) is particularly interesting. After assessing thousands of public spaces around the world, it has established a method to measure the success of those spaces according to their accessibility, usage, image and sociability conditions.

This method has been summarised in a diagram that serves as a tool for reflection and analysis. The relevance of intangible values can be appreciated that which is recreational and that which is 'performance' through the social acceptance parameter of those spaces, which widens and completes the quantitative values. This only confirms that the experience of space is inseparable from the events and 'situations' that take place in it, and 'emotion' is therefore a part of planning.

Valors estètics. Elements configuradors

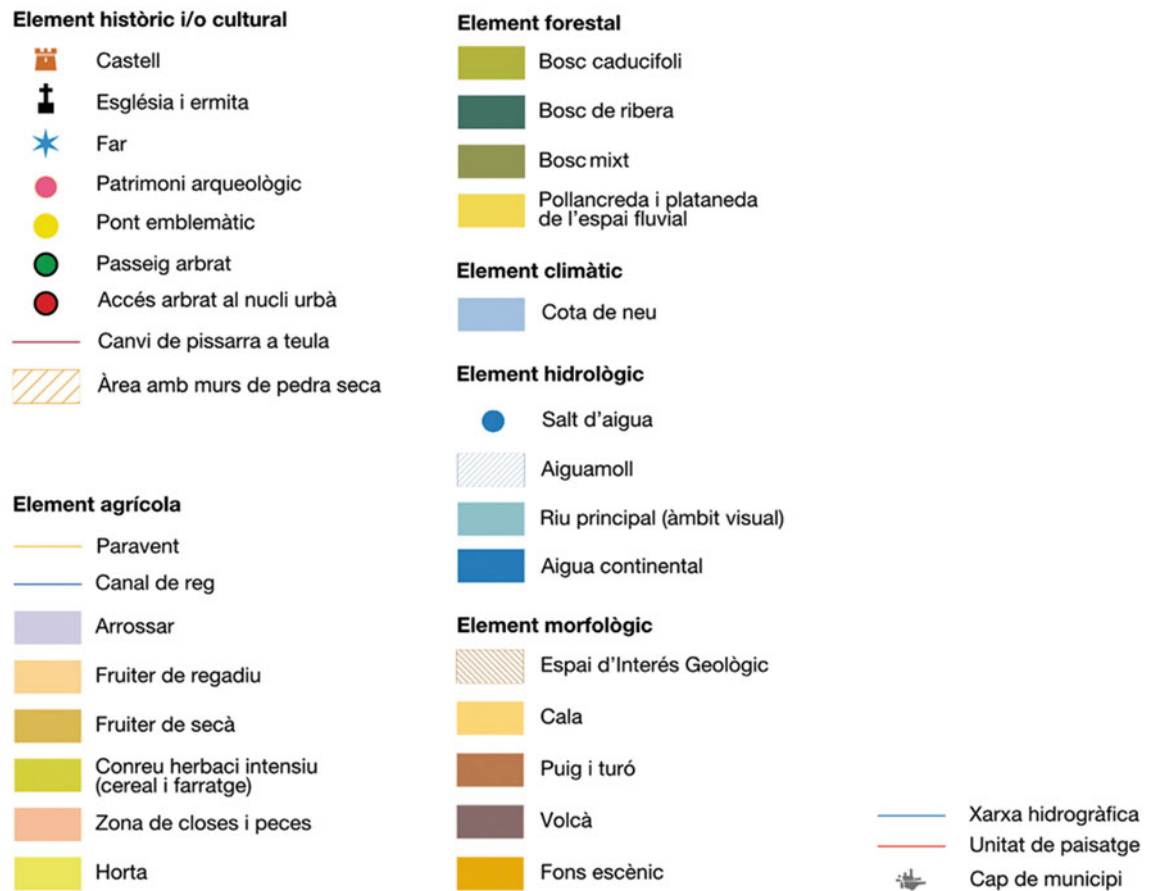


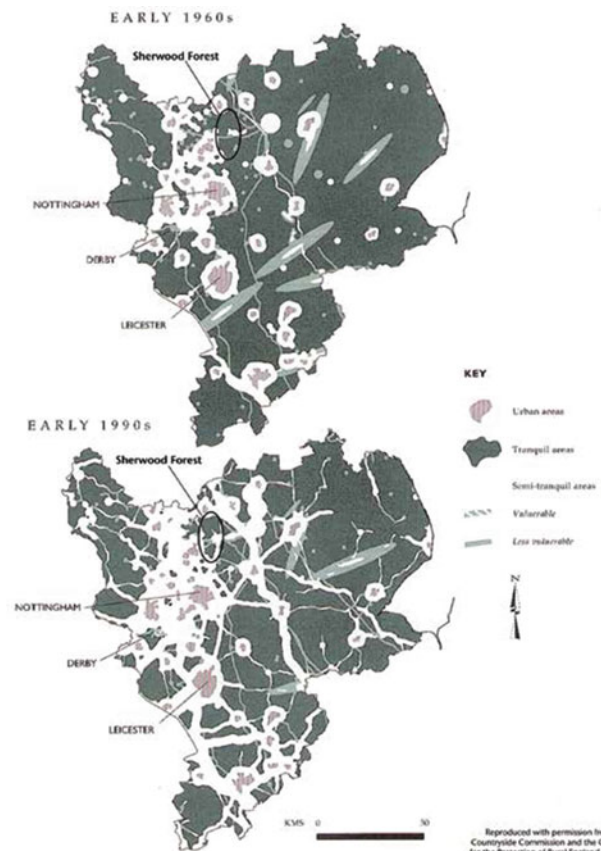
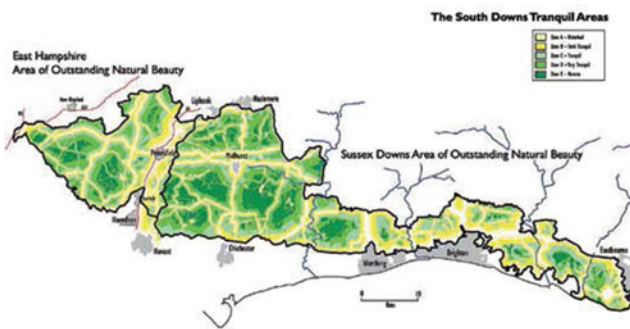
Fig. 31.6 (continued)

Case Studies

Tranquillity Maps, Countryside Commission (1995–2016)

The main objective of these maps drawn up by the Countryside Commission is to define the concept of tranquillity applied to landscape through participative processes and to obtain graphic representation. To achieve this, these concepts are translated into maps with scores assigned by the different agents in the territory through a number of surveys. Simon Rendel (ASH Consulting 1991) was the first to design a

cartography depicting the tranquillity of landscape in 1991 in a number of studies for the British Government's Department of Transport, aimed at assessing the rural environment of a new highway infrastructure, namely the Hertfordshire–Bedfordshire corridor, to the north of London. After several studies in other areas around the country, this methodology was applied to all of England in 1995, and an estimate of how the English landscape had changed was established in relation to this feeling of tranquillity between 1960 and 1990. The interesting point about these projects is that the concept of tranquillity arises out of a process of publicly assigned values (visual and sensory) rather than purely scientific knowledge.

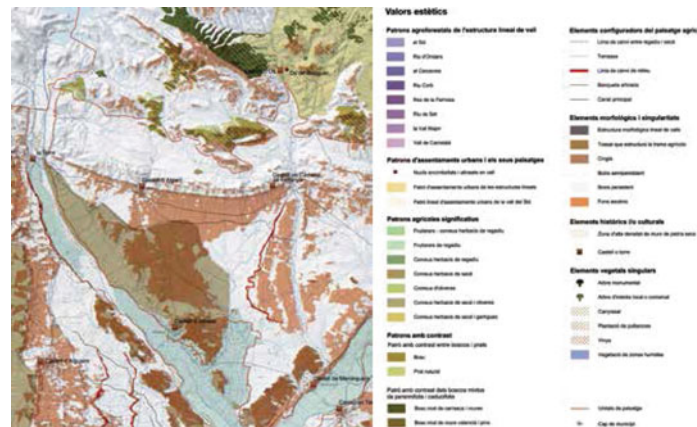


Landscape Catalogues of Catalonia (2000s)

The landscape catalogues of Catalonia, coordinated by the Landscape Observatory, are the main instrument for defining the landscape quality objectives in Catalonia. These objectives arise from the acknowledgement of a number of values and challenges identified in the landscape. In order to do so, all the landscape agents are considered. These landscape catalogues are not only an instrument for landscape policies, but they are also used in many other fields such as education, health, nature conservation, tourism, among others. The catalogues identify natural, historical, social, production, aesthetic and spiritual

values. In this context, the aesthetic values are related to the capability of the landscape to give a feeling of beauty regarding the items comprising the landscape in terms of colours, diversity, form, proportion, scale, texture, unity or harmony. The symbolic and cultural values, however, are more related to the feeling of belonging by a certain community or social group with the landscape and with their environment.

Of course, myths and legends, processions, festivities and other collective activities are part of this group of landscape values. In one way or another, each of them refers to tangible components of the landscape, and together, they represent its character (31.6).



References

- Council of Europe. 2000. European Landscape Convention. Florence.
- Fuller, D., C. Haggett, and H. Dunsford. 2008. Paisatge, tranquil·litat i salut. In *Plecs de Paisatge. Reflexions I. Paisatge i salut*, ed. J. Nogué, L. Puigbert, and G. Bretcha, 311–334. Olot: Observatori del Paisatge de Catalunya, Barcelona, Generalitat de Catalunya, Departament de Salut.
- García, M. 2012. Cartografías intangibles/Cartographies of the intangible values of the landscape. *Paisea* 23: 96–103.
- Nogué, J. 2007. Introducción. El paisaje como constructo social. In *La construcción social del paisaje*, ed. J. Nogué. Madrid: Biblioteca Nueva.
- UNESCO. 2003. *The Convention for the Safeguarding of Intangible Cultural Heritage*. Paris: UNESCO.

Further Readings

- Bell, S. 1999. *Tranquillity Mapping as an Aid to Forest Planning*. Edinburgh: Forestry Commission.
- Campaign to Protect Rural England (CPRE). 1995. *Tranquil places*. Edinburgh: Countryside Commission.
- Corner, J. 1999. The agency of mapping: speculation, critique and invention. In *Mappings*, ed. D. Cosgrove, 214–252. London: Reaktion Books.
- Corner, J., and A.S. MacLean. 1996. *Taking measures across the American Landscape*. New Haven—London: Yale University Press.
- CPRE North East Region. 2005. *Mapping Tranquillity: Defining And Assessing a Valuable Resource*. London: Campaign to Protect Rural England (CPRE).
- EUROPARC-España. 2012. El patrimonio inmaterial: valores culturales y espirituales. Manual para su incorporación en las áreas protegidas. Madrid: Fundación Fernando González Bernáldez.
- García, M. 2013. Written at the place. The intangible values of the landscape/Escrito en el lugar. Los valores intangibles del paisaje. *ZARCH: Journal of interdisciplinary studies in Architecture and Urbanism* 1: 36–47.
- Generalitat de Catalunya. 2010. *Catàleg de paisatge. Les Terres de Lleida*. Barcelona: Generalitat de Catalunya. Departament de Política Territorial i Obres Públiques.
- Jellicoe, G., and S. Jellicoe. 1975. *The Landscape of Man: Shaping the Environment from Prehistory to The Present Day*. London: Thames and Hudson.
- Ministerio de Medio Ambiente, and Council of Europe. 2007. *Convenio Europeo del Paisaje: textos y comentarios*. Madrid: Ministerio de Medio Ambiente.
- Nogué, J., L. Puigbert, G. Bretcha, and À. Losantos (eds.). 2013. *Reptes en la cartografia del paisatge. Dinàmiques territorials i valors intangibles. Plecs de Paisatge - Eines 3*. Olot: Observatori del Paisatge de Catalunya.
- Norberg-Schulz, C. 1980. *Genius Loci: Towards a Phenomenology of Architecture*. New York: Rizzoli.

Pablo de la Cal

Abstract

Urban Agriculture is not a new term in the history of urbanism. Many experiences have tried to include agriculture in the field of town planning, with very interesting initiatives in the first decades of the twentieth century or by the proposals for ‘protection and management of agricultural areas in metropolitan environments’ developed more recently. Bringing the dimension of agriculture to consolidated urban areas has undergone spectacular development over the last ten years, because it is accompanied by the growing concern for urban sustainability and the subject of feeding cities. Moreover, for urban planners, the strategies of ‘continuous productive urban landscapes’ (CPULs) that aim to introduce coherent productive interconnected spaces inside cities as an essential component or sustainable urban infrastructure, become a great innovation when designing open-space systems.

Keywords

Urban agriculture • Km 0 agriculture • Ecological agriculture

Historically, cities have integrated agricultural activity in a rather hybrid manner in courtyards, cloisters, areas around walls, etc. This symbiosis between residential and agricultural areas reflects a condition where ‘city’ and ‘countryside’ share the same infrastructure.

In the nineteenth century, the intensive densification of historical centres and the new functional needs of industrial cities meant that more land was required for urban expansion, which gradually displaced agriculture to outer areas, creating a sharp contrast in the city/countryside relationship, and understood since then as two opposing forces. The practice of urban planning throughout the twentieth century contributed to consolidating an antagonistic outlook between these two concepts, in spite of the fact that there have been some examples of efforts to include agriculture in the field of town planning. In this sense, we should refer to experiences in Germany in the first third of the twentieth century, where family allotments in towns were crucial for public health during the two world wars. Those experiences have been a

source of inspiration in creating and designing towns ever since. Leberecht Migge, in his pamphlet titled *Jedermann Selbstversorger. Eine Lösung der Siedlungsfrage durch neuen Gartenbau* (Everyman Self-sufficient. A solution to settlement issues through new gardens) put forward a model for a society in 1918 in which families had access to their own vegetable gardens where they could grow their own food, and where the same plot of land could also be used to reuse the waste the family produced.

In addition to his theories, such as *Das Grüne Manifest* (The Green Manifesto 1919), which lobbied for socialising urban greenery, Migge also developed more territorial approaches in several cities (Frankfurt, Berlin, etc.). He also collaborated with many architects to include vegetable gardens in the urbanistic vocabulary of the *Siedlungen* (Britz in Berlin, Römerstadt in Frankfurt, among others). This special awareness of cultivated spaces was evident at the town planning scale, with some very interesting examples, such as the plan for Magdeburg (Bruno Taut y Konrad Rühl 1923). Although there were also some other isolated experiences afterwards, such as those by the landscaper Carl Sørensen in Denmark, who worked in the middle of the twentieth century

P. de la Cal (✉)
School of Engineering and Architecture (EINA),
University of Zaragoza, Zaragoza, Spain
e-mail: pdelacal@unizar.es

with the idea of urban vegetable gardens as an urban component at different scales, for the most part it is true that urbanism has assigned agricultural spaces a condition of ‘void space’, without urban attributes or simply ‘non-urban’. As shown in Chap. 26, formalising ‘green belts’ was established in England and other European countries in order to preserve the productive and aesthetic values of agricultural land, and to interrupt urban sprawl.

Once it became clear that simply protecting these agricultural areas was insufficient, the need for collective management emerged, to promote and incentivise productivity



Fig. 32.1 Allotments in Montreuil, France

against the pressure from developers in those areas. As a result, the experiences of ‘protection and management of agricultural areas in metropolitan environments’ were developed. They have become gradually more important over the last few decades. The Parco Agricolo Sud Milano in Milan, the Parque Agrícola del Baix Llobregat in Barcelona or the Orchard Territorial Protection Plan in Valencia are just some outstanding examples. Likewise, references to historical and cultural features of agricultural areas, including the existing tracks and buildings, are more common in these projects and planning. Some interesting agricultural landscape recovery and renewal projects have been carried out, such as the one by the landscapers Claire and Michel Corajoud between 1998 and 2001 in Montreuil (France), where the landscape of peach orchards was recovered. Also in France, Michel Desvigne’s team of landscapers made a very suggestive proposal in 2005, based on a detailed study of agricultural allotments in Issoudun (France) (see Chap. 27).

But the subject which has perhaps undergone the most spectacular development over the last ten years is urban agriculture, which brings agriculture to consolidated urban areas, therefore breaking away from typical relationships between cities and their outlying areas. The interest this subject has awoken is accompanied by the growing concern for urban sustainability and therefore the sustainability of the planet, and the subject of feeding cities. Within the framework

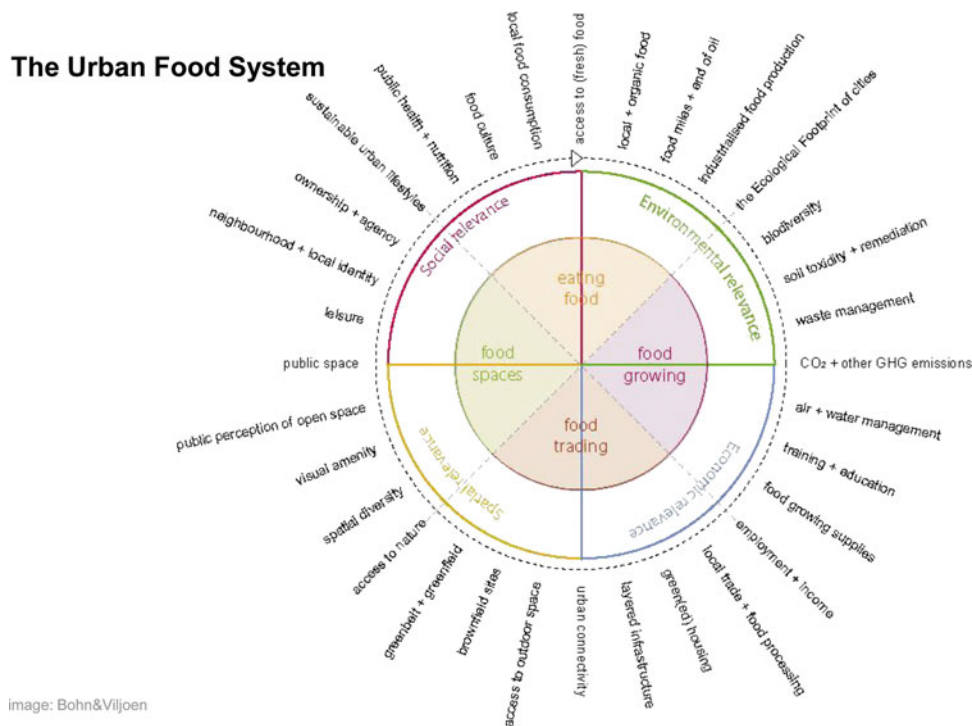


image: Bohn&Viljoen

Fig. 32.2 The food system in cities, in Bohn & Viljoen Architects, 2002. Food has an impact on human beings that goes far beyond welfare and enjoyment. This graph depicts the complexity from a space and sustainability perspective

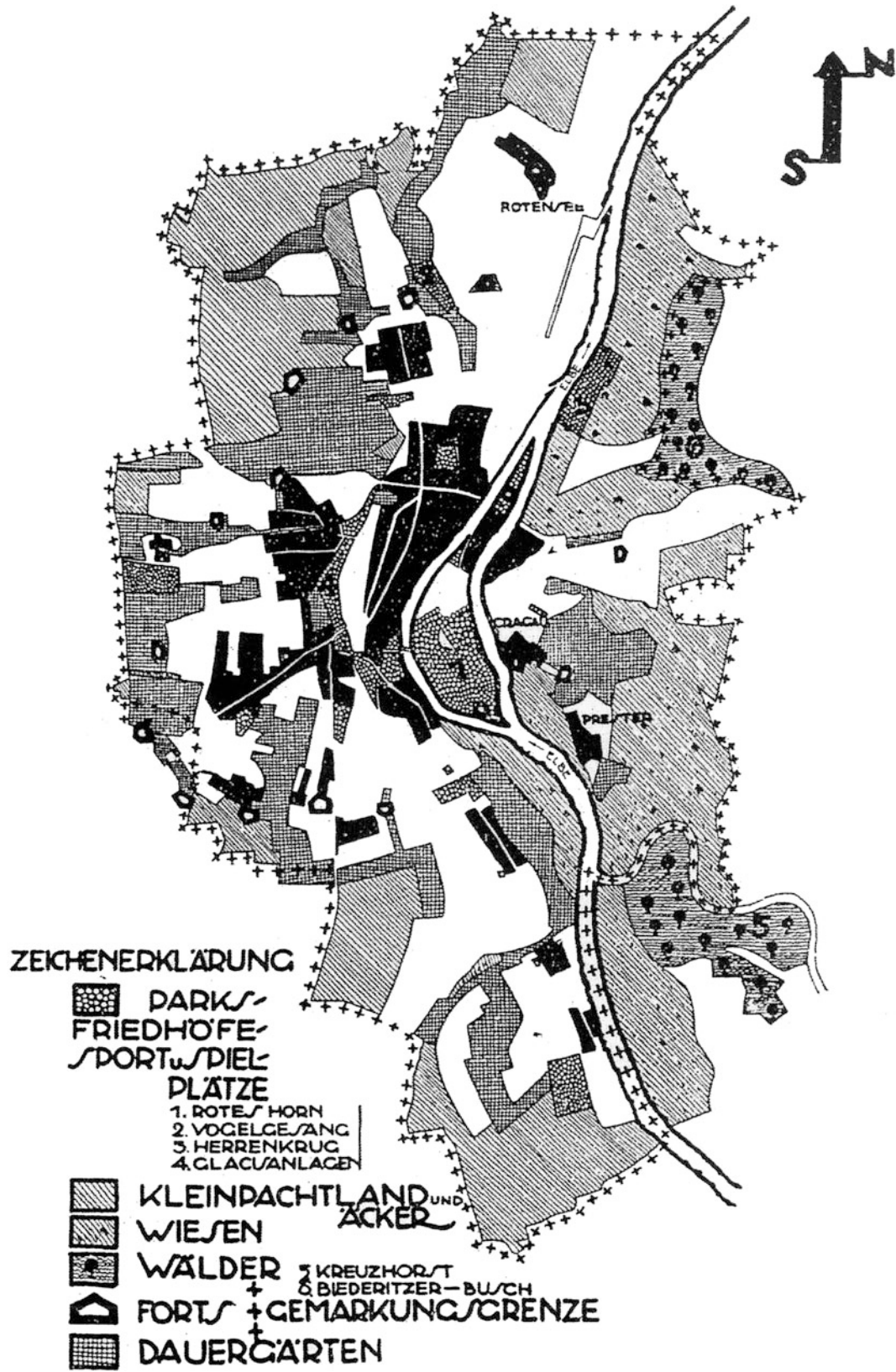


Fig. 32.3 Bruno Taut and Konrad Rühl, Plan of green spaces, Magdeburg, Germany, 1923

Jedermann Selbstversorger

Eine Lösung der Siedlungsfrage durch neuen Gartenbau



von Leberecht Migge

Herausgegeben auf Veranlassung des Gr.-Berliner Vereins für Kleinwohnungswesen vom Ausschuß Groß-Berlin für die Kriegsbeschädigten-Ansiedlung Verlegt bei Eugen Diederichs in Jena 1918

Fig. 32.4 Leberecht Migge, cover of *Everyman Self-sufficient*. A solution to settlement issues through new gardens, 1918

DIE FRUCHTLANDSCHAFT BERLINS.

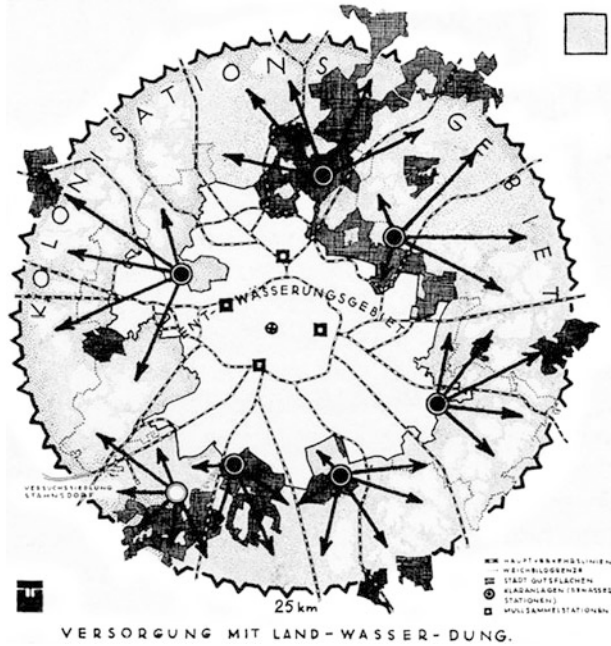


Fig. 32.5 Leberecht Migge, *The Fertile Landscape*. Regional Plan for Berlin, Germany, 1933

DIE GRÜNPOLITIK FRANKFURTS

REGIONALER GRÜNFLÄCHENPLAN

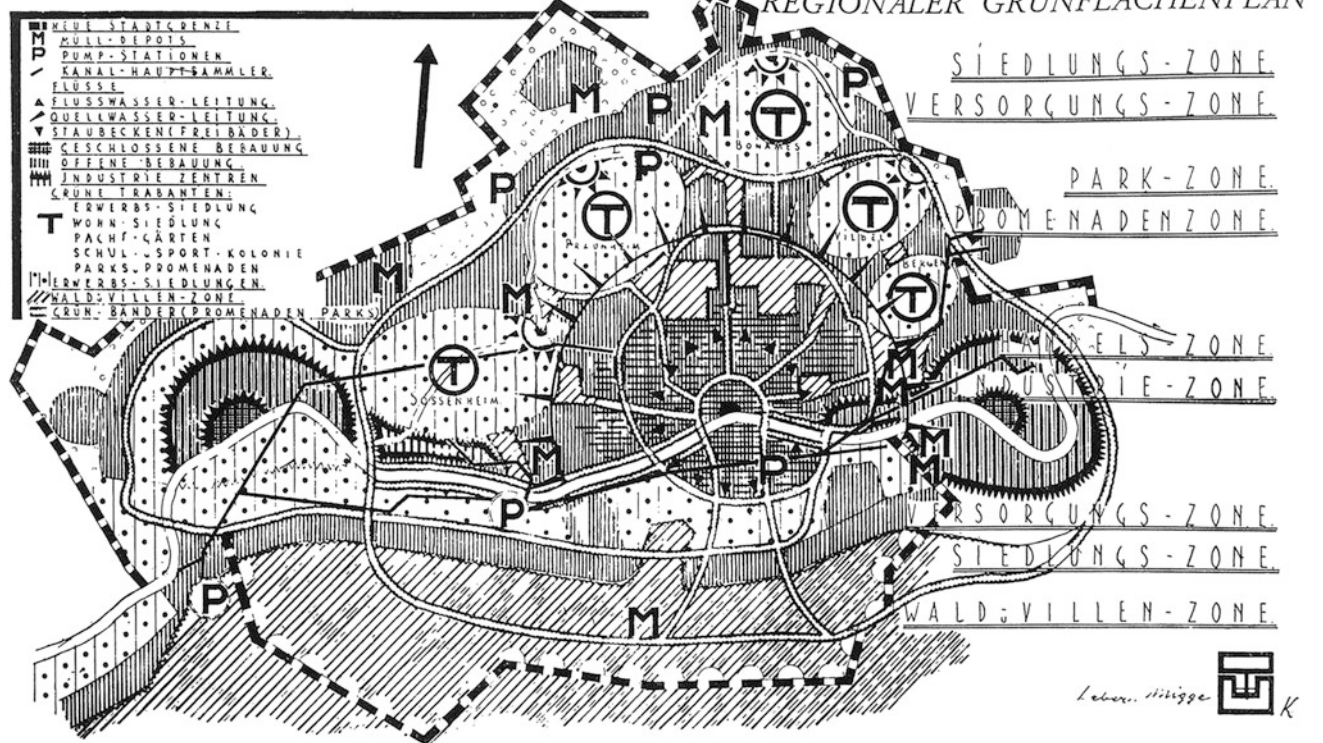


Fig. 32.6 Leberecht Migge, *Regional Green Space Plan* for Frankfurt, Germany, 1929



Fig. 32.7 Michel Desvigne, landscape proposal with agricultural lots subdivision in Issoudun, France, 2005

of Agenda 21, reducing the ecological footprint¹ of cities is an important goal (see Chap. 28), since providing food for cities has a very significant effect on the ecological footprint of a city. Urban agriculture also elicits renewed interest from two different points of view. One strictly concerning the food industry, from the issue of food supply, to fighting against poverty and even to organic farming. And the other is the question of integrating agriculture in town planning policies. These are often capable of developing the potential of agricultural areas in a system of green areas in cities and in the subject of green infrastructures, as well as re-establishing the lost continuity between countryside and city.

In fact, the potential of cities to produce food is very high, as has been proven historically. Today, in developing cities, but also in those undergoing crises, many residents find a clear system of subsistence in private areas in the cities. The impact and benefits of applying urban farming programmes in deprived cities and towns became evident with the West's economic sanctions on Cuba at the end of the nineties, blocking the import system. As a result of shortages, initially on a spontaneous basis and afterwards with support from the government, people started growing their own food on vacant land in the city: patios, residential gardens, etc. La Habana



Fig. 32.8 Urban 'organopónico', Cienfuegos, Cuba, 2002

became the leader in urban agriculture with some interesting composting practices and controlled use of waste water for irrigation, since agricultural production had to re-adapt to the shortage of pesticides, fertilisers and machinery (Bakker et al. 2000). During this process an urban movement arose in La Habana where every small space, albeit a communal courtyard, rooftop, wasteland or plazas were used to grow food, feeding over 50% of the population.²

Other Latin American cities have also found this system useful to fight against poverty and enhance social cohesion. In this sense, the urban allotments in Santiago de Chile and the Urban Agriculture Programme implemented in Rosario (Argentina) since 2002 are also interesting examples (Lattuca 2012). The latter has been internationally hailed for its multiple approaches. Chemical-free vegetable farmers' markets have been set up so that farming is introduced in the city as a showcase of the work carried out in the allotments of the outlying districts. And the parks and vegetable gardens, which have been designed in a participative manner, allow 'market gardeners' to become owners of the allotments. Although in developed cities, in a context of economic crisis, urban farming can also be seen as a complement to the population's basic needs, there is, in general, a growing concern for environmental sustainability, more in terms of a shortage of energy resources (Yokohari et al. 2010). Obviously, economic aspects and dependence also play a part in this decision. In fact, English sensitivity for these subjects is largely due to their situation of production dependence.³

Implementation of urban agriculture has three main benefits: maintaining biodiversity, closed consumption

¹"The sum of all land and water required to meet material consumption and waste discharge of a defined population is that population's ecological footprint of different on the earth" (Deelstra and Girardet 2000, 44).

²Around 2.2 million inhabitants. And in smaller Cuban towns, this percentage reached between 80 and 100%. It is estimated that the island has around 33,000 allotments dedicated to urban and suburban farming.

³In 2000, the consultants Best Foot Forward, pioneers in ecological footprints, estimated that Londoners consumed 6.9 million tonnes of food, of which 81% came from outside Great Britain. See exhibition leaflet *London Yields: Urban Agriculture*. 9 April–30 May 2009. London.



Fig. 32.9 Urban organic farming areas in Rosario, Argentina



Fig. 32.10 Urban allotments in the Casetas district, Zaragoza, Spain

cycles and a reduction of the amount of energy necessary to produce and distribute food. Hence, Km 0 agriculture offers a means of offsetting the practices underlying the production of our daily food, including air transport (with the subsequent production of greenhouse gases, atmospheric pollution, increase in traffic, stress, etc.) as well as the will to solve contamination problems caused by the use of chemical fertilisers, like proposals to recycle grey water from cities as fertiliser in agricultural areas form a part of organic farming, something that goes far beyond a simple commercial label and leads to an increasingly necessary global approach.

All these approaches, related to the specific food sector, have produced an extensive bibliography, particularly since 1996 with the publication of *Urban Agriculture: Food, Jobs and Sustainable Cities* (Smit et al. 2001).⁴ Apart from the economic benefits for producers, urban agriculture also has wider social benefits, since it improves environmental awareness among citizens. This can be seen in London, where almost all local councils promote Urban Agriculture within the framework of Agenda 21. There have been many exhibitions and work that show methods that can be used to produce food in an urban environment, whether at industrial or domestic levels.⁵

Analysis of urban agriculture spaces and their role in the layout of cities has recently gained currency in developed countries through some relevant work that seek to integrate it in the open-space system (Fucci et al. 2008). Katrin Bohn and André Viljoen coined the term ‘Continuous Productive Urban Landscape’ (CPUL), that aims to introduce productive, interconnected spaces inside cities, as an essential component or sustainable urban infrastructure.⁶

The goal is to organise a network of open spaces, not only agricultural, but also for work and recreation, that connect the built-up structure of the city with outdoor spaces (Viljoen 2005). The work by these architects in The Urban Farming Project Middlesbrough carried out in 2007 allowed us to see the potential of agriculture understood as a space network, and consolidated this English town as a ‘food-growing town’. This intention of creating interconnected spaces, at a large planning scale, has been successfully implemented in many towns, including a green infrastructure policy in urban planning policies, as is the case of London with the project All London Green Grid (see Chap. 26).⁷

According to Bohn and Viljoen, the design and planning of urban agriculture in our cities means we will have to re-learn past practices and develop new ones (Bohn and Viljoen 2011a, b). If urban agriculture is extensively embraced, its other functions and benefits, such as social cohesion or urban enhancement, will also require integration and articulation. Sustaining a city entails a complex system, and it is therefore both a challenge and an opportunity. The most suitable way to resolve these dichotomies is joint planning of the urban food system with the rest of the urban and territorial sustainability strategies. Indeed, urban agriculture has become a mandatory item in urban planning, as have other aspects such as energy saving and efficiency initiatives, or policies to contain urban sprawl (Simón et al. 2012). At a time when cities are once again looking inwards, there is an opportunity to rediscover that lost historical coexistence between inhabited spaces and agricultural areas through planning and development of urban voids.

⁴*Urban Agriculture: Food Jobs and Sustainable Cities* is based on a number of studies carried out between 1991 and 1992 by Jac Smit, Joe Nasr and Annu Ratta, financed by the United Nations Development Programme (UNDP). The results of these studies were published in this book in 1996, by UNDP as a contribution to the UN Conference on Human Settlements (Habitat II). The book was subsequently reprinted in 2001.

⁵Some other notable examples are the exhibitions: Bohn and Viljoen (2011b), Lee-Smith (2009) and Nasr and Komisar (2014).

⁶In this CPUL concept, urban agriculture mainly refers to fruit and vegetable production, since these products produce a higher yield per cultivated hectare. The effect of this type of action on cities has qualitative effects for citizen experiences and quantifiable effects in terms of reducing the negative impact of cities and towns.

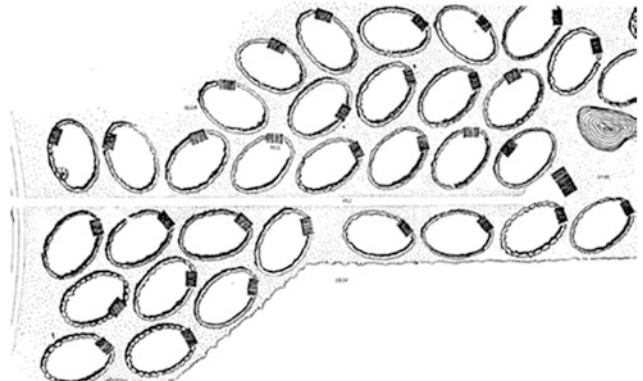
⁷The All London Green Grid considers creation of a green infrastructures network in Greater London and brings to light the considerable sensitivity to ‘green’ and towards production landscape in the approach, which has been documented in many recent papers. Consult: Draft Supplementary Planning Guidance published by the Greater London Authority in November 2011, for the public consultation process.

Case Studies

Nærum Allotment Gardens, Denmark (1948)

The Danish landscaper Carl Theodor Sørensen carried out a modest project in 1948 featuring 40 oval-shaped allotment gardens, confined by thick hedges to the height of an average person. Covering an elliptical area (measuring 25 and 15 m on the longest and shortest axes), the allotments were freely laid out on a neutral plot of grass, conferring the complex a strong entity. The elliptical areas had narrow separations, of just 2 m, which was enough to avoid losing the dynamic route of the convex spaces, with a growing sensation of a gentle slope

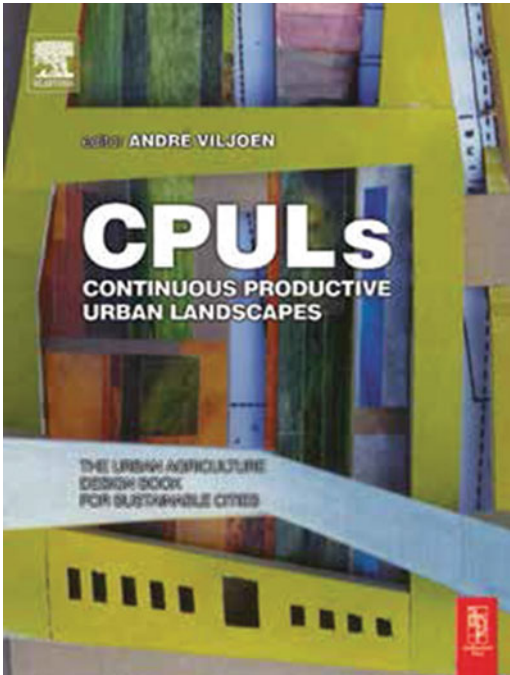
where the ellipses were located. Inside the allotments, the different owners had small buildings, sheds or greenhouses, surely with more freedom that Sørensen had expected, in view of the intentions set forth in the project design. Even so, the formal structure and general layout is consistent and permits perfect legibility of the complex. This intervention, which has formally influenced subsequent projects, is fully valid today, at a time when systematic construction of urban allotments is growing. The Sørensen allotment gardens in Nærum, cultivated for more than 70 years, still provide clues as to how innovative projects for urban allotments can be implemented in public parks around cities, also creating productive spaces, attractive urban areas with outstanding spatial conditions.



The Urban Farming Project, Middlesbrough, UK (2007)

CPUL (Continuous Productive Urban Landscape) is one of the pioneering initiatives bringing urban agriculture into town planning, considering that agricultural corridors are a continued network of spaces linked by paths and cycleways, so that the interrelations between built-up areas and open,

productive areas is complete. Katrin Bohn and André Viljoen (Bohn&Viljoen Architects) coined this term in 2005 and successfully developed it in 2007, within the framework of the exhibition *UK Design Council's Designs of the Time (DOTT07)*. The Middlesbrough project, which lasted two years, actively involved the population, the Town Hall and neighbourhood organisations in urban agriculture action throughout the entire city, from small facilities to large, industrialised agricultural production areas. Their plan defines all the sites and existing connections between them, clearly and attractively, in a green, edible Middlesbrough. Consolidation of this initiative, and other similar ones in successive years, has meant that Middlesbrough and Todmorden, among other towns in England, Berlin and Göttingen in Germany, have been tagged 'food-growing cities'. But above all, their proposals have served to consolidate urban agriculture as a strategic, infrastructural matter in the design of our cities and towns, where there is increasing support for agriculture in public and private urban areas.



References

- Bakker, N., M. Dubbeling, S. Gündel, U. Sabel-Koschella, and H. de Zeeuw (eds.). 2000. *Growing Cities, Growing Food: Urban Agriculture on the Policy Agenda. A Reader on Urban Agriculture*. Deutsche Stiftung für internationale Entwicklung (DSE): Feldafing.
- Bohn, K., and A. Viljoen. 2011a. *The case for urban agriculture as an essential element of sustainable urban infrastructure*. Copenhagen House of Food Urban Agriculture Conference, Copenhagen.
- Bohn, K., and A. Viljoen. 2011b. The edible city: Envisioning the continuous productive urban landscape (CPUL). *Field: A Free Journal for Architecture* 4: 149–161.
- Deelstra, T., and H. Girardet. 2000. Urban agriculture and sustainable cities. In *Growing Cities, Growing Food. Urban Agriculture on the Policy Agenda. A Reader on Urban Agriculture*, ed. N. Bakker, M. Dubbeling, S. Gündel, U. Sabel-Koschella, and H. de Zeeuw, 43–65. Feldafing: Deutsche Stiftung für internationale Entwicklung (DSE).
- Fucci, B., R. Ingersoll, and M. Sassatelli (eds.). 2008. *Agricoltura Urbana, dagli orti spontanei all'Agricoltura per la riqualificazione del paesaggio periurbano*. Bologna: Regione Emilia-Romagna.
- Lattuca, A. 2012. La agricultura urbana como política pública: el caso de la ciudad de Rosario, Argentina. *Agroecología* 6: 97–104.
- Simón, M., N. Morán, and A. Zazo. 2012. *Urbanismo y sistemas agrarios periurbanos*. Madrid: Grupo de Investigación en Arquitectura, Urbanismo y Sostenibilidad - Departamento de Urbanística y Ordenación del Territorio—Escuela Técnica Superior de Arquitectura de Madrid.
- Viljoen, A. (ed.). 2005. *Continuous Productive Urban Landscapes CPULS: Designing Urban Agriculture for Sustainable Cities*. Oxford: Architectural Press.
- Yokohari, M., M. Amati, J. Bolthouse, and H. Kurita. 2010. Restoring agricultural landscapes in shrinking cities: Re-inventing traditional concepts in Japanese planning. In *Globalisation and Agricultural Landscapes Change Patterns and Policy trends in Developed Countries*, ed. J. Primdahl, and S. Swaffield, 225–243. Cambridge: Cambridge University Press.

Further Readings

- Imbert, D. 2010. Aux Fermes, Citoyens! In *Ecological Urbanism*, ed. M. Mostafavi, and G. Doherty, 256–267. Cambridge: Harvard University Graduate School of Design—Lars Müller Publishers.
- Ingersoll, R. 2009. Agricivismo come terapia per la città diffusa. In *La città: bisogni, desideri, diritti. La governance urbana*, ed. G. Borelli, 242–254. Bologna: Franco Angeli.
- Lee-Smith, D. 2009. Carrot City: Designing for urban agriculture. *Urban Agriculture Magazine* 22: 43–44.
- Nasr, J., and J. Komisar. 2014. Displaying Urban Agriculture: From Garden City to Carrot City. In *Exhibitions and the Development of Modern Planning Culture*, ed. R. Freestone, and M. Amati, 277–292. Farnham: Ashgate.
- Primdah, J., and S. Swaffield (eds.). 2010. *Globalisation and Agricultural Landscapes. Change Patterns and Policy trends in Developed Countries*. Cambridge: Cambridge University Press.
- Smit, J., J. Nasr, and A. Ratta. 2001. *Urban Agriculture. Food, Jobs and Sustainable Cities*. United Nations Development Programme.

Sources of the Figures

The essence and purpose of this book are decidedly academic and therefore the documentation included herewith comes from the didactic material drawn from the teaching and research activity of the authors. Below are the source credits for the images, in keeping with the doctrine of 'fair use' applied in the world of university publications. The editors wish to thank all the authors and institutions that have granted permission for these reproductions. A great effort has been made to attribute authority where applicable, but, if any accidental error or omission appears, please inform us so that corrections can be made for future editions.

Cover: Barcelona, aerial view. Photograph by Michael Dörfler, 2011 © Michael Dörfler

1. City Beautiful and 'Architectural Urbanism' (1893–1940)

(Fig. 1.1) MHEU <https://goo.gl/y5QLTp>; (Fig. 1.2) UCL <https://goo.gl/Mlskmz>; (Fig. 1.3) F. A. Brockhaus, Berlin and Vienna, 1894; (Fig. 1.4) Chicagology <https://goo.gl/e6bwtu>; (Figs. 1.5 and 1.6) The American Vitruvius: An Architect's Handbook of Civic Art, 1922. (Caja Arquitectos); (Figs. 1.7 and 1.8) Torres Capell, M., La formació de la urbanística metropolitana de Barcelona, 1999; [CS1] Chicagology <https://goo.gl/zZlvsF>; <https://goo.gl/6E9Yvo>; [CS2] <https://goo.gl/1Onikd>

2. Garden Cities and Garden Suburbs (1898–1930)

(Fig. 2.1) National Education Network <https://goo.gl/EV84JN>; (Fig. 2.2) <https://goo.gl/x0IKGE>; (Fig. 2.3) <https://goo.gl/WOSNch>; (Fig. 2.4) <https://goo.gl/tKkQpW>; (Fig. 2.5) NAI (National Architectural Institute) <https://goo.gl/2fG1Do>; (Fig. 2.6) Ebenezer Howard Gartenstädte von morgen, 1903 <https://goo.gl/28ersF>; (Fig. 2.7) <https://goo.gl/KEih3B>; (Fig. 2.8) <https://goo.gl/mxdoQA>; (Fig. 2.9) <https://goo.gl/kUFzbK>; [CS1] Hamstead Garden Suburb <https://goo.gl/0OHNja>; [CS2] <https://goo.gl/P8ofH>

3. Social Democracy and Housing Policies (1919–1934)

(Fig. 3.1) <https://goo.gl/P93oUx>; (Fig. 3.2) Das Neue Wien: Ein Album mit Plan, 1932.; (Fig. 3.3) Tafuri, Vienna Rossa / La politica residenziale nella Vienna socialista 1919–1933. Milán: Electa, 1980, 240; (Fig. 3.4) ANNO Historische Zeitungen Zeitungen und Zeitschriften <https://goo.gl/LS3Et4>; (Fig. 3.5) Tafuri, Vienna Rossa / La politica residenziale nella Vienna socialista 1919–1933. Milán: Electa, 1980, 30; (Figs. 3.6 and 3.7) Archivo Carmen Díez; (Fig. 3.8) GuentherZ <https://goo.gl/YIkG7T>

4. Modern Urban Planning and Modernist Urbanism (1930–1950)

(Fig. 4.1) Arquitectos <https://goo.gl/4oT175>; (Fig. 4.2) Stadtentwicklung und Wohnen (Berlin) <https://goo.gl/Y3IrAu>; (Fig. 4.3) LAPIs EPFL—Archives de l'imaginaire <https://goo.gl/Jvhqvd>; (Fig. 4.4) <https://goo.gl/z0vx6C>; (Fig. 4.5) Revue "Urbanisme", N° 330 <https://goo.gl/Iezf7h>; (Fig. 4.6) <https://goo.gl/MnWqZF>; (Fig. 4.7) Archivo Carlos Sambricio <https://goo.gl/VAdp1x>; (Fig. 4.8) <https://goo.gl/wn2izJ>; (Fig. 4.9) Style Park <https://goo.gl/qN7jop>; [CS1] Van Eesteren Museum; [CS2] <https://goo.gl/0JoOwF>

5. Urban Planning and Ideology: Spain and Italy (1945–1960)

(Figs. 5.1–5.7) Archivo Carlos Sambricio; (Fig. 5.8) <https://goo.gl/hhP2nd>; (Fig. 5.9) Archivo Carmen Diez; (Fig. 5.10) ROSSI, P.O. Roma. Guida all'architettura moderna 1909–1991. Roma - Bari: Laterza, 1991, 178; (Fig. 5.11) Rodolfi, M. et al., Manuale dell'architetto, Roma: CNR-USIS, 1946; (Fig. 5.12) SAN (Sistema Archivistico Nazionale) <https://goo.gl/Di6Iht>; (Fig. 5.13) ROSSI, P.O. Roma. Guida all'architettura moderna 1909–1991. Roma - Bari: Laterza, 1991, 183; [CS1] FERNÁNDEZ-GALIANO, L., ISASI, J.F., LOPERA, A. La quimera moderna. Los poblados dirigidos de Madrid en la arquitectura de los 50. Madrid: Blume, 1989; [CS2] ROSSI, P.O. Roma. Guida all'architettura moderna 1909–1991. Roma - Bari: Laterza, 1991, 172–173; <https://goo.gl/5evSlv>; fotografías Carmen Diez 2003

6. Welfare Planning and New Towns (1945–1970s)

(Fig. 6.1) Redibujado sobre la fotografía extraída de: Leonardo Benévolo, “La segunda posguerra europea”, en Historia de la arquitectura moderna, (Barcelona: Gustavo Gili, 1974), 814; (Fig. 6.2) Leonardo Benevolo, Diseño de la ciudad - 5. El arte y la ciudad contemporánea (Barcelona: Gustavo Gili, 1982), 193; (Fig. 6.3) Multiplicidades <https://goo.gl/StWwMi>; (Fig. 6.4) Okänd (Arkitektur-och designcentrum) <https://goo.gl/NerNxa>; (Fig. 6.5) Frederick Gibberd, Town Desing (London: Architectural Press, 1953), 353 <https://goo.gl/Ik6Tzf>; (Fig. 6.6) Heikki von Hertzen y Paul D. Spreiregen, Building a New Town. Finland's New Garden City-Tapiola (Cambridge: The Mit Press, 1971), 113; (Fig. 6.7) Le Corbusier Oeuvre complète, volume 5, 1946–1952 (edition originale 1953), 195; (Fig. 6.8) Jean-Louis Cohen, Le Corbusier Le Grand (New York: Phaidon ed., 2008), 422; [CS1] Manfredo Tafuri y Francesco Dal Co, Arquitectura Moderna (Madrid: Aguilar, 1978), 366; Oskar Bladh <https://goo.gl/s7Za8s>; <https://goo.gl/CnZQ0h>; Stilhistorisk handbok 1880–1960. Boverket (1996); Fotografía de Max Plunger, extraída de, Alan Colquhoun, La arquitectura moderna, una historia desapasionada (Barcelona: Gustavo Gili, 2005), 196; [CS2] Kenneth Frampton, Estudio sobre cultura tectónica. Poéticas de la construcción en la arquitectura de los siglos XIX y XX (Madrid: Ediciones Akal, 1999), 252; Richard Weston, Utzon—Inspiration Vision Architecture (Denmark: Edition Bløndal, 2008), 88; Richard Weston, Utzon—Inspiration Vision Architecture (Denmark: Edition Bløndal, 2008), 89; Fotografía de Jørgen Jespersen, 2007, extraído de <https://goo.gl/G3Vn73>;

Richard Weston, Utzon—Inspiration Vision Architecture (Denmark: Edition Bløndal, 2008), 90

7. Modernist Mass Housing in Europe. Comparative Perspectives in Western and Eastern Cities (1950s–1970s)

(Fig. 7.1) RIBA Library Photographs Collection <https://goo.gl/bbgcv6>; (Fig. 7.2) Ministerie van Onderwijs, Cultuur en Wetenschap <https://goo.gl/oqRy1X>; (Fig. 7.3) Aging modernism <https://goo.gl/pYEbvR>; (Fig. 7.4) <https://goo.gl/wcspxC>; (Fig. 7.5) L'Architettura Cronache e Storia. N° 248. June 1976; (Fig. 7.6) Photograph by Bohdan Cherkas, 2014 (Fig. 7.7) <https://goo.gl/cPBtjI>; (Fig. 7.8) <https://goo.gl/mPYqKo>; (Fig. 7.9) <https://goo.gl/KgOW6n>; [CS1–4] Google maps y elaboración cartográfica de Sergio García-Pérez a partir de Geofabrik GmbH—OpenStreetMap Contributors

8. An experiment in Freedom (1970–1975)

(Fig. 8.1) Boudon, Philippe. 1972. Lived-in architecture. Le Corbusier's Pessac revisited. London: Lund Humphries. (Pessac de Le Corbusier: 1969), p. 121; (Fig. 8.2) Life, marzo 1909 <https://goo.gl/4q03yO>; (Fig. 8.3) <https://goo.gl/Jv8ROX>; (Fig. 8.4) Bernard Rudofsky, Architecture Without Architects. A Short Introduction to Non-Pedigreed Architecture, (Nueva York: Museum of Modern Art, 1964), p. 25; (Fig. 8.5) John Turner, “Dwelling resources in South America”, en Architectural Design n° 8, agosto, 1963, p. 361; (Fig. 8.6) <https://goo.gl/OKLskx>; (Fig. 8.7) Christopher Alexander, Sara Ishikawa, Murray Silverstein, “Pattern 78. House for one person”, en A Pattern Language: Towns, Buildings, Construction (Nueva York: Oxford University Press, 1977), pp. 389, 391; (Fig. 8.8) Cedric Price, “Steel Housing”, en Cedric Price: The Square Book (Londres: Wiley Academy, 2003), p. 49; [CS1] De Carlo, Giancarlo. 1977. “Alla ricerca di un diverso mododi progettare”. Casabella 421 (enero): 21; <https://goo.gl/OoRhsv>; <https://goo.gl/tchPBi>; <https://goo.gl/4yRPF3>; <https://goo.gl/rSq5kh>; [CS2] Mats Egelius, Ralph Erskine, architect (Stockholm: Byggforlaget, 1990), p. 152–8; a+t research group, 10 historias sobre vivienda colectiva (vitoria: a+t architecture publishers, 2013), p. 394; Mats Egelius, Ralph Erskine, architect (Stockholm: Byggforlaget, 1990), p. 154–9

9. Other Urbanisms

(Fig. 9.1) <https://goo.gl/4az6dL>; (Fig. 9.2) <https://goo.gl/2mO1wT>; (Fig. 9.3) <https://goo.gl/IF6mKu>; (Fig. 9.4) <https://goo.gl/pLzfb2>; (Fig. 9.5) New York World-

Telegram and the Sun Newspaper Photograph Collection <https://goo.gl/RfJDKk>; (Fig. 9.6) <https://goo.gl/c8HWFe>; (Fig. 9.7) <https://goo.gl/FSZOzv>; (Figs. 9.8 and 9.9) Archivo Rafael Moneo; (Fig. 9.10) Fotografía Lluís Casals; (Fig. 9.11) The seaside research portal <https://goo.gl/YtpTHL>; (Fig. 9.12) <https://goo.gl/DOU7Bs>; [CS1] Castanheira, C., Porcu, C., *As cidades de Álvaro Siza*, Figuerinhas, 2001; [CS2] Pinterest

10. Urban Projects and Megastructures: Modernist Campuses

(Fig. 10.1) Phyllis Lambert, ed.. *Mies van der Rohe in America*. Ostfildern-Ruit. Hatje Cantz Publishers, 2001; (Fig. 10.2) Karl Fleig, ed.. *Alvar Aalto. Complete Works*. Zürich. Artemis, 1971; (Fig. 10.3) Tom Avermaete. *Another Modern*. NAI Publishers, 2005; (Figs. 10.4 and 10.5) *L'Architecture d'aujourd'hui* n° 137, 1968; (Figs. 10.6 and 10.7) *Arkitektur DK* n° 8, 1976; (Fig. 10.8) Gabriella Borsano, ed. *Il progetto per l'Università delle Calabrie e altre architetture di Vittorio Gregotti*. Electa, 1979; [CS1] <https://goo.gl/KjHNTT>; [CS2] <https://goo.gl/o21baK>

11. New Paradigms and Strategic Urban Projects

(Fig. 11.1) Urban Task Force dirigido por R. Rogers, *Towards an Urban Renaissance*, Spon, Londres, 1999; (Fig. 11.2) F. Ascher, *Metápolis*, 1995; (Fig. 11.3) B. Secchi, *La ciudad del siglo XX*, 2005; (Fig. 11.4) N. Portas, *O ser urbano*, 2012; (Figs. 11.5 and 11.6) R. López Lucio, *Los nuevos ensanches de Madrid : la morfología residencial de la periferia reciente, 1985-1993*; (Fig. 11.7) AA.VV. *Paisajes urbanos residenciales en Zaragoza*, PUZ, 2013; (Figs. 11.8–11.10) J. Monclús, *Expos internacionales y Urbanismo*, Ed. UPC/ Archivo JM; [CS1] Arsenal; [CS2] CCCB

12. Urban Renewal and Urban Regeneration

(Fig. 12.1) <https://goo.gl/oIO8gS>; (Fig. 12.2) <https://goo.gl/YjyE4Q>; (Fig. 12.3) <https://goo.gl/8FI76Z>; (Fig. 12.4) <https://goo.gl/Scbn5I>; (Fig. 12.5) <https://goo.gl/bCzU4E>; (Fig. 12.6) <https://goo.gl/Pn23ty>; (Fig. 12.7) <https://goo.gl/RiC22S>; (Fig. 12.8) Cervellati, P., Scannavini, R. *Bolonia, política y metodología de la restauración de centro históricos*, Barcelona: G. Gili, 1973; (Fig. 12.10) <https://goo.gl/M6fnnQ>; (Fig. 12.11) ARARQ <https://goo.gl/I9yDLV>; [CS1-2] Velázquez Valoria, I., Verdaguier Viana-Cárdenas, C. *Regeneración urbana integral. Tres experiencias europeas innovadoras: Îlede Nantes*,

Coin Street y Barrio de la Mina. Madrid: Sepes. Entidad Estatal de Suelo, 2011

13. Waterfronts and Riverfronts. Recovery of Urban Waterfronts

(Fig. 13.1) <https://goo.gl/Bj6eET>; (Fig. 13.2) B.S. Hoyle, *en European port cities in transition*, 1992; (Fig. 13.3) <https://goo.gl/GBvMhQ>; (Fig. 13.4) <https://goo.gl/DPLMtm>; (Fig. 13.5) <https://goo.gl/V85B8j>; (Fig. 13.6) <https://goo.gl/CcmkvW>; (Fig. 13.7) Google Maps; (Fig. 13.8) Maïa Sonnier <https://goo.gl/5dG6SO>; (Fig. 13.9) Archivo Javier Monclús; [CS1] Archivo Javier Monclús; [CS2] Archivo Javier Monclús / Expo empresarial

14. Housing Experimental Projects in the Netherlands

(Fig. 14.1) Lotus International n° 94; (Fig. 14.2) Google Maps; (Fig. 14.3) Felix Claus, Frits van Dongen, Ton Schaap, IJburg, Haveneiland en Rieteilanden, Uitgeverij 010, Rotterdam, 2001; (Figs. 14.4 and 14.5) *Housing Primer*; (Fig. 14.6) Lotus International n° 132; (Fig. 14.7) Simona Pierini; (Fig. 14.8) Lotus International n° 132; (Figs. 14.9 and 14.10) Mozas, Javier, Fernández Per, Aurora Densidad, Density. *Nueva vivienda colectiva. New Collective Housing. a+t ediciones*, Vitoria, 2006; [CS1–4] Google Maps

15. New Housing Projects in Latin European Cities

(Figs. 15.1–15.3) Casabella n. 774; (Fig. 15.4) *Housing Primer*; (Fig. 15.5) Mozas, Javier, Fernández Per, Aurora Densidad, Density. *Nueva vivienda colectiva. New Collective Housing. a+t ediciones*, Vitoria, 2006; (Fig. 15.6) *Housing Primer*; (Fig. 15.7) <https://goo.gl/SkhdjK>; (Figs. 15.8 and 15.9) Lucan, J. *Où va la ville aujourd'hui ? Forme Urbaines et mixités*. Paris: Éditions de la Villette, 2012; (Fig. 15.10) Mozas, Javier, Fernández Per, Aurora Densidad, Density. *Nueva vivienda colectiva. New Collective Housing. a+t ediciones*, Vitoria, 2006; (Fig. 15.11) *Housing Primer*; [CS1–3] Google Maps; [CS4] Casabella n. 774

16. Citizen Participation. Urban Development for and by the People

(Fig. 16.1) Fotografía de Pablo de la Cal al cuadro de Glover en exposición pública en Francia; (Fig. 16.2) Fotografía del autor: Pablo de la Cal, 2012; (Fig. 16.3) Fotografía del autor: Pablo de la Cal, 2015; (Fig. 16.4) Libro *The City is the People*, 1962; (Fig. 16.5) Libro

The Man in the Street, 1975; (Figs. 16.6 and 16.7) Plan Especial de Jánovas. ARC Mediación Ambiental y Aragón Participa; (Fig. 16.8) Fotografía de Paco Cuenca, 2016; (Fig. 16.9) Fundación Mi Parque. <https://goo.gl/zvTCxb>; [CS1] Google Maps; Proyecto de Urbanización (1991): A. Lorenzo (Arqto.). Archivo Central Ayuntamiento de Zaragoza; Fotografía del autor: Pablo de la Cal; [CS2] Boa Mistura: <https://goo.gl/MmJDFz>

17. Urban Planning Models and Model Cities

(Fig. 17.1) Lortie, A. Paris s'exporte. París: Arsenal, 1995; (Fig. 17.2) <https://goo.gl/0loqOg>; (Fig. 17.3) <https://goo.gl/BknlNZ>; (Fig. 17.4) <https://goo.gl/z7g7xD>; (Fig. 17.5) <https://goo.gl/KNF3cC>; (Fig. 17.6) <https://goo.gl/Nrom4I>; (Fig. 17.7) Hammarby Sjostad Case Study <https://goo.gl/bNTSoU>; (Fig. 17.8) <https://goo.gl/QFuwdZ>; (Fig. 17.9) <https://goo.gl/8855K2>; [CS1] <https://goo.gl/0E22CQ>; [CS2] <https://goo.gl/mxdvIW>

18. Urban Transport and Technological Urbanism

(Fig. 18.1) Peter Newman y Jeffrey Kenworthy, en *Cities and Automobile Dependence: an International Sourcebook*, Gower Technical, Aldershot, 1989 <https://goo.gl/HIIrU>; (Fig. 18.2) C.D. Daniels y A. M. Warnes, en *Movement in cities*, 1980; (Fig. 18.3) *Les Trois établissements humains*, Le Corbusier, 1945; Éditions Denoël, Collection ASCORAL, Paris, 1945; (Figs. 18.4 and 18.5) Buchanan Report, *Traffic in Towns*, 1963 <https://goo.gl/rixG6z>; (Fig. 18.6) <https://goo.gl/qvmiGM>; (Fig. 18.7) <https://goo.gl/g4J24G>; (Fig. 18.8) <https://goo.gl/HPZe9S>; (Fig. 18.9) Rasmus Hjortshøj - COAST Studio <https://goo.gl/PVyXqV>; (Fig. 18.10) Bombardier <https://goo.gl/T9HPL6>; (Fig. 18.11) *Quaderns d'Arquitectura i Urbanisme* 249 (2006): 54–59; [CS1] <https://goo.gl/MGTqIU>; [CS2] <https://goo.gl/RVeQ5o>

19. New Productive Uses Areas. Central Business Districts (CBD), Business parks, Technology Parks and Corporate Cities

(Fig. 19.1) Soja, *Postmodern Geographies*, 1998, p. 174; (Fig. 19.2) Wikimedia Commons <https://goo.gl/ZWfJMd>; (Fig. 19.3) SOM <https://goo.gl/cSsS9v>; (Fig. 19.4) Fotografía del autor: Andrés Fernández-Ges; (Fig. 19.5) Richard Meier <https://goo.gl/FpHSou>; (Fig. 19.6) Dezert, B., Metton, A., Steinberg, J., *La périurbanisation en France*, 1991; (Fig. 19.7) Pelkonen, E., Albrecht, D., "Eero Saarinen. Shaping the future", 2006; (Fig. 19.8) Telefonica <https://goo.gl/u7kiHf>; (Fig. 19.9) BBVA

<https://goo.gl/vZcrnQ>; [CS1] <https://goo.gl/EjTbyV>; Wikimedia Commons <https://goo.gl/zekn4L>; [CS2] <https://goo.gl/x0euQf>; Wikimedia Commons <https://goo.gl/eenz9C>; [CS3] Google Earth; KRJDA <https://goo.gl/QqKzI4>; Gamelsa <https://goo.gl/j6pF9a>

20. Innovative Uses of ICT Technologies in Recent Urban Developments and Urban Planning

(Fig. 20.1) Friedmann, J. en "The World City Hierarchy", en *Development and Change*, 1986:71; (Fig. 20.2) The Atlantic <https://goo.gl/zx4X7t>; (Fig. 20.3) Horelli, L. 2013:141. Photograph from Wallin & Horelli, 2012; (Fig. 20.4) En-topia <https://goo.gl/KZNPaV>; (Fig. 20.5) Senseable City lab <https://goo.gl/Iu6E6u>; (Fig. 20.6) Senseable City Lab <https://goo.gl/e5mYZN>; (Fig. 20.7) Wikimedia Commons <https://goo.gl/wZWZSH>; (Fig. 20.8) Clive Wilkinson Architects <https://goo.gl/17rkE8>; (Fig. 20.9) Time <https://goo.gl/r8wY1v>; [CS1] KPF <https://goo.gl/7CLP81>; Wikimapia <https://goo.gl/MH6Zbs>; The Wall Street Journal <https://goo.gl/k61k7H>; KPF <https://goo.gl/Lf1rKi>; [CS2] The California Sunday Magazine <https://goo.gl/hnc1wC>; Cupertino <https://goo.gl/YKhTk5>

21. The Rise of Mixed-Use Urban Developments and Digital Districts

(Fig. 21.1) Treberspurg and Partner Architekten <https://goo.gl/IRqwm5>; (Fig. 21.2) Sers, S.A.; (Fig. 21.3) <http://www.urbangreenbluegrids.com/measures/bioswales/>; (Fig. 21.4) Ayuntamiento de Malmö; (Fig. 21.5) Ytoyoda <https://goo.gl/3Eh7KY>; (Fig. 21.6) Zaha Hadid <https://goo.gl/rZAdv9>; (Fig. 21.7) Media City UK en Salford Quays, Manchester, Reino Unido, 2011. Vista aérea; (Fig. 21.8) Wikimedia Commons <https://goo.gl/akkpKG>; (Fig. 21.9) Ciudad Creativa Digital <https://goo.gl/8iA1te>; [CS1] <https://goo.gl/06CPK1>; <https://goo.gl/TqiyB>; [CS2] Ayuntamiento de Barcelona <https://goo.gl/ooHiGk>; [CS3] Foster and Partners <https://goo.gl/CYB9F5>; [CS4] Wikimedia Commons

22. Urban Resilience. Towards a Global Sustainability

(Fig. 22.1) Beatrice Benne; (Fig. 22.2) Scheffer, M., Carpenter, S., Foley, J., Folke, C., Walker, B., et al., *Catastrophic shifts in ecosystems*. *Nature*, 413 (2001): 591–596; (Fig. 22.3) The Independent <https://goo.gl/4CYGzs>; (Figs. 22.4 and 22.5) ASLA <https://goo.gl/SVi9pJ>; (Fig. 22.6) Movilidad en bicicleta en Bogotá, Cámara de Comercio de Bogotá, Bogotá, agosto 2009,

13; (Figs. 22.7–22.9) Basdevant, Martín (ed.). 2009. *Natures intermédiaires. Les paysages de Michel Desvigne*. Basel, Boston, Berlin: Birkhäuser Verlag SG.; [CS1] ASLA <https://goo.gl/7TSRt3>; [CS2] Mark Hogan; DLand Studio <https://goo.gl/kq2fFA>

23. Mapping Urbanism, Urban Mapping

(Fig. 23.1) <https://goo.gl/bWeg7A>; (Fig. 23.2) <https://goo.gl/9vVL4f>; (Fig. 23.3) <https://goo.gl/g3Z9yy>; (Fig. 23.4) <https://goo.gl/79COqt>; (Fig. 23.5) <https://goo.gl/KnGua9>; (Fig. 23.6) <https://goo.gl/6OgIkV>; (Fig. 23.7) Wikimedia Commons; [CS1] <https://goo.gl/8kkICG>; [CS2] IABR <https://goo.gl/wniWrS>

24. Urban Voids and ‘in-between’ Landscapes

(Fig. 24.1) <https://goo.gl/fquhK7>; (Fig. 24.2) <https://goo.gl/9wuMQM>; (Fig. 24.3) Eikongraphia <https://goo.gl/0AaZ55>; (Fig. 24.4) https://www.google.es/imgres?imgurl=https://ahbelab.files.wordpress.com/2017/01/texas-highway-_drosscape.jpg%3Fw%3D922%26h%3D646&imgrefurl=https://ahbelab.com/2017/01/11/a-quommentary-about-the-drosscape-manifesto/&h=646&w=922&tbid=LPFLOWli4hPtUM&tbnh=188&tbnw=268&usq=__FO0Vg06j4GV0FO4F7HKff4liM8=&hl=es&docid=C-mYxIxQCnsUBM; (Fig. 24.5) <https://goo.gl/3og7oT>; (Fig. 24.6) AFP <https://goo.gl/1XUECM>; (Fig. 24.7) Arts at MIT <https://goo.gl/OSNTGN>; (Fig. 24.8) <https://goo.gl/J3C0S8>; (Figs. 24.9–24.11) Archivo PUPC y Google Maps; (Fig. 24.12); (Fig. 24.13) <https://www.google.es/maps/@41.6829509,-0.885178,2020m/data=!3m1!1e3?hl=es> [CS1] Carlos Zeballos <https://goo.gl/o4oJpf>; <https://www.rsh-p.com/projects/potsdamer-platz/>; [CS2] URBANUS <https://goo.gl/d9qnue>; Bing maps

25. From Urban Planning to Landscape Urbanism

(Fig. 25.1) *Cities in Evolution*, 1915 <https://goo.gl/UgjkQ>; (Fig. 25.2) *Cities in Evolution*, 1915; (Fig. 25.3) *A Theory of Good City Form*, 1981; (Fig. 25.4) Reprinted from Ludwig Hilberseimer, *The New City* (Chicago: Paul Theobald, 1944) p. 55, ill. 33, Ludwig Hilberseimer Papers, Ryerson & Burnham Library Archives, The Art Institute of Chicago; (Fig. 25.5) AA.VV., *Ernst May 1886-1970*, Munich-New York: Prestel Verlag, 2011; (Fig. 25.6) Ian McHarg., 1969; (Fig. 25.7) <https://goo.gl/JY0JrF>; (Fig. 25.8) <https://goo.gl/BaqZDm>; (Figs. 25.9 and 25.10) <https://goo.gl/9ILDor>; (Fig. 25.11) IBA Hamburg <https://goo.gl/UQDOvR>; [CS1] Latz + Partner <https://goo.gl/>

<https://goo.gl/zS3e82>; [CS2] Estudio Batlle i Roig <https://goo.gl/8pJppf>

26. From Park Systems and Green Belts to Green Infrastructures

(Fig. 26.1) Town Planning Conference (1910: London, England); London: Royal Institute of British Architects, 1911; (Fig. 26.2) Hermann Jansen, Greater Berlin Competition 1910: forest and green belt of Greater Berlin with radial connections, 1908 (source, Architekturmuseum TU Berlin, Inv. No. 20541); (Fig. 26.3) AA.VV. *Metropolis: reflections*, IBA Hamburg, Jovis, 2007; (Fig. 26.4) The JR James Archive <https://www.flickr.com/photos/jrjamesarchive/9567390477>; (Fig. 26.5) Amati, M., “Green Belts: A Twentieth-century Planning Experiment”, en M. Amati (ed.), *Urban Green Belts in the Twenty-first Century*, Ashgate, 2008; (Fig. 26.6) Archivo Carlos Sambricio; (Fig. 26.7) Campos Venuti, 159; (Fig. 26.8) Urban Task Force, *Towards an Urban Renaissance*, 1999, 58; [CS1] <https://goo.gl/SnhuzT>; <https://goo.gl/e8mjiQ>; <https://goo.gl/ML296j>; [CS2] Centro de Estudios Ambientales <https://goo.gl/wHvgRd>

27. Landscape Projects: Scale and Place

(Fig. 27.1) Aalto Obra completa; (Fig. 27.2) Ian McHarg <https://goo.gl/JWa5QH>; (Fig. 27.3) Photograph by Carlos Ávila; (Fig. 27.4) <https://goo.gl/tkNzrG>; (Fig. 27.5) Diagram adapted by Carlos Ávila from the scheme published in: Lefebvre, Henri. 1991. *The Production of Space*. Oxford: Blackwell Publishers. Pag 155; (Fig. 27.6) M. Desvigne y Dalnoky’s <https://goo.gl/LKefx7>; (Fig. 27.7) M Desvigne <https://goo.gl/qedfB1>; [CS1] Burgos y Garrido: <https://goo.gl/hJ3GR6>; <https://goo.gl/F6lV17>; <https://goo.gl/WGq9xw>; Burgos y Garrido: <https://goo.gl/LTGxQ8>; [CS2] XDGA <https://goo.gl/HZX7jd>; <https://goo.gl/ZX4pYe>; <https://goo.gl/Riq1oN>; https://smartlighting.es/wp-content/uploads/2016/11/MadridRio_AnaMullerBurgosGarrido-y-PorrasLaCasta.png; Masbouni, Ariella (dir). 2011. *Le paysage en préalable*, Michel Desvigne. Grand Prix de l’urbanisme 2011. Paris : Éditions du Moniteur; <https://goo.gl/GA1gBx>

28. New Urban Landscapes

(Fig. 28.1) Global Footprint Network <https://goo.gl/PoeAPC>; (Fig. 28.2) Terradas et al., 2011, *Ecología urbana*, 59 <https://goo.gl/kKynKd>; (Fig. 28.3) Bolund, Per, Hunhammar, Sven. 1999. *Ecosystem services in urban areas*. *Ecological Economics* 29. Amsterdam:

Elsevier. 293–301; (Fig. 28.4) Carl S. Sterner <https://goo.gl/r15BUr>; (Fig. 28.5) Dreiseitl <https://goo.gl/pKtPdI>; (Fig. 28.6) <https://goo.gl/zYa2Rx>; (Fig. 28.7) <https://goo.gl/jo1ie6>; (Fig. 28.8) Par Velvet—Travail personnel <https://goo.gl/13pmgj>; [CS1] <https://goo.gl/xZnnJH>; Friends of the High Line <https://goo.gl/mQC3CC>; <https://goo.gl/AvV2Ii>; <https://goo.gl/TyCsoJ>; [CS2] Kinga Jánossy; Senatsverwaltung für Stadtentwicklung und Umwelt <https://goo.gl/y2C1Ey>

29. Greenfield/Brownfield: Two Sides of the Same Coin

(Fig. 29.1) <https://goo.gl/jrBY11>; (Fig. 29.2) Green belts: a greener future, p. 19 <https://goo.gl/BI8HWB>; (Fig. 29.3) Urban Networks <https://goo.gl/YoQhFX>; (Fig. 29.4) Richard Rogers, Towards an Urban Renaissance, 1999; (Fig. 29.5) Richard Rogers, Towards an Urban Renaissance, 1999; (Fig. 29.6) Richard Rogers, Ciudades para un pequeño planeta, 1997, p. 115; (Fig. 29.7) Cecilia Wong y Andreas Schulze Bäing, “Brownfield residential redevelopment in England. What happens to the most deprived neighbourhoods?”, 2010, 9; (Fig. 29.8) Cecilia Wong y Andreas Schulze Bäing, “Brownfield residential redevelopment in England. What happens to the most deprived neighbourhoods?”, 2010, 12; (Fig. 29.9) Farrel, Terry. 2010. Shaping London. The patterns and forms that make the metropolis. John Wiley & Sons Ltd., London, pp. 98–99; (Fig. 29.10) Plan Regional de Estrategia Territorial de Madrid, Documento preparatorio de las Bases, 1995, p. 372

30. New Landscapes Perspectives for Planning

(Fig. 30.1) Global Risks 2015 <https://goo.gl/tRsjny>; (Fig. 30.2) Berger, A., Drosscape: Wasting Land Urban America. Princeton Architectural Press, 2006; (Figs. 30.3–30.5) J. Corner Field Operations <https://goo.gl/IpM4yB>; (Fig. 30.6) IABR <https://goo.gl/Sxsmndn>; (Fig. 30.7) Weller, Richard, 2013 “Global Landscapes” <https://goo.gl/Y9JfCO>; (Fig. 30.8) [https://newjerseyurbanism.wordpress.com/2010/11/07/drosscape-wasting-land-in-urban-](https://newjerseyurbanism.wordpress.com/2010/11/07/drosscape-wasting-land-in-urban-america/)

[america/](https://newjerseyurbanism.wordpress.com/2010/11/07/drosscape-wasting-land-in-urban-america/); (Fig. 30.9) Berger, A., Drosscape: Wasting Land Urban America. Princeton Architectural Press, 2006; [CS1] <https://goo.gl/gatTIS>; [CS2] J. Corner Field Operations <https://goo.gl/uP0qRB>

31. The Intangible Values of the Landscape

(Fig. 31.1) UNESCO; (Fig. 31.2) Taking Measures across the American Landscape (Corner and MacLean 1996, 53); (Fig. 31.3) <https://goo.gl/v4YUAD>; (Fig. 31.4) Stockport Emotion Map, 2007 <https://goo.gl/R6eBtv>; (Fig. 31.5) Centre de Recerca i Projectes de Paisatge de la UPC, Departament de Geografia de la UdG i Observatori del Paisatge; (Fig. 31.6) Project for Public Spaces <https://goo.gl/p0nccZ>; [CS1] CPRE <https://goo.gl/eGaHou>; [CS2] Observatori del Paisatge <https://goo.gl/o24gJz>

32. Urban Agriculture. Towards a Continuous Productive Spaces System in the City

(Fig. 32.1) <https://goo.gl/ZA0mut>; (Fig. 32.2) Bohn & Viljoen Architects (2002), p. 4; (Fig. 32.3) Regina Prinz: “Der General Siedlungsplan für Magdeburg 1923 und Seine Folgen”, en Actas del Symposium Bruno Taut, p. 273 <https://goo.gl/JImUxH>; (Fig. 32.4) David H. Haney: When Modern was Green: Life and Work of Landscape Architect Leberecht Migge. Routledge, London-New York 2010 <https://goo.gl/dbGqnO>; (Fig. 32.5) <https://goo.gl/Rh1iJ>; (Fig. 32.6) David H. Haney: When Modern was Green: Life and Work of Landscape Architect Leberecht Migge. Routledge, London-New York 2010 <https://goo.gl/bJSxCT>; (Fig. 32.7) Basdevant, Martin (ed.). 2009. Natures intermédiaires. Les paysages de Michel Desvigne. Basel, Boston, Berlin: Birkhäuser Verlag SG; (Fig. 32.8) Bohn & Viljoen Architects.; (Fig. 32.9) <https://goo.gl/pM4re0>; (Fig. 32.10) Fotografía del autor: Pablo de la Cal, 2014; [CS1] <https://goo.gl/ehMyAA>; <https://goo.gl/65eVuq>; <https://goo.gl/IWkCLI>; [CS2] Carrot City Designing for Urban Agriculture Web <https://goo.gl/Sabyi1>; <https://goo.gl/Ohdfu7>

Index

- A**
Aalto, Alvar, 61, 62, 104, 209, 280, 341, 343
Abercrombie, Patrick, 19, 40, 58, 190, 271, 272, 276, 299
Abu Dhabi, xxii, 220, 221, 225
Advanced Spatial Analysis (CASA), 210, 211
Agache, Alfred, 178
Agenda 21, 333, 335
Agriculture km 0, 329, 335
Aichinger, Hermann, 27, 28
Alberola and Martorell, 156, 159
Albert, Édouard, 105
Alexander, Christopher, 68, 84, 85, 94, 95, 165, 340
Alexanderplatz, 249, 254
Allen, Stan, 309, 312, 313
Almere, 153
Alvear, Jaime de, 48, 55
Amaboldi, Michele, 219
Amsterdam, 9, 11, 31, 38, 69, 74, 82, 143–146, 148–151, 180, 200, 343
Amsterdam Extension Plan, 42
Amsterdam School, 31, 143
Amsterdam South, 9, 11, 42
ANA architects, 145
Anthony, Sutcliffe, xvii, 35, 114, 123
Anthropocene, 227, 245, 309
Apple Campus, 202, 212, 215
Appleyard, Donald, 92, 95
Arabianranta, 221, 224
Araguren and Gallegos, 156
Archigram, 80, 189
Architekten CIE, 144, 145, 147, 148, 150, 151
Area 24/7, 214, 220
Arequipa, 82
Arets, Wiel, 144
Arrese, José Luis, 49
Arretche, Louis, 238
Arts and crafts, 15, 19, 81
Arts and Design City Helsinki, 224
Art Urbain, 5, 8
Ascher, François, 113, 114, 341
Associazione per l'architettura organica, 50, 54
Asturias, xiii, 48
Atelier Dreiseitl, 293
Athens charter, xviii, xxi, 37, 38, 40–42, 58, 59, 68, 71, 73, 82, 91, 99, 103, 118, 189
AZCA, 200
- B**
Backström & Reinius, 53, 59, 61, 62, 64
Bakema, Jaap, 63, 103, 105, 143
Baltimore, 126, 133, 135, 180
Banham, Reyner, 80, 83, 105
Bankenviertel, 200
Barcelona, xiii, xv, xviii, xix, 5, 9, 34, 37, 39, 48, 62, 76, 97, 98, 116, 118, 119, 121, 128, 129, 139, 145, 161, 163, 177, 183, 217, 221, 225, 262–265, 267, 280, 291, 303, 330
Barcelona International Exhibition 1929, 98
Barcelona Olympic Games, 98, 116, 119, 121, 139, 183, 217
Barking central, 127, 129
Barnett, Henrietta O., 16
Barn raising, 80
Batlle, Enric, 139, 262, 267, 290
Battery park, 183, 295
Batty, Michael, 208, 210, 221
BBVA City, Ciudad BBVA, 202
Beautification, 3
Beckman, John, 159, 160
Bedford park, 16
Benevolo, Leonardo, 33, 57, 62, 63, 155, 163, 340
Benne, Beatrice, 228, 342
Bennett, Edward H., 5
Berger, Alan, 250, 310, 312, 315, 344
Berlage, Hendrick Petrus, 9, 11, 42, 143, 154
Berlin, 9, 29, 98, 99, 101, 105, 138, 144, 155, 177, 181, 200, 217, 238, 251, 254, 271, 297, 329, 337
Berlin International Exhibition IBA 1984/87, Internationale Bauausstellung (IBA) Berlin 1984/87, 101, 251
Berlin Urban Landscape Strategy, 297
Berman, Marshall, xviii, 68, 177
Berrizbeitia, Anita, 310
Best practices, 181
Bicycle Snake Copenhagen, Cykelslangen Copenhagen, 192
Biesbosch, 232, 233
Big data, 207, 210
Bijlmermeer, 69, 74
Bloomfield, 202
Bo01, 219, 220
Boa Mistura, 170, 173, 342
Bochum, 105, 106
Bogotá, 178, 232, 342
Bohn, Katrin, 335, 337, 344
Bologna, 123, 126, 127, 129

- Bolund, Per, 291, 343
 Bongioannini, Biagio, 51, 52
 Bordeaux, 134, 137, 138, 283, 285
 Borneo sporenburg, 144, 150
 Boston, xviii, 133, 241, 269, 282, 316, 343
 Boudon, Philippe, 79, 80, 340
 Bournville, 15
 Bouvard, Joseph Antoine, 178
 Brasilia, 43, 177, 180
 Breda, 144, 145, 153
 Brescia, 154–156, 163
 Briey-en-Forêt, 63
 Brinkman, Jan, 145
 Britz, 329
 Broadacre city, 81, 177
 Brownfields, 263, 300, 302
 Brunner, Karl, 178
 Brussels, 192
 Buchanan (report), 189, 190, 342
 Bucharest, 244
 Bucharest plan, 244
 Buenos Aires, 85, 178, 183, 200, 270
 Buffalo, 269
 Bunschoten, Raoul, 241, 244
 Burgos & Garrido, 158, 286
 Burnham, Daniel H., 5, 10, 343
 Bus Rapid Transit (BRT), 190, 232
 Business park, 200, 202
 Butler, Paul, 209
 Byker Wall, 86, 151, 167
- C**
 Cage, John, 241, 242
 Calero, 49
 Calthorpe, Peter, 191, 217
 Cambellotti, Lucio, 51
 Camelot, Robert, 199, 203
 Campaign to Protect Rural England (CPRE), 271, 344
 Campos Venuti, Giuseppe, 274, 343
 Canary Wharf, 125, 199, 200
 Candilis, Georges, 103–106
 Carabanchel, 47, 49, 156, 157, 159, 162, 306
 Carpenter, Steve, 228, 342
 Casa de las flores, 31
 Casa Rustici, 155
 Castells, Manuel, 171, 201, 202, 207, 220, 252
 Cavadini, Nicoletta Ossanna, 219
 Celebration, 51, 98
 Central Business Districts (CBD), xxiii, 197, 199–201, 203, 220
 Central city-garden city, 13, 15
 Cerdá, Idelfonso, 5, 34, 35, 37, 76, 154, 161, 163, 217, 225
 Chandigarh, 38
 Changsha, 230–232
 Chaparro, Lydia, 291
 Charles Fourier's Phalanstère, 81
 Charlottenburg, 251
 Chassé Terrain, 143–145
 Chicago, 3–67, 10, 11, 104, 134, 165, 180, 265, 269
 Chicago Columbian Exposition, 6
 Chicago plan, 5, 10, 11
 Choay, Françoise, xviii, 33, 37, 155
- CHORA, 241, 244
 Chorosevo-Mnevnik, 73
 Churchill, Henry S., 165, 168
 CIAM 8, 40, 91, 92
 CIAM 9, 82, 91, 103
 CIAM 10, 41, 103
 CIAM 11, 82, 103
 Cienfuegos, 333
 Cité Internationale, 262
 Cities on water, 134, 138
 Citizen participation, 185, 209, 238, 294
 City Beautiful, xviii, xxi, 3, 5, 20, 91, 99, 134, 269
 City competitiveness, 207, 217
 City extension, 5, 31, 34, 35, 47, 55, 217, 225, 303
 City sprawl, 250
 Ciudad BBVA, BBVA City, 201
 Ciudad Creativa Digital of Guadalajara, 221, 223
 Civic Art, 3, 5, 8, 91
 Civic design, 5, 92
 Clayton, 220
 Clément, Giles, 294, 295
 Cleveland, 5
 Clive Wilkinson Architects, 212
 Cloudburst plan, 294, 295
 Cluster, 19, 60, 64, 67, 100, 103, 105, 110, 208, 220, 286, 287
 Clúster Paris-Saclay, 287
 Coin street, 129, 130
 Collective housing, 85, 224, 302
 Coll-Leclerc, 161
 Comisaria para la Ordenación Urbana de Madrid (COUM), 47
 Community and Regional Resilience Institute, 229
 Community Parklands, 305
 Connecticut General Insurance Co, 202
 Conservation, xix, 123, 124, 126, 184, 238, 248, 289, 296, 327
 Consonni, Giancarlo, 154
 Contemporary city of 3 million inhabitants, 36
 Cooperation, 47, 52, 80, 138, 183
 Copcutt, Geoffrey, 59
 Copenhagen, 180, 181, 190, 192, 194, 210, 221, 293, 294
 Corajoud, Claire and Michel, 330
 Corajoud, Michael, 262, 280, 282, 330
 Corner, James, 238, 239, 241, 244, 245, 259, 261, 285, 296, 309, 310, 312, 313, 320
 Corporate cities, 197, 202, 205, 215
 Corrales, José Antonio, 46
 Corso Italia, 155
 Cosenza, 105, 108
 Costa, Lucio, 43
 Coudroy de Lille, Lydia, 73
 Countryside commission, 326
 County of London Plan, 19, 40, 58, 179, 271, 272, 276, 299
 Covent garden, 123–126
 Critical reconstruction, 96
 Crossroads, 20, 170, 173
 Crown hall, 104
 Crystal palace, 5
 Cubillo, Luis, 48, 49
 Cullen, Gordon, 68, 92–94, 261
 Cumbernauld New Town, 59
 Cupertino, 202, 212, 215
 Curitiba, 177, 180, 184
 Curitiba model, 177, 180, 184

D

Díez Medina, Carmen, xvii, 24, 25, 29, 34, 37, 38, 40, 41, 71, 73, 114, 178
 Daniels, C. D., 187, 189
 De Carlo, Giancarlo, 87
 Decentralization, 187
 De Geyter, Xaveer, 145
 Dehumanisation, 92
 Deindustrialization, 195, 247
 De La-Hoz Arderius, Rafael, 48
 De La-Hoz Castanys, Rafael, 201
 De la Sota, Alejandro, 46
 De Sica, Vittorio, 50, 51, 53
 Dean, Alejandro, xiv, 57
 Debord, Guy, 83, 242, 321, 323
 Deleuze, Gilles, 237
 Dematteis, Giuseppe, 305
 Denes, Agnes, 295
 Density, 15, 16, 24, 25, 29, 59, 81, 94, 143, 145, 157, 159–161, 200, 203, 217, 220, 221, 224, 255, 302, 305, 306
 De Renzi, Mario, 51
 Der Städtebau, 9, 35, 270
 Desvigne, Michael, 232, 233, 282, 283–285, 287, 330, 333
 Digital districts, xxiii, 219, 220, 221, 223–225
 Digital media city, 221
 Diller Scofidio + Renfro, 296
 Dinkeloo, John, 205
 Dispersed city, 250
 Diversity, xvii, xxiii, 19, 28, 73, 75, 82, 94, 138, 144, 149, 160, 215, 222, 225, 235, 273, 290, 294, 305, 319, 327
 DKV Architekten, 151
 Dlandstudio, 231, 235
 Dnipropetrovsk, xx, 72
 Docklands, 125, 126, 130, 133, 134, 139, 144, 183, 200
 Downsvew Park, 309, 312, 313
 Drosscape, 250, 312, 315
 Duany & Plater-Zyberk (DPZ), 98, 99, 217
 Dubrovnik, 103
 Duisburg, 181, 265

E

East Berlin, 68, 71
 Eberstadt, Rudolf, 270, 271
 Ebro riverbanks, 140
 Ecocity Valdespartera, 218, 219
 École des beaux arts, 5
 École Française d'Urbanisme, 35
 Ecologic agriculture, 329
 Ecological footprint, 290, 333
 Ecological infrastructure, 231
 Ecological landscape, 259
 Ecological processes, 229, 310
 Ecological resilience, 227
 Ecological urbanism, 259, 261, 265, 267, 274
 Ecology, xxiii, 191, 231, 233, 237, 239, 250, 260, 261, 280, 290, 305, 310, 313
 Economic cycle, 113–115
 Economy of knowledge, knowledge economy, 185
 Edge city, 220, 250
 Edge city Tyson's corner, 220
 Edificio Celosia, 157
 Edinburgh, 200

Ehn, Karl, 28, 30
 Eiermann, Egon, 202
 Elliot, Mark, 209
 El Lissitzky, 38
 Emerald Necklace, 269, 280, 316
 Empowerment, 165, 168, 170, 173
 Emscher Park, 231, 256, 265
 Engels, 15
 Ensanche (city extension), xviii, 5, 31, 34, 47, 115, 145, 155
 Enterprise zones, 129
 Entrevías poblado, 55
 Erskine, Ralph, 86, 87, 151, 167
 Ervi, Aarne, 61, 62, 300
 Espacios verdes apropiados (EVAs), 171
 États-Unis, neighborhood, 154
 Ethiopia, 53
 Euralille, 192, 195, 295
 European Landscape Convention, 319
 Évora, 100
 Exopolis, 250
 Ezquiaga, José María, 115, 306

F

Fabbri, Gianni, 23, 24
 FABRIC, 241, 245, 314
 Facebook headquarters, 212
 Fanfani Law, 51
 Fariello, Francesco, 51
 Farrell, Terry, 300, 305
 Farsta, 62, 300
 Fascism, 31, 50, 53
 Fernández-Ges, Andrés, xxiii, 221, 223
 Ferrando, José Luis, 172
 Feuchtwang, Stephan, 168
 Field operations, 240, 241, 245, 263, 296, 317
 Fili-Izmajlovo, 73
 Finger plan, 190, 273, 294
 Firminy, 63
 Fisac, Miguel, 46–48
 Fishman, Robert, 15, 177, 217
 Florence, 319
 Florida, 217, 218, 220
 Flushing meadows, 265
 Foley, Jonathan A., 228
 Folke, Carl, 228
 Ford, 188
 Forestier, Jean-Claude Nicolas, 270
 Forest town, xxi, 62
 Forman, Richard T.T., 280
 Forshaw, John Henry, 58, 299
 Fórum 2004, 139
 Foster & Partners, 202, 212, 215, 220, 225
 Foster, Norman, 111, 212, 215, 220, 225
 Frampton, Kenneth, 259
 Franco, 45, 47, 129, 294
 Frankfurt, 9, 21, 29, 180, 200, 261, 329
 Frank, Josef, 23, 24
 Franquesa, Teresa, 291
 Fredensborg, 62, 65
 Freedom, xxi, 50, 63, 80, 81, 160, 247, 336
 Free University Berlin, 104, 105, 111
 Freiburg, 177, 181, 183, 185

- Fresh Kills Park, 240, 285, 309, 317
 Friedmann, John, 168, 170, 208
 Fritsch, Theodor, 270
 Frits Palmboom & Van Den Bout, 145
 Frusca Marco, 154–156
 Fuencarral, 48, 50
 Functionalist urbanism, xxi, xxii, xxiii, 33, 38, 40, 41, 42, 68, 73–75, 91, 92, 94, 100
 Future Cities Laboratory, 210
 Future Melbourne, 209
- G**
 Galantino, Mauro, 154, 155, 156, 163
 Galí, Teresa, 267
 Garden city, xviii, 13, 15, 16, 19, 21, 24, 42, 62, 177, 217, 270, 271, 276, 299
 Garden city association, 15
 Garden of memory, 172
 Garden suburb, xxi, 9, 13, 15, 19, 270
 Garnier, Tony, 154
 Garonne, 137, 138, 283
 Garraf (landfill site), 265, 267
 Garreau, Joel, 220
 Garrido, Ginés, 158, 159, 286
 Gazeau, Philippe, 155
 Geddes, Patrick, 239, 259, 260
 Gehl, Jan, 165, 167, 194
 Gehry, Frank, 212, 213
 Gelsenkirchen-Bismark, 252
 Genius loci, 280
 Gentrification, 123, 124
 Gessner, Hubert, 28, 29
 Geuze, Adriaan, 265
 Gibberd, Frederick, 58
 Giedion, Siegfried, 9
 Globalisation, 113, 134, 177, 181, 254
 Glover, Ablade, 166
 Golden lane, 103, 105
 Goldzamt, Edmund, 71
 Googleplex, 212, 213
 Gorio, Federico, 51–53
 Gowanus Canal, 231, 235
 Grands ensembles, 67, 70
 Grands projets, 119, 120
 Gravagnuolo, Benedetto, 33, 60, 62
 Graves, Michael, 238
 Great Berlin, 35, 271
 Greater London Plan, 19, 40, 58, 271, 272, 276, 299
 Green belt, xxiii, 13, 58, 190, 260, 269, 271–273, 277, 300, 302, 307, 330
 Green city, 292
 Greenfield, xxiii, xxiv, 300–302, 305
 Green infrastructure, xxiii, 271–274, 277, 292–294, 303, 310, 316, 333, 335
 Green urbanism, 271, 290, 291
 Green ways, 271
 Green wedges, 194, 271
 Gregotti associati, 105, 108
 Greyfield, 302, 303
 Gröndal, 59, 61, 64
 Gropiusstadt, 75
 Gropius, Walter, 75, 105
 Gründerzeit, 25, 26
 16 Grundsätze des Städtebaus, 41
 Guadalajara, 221, 223
 Guattari, Félix, 237
 Gürtel, 24
 GWL Terrain, 151
- H**
 Habraken, John N., 85
 Hafen City Hamburgo, 129, 131
 Hagström, Jan Inghe, 219, 220
 Hall, Peter, xvii, xxiv, 3, 33, 181, 302
 Hamburg, 129, 131, 134, 181, 264, 271
 Hammarby model, 181, 182
 Hammarby Sjöstad, 181, 219, 220
 Hampstead Garden Suburb, 16, 20, 21
 Hannover, 219
 Hanuschhof, 27
 Harlow new town, 58
 Harvey, David, 81, 126
 Haussmann, 3, 9, 119, 120, 123, 177, 187
 Heavy-rail, 190
 Hebbert, Michael, xvii, 35, 115, 238
 Hegemann, Werner, 5
 Helsingør, 65
 Helsinki, 62, 104, 210, 221, 224
 Henselmann, Hermann, 68
 Hentrich & Petschnigg, 105
 Hertzberger, Herman, 279
 Herzog & de Meuron, 201
 Hessel, Franz, 254
 High line, 263, 296
 High line park, 296
 Hilberseimer, Ludwig, 38, 58, 259, 261
 Historical centre, 24, 91, 92, 123, 124, 126, 131, 190, 194, 306, 329
 Hoddesdon, 40
 Hof, Höfe, 24, 25, 30
 Holling, Crawford Stanley, 227
 Horelli, Lisa, 209
 Housing estate, 40, 67, 68, 73, 75, 129, 302
 Houston, 250
 Howard, Ebenezer, 13, 15, 19, 58, 62, 177, 270, 276
 Hoyle, B. S., 135
 Hugh Wilson, 59
 Hunhammar, Sven, 291
 Hypercity, 250
- I**
 IABR Project Atelier Rotterdam, 314
 IBA Berlin, 99, 101, 217, 254, 265
 IBA Emscher Park, 231, 266
 IBA Hamburg, 131
 IBA-IGA 2013, 264
 IBM, 202
 ICT technologies, xxiii, 207–212, 221, 225
 Identity, xxiv, 58, 104, 114, 126, 138, 168, 229, 241, 259, 272, 310, 322
 Île Derborence, 294, 295
 Illinois Institute of Technology (IIT), 104
 Îlot ouvert, 145, 158, 159, 162
 INA-Casa, 51
 In-between areas, 248
 In-between landscape, 247, 248
 Incheon, 200, 214
 Index of Multiple Deprivation(IMD), 129

- Industrial city, 81, 86, 119
 Infrastructures, 71, 120, 134, 187–189, 192, 195, 204, 211, 221, 248, 255, 259, 261, 265, 273, 286, 293, 294, 296, 303, 316
 Inner Harbour, 126
 Instituto Nacional de la Vivienda (INV), 47, 49
 Intangible, xxiv, 279, 319, 322–324
 International Biennale Rotterdam, Rotterdam Architectural Biennial, 310
 International Exhibition, 98, 101, 116, 118, 140, 141
 Internationalisation, 113
 Interstitial space, 100
 Inter-war, 23, 24, 26
 Issoudun, 330, 333
- J**
 Jackson Park, 6
 Jacobsen, Arne, 62, 105
 Jacobs, Jane, 68, 83, 92, 133, 134, 165, 241
 Jánovas, 169
 Jansen, Hermann, 35, 39, 271
 Jaussely, Léon, 8, 37
 Jaussely Plan (Barcelona), 9
 JCFO, 314
 Jean-Baptiste André Godin's Familistère, 81
 Jeanneret, Pierre, 79, 80
 Jensen, Jens, 310
 Jonathan Cook Landscape Architects, 307
 Jorn, Asger, 242
 Josic, Alexis, 104–106
 Jussieu Campus, 105
 Jyväskylä, 104
- K**
 Karl-Marx-Hof, 24, 30
 KCAP, 145, 147–149, 151
 Kenworthy, Jeffrey, 188, 342
 Kepes, Gyorgy, 92
 Khimki-Khovrino, 73
 Kiev, 77
 Kingo, 62, 65
 Klampenborg, 62
 Klaus en Kaan Architecten, 145
 Klaus, Felix, 145, 146
 Kleihues, Josef Paul, 101, 238, 251
 Knowledge economy, economy of knowledge, 207, 208, 217, 220
 Knud Holscher & KHR, 105, 107
 Koetter, Fred, 96, 250
 Kohn Pedersen Fox (KPF), 214
 Kollhoff, Hans, 144, 145, 251
 Koolhaas, Rem, 80, 144, 153, 168, 195, 252, 255, 259, 261
 Kop van Zuid, 147, 148, 151, 199, 200
 Kostof, Spiro, 19
 Kotka, 280
 Krakow, 73
 Kreuzberg, 101, 251
 Kroll, Lucien, 85
 Kronsberg, 219
- L**
 La Defense, 199, 203
 Ladri di biciclette, 51
 Laguna, Julián, 49
 Laguna West, 98
 La Habana, 333
 Lakua, 97
 La Martella, 51, 52
 Land Art, 241, 263
 Landfill, 263, 265, 267, 295
 Land Law(Land Act), 49
 Landscape architect, 92, 143, 144, 149, 232, 239, 259–261, 263, 267, 307, 309, 310, 314
 Landscape catalogue, 323, 324, 327
 Landscape infrastructure, 263
 Landscape projects, 139, 261–263, 267, 279, 285, 307
 Landscape urbanism, 92, 259–261, 265, 267
 Landtong, 147, 148, 151
 Laruelle, Nicolas, 273
 Lasdun, Denys, 105, 110
 Late comers, 115
 Lazio, 50, 54
 Le Corbusier, 36–40, 42, 43, 62, 63, 79, 80, 91, 103, 109, 154, 177, 189, 195, 340, 342
 Lefebvre, Henri, 81, 167, 282, 285, 343
 Le Grand Paris, 159
 Leipzig, 181, 254
 Le Marais, 238
 L'Enfant plan (Washington), 5
 Lenné, Peter Joseph, 271
 Leopold, Aldo, 310
 Les Halles, 123, 124, 249
 Letchworth, 15–17, 16, 19, 20
 Letchworth Park, 200
 Letterist International, 83
 Levi-Strauss, Claude, 82
 Lewin, Kart, 323
 Light-rail, 190, 203
 Lijnbaan, 105
 Lille, 181, 195, 294
 Limits, 10, 42, 139, 160, 161, 251, 277, 280–282, 309, 316
 Linz, 218
 Lisbon, 116, 139, 140
 Lister, Nina-Marie, 309, 310, 312
 Living lab, 211, 223, 224
 Lleó, Blanca, 157, 159
 London, 5, 16, 19, 40, 57, 58, 92, 103, 105, 114, 123–125, 129, 130, 133, 134, 136, 161, 177, 180, 187, 190, 192, 199, 200, 211, 244, 254, 269, 271, 272, 276, 300–303, 305, 307, 326, 335
 London County Council, 58
 London Green Belt, 271, 276
 London Olympic Games, 139, 183
 Loos, Adolf, 23, 145
 López de Lucio, Ramón, 68, 157, 306
 Lorenzo, Antonio, 172
 Los Angeles, 190, 315
 Luz Nas Vielas, 173
 Lviv, 72
 Lynch, Kevin, 92, 95, 133, 134, 222, 241, 260, 261
 Lyon, 134, 139, 154, 262, 285
 Lyon Confluence, 284
- M**
 Madrid, 31, 45–49, 55, 157, 167, 173, 200–202, 205, 286, 303, 305, 306
 Madrid Plan, 273
 Madrid Río, 286
 Magdeburg plan, 329
 Maily, Jean de, 203
 Malmö, 181, 219, 220

- Manhattan, 183, 241, 281, 295
 Mapping, 209, 211, 237–241, 245, 250, 323
 Marais, 123
 Marciunas, George, 241
 Markelius, Sven, 60, 62
 Märkisches Viertel, 70
 Marrakech, 166
 Marseille, 38, 48, 62
 Martella, La, 51, 52
 Martí, Carlos, 161
 Martínez Lapeña, José Antonio, 263, 264
 Martorell, Bohigas y Mackay (MBM), 161
 Marx, Karl, 24, 26, 30
 Maryland, 251
 Masdar City, 221, 225
 Mass housing, 9, 21, 26, 40, 67–69, 71, 73, 340
 Mass housing estates, 40, 68, 73
 Masterplan, 144
 Mat-building, 104, 105
 Mateo, Josep Lluís, 144
 Matera, 52
 May, Ernst, 21, 29, 261, 343
 McHarg, Ian L, 239, 240, 259, 262, 280, 281, 310, 343
 Media City UK, 221, 222, 342
 Medical Faculty Housing, at the University of Louvain, 85
 Megastructures, 105, 341
 Meier, Richard, 200, 342
 Melbourne, 209
 Metabolism, 240, 241, 245, 250, 260, 291–294, 314
 Metapolis, 250
 Metropolis, 16, 29, 98, 157, 191, 195, 205, 208, 247, 250, 254, 273, 300, 310
 Mexico City, 178
 Meyer & Van Schooten, 151, 251
 Microrayon, 71, 73, 77
 Middle landscapes, 247
 Middlesbrough (Urban Farming Project), 335, 337
 Mies van der Rohe, Ludwig, 104, 109, 249, 341
 Mietskaserne, 25, 27
 Migge, Leberecht, 261, 329, 332, 344
 Milan, 50, 71, 72, 116, 143, 153, 155, 330
 Milan Expo, 117
 Milla Digital, 222
 Milton Keynes, 59, 300
 Mini-bus, 190
 Ministry of Employment, 47
 Ministry of Governance, 47
 Minosts, Maurice, 238
 Miralles, Enric, 144
 Mitscherlich, Alexande, 68
 MIT Senseable City, 210
 Mixed use districts, 131
 MMBB Arquitectos, 293, 294
 Model cities, 177, 180, 342
 Modern housing estates, 302
 Modernist townscape, 92
 Modernist urbanism, 33, 37, 38, 40, 42, 43, 91, 92, 94, 113, 115, 197, 237
 Modern Movement, 46, 58, 59, 61, 83, 92, 98, 99, 103, 104, 143, 153, 197, 203, 220
 Modern urban planning, 35, 123
 Mollet del Vallés, 161
 Moneo, Rafael, 45, 55, 96, 97, 279, 341
 Montpellier, 181
 Montreuil, 330
 Morales, Álvaro, 170
 Moretti, Luigi, 155
 Möring, Bruno, 270
 Morphology, 54, 96, 98, 182, 237, 244
 Morris, William, 19, 81
 Moscow, 71, 73, 180
 Moser, Karl, 38
 Mostafavi, Mohsen, 250, 265, 310
 Mountain View, 212, 213
 Mumford Eric, 41, 91, 259, 305
 Mumford, Lewis, 10, 81, 259, 300
 Municipal Improvement Associations, 3
 Municipal Orphanage (Amsterdam), 82
 Muratori, Saverio, 51, 96
 MVRDV, 143, 145, 157, 159
- N**
- Nærum Allotment Gardens, 336
 Nairn, Ian, 92
 Nantes, 63
 Neighbourhood unit, 43, 58, 71
 Neorealism, xxi, 45, 49, 50, 52–54
 Nervi, Pier Luigi, 51, 52
 Network on Building Resilient Regions, 229
 Neutelings Riedijk, 144, 151
 New Babylon, 83
 Newcastle, 86, 151, 167
 New Earswick, York, 19
 New Empiricism, 59, 60
 New extensions, 115, 187
 New Jersey, 133, 241
 Newman, Peter, 188
 New Orleans, 229
 New outskirts, 190
 New paradigms, xxi, 261
 New town, xxi, 19, 52, 58, 59, 61, 109, 165, 190, 194, 271, 276
 New Towns Group, 299
 New Urbanism, 38, 98, 118, 194, 217
 New York, xx, 3, 133, 180, 231, 254, 263, 269, 296, 317
 Niemeyer, Óscar, 43
 Nieuwenhuys, Constant, 83
 Nogué, Joan, 319
 Nold, Christian, 323
 Noll, Giambattista, 238
 Norwich, 110
 Nouvel, Jean, 195
 Nowa Huta, 73
 Now Factory Creative Office Park, 255
- O**
- Obsolescence, 67, 68, 73, 77, 123
 Odense, 105, 107
 Oerley, Robert, 27
 Oliva, Federico, 274
 Olmsted, Frederick Law, 98, 259, 261, 269, 282, 310, 316
 Olympic Games, 98, 116, 120, 139, 183, 217
 OMA, 144, 145
 One North, 221
 Örebro, 64
 Orchard Territorial Protection Plan (Valencia), 330
 Orestad, 194, 221
 Organización Sindical del Hogar OSH, 47
 Otaniemi, 104, 105
 Otterlo, 82, 103
 Oud, J.J.P., 143, 145

- Oudolf, Piet, 296
 Outer ring, 58
 Owen, Robert, 15, 81
- P**
- Panelaky, 67
 Parco Agricolo Sud Milan, 330
 Paris, xviii, 3, 5, 9, 70, 81, 105, 118, 120, 123, 124, 134, 145, 159, 177, 180, 187, 199, 203, 254, 269, 271, 287
 Paris International Exhibition 1929, 5
 Parker, Barry, 16, 17, 20
 Park Hill, 69
 Park Movement, 3
 Park system, xxiii, 269, 271, 272, 274, 282, 316
 Parque agrícola del Baix Llobregat, 330
 Participatory planning, 209
 Participatory urbanism, 209
 Pattern, 64, 65, 85, 145, 177, 280, 323
 Perfectible housing, 79
 Peri-urbanisation, 250
 Perpiñá, Antonio, 200
 Perugini, Giuseppe, 51
 Pessac, 79, 80
 Petersen, Richard, 270, 271
 Philadelphia, 3, 7, 252
 Piano INA-Casa, 51
 Piano, Renzo, 262
 Pierini, Orsina Simona, 143, 153
 Pileri, Paolo, 294
 Piraeus, 144
 Pixmore, 17
 Place de la Bourse (Bordeaux), 134, 137
 Pla del Raval (Barcelona), xviii, xix, 128
 Plan de Urgencia Social (Social Urgency Plan) (Madrid), 47, 49
 Plan Maciá (Barcelona), 39
 Planned settlement, 57, 58, 62
 Planning, xvii, xviii, xix, xx, xxi, xxii, xxiii, 5, 8, 9, 11, 13, 15, 16, 21, 35, 38, 50, 57, 60, 61, 82, 92, 105, 109, 114, 138, 139, 143, 144, 168, 180, 184, 208, 209, 211, 220, 227, 229, 239, 240, 245, 259, 260, 263, 271, 273, 276, 293, 300, 306, 310, 322, 324, 329, 330, 335
 Planning history, xvii, xviii, xx, 35
 Plan programme for East Paris, 120
 Plateau de Saclay, 287
 Plater-Zyberk, Elizabeth, 217
 Plattenbau, 67
 Poblados de absorción (absorption settlements), 47, 48
 Poblados dirigidos (targeted settlements), 46, 47, 49, 55
 Poblados mínimos (minimum settlements), 47
 Pollak, Linda, 310
 Portas, Nuno, 99, 100, 115, 116, 139
 Portland, 180, 182
 Porto Alegre, 167
 Port Sunlight, 15
 Portzamparc, Christian de, 144, 158–160, 162, 195
 Post-metropolis, 250
 Post-suburbia, 250
 Post-war, 19, 40, 45, 46, 49, 50, 60, 62, 63, 91, 92, 179, 192, 276
 Potsdamerplatz, 254
 Preservation, 124, 271, 273, 277
 Price, Cedric, 84, 85
 Project for Public Spaces, 322, 324
 Prost, Henri, 37
- Prouvé, Jean, 105, 111
 Pruitt-Igoe, 68
 Public Art, 3, 5
 Pudong, 200
 Puerto Madero, Buenos Aires, 183, 200
 Purdom, Charles Benjamin, 19, 300
- Q**
- Qian'an, 234
 Qian'an city ecological corridor, 234
 Qualitative urbanism, xxii, 91
 Quaroni, Ludovico, 50, 52–54
 Quartiers Modernes Frugès, 79
 Quarto Cagnino, 71, 72
 Quinta de Malagueira, 99, 100
- R**
- Rabenhof, 27
 Radiant City, 177
 Rainer, Roland, 218, 219
 Ratti, Carlo, 210
 Red Vienna, xxi, 23, 24, 26, 28, 31
 Reed, Chris, 310
 Reggio Emilia ecological/urbanistic renewal project., 274
 Regional Planning Association of America, 98, 259
 Reimann, Brigitte, 68
 Rendel, Simon, 326
 Residual landscape, 248
 Resilience, 227–229, 234, 303, 305, 310
 Resilience Alliance, 229
 Resilient cities, 229, 310
 Reumannhof, 28
 Rhone, 134
 R.I.B.A., 9, 180
 Rickards, Edwin Alfred, 34
 Ridolfi, Mario, 50–52, 54
 Ringstraße, 3, 24
 Rio de Janeiro, 178
 Riverfront, xxii, 133, 134, 139, 141
 Riverside, 137, 232
 Robin Hood Gardens, 41
 Roche, Kevin, 205
 Rogers, Richard, 114, 118, 167, 301, 305
 Roig, Joan, 139, 262, 265, 267
 Roihuvuori neighbourhood, 210
 Roiseco, Giulio, 51
 Roma, 238
 Romany, José Luis, 46–50
 Römerstadt, 21, 261, 329
 Rosario, 333, 334
 Rossi, Aldo, 68, 95, 96, 238
 Rotival, Maurice, 178
 Rotterdam, xix, 105, 129, 134, 143, 145, 147, 151, 180, 200, 232, 233, 240, 241, 245, 314
 Rotterdam Architectural Biennial, International Biennale Rotterdam, 310
 Rowe, Colin, 96, 238, 250
 Royal Institute of British Architects, 34, 180
 Rudofsky, Bernard, 82, 165
 Rühl, Konrad, 329
 Rurbanisation, 250
 Rusanovska mikrorayon, 77

- S**
- Saad-Sulonen, Joanna, 209
- Saarinen, Eero, 201, 202
- Saarinen, Eliel, 62
- Sáenz de Oíza, Francisco Javier, 46, 47, 49, 55
- Saigón, 177
- Saint Louis, 220
- Salford Quays, 221, 222
- Saltaire, 15
- Salt, David, 227, 229
- Samonà, Giuseppe, 51
- Sanchinarro, 157–159, 162, 306
- San Francisco, 5, 201
- Sanpolino, 153–156, 163
- Santander City, 202, 205
- Santiago de Chile, 178, 333
- Santiago de Compostela, 129
- São Paulo, *xiv*, 173, 293, 294
- Sarcelles, 70
- Sassen, Saskia, 168, 208, 220
- Satellite city, satellite town, 19, 46, 58, 60–62, 270, 276, 299, 300
- Scale, *xvii*, *xxi*, *xxii*, *xxiii*, 3, 5, 16, 23, 29, 38, 49, 53, 63, 64, 68, 71, 73, 104, 115–117, 119, 121, 129, 134, 143, 144, 147, 149–153, 155, 157, 159, 161, 162, 163, 165, 167, 170, 181, 194, 195, 208, 217, 229, 232, 233, 239, 240, 244, 263, 265, 279, 280–283, 285–287, 289, 293, 294, 309, 310, 313, 314, 317, 322, 327, 329, 330, 335
- Schaap, Ton, 150
- Scharoun, Hans, 271
- Schiedhelm, Manfred, 111
- Schmid, Heinrich, 27
- Schmitt, Gerhard, 210
- School of Venice, 96
- Schulze-Fielitz, Eckhard, 105
- Schumacher, Fritz, 131, 271
- Schumaker, Patrick, 265
- Schwarzpläne, 251
- Segal, Walter, 85
- Seaside, 98, 99, 218
- Secchi, Bernardo, 113, 114, 163
- Second World War, *xvii*, *xxi*, *xxii*, 33, 57, 60, 63, 91, 103, 123, 153, 165
- Segre, Roberto, 178, 183
- Seine, 134, 136
- Seine riverbanks, 134, 136
- Self-aware City, 210
- Senseable City Lab, 210–212
- Sert, José Luis, 39, 40, 91, 92
- Seoul, 214, 221
- 7V (7 roads), 189
- Seville, 116
- Seville Expo, 116
- Shanghai, 200, 255
- Sharp, Thomas, 92
- Sheffield, 69
- Shiedhelm, Manfred, 104
- Siedlerbewegung, 24
- Siedler, Wolf Jobs, 68
- Siedlung, 21
- Siedlung Römerstadt, 21
- Sierra, Manuel, 47–49, 55
- Sieverts, Thomas, 155, 161, 248, 250, 251
- Sijmons, Dirk, 240, 310
- Silicon Valley, 201, 202, 204, 212, 213
- Singapur, 221
- Site planning, 16
- Sitte, Camillo, 5, 19, 178
- Situationist, 81, 83, 241, 323
- Situationist International, 81, 83, 241
- Siza, Álvaro, 100
- Smart cities, 190, 192
- Smart growth, 190
- Smart urbanism, 190, 192
- Smithson, Alison, 103–105, 161, 241
- Smithson, Robert, 241
- Social housing, 23, 45, 47–50, 58, 67, 79, 100, 101, 163
- Socialist urbanism, 71
- Social networks, 209, 210, 229
- Soissons, Louis de, 18, 19
- Soja, Edward, 197
- Solà Morales, Ignasi, 247
- Solà Morales, Manuel, 96, 97, 247
- Solar City Linz-Pichling, 218
- Solholm, 62
- Solnechny, 72
- SOM, 200, 202
- Sondgo International Business Disgtrict, 214
- Songdo, 200, 212, 214
- Sonne, Wolfgang, 9, 92, 99
- Sørensen, Carl Theodo, 329, 336
- South Bank, 92, 93, 129, 130
- Sozialdemokratische Arbeiterpartei Österreichs, 24
- Spangen, 145
- Spardammerstock, 145
- Sprawl, 58, 189, 195, 217, 248, 252, 260, 269, 273, 276, 300, 330, 335
- Stadtbaukuns, 3, 5
- Städtebau, *xvii*, *xxi*, 9, 33–35, 37, 41, 71, 270
- Stalin, Iósif, 41, 91, 92
- Stanford, 202
- Staten Island, 240, 263, 281, 285, 317
- Steel Housing, 84, 85
- Sterner, Carl, 292
- Stirling, James, 96
- Stockholm, 60, 62, 180–182, 219, 220, 291, 300
- Stockholm General Plan, 60, 62, 180–182, 219, 220, 291, 300
- Stockley Park, 200
- Strasbourg, 181, 192
- Strategic projects, *xxii*, 118, 139, 181, 200
- Streetcar suburbs, 188
- Street in the air, 86, 103, 105
- Stübben, Josef, 35, 270
- Stuttgart, 24, 202, 271
- Sudoeste del Besós housing estate, 76
- Sunila Pulp Mill, 280
- Sustainability, *xxiii*, 98, 113, 129, 181, 214, 215, 217, 219, 223, 233, 289, 290, 305, 310, 329, 330, 333, 335
- Sutcliffe, Anthony, *xvii*, 8, 9, 13, 33, 35, 114, 123
- SWA Group, 230, 231
- T**
- Tafari, Manfredo, 23, 24, 26, 28, 29, 51, 53
- Tange, Kenzo, 109
- Tapiola, 61, 62, 104
- Tassotti, Dante, 51
- Taut, Bruno, 329, 331
- Team X, 99, 167, 189
- Technical Centre of General Motors, 201, 202
- Technological parks, 215
- Technology, *xxi*, 25, 41, 79, 80, 83, 85, 104, 160, 187, 188, 192, 195, 197, 200–202, 204, 207, 211, 220, 225, 309, 310
- Telefónica City, 202

- Telefónica City, Distrito Telefónica, 201, 202
 Termini, 51, 87
 Terradas, Jaume, 291
 Terragni, Giuseppe, 155
 Terrain vague, 247, 249, 294
 Terrorism, 227, 229
 Tertiary uses, 197, 200
 Teyssot, George, 161
 Thames riverfront, 136
 Tham, Klas, 219, 220
 The Hague, 83, 143, 145
 The Hague Plan, 9
 The Heart of the City, 40, 91, 92
 The Urban Farming Project Middlesbrough, 335, 337
 Third landscape, 289, 294
 Tiburtino, 45, 50, 51, 54
 Tobías, Basilio, xxii, 103
 Tokyo Plan, 85, 109, 204
 Toronto, 180, 309, 312, 313
 Torres, Elías, 62, 263, 264
 Toulouse, 105, 106
 Town planning, xvii, xxi, 3, 5, 8–10, 11, 16, 19, 20, 21, 33–35, 74, 80, 114–116, 118, 121, 219, 269–272, 276, 277, 279, 285, 290, 300, 303, 306, 307, 309, 310, 329, 333, 337
 Townscape, xxii, 91, 92, 92, 94, 261, 310
 Traditional Neighborhood Design (TND), 98
 Tranquillity maps, 323, 326
 Transit-Oriented Development (TOD), 98
 Transport and urban growth, 187
 Transport infrastructure, 187, 189, 192, 195
 Transport systems, 59, 181, 184, 187, 189, 190, 192
 Trash Track, 210, 212
 Trinitat Park (Barcelona), 265
 Tsukuba, 204
 Tsukuba Expo, 204
 Tsukuba Science City, 204
 Tungkwan, 82
 Turenscape, 232, 234
 Turin, 119
 Turner, John, 82, 83
 Tuscolano, 51
 22@, 221, 225
 Typology, 30, 48, 72, 73, 75, 96, 100, 102, 129, 143, 152, 202, 250
 Tyrwhitt, Jacqueline, 92
 Tyson's Corners, 220
 Tzara, Tristan, 145
- U**
- U Green (Stuttgart), 271
 Unemployment, 28, 229
 UNESCO, 166, 319, 320
 Ungers, Oswald Mathias, 23, 96
 Union City, 191, 192
 Unité d'Habitation, 48, 62, 63
 United Nations, 51, 138, 289, 290, 335
 University campus, xxii, 103, 104, 111, 200, 204, 214
 University of Bochum, 105, 106
 University of Calabria, 105, 108
 University of East Anglia, 105, 110
 University of Odense, 105, 107
 University of Otaniemi, 105
 University of Toulouse-le-Mirail, 106
 UNRRA, 51, 52
 Unused areas, 248
- Unwin, Raymond, 8, 16, 17, 20
 Urban agriculture, xxiv, 329, 330, 333, 335, 337
 Urban cartographies, 323
 Urban design, xiii, xv, xviii, xxiv, 57, 62, 91, 92, 109, 139, 143, 147, 150, 155, 159, 161, 165, 167, 178, 200, 208, 210, 215, 217, 224, 225, 235, 261, 313
 Urban enhancement, 5, 134, 335
 Urban façade, 5, 10, 134
 Urban farming, 333, 335, 337
 Urban Gallery, 241, 244
 Urbanisation, 15, 35, 68, 190, 201, 247, 248, 250, 255, 261, 272, 290, 305
 Urbanisme, xvii, xviii, xxi, 8, 9, 33–35, 37, 114
 Urbanismo, xvii, 5, 8, 19, 33–35, 37, 114
 Urbanistica, xvii, xviii, xxi, 8, 29, 33, 34, 52, 114, 157
 Urbanity, 9, 41, 73, 92, 94, 96, 99, 143, 150, 155, 161, 223, 251, 252, 255
 Urban mapping, xxiii, 237, 238
 Urban marketing, 183
 Urban planning, xvii, xviii, xix, xxi, xxii, xxiii, 13, 33–35, 45, 49, 54, 58, 61, 67, 71, 91, 103, 105, 109, 113–115, 118, 123, 124, 126, 129, 143, 144, 147, 153, 165, 170, 171, 177, 178, 180, 181, 183, 184, 207–211, 218–220, 227, 239, 259, 265, 271, 302, 329, 335
 Urban planning models, xxii, 126, 177, 178
 Urban reform, xviii, xxii, 3, 123
 Urban regeneration, xxii, 123, 129, 130, 133, 181, 197
 Urban Re-Identification Grid, 41, 103
 Urban renewal, xxii, 71, 92, 96, 101, 115, 123–126, 129, 130, 160, 217, 220, 265, 266, 284, 304
 Urban riverfronts, 133
 URBAN SMS, 294
 Urban Task Force, 114, 118, 275, 301, 302
 URBANUS, 255
 Urban void, xxiii, 124, 190, 247, 248, 252, 254, 255, 263, 335
 URBED, 238
 Utzon, Jørn, 62, 65
- V**
- Vacant lot, 247
 Vagnetti, Luigi, 51
 Valdebernardo Norte, 306
 Valdespartera, 218, 219
 Valencia, 330
 Valero, Luis, 49
 Vällingby, 60, 62, 180
 Vancouver, 179, 180
 Van den Berg, Leo, 208
 Van der Broek & Bakema, 143
 Van Dongen, Frits, 145, 150
 Van Eesteren, Cornelis, 38, 40, 42, 74
 Van Eyck, Aldo, 82, 103, 161
 Van Gameren, Dick, 145
 Van Winden, Willem, 208
 Vasconi, Claude, 195
 Vauban, 185
 Vaux, Calver, 269
 Vázquez Molezún, Ramón, 46
 Venturi & Rauch, 238
 Vertical town, xxi, 62, 63
 Vertikalstadt, 38
 Vienna, xxi, 3, 6, 7, 23, 26, 28, 30, 180
 Viganò, Paola, 163
 Vignes Blanches, 85

Viljoen, 330, 335, 337
 Villaggio Matteotti, 87
 Ville Contemporaine, 38
 Virginia, 220
 Vitoria, 96, 97, 129, 277
 Vitoria Green Belt, 277
 Vitry, Bernard, 238
 Vizcaya, 48
 Volkswohnpalast, 23, 24
 Von Spreckelsen, Johann Otto, 203
 Vulnerability, 227, 234, 309

W

Wagner, Martin, 29, 254, 271
 Wagner, Otto, 178
 Waldheim, Charles, 261, 310
 Walker, Brian, 80, 81, 227, 229
 Wall, Alex, 265
 Wallin, Sirku, 209
 Ward, Stephe, xvii, 5, 33, 35, 98, 126, 180
 Warnes, A.M., 187
 Warsaw, 180
 Washington Mall, 5
 Wassenberg, Frank, 68
 Wasserstadt GmbH, 134, 138
 Waste landscapes, 250
 Waterfront, xxii, 121, 133, 134, 138, 139, 217, 229
 Watery Voids, 293, 294
 Weimar Republic, 21, 23, 24, 47
 Welfare state, xxii, 57, 60, 103
 Weller, Richard, 313
 Welwyn, 18, 19
 Wenders, Wim, 248, 251
 West 8, 143, 144, 149, 150, 265

West Berlin, 68, 70, 75
 West Coast 1, 251
 Whiston Spirn, Anne, 310
 White City, 5
 Whyte, William, 300, 305
 Wirth, Louis, 165
 Witheford Watson Mann Architects, 307
 Wohnhof, Wohnhöfe, 24
 Woods, Shadrach, 103–106, 167, 168
 World's Columbian Exposition (Chicago, 1903), 6
 Wren, Christopher, 34
 Wright, Frank Lloyd, 80, 81, 177, 259

Y

Yorktown, 250
 Ypenburg, 145

Z

ZAC Masséna, 153, 162
 Zaha Hadid Architects, 221
 Zaragoza, 96, 116–118, 139, 141, 169, 218, 219, 221, 302, 334
 Zaragoza Expo, 116
 Zehrfuss, Bernard, 199, 203
 Zeinstra van der Pol, 151
 Zevi, Bruno, 50–52
 Zofio, 48
 Zones Franches Urbaines (ZFU), 129
 Zoning, xxiii, 9, 34, 37, 38, 41, 43, 67, 68, 73, 91, 94, 115, 139, 197, 220–222, 248, 269, 271, 274
 Zuazo, Secundino, 31, 39
 Zuidas, 200
 Zurich, 105, 210
 Zwischenstadt, xix, 250, 252