



Touching the City

Thoughts on
Urban Scale

TIMOTHY MAKOWER

WILEY



Touching the City

WILEY



Touching the City

Thoughts on
Urban Scale

TIMOTHY MAKOWER

WILEY

©2014 John Wiley & Sons Ltd

Registered office

John Wiley & Sons Ltd, The Atrium, Southern Gate, Chichester, West Sussex, PO19 8SQ,
United Kingdom

For details of our global editorial offices, for customer services and for information about how to apply for permission to reuse the copyright material in this book please see our website at www.wiley.com.

The right of the author to be identified as the author of this work has been asserted in accordance with the Copyright, Designs and Patents Act 1988.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, except as permitted by the UK Copyright, Designs and Patents Act 1988, without the prior permission of the publisher.

Wiley publishes in a variety of print and electronic formats and by print-on-demand. Some material included with standard print versions of this book may not be included in e-books or in print-on-demand. If this book refers to media such as a CD or DVD that is not included in the version you purchased, you may download this material at <http://booksupport.wiley.com>. For more information about Wiley products, visit www.wiley.com.

Designations used by companies to distinguish their products are often claimed as trademarks. All brand names and product names used in this book are trade names, service marks, trademarks or registered trademarks of their respective owners. The publisher is not associated with any product or vendor mentioned in this book. This publication is designed to provide accurate and authoritative information in regard to the subject matter covered. It is sold on the understanding that the publisher is not engaged in rendering professional services. If professional advice or other expert assistance is required, the services of a competent professional should be sought.

Executive Commissioning Editor: Helen Castle

Production Editor: Tessa Allen

Assistant Editor: Calver Lezama

ISBN 978-1-118-73772-9 (paperback)

ISBN 978-1-118-73758-3 (ebk)

ISBN 978-1-118-73769-9 (ebk)

ISBN 978-1-118-73770-5 (ebk)

ISBN 978-1-118-94769-2 (ebk)

Cover design, page design and layouts by Karen Willcox, karenwillcox.com

Cover image ©Tim Makower

Printed in Italy by Printer Trento Srl



Acknowledgements

It is impossible to put into words my gratitude to Sibella, Noah, Sylvie and Bonnie for the support they have given to this project, and for putting up with me writing while eating porridge at the breakfast table. Graciela Moreno of UCL and Helen Castle of John Wiley & Sons have been central to the work; without them it would not have happened. Also thanks are due to Miriam Murphy, Caroline Ellerby, Calver Lezama and Edward Denison. I would specially like to thank my parents Peter and Katharine, my brother Andrew and his family, Richard and Anne, and Randle and Amanda, Charlotte and Alice Baker Wilbraham and Paul Randour for their cherished encouragement.

Great thanks go to Bob Allies and Graham Morrison for giving me my foundation in architecture and urbanism, and to all those at Allies and Morrison whom I have worked with over the years. I would also like to thank Mike Hussey of Almacantar, Greg Tillotson and Alastair Baird of Barratt London, Roger Madelin and David Partridge of Argent, Shem Krey and Ramez and Motaz Al Khayyat of UrbaCon, Yousef Al Horr of GORD, Saad Al Muhannadi of Qatar Foundation and Issa Al Mohannadi of Qatar Tourism Authority, Alaa Larri and Fatima Fawzi and my other former colleagues at Msheireb Properties, and Bassam al Mannai and Othman Zarzour of the Supreme Committee for Delivery and Legacy.

Many thanks also for support and help from Mohammad Ali Abdullah, Ibtehaj Al Ahmadani, Bez Baik, Ben Barber, Oliver Barratt, Adrian and Vero Biddell, Peter Bishop, Alain de Botton, Claire Bufflier, Ed Carr, Mark Cazalet, Annie Chillingworth, Chris Choa, Alan Cobb, Tom Cornford, Kees Christiaanse, Hina Farooqi, Terry Farrell, Paul Fisher, Simon Gathercole, Clare Gerrard, Daniel and Olivia Gerrard, Kerry Glencorse, Ana Gonzalez, Mariana Heilmann, Jerry Herron, Mark Hewitt, Hendrik Heyns, Niall Hobhouse, Kelly Hutzell, Ibrahim Jaidah, Charles Jencks, Shalini John, Anna Joynt, Crispin Kelly, Sasha and James Kennedy, Chris Lee, Annabel Lord, Donna MacFadyen, James Meek, Chris Millard, James and Mary Miller, Velina Mirincheva, Lucy Mori, Mohsen Mostafavi, Jean Nouvel, Chris Panfil, Tom and Katie Parsons, Fred Pilbrow, Jorn Rabach, Hafid Rakem, John Rose, Martin and Harriet Roth, Fatma Al Sahlawi, Rami al Samahy, Paulo Sousa, Stephen Taylor, Pete Veale, Tim Wells, Oliver Wong and Carter Worth.

Contents

Acknowledgements	005
Foreword: Scaling the XXL – Kees Christiaanse	009
Introduction	011
Chapter 1: On Scale and Size	024
Chapter 2: On Scale and Movement	045
Chapter 3: On Scale and Edges	076
Chapter 4: On Scale and Grain	101

Chapter 5: On Scale and Form	127
Chapter 6: On Scale, Skeletons and Surface	156
Chapter 7: On Scale and Detail	178
Conclusion: From Nature	200
Select Bibliography	208
Index	212
Picture Credits	216



Foreword

Scaling the XXL

The essence of scale is that it is simultaneously finite and infinite. When we observe a building from the perspective of scale, we observe it as it is, embedded in its localised context. But we are also aware of the fact that at the lower end of the scale its details do not end with the doorknob, and that at the upper end of the scale it is part of a neighbourhood, a city, a country and a greater economic and political region.

In architecture and urbanism, scale thus oscillates between the tangible and the material on the one hand and the abstract and the conceptual on the other. Good design reflects this parallel (in-)finite quality, the relation between the scale of observation and the universe, and the relation between the detail and the overarching concept. Bad design is merely S, M, L, XL or even XXL!

Billboard in Chelsea, New York, 2013

Manhattan vacillates successfully between scales like no other city in the world, with its urban grid providing an essential touchstone. Chelsea – once an industrial area of wharfs, distilleries and factories – is now an ‘upscale’ residential, retail and gallery district.

Proportion plays a key role in this reciprocal reflection. When, as a continental European, I first saw English and American early 20th-century architecture, I asked myself why is it mediated by such a strong feeling of scale, until I realised that it was designed in feet and inches, whereas continental modernist buildings were designed using millimetres, centimetres and metres, which in its minutiae is proportionally dead. I then understood Le Corbusier’s urge to conceive the Modulor.

The awareness of this parallel (in-)finity may also be the reason that most successful urban design projects are designed by architects and not by planners. Urban designers tend to grow out of architects, as their projects become larger and more complex, constantly calibrating their work with multiple scale-levels, from the strategic or tactical and the material to the abstract and conceptual. In this way they can even make their XXL project become tangible at a giant scale, or, as Tim Makower asserts here in his Conclusion, have the potential to bring together 'the notion of the child and the giant in us all'.

Kees Christiaanse

Kees Christiaanse is Chair of Architecture and Urban Design at ETH Zurich and Programme Leader of the Future Cities Laboratory Singapore ETH Centre for Sustainable Development. Previously a Partner at OMA in Rotterdam, Christiaanse founded KCAP Architects&Planners in 1989. KCAP is based in Rotterdam and has two branch offices in Zurich and Shanghai.

Introduction

London from the air, 2012
Big shapes: river, Roman roads and parks.

Richard Rogers and Renzo Piano, Centre Pompidou and Place Beaubourg, Paris, 1977 (photographed in 2012)

Super-scaled machine meets fine-grain city: a fertile combination.

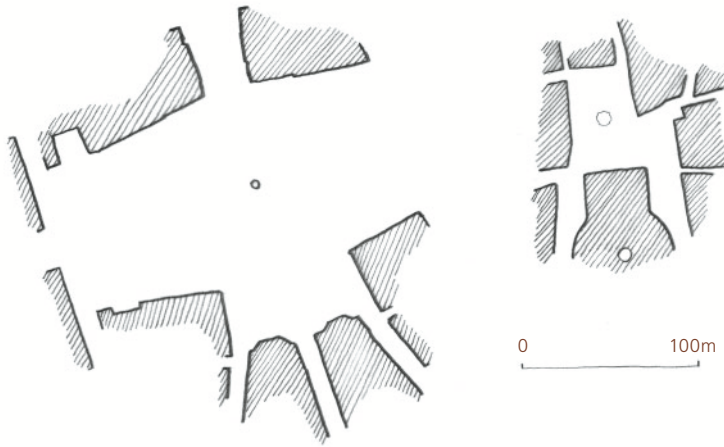
Allies and Morrison, Diwan Annex, Doha, 2013
Irresistible to touch: drawn by hand, cut by machine.

‘No pattern is an isolated entity. Each pattern can exist in the world, only to the extent that it is supported by other patterns: the larger patterns in which it is embedded, the patterns of the same size that surround it, and the smaller patterns which are embedded in it.’

Christopher Alexander, *A Pattern Language*, 1977¹

This book is about scale as it is manifested in cities. The word ‘scale’ can be defined as the ‘experience of size’. The book explores scale in cities, in the spaces between buildings, in buildings themselves and in their details. It seeks to ask how scale in the cities we inhabit can make us feel at home in the world or alien from it; connected or disconnected. Scale in cities is both





Scale comparison between Piazza della Rotonda and Piazza del Popolo, Rome: drawing by the author, 2014
Rome: a city of intimacy and grandeur.

relative and absolute. ‘Getting the scale right’ – although it is impossible to define such a thing – is a fundamental part of the magic of architecture and urban design. There are over-sized places, which make people feel small, and there are well-sized places, which can make people feel comfortable, and sometimes larger than life.

Christopher Alexander, in his seminal manifesto on scale and touch, *A Pattern Language*, identifies a problem: ‘the languages which people have today are so brutal, and so fragmented, that most people no longer have any language to speak of at all – and what they do have is not based on human or natural considerations’.² The beauty of his book, which seeks to address this problem by considering the connection between people and their built environment – the joining together of the fragmented world of experience – is that it connects not just from one thing to another, from outer to inner, but also from macro to micro; it zooms in.

Zooming In

So in what way does scale make a difference? There are the dangers of lumpiness and laziness in design which can arise from working too fast, and there is an economic paradox in the fact that developments which seek to cover too great an area in too little time – notionally benefiting from ‘economies of scale’ – can destroy their own value by ending up monotonous or characterless. As with cuisine, fast food has its limitations; slow food



Fast food, London
Not nourishing the body.

is more nutritious and generally more delicious. The same is true of urbanism. These conundrums are worthy of discussion. Of the many aspects of scale to be discussed in this book, two main points stand out. Firstly that scale matters, and is essential to good design and the understanding of cities. Secondly that both big and small are beautiful; both are right, neither is wrong; it all depends on their relationships.

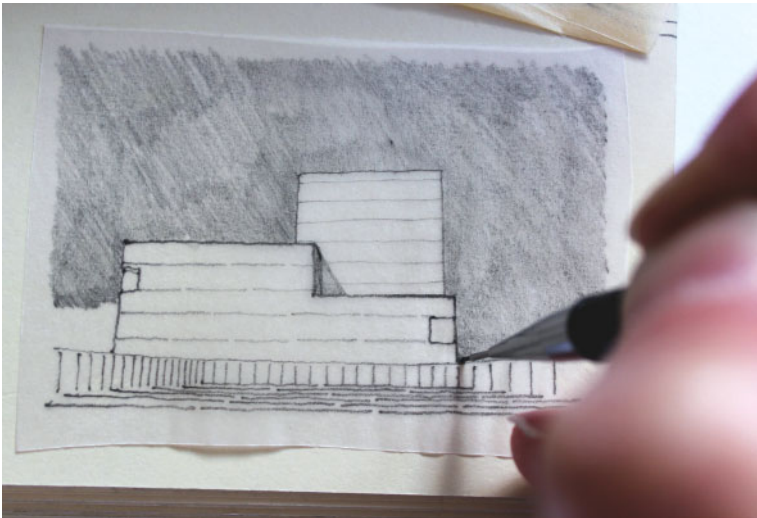
Fast urbanism, Doha
Not nourishing the community.

The book travels from Detroit via Paris, Doha, New York and other places to London, looking at cities both with the analytical eye of a designer and with the experiential eye of the 'nine- or ninety-year-old'; the person on the street. It looks at old cities and asks what is good about them; what can we learn from the old to inform the new? Like Christopher Alexander's *A Pattern Language*, the book zooms in from the macro scale of surfing Google Earth



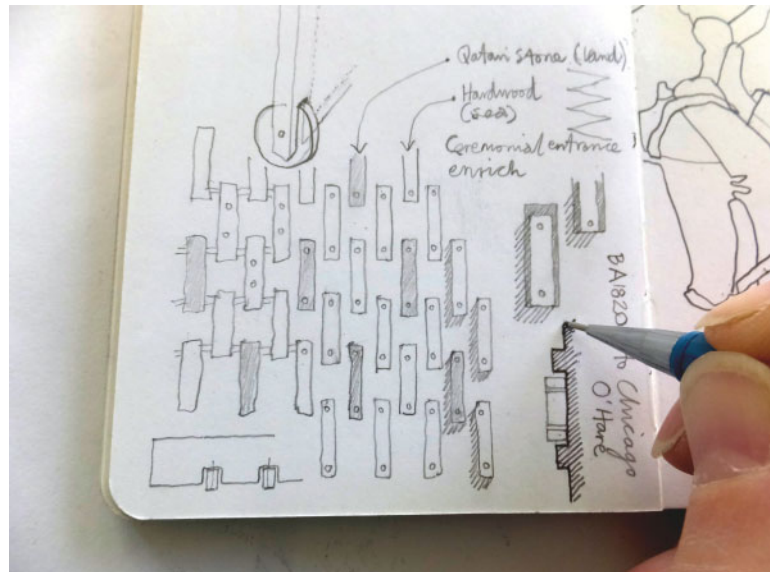


Makower Architects, Al Asmakh, Doha, 2014
The macro-strategy for Al Asmakh is to make the central spine – ‘Triple-A Street’ – into a linear public space, connecting into the heart of Msheireb, to the north.



Allies and Morrison, Qatar National Archive, Doha, 2011
The carved forms of the project were drawn over by hand, as if being sculpted by the pencil.

to micro moments such as finding fossils in a weathered wall. It examines the dynamics and movement patterns of cities, the making of streets and skylines, the formation of facades, and the honing of thresholds. It also touches on the process of design and the importance of drawing.



The title – *Touching the City* – reminds us that the city is indeed something physical, and it is alive. We can touch it and it can touch us. Rather than just being in it, we can be of it. To be able to touch a burnished brass door handle at one moment, to enjoy the crank of a wall or the bristling of chimneypots in the next, and to close our eyes, zoom right out and understand the entire shape of a city, both in time and space, is not only essential for a designer; it is valuable for all of us who experience the tactile nature of cities, both actually and metaphorically. The aim of this book is to talk about these things, which are formative in the making and re-making of cities over time, and so to push forward the debate: what place does scale have in the making of good cities for people?

In the early 1970s, when I was six or seven, in the days leading up to Christmas, when we were staying with my grandparents and I was sharing an attic room with my sister, before going to sleep I would describe out loud, into the darkness, models of towns from my imagination, impossibly detailed, all in motion; lights, cars, people; all crystal clear. These were the Christmas presents of my dreams. One of these models was a great city with tall buildings, a huge park and a railway station; another was a harbour town with a long jetty, a marketplace and a domed church; a third was a village on a hill with a castle and a manor house and a bridge across a small river valley.



Eliel Saarinen, Cranbrook Art Museum, Bloomfield Hills, Michigan, 1942
The door handle is part of a solid bronze casting. It brings together the functional, aesthetic and tactile language of the building.

Flying over a town, somewhere between Chicago and Kansas City, 2010

The Jefferson Ordnance rides regardless over a landscape of hills, rivers and historic paths; the irregular informs the regular.



My sister would join in with the descriptions. In the darkness, we felt we could reach out and touch these models but we held off, because they were so fragile. Once I remember thinking I saw an aeroplane fly over one of the models, far below me.

Under the Table

'There is a kind of play common to nearly every child; it is to get under a piece of furniture or some extemporized shelter of his or her own and exclaim that he or she is in a "house".' John Summerson, 'Heavenly Mansions', 1949³

John Summerson in his seminal essay 'Heavenly Mansions' describes the child's activity of playing with a doll's house as a 'strict analogy' between the world of the child and that of adulthood. Nothing could be a truer example of this than my own experience with imaginary cities, towns and villages in my grandparents' attic, although seen through the other end of the telescope. Summerson writes of the child playing under a table or with dolls and doll's houses as follows: 'he is placing either himself or the doll (a projection of himself) in a sheltered setting [...] the pleasure he derives from it

is a pleasure in the relationship between himself (or the doll) and the setting.'⁴

The table used by the author as a 'house' when he was a child
Sometimes its walls were made of linen sheets, and sometimes of adult legs.



He makes a connection between the 'cosiness' of the little house and the value of 'ceremony', as a signal for inner comfort in a world full of challenges; 'for us the ceremonial idea is more important – the idea of neatness and serenity within, contrasting with wildness and confusion without'. He even refers to camping and sailing as 'adult forms of play analogous to the "my house" pretences of a child. In both there is the fascination of the miniature shelter which excludes the elements by only

a narrow margin and intensifies the sense of security in a hostile world.⁴⁵ However he does not mention that the child is seeking to be 'larger than life' (the child wants to grow up). The child in us all, however old we are, is seeking to transcend the everyday tangible world and, as with the large-scale model in the attic, to gain a perspective on life.

My main interest in writing this book is to think about, and to address, people who have not been educated or brainwashed in the subject of architecture or urban design but who are attuned to their environment and who know what they like. The universal relevance of Summerson's point to our relationship with the city is that in all of us there is both a child and a giant. The child, aspiring to adulthood, aggrandises the world through imagination, while the giant, harbouring the infant within, miniaturises in order to gain a 'touch' on the city. The child empathises with the doll who is in turn within the child's realm, but it is not so much a sense of possession or ownership we are concerned with as a sense of belonging.

Intermediary Scale

Summerson goes on to discuss 'aedicules' – the use of miniature structures in the architecture of buildings to break down the scale of the whole into a set of interconnected elements, the entirety of which will amount to something greater, and perhaps grander, than the sum of the parts: 'the aedicule has been used to harmonize architecture of strictly human scale with architecture of a diminutive scale, so that a building may at the same time serve the purposes of men and of a race of imaginary beings smaller than men. It has also been used to preserve the human scale in a building, deliberately enlarged to express the superhuman character of a god [...] enlarged to human scale and then beyond.'⁴⁶ I am not alone

Michelangelo, aedicule of St Peter's Basilica, Rome, 1590

The aedicule brings intermediary scale, catering for the giant in us all.

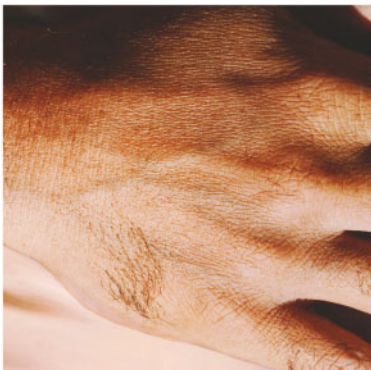
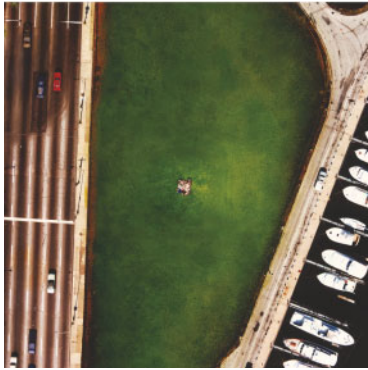


in feeling the resonance of Summerson's analogy. Gerald Adler in his chapter on 'Little Boxes' in his book *Scale: Imagination, Perception and Practice in Architecture*⁷ quotes the same opening passage and uses it to examine carefully scaled sequences of space and detail in architecture.

Although Summerson was talking about architecture, a similar point applies to the urban realm. In his thinking, we find that the subject and the object of consideration – both the viewer and the detail, building, space or city which is being viewed – are benefiting from 'intermediary scale': the possibility for mind and body to empathise with things outside themselves and to achieve a state of intimacy or grandeur, beyond what is normal. Intermediary scale in terms of perception is enabling us to experience the largest and smallest of scales in parallel. In terms of our built environment, it is what connects the large and the small in a series of graded and tangible steps.

Leon Battista Alberti, in the first book of his mid-15th-century treatise on architecture, relates the scale of the house to the scale of the city: 'as the philosophers maintain, the city is like some large house and the house is in turn like some small city'.⁸ The domestic analogy between the house and the city is relevant in our aim to answer the questions 'What aspects of scale in a city are good for people?' and 'What makes people feel "at home"?' The blurring of boundaries and acknowledgement of overlaps between inner and outer worlds, between private rooms and urban rooms, between large and small scales; this is all part of scaling cities to suit ourselves, who are both the makers and users of the metropolis.

In the book *Powers of Ten: About the Relative Size of Things in the Universe* (1982) by Philip and Phylis Morrison and the Office of Charles and Ray Eames, the notion of approximate absolutes is suggested as a way for us to 'gauge' our environment: 'The world at arm's length – roughly one meter in scale – is the world of most artifacts [...] six orders of magnitude cover the entire domain of familiarity'.⁹ The book is a systematic examination of a series of images taken at 42 decreasing powers of ten; zooming in from the Cosmos to the atom. With an emphasis on approximation it suggests that there are normative scales to which all things in the world around us relate and, with our own normative dimensions of average height, arm's length, span and pace, it examines how we relate to them. This becomes a framework of approximate norms which enables us to discern, or at least to discuss, how scale-ratios – a journey through a city, the width or unbroken length of a street, the height-to-breadth ratio of a public space, the articulation of the



Photograph from Philip and Phylis Morrison and the Office of Charles and Ray Eames's *Powers of Ten: About the Relative Size of Things in the Universe*, Scientific American Library (New York), 1982

Looking down on Lake Shore Drive, Chicago: a piece of grass between the Marina and the Soldier Field stadium, taken from 1 kilometre, 100 metres, 10 metres, 1 metre, 10 centimetres and 1 centimetre above.

facade of a building – can work for us practically, socially, aesthetically and emotionally. It is useful, if not to set absolutes for ourselves (since everything is relative) then at least to believe in norms to which we can point or gravitate.



Plane flying over Russell Square, London
Compression in time and space.

To Connect or Dis-connect

Today I regularly use Google Earth to explore places I know (and those I don't) from above. If I zoom in on Russell Square, just north of the British Museum, to my surprise there is an aeroplane flying due south. The plane is a flattened white shape; it is impossible to know the distance between it and the city below. The image was taken on 27 June 2010, and judging by the shadows, at around nine o'clock in the morning. Who was on the plane? Someone in a window seat would have been looking down; someone on the street looking up. Like all photographs, it represents a frozen moment; but, with Google Earth and the infinite accessibility of information (and to a degree sensation too) which we have become accustomed to over the last decade, the image is striking as a compression of simultaneous elements – a range of scales compounded in time and space. Google Earth has opened up new horizons for me. Like a child, I feel as if the city is in my hand. The challenge of course, in EM Forster's lasting words from *Howard's End*, is to