

Re-Framing Urban Space

Urban Design for Emerging Hybrid and High-Density Conditions

Im Sik Cho, Chye Kiang Heng and Zdravko Trivic



First published 2016 by Routledge 711 Third Avenue, New York, NY 10017

and by Routledge 2 Park Square, Milton Park, Abingdon, Oxon OX14 4RN

Routledge is an imprint of the Taylor & Francis Group, an informa business

© 2016 Taylor & Francis

The right of National University of Singapore to be identified as author of this work has been asserted by it in accordance with sections 77 and 78 of the Copyright, Designs and Patents Act 1988.

This Work is made possible by the research/work and resultant deliverables from the project entitled "Urban Space Planning for Sustainable High Density Environments," being a critical review on the theories and practices of sustainable high-density environment, supported by the funding from the Singapore Ministry of National Development ("MND") and undertaken jointly in collaboration by the Copyright Owner and Singapore's Urban Redevelopment Authority ("URA"), Housing and Development Board ("HDB") and National Parks Board ("NParks"). Such research/ work and deliverables form the basis upon which this Work is produced.

All rights reserved. No part of this book may be reprinted or reproduced or utilized in any form or by any electronic, mechanical, or other means, now known or hereafter invented, including photocopying and recording, or in any information storage or retrieval system, without permission in writing from the publishers.

Trademark notice: Product or corporate names may be trademarks or registered trademarks, and are used only for identification and explanation without intent to infringe.

Library of Congress Cataloging in Publication Data

Cho, Im Sik, author.

Re-framing urban space : urban design for emerging hybrid and high-density conditions / Im Sik Cho, Chye-Kiang Heng, and Zdravko Trivic.

This Work is made possible by the research/work and resultant deliverables from the project entitled Urban Space Planning for Sustainable High Density Environments. 1. Public spaces--Social aspects. 2. City planning. 3. Urban density. I. Heng, Chye Kiang, 1958- author. II. Trivic, Zdravko, author. III. Title. NA9053.S6C495 2015

307.1'216--dc23 2015008619

ISBN: 978-1-138-84985-3 (hbk) ISBN: 978-1-138-84986-0 (pbk) ISBN: 978-1-315-72514-7 (ebk)

Typeset in Avenir LT Pro by Fakenham Prepress Solutions, Fakenham, Norfolk NR21 8NN Printed by Bell & Bain Ltd, Glasgow



Re-Framing Urban Space

Re-Framing Urban Space: Urban Design for Emerging Hybrid and High-Density Conditions rethinks the role and meaning of urban spaces through current trends and challenges in urban development. In emerging dense, hybrid, complex and dynamic urban conditions, public urban space is not only a precious and contested commodity, but also one of the key vehicles for achieving socially, environmentally and economically sustainable urban living. Past research has been predominantly focused on familiar models of urban space, such as squares, plazas, streets, parks and arcades, without consistent and clear rules on what constitutes good urban space, let alone what constitutes good urban space in a "high-density context."

Through an innovative and integrative research framework, Re-Framing Urban Space guides the assessment, planning, design and redesign of urban spaces at various stages of the decision-making process, facilitating an understanding of how enduring qualities are expressed and negotiated through design measures in high-density urban environments. This book explores over 50 best practice case studies of recent urban design projects in high-density contexts, including Singapore, Beijing, Tokyo, New York and Rotterdam.

Visually compelling and insightful, Re-Framing Urban Space provides a comprehensive and accessible means to understand the critical properties that shape new urban spaces, illustrating key design components and principles. An invaluable guide to

the stages of urban design, planning, policy and decision making, this book is essential reading for urban design and planning professionals, academics and students interested in public spaces within high-density urban development.

Im Sik Cho is an assistant professor at the Department of Architecture, School of Design and Environment, National University of Singapore (NUS), where she serves as the leader for urban studies research and teaching and principal investigator for many research projects related to urban space design and participatory planning for sustainable high-density environments.

Chye Kiang Heng is a professor, urban designer and planner. Currently, he is the dean of the School of Design and Environment at the National University of Singapore (NUS). He has published four books and numerous articles and book chapters. He is visiting professor at several leading Asian universities and serves on the editorial board of a number of international journals.

Zdravko Trivic is an assistant professor at the Department of Architecture, School of Design and Environment (SDE), National University of Singapore (NUS). He also worked as a researcher at the Centre for Sustainable Cities (CSAC), SDE, NUS. His research and design work in the areas of urban design and health and space theories has been presented internationally. He has published several book chapters and conference and journal articles.

"For a long time, conscientious professionals have expressed hostility towards dense environments and tall buildings, harboring, instead, the ideals of public spaces in the 'human' scale and the city's rich visual communication in Medieval or nineteenth century urban design. Today, however, anybody can freely eat, profess their love, or read newspapers not only on ground level, but at heights 10 m, 100 m, 1,000 m and 10,000 m above ground. It is now time for classical knowledge to be reconstructed. This book provides stimulating material for architects, urban designers and landscape architects to revisit design philosophies on public spaces and reach brilliant new ideas fit to the realities of today."

—Hidetoshi Ohno, Professor Emeritus, University of Tokyo, Japan

"Focused on the dynamic, high-density cities of East Asia, Re-Framing Urban Space argues that we need to move beyond traditional public-private space dualisms, to recognize the increasingly hybrid nature of contemporary cities. Provocative and richly illustrated, yet profoundly pragmatic, this foundational text should sit on every urban practitioner's desk."

—Jennifer Wolch, William W. Wurster Dean, College of Environmental Design, University of California, Berkeley, USA

Acknowledgments

This book is a result of the research project "Urban Space Planning for Sustainable High Density Environments," which was conducted at the Centre for Sustainable Asian Cities (CSAC), School of Design and Environment, National University of Singapore (NUS), during 2009 to 2013, in collaboration with URA (Urban Redevelopment Authority, Singapore), HDB (Housing and Development Board, Singapore) and NParks (National Parks Board, Singapore). The project was funded by the Ministry of National Development (MND), Singapore. All copyrights are shared among the National University of Singapore, the collaborating agencies and the publisher.

We also acknowledge valuable contributions to this work made by Dr. Limin Hee as initial principal investigator, Dr. Davisi Boontharm, Dr. Erwin Viray and Dr. Patrick Janssen as collaborators for the research.

We also thank Ivan Kurniawan Nasution for his contribution to the research as research assistant as well as his efforts working on the numerous illustrations presented in this book, a number of part-time student researchers for their timely assistance in various phases of the project, as well as Jinhui Wang for the development of the TUSA (Tool for Urban Space Analysis).

Finally, we acknowledge numerous contributors who agreed to share their material and made this volume a visually enriching read.

Singapore, 2015

Im Sik CHO Chye Kiang HENG Zdravko TRIVIC

List of Figure Credits

Courtesy of Chen Xiuqi.

1.1

| 1.6 | Courtesy of Flickr user "Paspro" (Panos Asproulis). This image is freely available at https://www.flickr.com/photos/dalbera/9620372847/sizes/o/. This file is licensed under the Creative Commons Attribution 2.0 Generic (CC BY 2.0) license (https://creativecommons.org/licenses/by/2.0/; https://creativecommons.org/licenses/by/2.0/legalcode). |
|------|---|
| 1.7 | Courtesy of John Valk. |
| 1.8 | Courtesy of Pixelin Pictures. |
| 1.11 | Courtesy of Flickr user "robertpaulyoung" (Robert Young). This image is freely available at https://www.flickr.com/photos/robertpaulyoung/151496351/sizes/o/. This file is licensed under the Creative Commons Attribution 2.0 Generic (CC BY 2.0) license (https://creativecommons.org/licenses/by/2.0/; https://creativecommons.org/licenses/by/2.0/legalcode). |
| 1.12 | Courtesy of MAP Office, Mapping HK, 2000. |
| 1.14 | Courtesy of Flickr user "David Berkowitz" (David Berkowitz). This image is freely available at https://www.flickr.com/photos/davidberkowitz/3692427372/sizes/o/. This file is licensed under the Creative Commons Attribution 2.0 Generic (CC BY 2.0) license (https://creativecommons.org/licenses/by/2.0/; https://creativecommons.org/licenses/by/2.0/legalcode). |
| 1.15 | Courtesy of Fai Chong. |
| 1.18 | Courtesy of Superflex. |
| 1.23 | Courtesy of Wikipedia and Wikimedia user "Jean-Christophe BENOIST". This Wikipedia and Wikimedia Commons image is from the user "Jean-Christophe BENOIST" and is freely available at http://commons.wikimedia.org/wiki/File:New-YorkBryant_Park.jpg under the Creative Commons Attribution 3.0 Unported (CC BY 3.0) license (http://creativecommons.org/licenses/by/3.0/deed.en; http://creativecommons.org/licenses/by/3.0/legalcode). |
| 1.24 | "Radiant Lines as part of The Light in Winter 2015": Courtesy of John Gollings and FED SQUARE PTY LTD. |
| 2.4b | Courtesy of Flickr user "Lucius Kwok" (Lucius Kwok). This image is freely available at https://www.flickr.com/photos/luciuskwok/3367603922/sizes/o/. This file is licensed under the Creative Commons Attribution-ShareAlike 2.0 Generic (CC BY-SA 2.0) license (https://creativecommons.org/licenses/ |

- by-sa/2.0/; https://creativecommons.org/licenses/by-sa/2.0/legalcode).
- 2.7 Courtesy of Flickr user "ironypoisoning" (Connie Ma). This image is freely available at https://www.flickr.com/photos/ironypoisoning/9758620256/sizes/o/. This file is licensed under the Creative Commons Attribution-ShareAlike 2.0 Generic (CC BY-SA 2.0) license (https://creativecommons.org/licenses/by-sa/2.0/; https://creativecommons.org/licenses/by-sa/2.0/legalcode).
- 2.8a Courtesy of Wikipedia and Wikimedia user "Aw1805". This Wikipedia and Wikimedia Commons image is from the user "Aw1805" and is freely available at http://commons. wikimedia.org/wiki/File:Cat_Street,_Ura_Harajuku_1.jpg under the Creative Commons Attribution 3.0 Unported (CC BY 3.0) license (http://creativecommons.org/licenses/by/3.0/deed.en; http://creativecommons.org/licenses/by/3.0/legalcode).
- 2.29a Courtesy of Flickr user "joiseyshowaa" (b k). This image is freely available at https://www.flickr.com/photos/joiseyshowaa/8521860913/sizes/o/. This file is licensed under the Creative Commons Attribution-ShareAlike 2.0 Generic (CC BY-SA 2.0) license (https://creativecommons.org/licenses/by-sa/2.0/; https://creativecommons.org/licenses/by-sa/2.0/legalcode).
- 2.29b Courtesy of Flickr user "Marcin Wichary" (Marcin Wichary).

 This image is freely available at https://www.flickr.com/photos/mwichary/5985172824/sizes/o/. This file is licensed under the Creative Commons Attribution 2.0 Generic (CC BY 2.0) license (https://creativecommons.org/licenses/by/2.0/; https://creativecommons.org/licenses/by/2.0/legalcode).
- 2.29c Courtesy of Flickr user "JessyeAnne" (Jessica Sheridan).

 This image is freely available at https://www.flickr.com/
 photos/16353290@N00/4043257769/sizes/o/. This file is
 licensed under the Creative Commons Attribution 2.0 Generic
 (CC BY 2.0) license (https://creativecommons.org/licenses/
 by/2.0/; https://creativecommons.org/licenses/by/2.0/
 legalcode).
- 2.30b Courtesy of Flickr user "Daquella manera" (Daniel Lobo). This image is freely available at https://www.flickr.com/photos/daquellamanera/7565793192/sizes/o/. This file is licensed under the Creative Commons Attribution 2.0 Generic (CC BY

LIST OF FIGURE CREDITS

- license (https://creativecommons.org/licenses/by/2.0/; https://creativecommons.org/licenses/by/2.0/legalcode).
- 2.31 Courtesy of Flickr user "daneshj". This image is freely available at https://www.flickr.com/photos/daneshj/6148858265/sizes/o/. This file is licensed under the Creative Commons Attribution 2.0 Generic (CC BY 2.0) license (https://creativecommons.org/licenses/by/2.0/; https://creativecommons.org/licenses/by/2.0/legalcode).
- 2.33 Courtesy of Flickr user "on1stsite." (Marja van Bochove). This image is freely available at https://www.flickr.com/photos/on1stsite/2849204789/sizes/o/. This file is licensed under the Creative Commons Attribution 2.0 Generic (CC BY 2.0) license (https://creativecommons.org/licenses/by/2.0/; https://creativecommons.org/licenses/by/2.0/legalcode).
- 2.34 Courtesy of Flickr user "havankevin" (Kevin). This image is freely available at https://www.flickr.com/photos/marionenkevin/3374622621/sizes/o/. This file is licensed under the Creative Commons Attribution 2.0 Generic (CC BY 2.0) license (https://creativecommons.org/licenses/by/2.0/; https://creativecommons.org/licenses/by/2.0/legalcode).
- 2.40b Courtesy of Flickr user "gucky" (Amanda Peterson). This image is freely available at https://www.flickr.com/photos/gucky/460709827/sizes/o/. This file is licensed under the Creative Commons Attribution 2.0 Generic (CC BY 2.0) license (https://creativecommons.org/licenses/by/2.0/; https://creativecommons.org/licenses/by/2.0/legalcode).
- 2.45 Courtesy of Flickr user "*_*" (Guilhem Vellut). This image is freely available at https://www.flickr.com/photos/o_0/13622090024/sizes/o/. This file is licensed under the Creative Commons Attribution 2.0 Generic (CC BY 2.0) license (https://creativecommons.org/licenses/by/2.0/; https://creativecommons.org/licenses/by/2.0/legalcode).
- 2.57 Courtesy of Riken Yamamoto & Field Shop.
- 2.75 Courtesy of Riken Yamamoto & Field Shop.
- 2.81 Courtesy of Flickr user "kylehase" (Kyle Hasegawa). This image is freely available at https://www.flickr.com/photos/kylehase/14346929426/sizes/o/. This file is licensed under the Creative Commons Attribution 2.0 Generic (CC BY 2.0) license (https://creativecommons.org/licenses/by/2.0/; https://creativecommons.org/licenses/by/2.0/legalcode).
- 2.82 Courtesy of Flickr user "kjarrett" (Kevin Jarrett). This image is freely available at https://www.flickr.com/photos/kjarrett/7647180302/sizes/o/. This file is licensed under the Creative Commons Attribution 2.0 Generic (CC BY 2.0) license (https://creativecommons.org/licenses/by/2.0/; https://creativecommons.org/licenses/by/2.0/legalcode).
- 2.84 Courtesy of Philip Szymanski.
- 2.88a Courtesy of Flickr user "La Citta Vita." This image is freely available at https://www.flickr.com/photos/

- la-citta-vita/454541809/sizes/o/. This file is licensed under the Creative Commons Attribution-ShareAlike 2.0 Generic (CC BY-SA 2.0) license (https://creativecommons.org/licenses/by-sa/2.0/; https://creativecommons.org/licenses/by-sa/2.0/legalcode).
- 2.88b Courtesy of Flickr user "La Citta Vita." This image is freely available at https://www.flickr.com/photos/la-citta-vita/4545541809/sizes/o/. This file is licensed under the Creative Commons Attribution-ShareAlike 2.0 Generic (CC BY-SA 2.0) license (https://creativecommons.org/licenses/by-sa/2.0/; https://creativecommons.org/licenses/by-sa/2.0/legalcode).
- 2.94 Courtesy of Torben Eskerod and Superflex.
- 2.99 Courtesy of Flickr user "Dougtone" (Doug Kerr). This image is freely available at https://www.flickr.com/photos/dougtone/6852497566/sizes/o/. This file is licensed under the Creative Commons Attribution-ShareAlike 2.0 Generic (CC BY-SA 2.0) license (https://creativecommons.org/licenses/by-sa/2.0/, https://creativecommons.org/licenses/by-sa/2.0/legalcode).
- 2.105 Courtesy of Wikipedia and Wikimedia user "Momotarou2012."

 This Wikipedia and Wikimedia Commons image is from the user "Momotarou2012" and is freely available at http://commons.wikimedia.org/wiki/File:Hinokichou-Park-pond. jpg under the Creative Commons Attribution-ShareAlike 3.0

 Unported (CC BY-SA 3.0) license (http://creativecommons.org/licenses/by-sa/3.0/deed.en; http://creativecommons.org/licenses/by-sa/3.0/legalcode).
- 2.106 Courtesy of Wikipedia and Wikimedia user "Calvin Teo." This Wikipedia and Wikimedia Commons image is from the user "Calvin Teo" and is freely available at http://commons.wikimedia.org/wiki/File:VivoCity_Roof_Garden_3.jpg under the Creative Commons Attribution-ShareAlike 3.0 Unported (CC BY-SA 3.0) license (http://creativecommons.org/licenses/by-sa/3.0/deed.en; http://creativecommons.org/licenses/by-sa/3.0/legalcode).
- 2.113 Courtesy of Wikipedia and Wikimedia user "Calvin Teo."
 This Wikipedia and Wikimedia Commons image is from the user "Calvin Teo" and is freely available at http://commons. wikimedia.org/wiki/File:VivoCity_Roof_Garden_2.jpg under the Creative Commons Attribution-ShareAlike 3.0 Unported (CC BY-SA 3.0) license (http://creativecommons.org/licenses/by-sa/3.0/deed.en; http://creativecommons.org/licenses/by-sa/3.0/legalcode).
- 2.123 Courtesy of Wikipedia and Wikimedia user "Calvin Teo." This Wikipedia and Wikimedia Commons image is from the user "Calvin Teo" and is freely available at http://commons. wikimedia.org/wiki/File:VivoCity_Bayfront_Terrace.jpg under the Creative Commons Attribution-ShareAlike 3.0 Unported (CC BY-SA 3.0) license (http://creativecommons.org/licenses/

| | by-sa/3.0/deed.en; http://creativecommons.org/licenses/by-sa/3.0/legalcode). | 2.142 | Courtesy of Wikipedia and Wikimedia user "Calvin Teo." This Wikipedia and Wikimedia Commons image is from the |
|--------|--|--------|---|
| 2.125 | Courtesy of Flickr user "qinrongs" (Qinrong Lim). This image is freely available at https://www.flickr.com/photos/qinrongs/6034378423/sizes/o/. This file is licensed under the Creative Commons Attribution-NoDerivs 2.0 Generic (CC BY-ND 2.0) license (https://creativecommons.org/licenses/by-nd/2.0/; https://creativecommons.org/licenses/by-nd/2.0/ | | user "Calvin Teo" and is freely available at http://commons. wikimedia.org/wiki/File:Vivocity_Bayfront_view_at_night. jpg under the Creative Commons Attribution-ShareAlike 3.0 Unported (CC BY-SA 3.0) license (http://creativecommons.org/licenses/by-sa/3.0/deed.en; http://creativecommons.org/licenses/by-sa/3.0/legalcode). |
| | legalcode). | 2.143 | Courtesy of Flickr user "iedwin.11" (Edwin Lee). This |
| 2.128b | Courtesy of Flickr user "acnatta" (André Natta). This image is freely available at https://www.flickr.com/photos/acnatta/6286042804/sizes/o/. This file is licensed under the Creative Commons Attribution 2.0 Generic (CC BY 2.0) license (https://creativecommons.org/licenses/by/2.0/; https:// | | image is freely available at https://www.flickr.com/photos/edwin11/3171189412/sizes/o/. This file is licensed under the Creative Commons Attribution 2.0 Generic (CC BY 2.0) license (https://creativecommons.org/licenses/by/2.0/; https://creativecommons.org/licenses/by/2.0/legalcode). |
| | creativecommons.org/licenses/by/2.0/legalcode). | 2.144 | Courtesy of Ben Melger. |
| 2.129a | Courtesy of Wikipedia and Wikimedia user "Another Believer." This Wikipedia and Wikimedia Commons image is from the user Another Believer and is freely available at http://commons.wikimedia.org/wiki/File:Bryant_Park,_New_York_City_(May_2014)08.JPG. This file is licensed under the Creative Commons Attribution-ShareAlike 3.0 Unported license. | 2.145 | Courtesy of Flickr user "Josiah Lau Photography." This image is freely available at https://www.flickr.com/photos/josiahlau/5836835438/sizes/o/. This file is licensed under the Creative Commons Attribution-NoDerivs 2.0 Generic (CC BY-ND 2.0) license (https://creativecommons.org/licenses/by-nd/2.0/; https://creativecommons.org/licenses/by-nd/2.0/ |
| 2.130a | Courtesy of Flickr user "imgdive" (Banzai Hiroaki). This | | legalcode). |
| | image is freely available at https://www.flickr.com/photos/ imgdive/4591084984/sizes/o/. This file is licensed under the Creative Commons Attribution 2.0 Generic (CC BY 2.0) license (https://creativecommons.org/licenses/by/2.0/; https:// creativecommons.org/licenses/by/2.0/legalcode). | 2.148 | Courtesy of Terence Ong. This Wikipedia and Wikimedia Commons image is from the user Terence Ong and is freely available at http://commons.wikimedia.org/wiki/ File:Esplanade_outdoor_performance.JPG. Permission is granted to copy, distribute and/or modify this document |
| 2.130b | Courtesy of Flickr user "imgdive" (Banzai Hiroaki). This image is freely available at https://www.flickr.com/photos/imgdive/548444411/sizes/o/. This file is licensed under the Creative Commons Attribution 2.0 Generic (CC BY 2.0) license (https://creativecommons.org/licenses/by/2.0/; https://creativecommons.org/licenses/by/2.0/legalcode). | | under the terms of the GNU Free Documentation License, Version 1.2 or any later version published by the Free Software Foundation; with no Invariant Sections, no Front-Cover Texts, and no Back-Cover Texts. A copy of the license is included in the section entitled GNU Free Documentation License. This file is licensed under the Creative Commons Attribution-ShareAlike |
| 2.132b | Courtesy of William Cho. This image is from the user | | 3.0 Unported license and under the Creative Commons Attribution 2.5 Generic license. |
| | williamcho (William Cho) and is freely available at https://www. | 2.149a | Courtesy of Chen Xiuqi. |
| | flickr.com/photos/adforce1/3743214056/sizes/o/. This file is licensed under the Creative Commons Attribution-ShareAlike | 2.1478 | Courtesy of Wojtek Gurak. |
| | 2.0 Generic (CC BY-SA 2.0) license (https://creativecommons. | 2.156 | Courtesy of Relan Masato. |
| | org/licenses/by-sa/2.0/). | 2.157 | Courtesy of Relan Masato. |
| 2.137 | Courtesy of Flickr user "準建築人手札網站 Forgemind | 2.171 | Courtesy of Relan Masato. |
| | ArchiMedia." This image is freely available at https://www.flickr. | 2.171 | Courtesy of Relan Masato. |
| | com/photos/eager/8615547244/sizes/o/. This file is licensed under the Creative Commons Attribution 2.0 Generic (CC BY | 2.172 | |
| - | 2.0) license (https://creativecommons.org/licenses/by/2.0/; | 2.173 | Courtesy of Larry Yeung |
| | https://creativecommons.org/licenses/by/2.0/legalcode). | 2.182 | Courtesy of Larry Yeung. Courtesy of Larry Yeung. |
| 2.138a | Courtesy of Chen Xiuqi. | 2.182 | Courtesy of Larry Yeung. |
| 2.138b | Courtesy of Relan Masato. | 2.185 | Courtesy of Larry Yeung. |
| 2.140a | Courtesy of Chen Xiuqi. | 2.185 | Courtesy of Larry Yeung. Courtesy of Housing and Development Board (HDB), |
| 2.141 | Courtesy of David Wilkinson. | 2.100 | Singapore. |

LIST OF FIGURE CREDITS

| 2.187 | Courtesy of Housing and Development Board (HDB), | 2.197 | Courtesy of Larry Yeung. |
|-------|--|-------|--------------------------|
| | Singapore. | 2.198 | Courtesy of Larry Yeung. |
| 2.188 | Courtesy of Larry Yeung. | 2.199 | Courtesy of Larry Yeung. |
| 2.190 | Courtesy of Larry Yeung. | 2.203 | Courtesy of Larry Yeung. |
| 2.191 | Courtesy of Chen Xiuqi. | 2.205 | Courtesy of Larry Yeung. |
| 2.192 | Courtesy of Housing and Development Board (HDB), | 2.206 | Courtesy of Larry Yeung. |
| | Singapore. | 2.207 | Courtesy of Larry Yeung. |
| 2.193 | Courtesy of Larry Yeung. | 2.209 | Courtesy of Larry Yeung. |
| 2.195 | Courtesy of Larry Yeung. | | ,,g- |

Prologue

Places that evoke long-lasting memories for their visitors are often found in the accessible urban spaces of the city, since these spaces exude their individual charm and endow the city with a collective sense of character. One remembers with fondness the plaza mayors of Spanish cities, the canal streets of many a Dutch city, the sidewalk cafés in Paris and the arcades in Milan, the night markets of Taipei, the shotengai or covered shopping streets in Japanese cities, and the xiangs and hutongs of Chinese cities. More specifically, one recalls place-specific sites like Piazza San Marco in Venice, Times Square in New York, Quiapo in Manila, the Bund in Shanghai, the banks of Kamogawa River in Kyoto, and Insadong in Seoul. Descending deeper into the memory bank, one might recollect particular urban encounters such as a brief afternoon respite reading a guidebook on a bench in a pocket park in Paris or an evening stroll along the guays of Singapore River. Although seemingly generic, these public spaces play a significant role in our experience of the city.

Urban spaces made memorable by the visitor hold even more importance for inhabitants and citizens of the city. These arenas where civic lives intersect not only encapsulate the collective memories of its people but also the stories told by one generation to the next, the hopes and aspirations of the city and its constituents, and the tender moments shared by couples and families. It is in these crucibles that urban identities and social cohesion are forged and the resilience of a city tested. Needless to say, if the urban spaces of a city are successful in achieving these aims, then the city, too, succeeds.

Cities with long histories have a range of such public spaces that, over time, are shaped by and adapted to the different needs of its inhabitants; in this respect, newer urban developments that sprout overnight from speculative real estate play often lack the treasured traits of established public spaces. The beloved spaces of a city take generations to be nurtured into substantial places that are valued by the communities around it, and so the seeds which bear such fruits need to be planted together with the planning and provision of fertile spaces for its growth. In traditional towns and cities, a defined open space, a few benches, a favorite corner café, a water fountain, an old tree, a few raised steps, a thoughtful piece of public art and so on can evolve into the nucleus within or around which meaningful public space forms.

Casual observers familiar with the Western urban paradigm have the misconception that traditional Asian cities—which evolved over millennia under contrastingly different power structures and belief systems—enjoy few, if any, public spaces. (East) Asian cities, founded and transformed through various religious and political ideologies, have formulated their own logic toward the treatment of urban spaces: at bridgeheads, along river banks, around wells, in front of temples, within temple compounds, before administrative buildings and the like.

In the past few decades, the traditional urban tissue of many matured Asian cities has been reworked by rapid urbanization. The hybrid conditions that emerge from these fast-changing cities provide, in some instances, great opportunities for public space creation while, in other circumstances, causing irreversible consequences for the grain and texture of age-old urban districts. In many cases, swaths of existing urban fabric along with their multifarious public spaces have been erased to make way for extensive high-density real estate developments driven by expedience and the maximization of profit. While there are successful examples of new public space created in this dynamic context—a number of which are featured in this volume—the outcome, more often than not, is the proliferation of generic gated communities and the replacement of veritable public domains by exclusive private open spaces. Fortunately, in recent years, forward-looking city managers, developers and architects have collectively produced new typologies of public spaces that are open to the wider community amidst such high-density residential developments. Notable examples are Central Park Beijing apartments (Xincheng gouji) and the Linked Hybrid in Beijing1 or the private residential developments along Robertson Quay and in One North Residences at Biopolis in Singapore, to name a few.

Commercial retail developments are more concerned than gated residential ones with creating public spaces, if nothing else, to attract the public to frequent their shops. Many such spaces, unfortunately, are privately owned public spaces or pseudo-public spaces operating under a set of motivations that emphasize individualism and consumption over civic interests and collective rewards. This disparity between the private provider and public user of urban open spaces, particularly within the premises of

commercial retail developments, can create real barriers in terms of accessibility and inclusiveness. The display of blatant signage warning users of the types of activities that are prohibited and the expression of non-verbal cues, such as indicators of dress code and affordability, impose controls that may make certain public spaces inviting to some but perhaps not to others. In this respect, city governments can contribute (directly and indirectly) to the protection of quality public spaces, since it is at this level of urban planning where complex decisions are made pertaining to land use, by-laws and incentives on development issues. Several examples such as Roppongi Hills² and Tokyo Midtown³ in Tokyo and Ion Orchard⁴ in Singapore featured in this volume show the insertion of such facilities and the creation of urban space often near transport nodes.

At the periphery of existing cities, unshackled by historical constraints, new urban forms flourish with mixed results. Particularly in East Asia, these fringe areas are often met with high-density developments. Occasionally, well-conceived master plans give rise to new memorable urban spaces well loved by their users. The lakeside promenade in Suzhou Industrial Park, Treelodge@ Punggol⁵ in Singapore and Shinonome Codan Court⁶ in Tokyo are examples that come to mind.

Equally creditable are the conversions of old industrial buildings and dilapidated production facilities such as 798 Art Zone in Beijing and the old log pond in Yilan. Meanwhile, in other cities, existing infrastructures are improved and provide the city with surprising encounters. New York's High Line Park⁷ and Singapore's Kallang River in Bishan Park are noteworthy examples; they are the pride of the city in general, while also serving as an immense resource for local residents who use them on a regular if not daily basis.

The world has undergone rapid changes in the past few decades: the rising middle class and transformed lifestyles in Asia, the emerging complex hybrid urban conditions in dense Asian cities, the processes of globalization and neo-liberalism that are not only dominating much of the developed world but are also eroding the quality of public space, and the list goes on. These changes have both enriched as well as undermined our urban experience. Although there are instances where the urban fabric and spaces of traditional cities have had to give way to modern developments, new typologies have also emerged in the process. Past research has primarily focused on familiar models of urban space, such as squares, plazas, streets, parks and arcades; this volume extends the repertoire to include the expanding typologies of urban spaces emerging today.

These emerging contemporary spaces are shaped by a dynamic process which aims to synergize the various aspects of urban design from spatial configuration and programming to utilization and management. At the same time, however, the hybrid spaces

produced are often complicated by tensions and negotiations among diverse users and agencies. The ever-evolving urban conditions of high-density cities call for the re-conceptualization of conventional modes of understanding urban design and public space. Re-Framing Urban Space presents an innovative research framework for inciting new knowledge on the complex relationship between density and quality of public space. By re-examining the characteristics and performances of public space, we gain an enriched understanding of how enduring qualities are expressed and negotiated through design and other measures in the increasingly hybrid and high-density urban context. With this broad intention, Re-Framing Urban Space aims to achieve three objectives.

First, as the title implies, re-framing urban space is an attempt at rethinking and re-conceptualizing the role and meaning of public spaces within the current global trends and challenges accompanying contemporary urban development. In doing so, the book addresses emerging hybrid urban space typologies in high-density contexts that fall outside conventional notions of public space. Second, this volume aims to demonstrate the application of the Urban Space Framework and Instrument for: (1) the systematic categorization of hybrid conditions and new urban space typologies, and (2) the evaluation and analysis of urban space performance. In this way, the book serves as a guide to assess, plan, design (and redesign) urban spaces at various stages of the decision-making process. Third, with over 50 urban spaces explored through best practice case studies, the book adds practical value to our knowledge of public space in an insightful and visually compelling format.

While the geographic focus of this volume draws attention to (East) Asian cities—in which Asia's rapid pace of urbanization and, hence, potential to exhibit new models of urban space was discussed—the learning points gleaned from such a study also correspond to the experiences of other cities, for example, in Latin America and Africa, with comparatively high-density urban development. Globalization, after all, has enabled the exchange of ideologies and cultures across borders such that urban phenomena once thought to be unique to a particular region are transposed, thus implicating cities on a worldwide scale. Likewise, the scope of the research framework and tools introduced in this book are not city- or region-specific but, rather, holistic and adaptable in their application capabilities to assess and analyze various urban spaces in high-density environments.

With an intention to guide different phases in urban space design, the structure of Re-Framing Urban Space reflects the main stages of the design process, namely: Review, Understanding, Assessment and Analysis, and Application. Chapter 1, "Review: Urban Space and Current Tendencies in Urban Development," guides the reader through key theoretical and design concepts

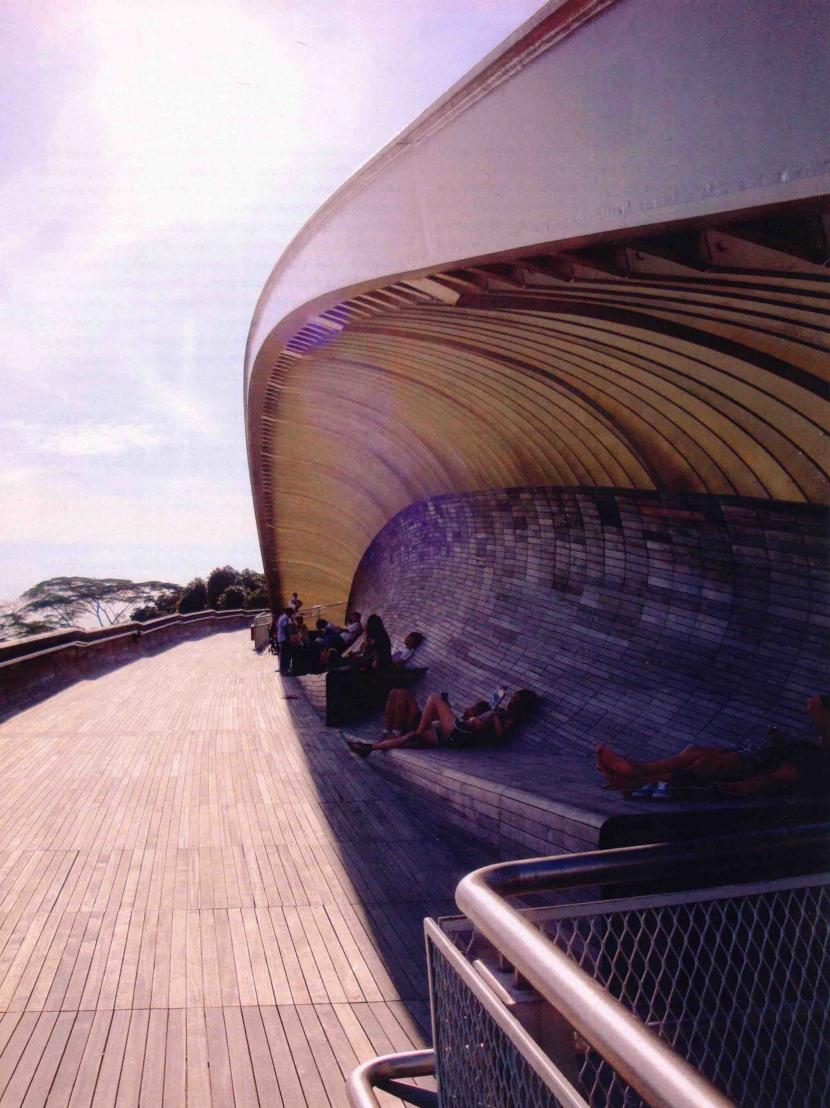
currently dominating the discourse on public space. The chapter also discusses current trends and challenges in contemporary urban development (such as densification, intensification, hybridization and sustainability), cross-referenced to a number of recent urban design projects in high-density contexts globally. Building on the literature review of relevant urban design theories, concepts, guidelines and practices, Chapter 2, "Understanding: Quality of Urban Space and Design Principles," develops an integrated urban space research framework by which to identify the critical properties and design principles that shape new and emerging quality public spaces in high-density urban environments. Chapter 3, "Assessment and Analysis: Assessing the Quality of Urban Space," offers practical tools to capture, assess and analyze urban space performance based on the systematic framework established in Chapter 2. In closing, Chapter 4, "Application: Guide to Design Actions," suggests practical means of applying the systematic framework and instrument to different design purposes to facilitate optimum design actions to enhance the urban space design quality that is relevant and of interest to urban planners, urban designers, architects and developers.

Re-Framing Urban Space confronts the very real urban conditions of densification and hybridity that are playing out in some cities today, and which are sure to appear in many more cities in the near future. The process of framing the notion of urban space within the context of these emerging conditions, indeed, has created (necessary) conceptual demands for this volume. First, can certain valued qualities of public space be regarded as "timeless"? If so, can these timeless characteristics be achieved under evolving conditions found in hybridized high-density urban environments?

The book is premised on the assertion that public spaces with timeless appeal do and can indeed prosper in hybrid high-density cities; yet, second, how do we move beyond conventional means of studying these emerging typologies of urban space? Third, what innovative approaches in applied research can yield new insights about the timeless qualities of public space? Our initial discussions of framing urban space within today's hybrid and high-density urban contexts consequently led us to the *re-framing* of urban space. In re-framing urban space, we see an opportunity to advance the frontier of knowledge on urban space by opening up possibilities in research and practice for the inclusion of emergent public space typologies where hybrid and high-density urban conditions prevail.

NOTES

- 1 See Chapter 2, "Urban Space Quality," 15 and 42, and section entitled "Orgware Qualities of Urban Space: An Example" for more details about Dangdai Moma (Linked Hybrid) in Beijing.
- 2 See Chapter 2, "Urban Space Quality," 12, 20, 27 and 35 for more details about Roppongi Hills in Tokyo.
- 3 See Chapter 1, section entitled "Mixed-use Developments," and Chapter 2, "Urban Space Quality," 22 and 36 for more details about Tokyo Midtown in Tokyo.
- 4 See Chapter 2, "Urban Space Quality," 2, 9, 29 and 38 for more details about Ion Orchard in Singapore.
- See Chapter 2, "Urban Space Quality," 1 and 10, and section entitled "Qualities of Urban Space: An Example of Full Analysis" for more details about Treelodge@Punggol in Singapore.
- 6 See Chapter 2, "Urban Space Quality," 6, 38, 39 and 40, and section entitled "Hardware Qualities of Urban Space: An Example" for more details about Shinonome Codan Court in Tokyo.
- 7 See Chapter 1, section entitled "Recreational Green Hybrids," and Chapter 2, "Urban Space Quality," 15, 16, 29, 34, 37, 43 and 45 for more details about the High Line Park in New York.



Contents

Acknowledgments viii List of Figure Credits ix Prologue xiii

| 1 | REVIEW: Urban Space and Current Tendencies in Urban Development | 1 |
|---|---|-----|
| | Contemporary Urban Conditions | 1 |
| | Challenges of Urbanization | 1 |
| | What is Density? | 2 |
| | Is the Denser the Better? | 2 |
| | Intensity—Complexity—Urbanity | 3 |
| | Redefining Urban Space | 4 |
| | Public Space—Urban Space—Hybrid Space | 4 |
| | Public Space: Definitions | 4 |
| | Urban Space | |
| | Hybrid Urban Space | 5 6 |
| | Spatial Hybrids | 7 |
| | Programmatic Hybrids | 7 |
| | Operational Hybrids | 7 |
| | Emerging Hybrid Urban Space Typologies | 8 |
| | Intensified Residential Developments | 8 |
| | Mixed-use Developments | 11 |
| | Infrastructural Transit-led Spaces | 12 |
| | Recreational Green Hybrids | 19 |
| | Hybrid Urban Voids | 21 |
| 2 | UNDERSTANDING: Quality of Urban Space and Design Principles | |
| 2 | Value and Benefits of Quality Urban Design | 33 |
| | Social and Health Benefits | 33 |
| | Economic Benefits | 33 |
| | Environmental Benefits | 33 |
| | Quality of Urban Space | 34 |
| | The "Classics" and the "Followers" | 34 |
| | Placemaking | 35 |
| | Convivial Space | 35 |
| | "Publicness" of Public Space | 36 |
| | Urban Space Framework: HARDWARE—SOFTWARE—ORGWARE | 37 |
| | HARDWARE: Physical and Geometrical Properties of Urban Spaces | 37 |
| | Nodal Value | 38 |
| | Spatial Value | 38 |
| | Environmental Value | 38 |
| | A Accessibility | 39 |
| | 1 Pedestrian Access Points | 39 |
| | 2 Universal Access | 42 |
| | 3 Types and Distribution of Universal Access | 43 |
| | 4 Prioritizing the Pedestrians | 44 |

CONTENTS

| B Connectivity | 47 |
|---|------|
| 5 Movement Patterns | 47 |
| 6 Node Connectivity | 49 |
| 7 Sightlines and Way-Finding | 51 |
| C Mobility Means | 52 |
| 8 Bicycle-Friendly Design | 52 |
| 9 Public Transport | 54 |
| 10 Vehicular Access | 57 |
| 11 Drop-Off and Taxi Stands | 58 |
| D Legibility and Edges | 59 |
| 12 Spatial Layout | 59 |
| 13 Focal Points of Activity | 61 |
| 14 Visual Landmarks | 63 |
| 15 Permeability | 64 |
| E Spatial Variety | 66 |
| 16 Spatial Variety | 66 |
| 17 Spatial Adaptability | 70 |
| F Environmentally Friendly Design | 73 |
| 18 Greenery and Water: Availability and Access | 73 |
| 19 Greenery: Form, Pattern and Diversity | 75 |
| 20 Biodiversity | 78 |
| 21 Environmentally Friendly Strategies | 80 |
| | |
| 22 Environmental Integration | 81 |
| G User Comfort | 82 |
| 23 Protection from Extreme Weather Conditions | 82 |
| 24 Variety of Shade/Sunlight Conditions | 85 |
| 25 Air Control and Optimization | 87 |
| 26 Noise Control and Optimization | 90 |
| HARDWARE QUALITIES OF URBAN SPACE: AN EXAMPLE—SHINONOME CODAN COURT, TOKYO, JAPAN | |
| SOFTWARE: Use and Socio-Perceptual Values of Urban Space | 101 |
| H Diversity and Intensity of Use | 101 |
| 27 Diversity of Activities: Within Urban Space | 102 |
| 28 Choice of Activities: Around Urban Space | 106 |
| l Social Activities | 108 |
| 29 Seating Amenities | 108 |
| 30 Seating: Condition and Variety | 110 |
| 31 Interactivity | 114 |
| 32 Intimacy and Exposure | 116 |
| J Identity (Image and Character) | 118 |
| 33 Imageability | 118 |
| 34 History and Symbolic Value | 119 |
| 35 Art, Culture and Alternative Culture | 122 |
| 36 Unique Nature | 126 |
| SOFTWARE QUALITIES OF URBAN SPACE: AN EXAMPLE—SKYPARK AT VIVOCITY, SINGAPORE | 128 |
| ORGWARE: Operational and Management Value of Urban Space | 136 |
| K Provision of Amenities, Services, Public Facilities and Infrastructure | 137 |
| 37 Hygiene Facilities | 137 |
| 38 Lighting | 141 |
| 39 Informational Facilities | 145 |
| 40 Healthcare and Social Services | 147 |
| L Safety and Security | 148 |
| 41 Safety and Image | 148 |
| 42 Security | 150 |
| M Management and Regulations | 153 |
| 43 Rules and Regulations | 153 |
| 44 Access Regulation and Management | 155 |
| 45 Time and Program Regulation and Management | 158 |
| and and region regions and management | . 00 |

| | 46 Permissions and Management 47 Affordability and Equality | 160 162 |
|---|--|------------|
| | ORGWARE QUALITIES OF URBAN SPACE: AN EXAMPLE—DANGDAI MOMA (LINKED HYBRID), BEIJING, | 1/1 |
| | CHINA QUALITIES OF URBAN SPACE: AN EXAMPLE OF FULL ANALYSIS — TREELODGE@PUNGGOL, SINGAPORE | 164 174 |
| 3 | ASSESSMENT AND ANALYSIS: Assessing the Quality of Urban Space | 193 |
| | Research Process | 193 |
| | How to Document Urban Space | 193 |
| | Preselection of Case Studies | 193 |
| | Documentation Techniques | 194 |
| | Focus Area of Observation | 195 |
| | Initial Mapping and Photo-documentation | 195 |
| | Review of Secondary Sources | 196 |
| | Urban Space Instrument | 196 |
| | How to Classify Urban Space | 196 |
| | HARDWARE Descriptors and Tags | 199 |
| | SOFTWARE Descriptors and Tags | 200 |
| | ORGWARE Descriptors and Tags | 200 |
| | How to Qualitatively Assess Urban Space | 200 |
| | Scoring System | 200 |
| | Evaluation Checklist | 200 |
| | Circular Chart: Urban Space Value Diagrams | 200 |
| | How to Analyze Urban Space Performance | 203 |
| | Hierarchy of Criteria: Design Actions for Default Urban Space Typologies (Primary Use) | 206 |
| | Comparative Insights | 209 |
| | Hierarchy of Criteria: Design Actions for Hybrid Urban Space Typologies and Conditions | 209 |
| | Hybrid Typology: Primary Use + Scale Comparative Insights | 209 |
| | TUSA: Tool for Urban Space Analysis | 212 |
| | The TUSA Interface | 212 |
| | TUSA Modes and Capacities | 213 |
| | Dynamic System | 213 |
| | Interactive Catalog: Search and Repository | 213 |
| | Tool for Critical Analysis | 213 |
| | Speculative Tool | 214 |
| | Discussions and Implications | 215 |
| | Urban Space Catalog | 217 |
| | | |
| 4 | APPLICATION: Guide to Design Actions | 225 |
| | Improving the Quality of Urban Space by Strategic Design Guidance | 225 |
| | Application of the Urban Space Instrument | 225 |
| | Design Brief Development | 226 |
| | Strategic Intervention: Evaluation and Enhancement | 227 |
| | Comparison and Benchmarking | 236 |
| | Discussions and Implications | 237 |
| - | EPILOGUE | 243 |
| | | |

Index 245