

Site and Composition

Site and Composition examines design strategies and tactics in site making. It is concerned with the need for a renewed understanding of the site in the twenty-first century and the need for a critical position regarding the continued tendency to view the site as an isolated 'fragment' severed from its wider context.

The book argues for revisiting the traditional instruments or means of both siting and composition in architecture to explore their true potential in achieving connections between site and context. Through the various examples studied here it is suggested that such instrumental means have the potential for achieving greater poetic outcomes. The book focuses on the works of twentieth-century architects of wide-ranging persuasion – Peter Eisenman, Le Corbusier, Frank Lloyd Wright, Alvaro Siza, Herzog & de Meuron and Charles Correa, for example – who have strived in quite different ways to achieve deeper engagement with the physical qualities of place and context.

Departing from a reconsideration of the fragment, *Site and Composition* emphasises the role of the 'positive fragment' in achieving both historical continuity and renewed wholeness. The potential of both planimetric and sectional compositional methods is explored, emphasising the importance of reciprocity between 'inside' and 'outside' – between fragment and the whole, as well as materiality. Written in a clear and accessible manner, this book makes vital reading for both researchers and students of architecture and urbanism.

Enis Aldallal has been practising architecture in the United States since 2011 and is pursuing licensure in the state of Illinois. Before coming to the USA, he practised architecture for six years in renowned architectural firms in the Middle East. He holds a MArch from Illinois Institute of Technology (2011) and an MPhil from the University of Liverpool, UK (2009). His interest in place-specific approaches to architecture supports his research on site-related challenges and how they engage with his architectural designs.

Husam AlWaer is an urbanist with a background in architecture, urban design and sustainability. He is Senior Lecturer in sustainable urban design and evaluation in the School of Social Sciences, University of Dundee, having previously researched and taught at Reading and Liverpool universities. Husam's work has had considerable impact in academia, practice and in the field of community out-reach. With Barbara Illsley he is currently editing *Place-making: Rethinking the Master-planning Process*, with contributions from internationally reputed scholars and experts in the field (ICE Publisher, expected 2016).

Soumyen Bandyopadhyay holds the Sir James Stirling Chair in Architecture at the University of Liverpool. Director of the research centre, ArCHIAM (Architecture and Cultural Heritage of India, Arabia and the Maghreb), he has published widely on aspects of Indian modernity and vernacular architecture of Arabia. His recent publications include *The Territories of Identity* (Routledge 2013, co-edited with Guillermo Garma-Montiel) and *Manah: Omani Oasis, Arabian Legacy* (Liverpool University Press 2011).



Site and Composition

Design strategies in architecture and urbanism

Enis Aldallal, Husam AlWaer and Soumyen Bandyopadhyay



First published 2016 by Routledge 2 Park Square, Milton Park, Abingdon, Oxon OX14 4RN

and by Routledge 711 Third Avenue, New York, NY 10017

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

© 2016 Enis Aldallal, Husam AlWaer and Soumyen Bandyopadhyay

The right of Enis Aldallal, Husam AlWaer and Soumyen Bandyopadhyay to be identified as authors of this work has been asserted by them in accordance with sections 77 and 78 of the Copyright, Designs and Patents Act 1988.

All rights reserved. No part of this book may be reprinted or reproduced or utilised 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.

British Library Cataloguing in Publication Data

A catalogue record for this book is available from the British Library

Library of Congress Cataloging-in-Publication Data
A catalog record for this book has been requested

ISBN: 978-0-415-49825-8 (hbk) ISBN: 978-0-415-49826-5 (pbk) ISBN: 978-1-315-73037-0 (ebk)

Typeset in Myriad Pro by Karen Willcox, www.karenwillcox.com

Contents

vii List of illustrations

001 Preface

005 1 Introduction: site and composition

- 012 Fragment and fragmentation
- 015 Wholeness
- 017 Fragmentation in architecture

023 2 Resilient fragments

- 025 Introduction
- 029 The persistent shadow of injustice
- 031 The rise of the fragment and 'measure'
- 035 An 'archipelago' of fragments
- 040 Tapestry as vêtement

047 3 Site readings

- 049 Introduction: site as an urban fragment
- 049 Site-by-site and figure-ground relationship
- 051 Figure-ground
- 052 Site fragments: the Wexner Centre for the Visual Arts

- 056 Sectional analysis
- 060 Boundary as communicative space
- 065 Conclusion: site at different scales of integrity and fragmentation

071 4 The planimetric composition of site

- 073 Introduction
- 073 Drawing and composition in architecture: information and *disegno*
- 075 The mediating projection
- 077 The intrinsic role of section or the tyranny of the plan
- 081 Exclusivism versus inclusivism
- 082 Topography as a font of design
- 083 The completing plan: or how topography is both the signified and the signifier
- 083 Horizontal flow: Zaha Hadid's 'LF One' landscape exhibition
- 085 Emergent fragment: Peter Eisenman's Wexner Centre

- 092 Mediation: Peter Eisenman's Aronoff Centre for the Arts
- 094 Conclusion: emergent composition

101 5 Enmeshed horizons: interior and exterior spaces

- 103 Introduction: space experience in architecture
- 105 In-between chora
- 108 Reciprocity and disjunction versus convergence or stasis versus flow
- 112 The defining horizon
- 115 Charged fragments: reciprocity in Le Corbusier's Mill Owners' Association, Ahmedabad
- 123 Conclusion: the residual mission of site

129 6 Materiality and the culture of place

- 131 Introduction
- 132 Place considerations: place between perception and materialisation
- 133 Place extension: immediate context, ultimate context and material invention
- 133 Local materials or the influence of immediate context
- 137 Regional materials or the influence of ultimate context
- 143 The play of mediating boundaries
- 147 Conclusion: camouflage

153 7 Conclusion

- 161 Illustration credits
- 165 Bibliography
- 175 Index

List of illustrations

Illustrations

viii Enis Aldallal Husam AlWaer and Soumyen Bandyopadhyay Site and Composition: Design strategies in architecture and urbanism

Figure 1.1 Diminutive cupola, the *bumah* on top of Omani mosques used for the call to prayer 14

Figure 1.2 Natural fractal 16

Figure 1.3 Gestalt interpretation of Greek vase 17

Figure 1.4 Juxtaposing and repeating the Greek vase to read as a balustrade 18

Figure 2.1 Le Corbusier. The Mill Owners' Association Building, Ahmedabad: entrance facade 25

Figure 2.2 Le Corbusier. The High Court Building, Chandigarh: courtroom facade **27**

Figure 2.3 Le Corbusier. The Capitol Complex, Chandigarh: view of the Assembly Building from the High Court **28**

Figure 2.4 Chandigarh master plan: sector organisation showing the many villages and hamlets destroyed through the establishment of the city **30**

Figure 2.5 Nek Chand Saini. The Rock Garden, Chandigarh: view of a passage 31

Figure 2.6 The Rock Garden: wall detail showing salvaged fragment from earlier inhabitation 31

Figure 2.7 Le Corbusier. 1911. Skyline of Istanbul; watercolour on blue paper, 9×29.5 cm **32**

Figure 2.8 Le Corbusier. 1911. Photograph taken of the fire of Istanbul on the night of 23 July 1911 **33**

Figure 2.9 Le Corbusier, after 1931. Drawing based on collected postcard of nomadic tent in the Algerian desert; graphite and coloured pencil on cardboard, 24.5×32 cm 34

Figure 2.10 The Assembly Building: detail of 'Modulor Man' impression on a pylon 35

Figure 2.11 The Assembly Building: detail of serpent impression on a pylon 35

Figure 2.12 Le Corbusier. The Secretariat Building, Chandigarh: view of front facade **36**

Figure 2.13 Le Corbusier. The Tower of Shadows, Chandigarh 36

Figure 2.14 The Assembly Building: view of the southwest facade **37**

Figure 2.15 The High Court Building: detail of the High Court facade 38

Figure 2.16 Le Corbusier. Sketchbook drawing (213) showing the buildings and installations of the Capitol Complex in the context of the surrounding hills 39

Figure 2.17 Le Corbusier. Sketchbook drawing (209) showing foreground grid used as a device to connect the built fabric to the natural topography 40

Figure 2.18 The Assembly Building: detail of ceremonial door 41

Figure 2.19 The High Court Building: tapestry in the courtrooms 42

Figure 2.20 The Rock Garden, Chandigarh: feminine figures draped in broken glass bangles 43

Figure 3.1 Map of Rome, Giambattista Nolli, 1748 50

Figure 3.2 Competition entry of the Civic Centre; Derby, James Stirling 52

Figure 3.4 The Wexner Centre: site–campus axis, view from the east 53

Figure 3.5 The Wexner Centre: campus–site axis, looking eastward **54**

Figure 3.6 The Wexner Centre: diagram illustrating how the urban axes fragment the building 55

Figure 3.7 Le Corbusier. Atelier Ozenfant, Paris: view of the front facade and longitudinal section **56**

Figure 3.8 Peter Eisenman. Aronoff Centre for the Arts, University of Cincinnati, Cincinnati, Ohio: location between the 'natural' and the urban topographies **57**

Figure 3.9 Aronoff Centre: conceptual sketch – between the 'natural' and the urban topographies **58**

Figures 3.10–3.12 Aronoff Centre: the series of overlays and torques applied to the boxes to define sectional configuration **59–60**

Figure 3.13 Frank L. Wright. Robie House, Chicago, Illinois: the communicative space of the house defined between the two arrows **62**

Figure 3.14 Robie House: communicative space defined by the overhanging roof of the living room **63**

Figure 3.15 Aronoff Centre: Level +400 plan showing the communicative spaces **63**

Figure 3.16 Aronoff Centre: inside the communicative space **64**

Figure 3.17 In-between urban spaces represented in different densities of shading **65**

Figure 4.1 Action and representational meaning 74

Figure 4.2 Frank L. Wright. Robie House, Chicago, Illinois: third floor plan **76**

Figure 4.3 Peter Eisenman. The City of Culture of Galicia, Spain: topographic study **78**

Figure 4.4 Piazza della Signoria, fourteenth century CE, plan

Figure 4.5 Alvaro Siza. Swimming Pools, Leça da Palmeira, Portugal: plan **80**

Figure 4.6 Antoine Le Paurte. Hotel de Beauvais, Paris: plans 81

Figure 4.7 Zaha Hadid. LF-One Exhibition Landscape, Weil am Rhein, Germany: the dynamic plan 84

Figure 4.8 Peter Eisenman. The Wexner Centre for the Visual Arts, Ohio State University, Columbus, Ohio: view looking north **86**

Figure 4.9 The Wexner Centre: the boat-like object resulting from alignment with the Weigel Hall 87

Figure 4.10 The Wexner Centre: north-eastern forecourt, view looking west 88

Figure 4.11 The Wexner Centre: south-eastern forecourt, view looking west **89**

Figure 4.12 The Wexner Centre: the relationship between the Oval and the city **90**

List of illustrations

Figure 4.13 The Wexner Centre: brick presence 91

Figure 4.14 The Wexner Centre: a tower trace; half-sunk, half-exposed presence within the site's topography 92

Figure 4.15 Peter Eisenman. The Aronoff Centre for the Arts, University of Cincinnati, Cincinnati, Ohio **93**

Figure 4.16 The Aronoff Centre: compositional process of the curve(s) **94**

Figure 4.17 The Aronoff Centre: site composition showing relationship with the DAAP 95

Figure 5.1 Man in space 103

Figure 5.2 The Greek temple's inner void 105

Figure 5.3 Boundary and the in-between space (chora) 106

Figure 5.4 Peter Eisenman. The Aronoff Centre for the Arts, University of Cincinnati, Cincinnati, Ohio: the tectonic, ornamental continuation 109

Figure 5.5 Frank Gehry. Jay Pritzker Pavilion, Chicago, Illinois: the sculptural and fragmented structure of the pavilion 112

Figure 5.6 The *chora* and the defining horizon – topography 113

Figure 5.7 Peter Eisenman. The Wexner Centre for the Visual Arts, Ohio State University, Columbus, Ohio 114

Figure 5.8 Frank L. Wright. Robie House, Chicago, Illinois: the inside-out/outside-in yard 115

Figure 5.9 Le Corbusier. The Mill Owners' Association Building, Ahmedabad: facade 116

Figure 5.10 The Mill Owners' Association: plans 117

Figure 5.11 The Mill Owners' Association: entrance ramp and staircase 118

Figures 5.12–5.13 Mill Owners' Association: the breakdown of facade as 'hewn-out' mass from the building's cuboid form is displaced outside to form a staircase 119

Figures 5.14–5.15 The Mill Owners' Association: deep planters within the *brise soleil* and the gradual reclamation by nature of the rear facade 120–121

Figures 5.16–5.17 The Mill Owners' Association: framed view of the Sabarmati River through the rear facade 121–122

Figure 5.18 The Mill Owners' Association: interlocking curved walls housing the toilets 123

Figure 5.19 The Mill Owners' Association: roof detail with free-standing column and conference room roof 123

Figure 5.20 The Mill Owners' Association: free-standing plane at the entrance with inset aperture and 'spout' 124

Figure 5.21 The Mill Owners' Association: site plan 124

Figure 6.1 Richard Meier. Douglas House, Harbor Springs, Michigan: view from Lake Michigan 134

Figure 6.2 Charles Correa. British Council Headquarters, Delhi: front facade detail showing red sandstone cladding 136

Figure 6.3 RoTo Architects. Architecture and Art Building, A&M University, Prairie View, Texas: undulated brick masonry wall 136

Figure 6.4 Zaha Hadid. Contemporary Arts Centre, Cincinnati, Ohio: material continuity between the sidewalk and the lobby 137

Figure 6.5 Herzog & de Meuron. CaixaForum Building, Madrid: juxtaposition of old brick facade and acid-oxidised metal clad extension 138

Figure 6.6 Alvaro Siza. Galician Centre for Contemporary Art, Santiago de Compostela **140**

Figure 6.7 Peter Eisenman. The Wexner Centre for the Visual Arts, Ohio State University, Columbus, Ohio: the fragmented presence of brick masonry 141

Figure 6.8 Charles Correa. The Gandhi Memorial Museum, Ahmedabad: brick piers, rural iconography and the raised plinth create a 'horizontal' monument to Mahatma Gandhi 142

Figure 6.9 Gandhi Memorial Museum: infill panels, view from one of the gallery interiors and exterior view 143

Figure 6.10 Charles Correa. Handloom Pavilion, Delhi (1958): section showing mud walls and fabric 'parasols' **144**

Figure 6.11 Charles Correa. Hindustan Lever Pavilion, Delhi (1961): formal study 144

Figure 6.12 Herzog & de Meuron. Casa de Piedra (Stone House), Tavole: facade study 145

Figure 6.13 EHDD. Pritzker Family Children's Zoo, Lincoln Park Zoo, Chicago, Illinois: facade detail with the 'ivy wall' 146

Figure 6.14 Gandhi Memorial Museum: porosity of the interior 148

Preface

Preface

)	Enis Aldallal	Site and Composition: Design strategie
	Husam AlWaer and	in architecture and urbanism
	Soumyen Bandyopadhyay	

The book is concerned with the need for a renewed understanding of the site in the twenty-first century and the establishment of a critical position regarding the continued tendency to view the site as a fragment severed from its wider context. The dominant modernist tendency to regard the world around as a fragmented phenomenon, which replaced the world of pre-modern certainty, has been found inadequate in the postmodern era of globalisation, and amidst a renewed interest in achieving wholeness. Even as we have to treat sites increasingly as assemblages of orthogonal projections – which has no doubt helped designers often operating remotely in today's globalised world of architectural practice – such abstraction need not necessarily prevent us from considering the deeper, often latent and less obvious knowledge about the site. Instrumentality and abstract codification per se, we argue, are not the problem, and, as Alberti's survey of Rome demonstrates, are even critical to our understanding of orders of things. It is the counter-creative and antianthropological manner in which we have increasingly treated such material that has caused the crisis.

Addressing these tendencies, this book has argued for revisiting the instruments of both siting and composition in architecture to explore their true potential in achieving connections between site and context. Departing from a reconsideration of the fragment, and the processes that form fragments, fragmentation, the book emphasises the role of the 'positive fragment', and the role such positive entities could potentially play in achieving both historical continuity and renewed wholeness. It focuses on architects of wide-ranging persuasion of the twentieth century – for example, Peter Eisenman, Le Corbusier, Frank Lloyd Wright, Alvaro Siza, Herzog & de Meuron and Charles Correa – whose works defy categorisation under simple binary oppositions. Through the various examples studied here, we suggest that the instrumental means have the potential for enhanced analogical and scalar relationships capable of achieving poetic outcomes. By considering such architects' works of diverse periods and geographical locations, one intention is

to question the lenses of preconception through which their works are regarded and promptly put into artificial 'political' categories. However, more importantly, it is a plea to treat architecture and the city *not* as a collection of disjointed objects but as overlapping networks of relationships, cutting across temporal and cultural boundaries.

We would like to thank all those who have helped the long journey of this book from an initial idea to fruition. Our sincere thanks to those who read and commented on the initial proposal, including Professor Graeme Hutton; special thanks are due to Professor Nicholas Temple who read and commented extensively on an earlier draft of the book. Thanks are also due to Desiree Campolo and Manwinder Lall for preparing the illustrations for publication; Desiree has worked tirelessly to ensure that all photographs are of uniform quality and has helped prepare a number of drawn illustrations that accompany this book. The North American material was collected through fieldwork visits to the key buildings discussed in this book, helped by numerous individuals: Frank Lloyd Wright's Robie House in Chicago; Zaha Hadid's Contemporary Arts Centre in Cincinnati; and Peter Eisenman's Aronoff Centre for the Arts in Cincinnati and the Wexner Centre for the Visual Arts in Columbus. Some of the Indian material on Le Corbusier and Charles Correa was collected during the course of an Arts and Humanities Research Council (AHRC) supported research on modernity in Indian architecture and Nek Chand's Rock Garden in Chandigarh. OTTO Archive, Richard Brook, Clive Gracey and Dr Ana Souto have kindly permitted the use of their photographs of the following buildings: Douglas House in Harbor Springs, Michigan; CaixaForum in Madrid; a traditional mosque in Manah in Oman; and the Galician Centre for Contemporary Art in Santiago de Compostela. Dr lain Jackson has permitted the use of photographs of a drawn illustration of Chandigarh city plan and photographs of the Mill Owners' Association Building in Ahmedabad. Fondation Le Corbusier has kindly allowed us to use reproductions of photographs and drawings by Le Corbusier and of his sketchbook pages.

Soumyen Bandyopadhyay

For various reasons this book has been a long time in the making. We would like to acknowledge the continued patience of the editors and designers at Routledge for their support of this project. Earlier ideas on Le Corbusier's design approach in Chandigarh involving fragments were presented at the 2009 'Architecture and Justice' conference held at the University of Lincoln, and a preliminary study of reciprocity in the Mill Owners' Building in Ahmedabad was published earlier in 2007. We would like to thank Professor Tom Jefferies and the Manchester School of Architecture at Manchester Metropolitan University for the support extended towards the publication of this book. Last but not least, we would like to extend our heartfelt gratitude to our families, as without their continued support the book would not have materialised.

1 Introduction: site and composition

Enis Aldallal	Site and Composition: Design strategies
Husam AlWaer and	in architecture and urbanism
Soumyen Bandyopadhyay	

The need to revisit our understanding of the site and its relationship to its surroundings has become necessary – more than ever before – at this point well into the twenty-first century.

Such a necessity has arisen for a number of reasons. The reality is that site considerations have received progressively less attention in the academic and professional practice of architecture over the past decades. The proliferation of iconic buildings – Venturi's ducks1 – has resulted in distinctive, formally unique architecture, claiming special symbolic and aesthetic qualities. Formal iconicity has also been proclaimed and acquired through the unbuilt, such as in Libeskind's proposed extension to the V&A Museum in London and Alsop's Fourth Grace project in Liverpool. Aspiring to be the object of veneration itself, such iconicity is removed from previous understandings of the term as representation or resemblance of a sacred persona or work of art generated following established conventions. This solipsistic isolation and narcissism has often resulted in little attention being given to the qualities of their sites, and the building and site's relationship to the surroundings. Venturi's decorated shed, exemplified by the myriad out-of-town shopping complexes and neighbourhood supermarkets, has also remained uneasily situated within a landscape essentially shaped by the need to optimise car-parking arrangements. Contrary to Venturi's belief, these structures housing mundane and everyday activities have hardly carried any enduring symbolism, meaning or social messages, to which the insensitive, banal treatment of site and context have contributed. Sadly, architectural education has not been immune to such developments and pressures.

The welcome rise in environmental concern has also ushered in a kind of myopic, conservative instrumentality into the way both architects and students of architecture are now guided to handle sites. The tendency to assess the appropriateness of a site for building and its relationship with the wider context through a set of overly simplistic and determining criteria – site geometry, orientation, transport

and accessibility, solar gain, minimal environmental footprint, community benefits, to name a few – is both limiting and abstract in its scope.² On the other hand, rising demand for expediency in building procurement, cost optimisation and the persistent shadow of the conservationists looming large over architects engaged in suburban volume house-building projects have limited the opportunities for engaging with site and context.

The age of frenzied information production and exchange has arguably turned our world into a global village with a flattened geography with no peaks and troughs. More than ever before, architects and architectural practices are working at locations across the globe – and often remotely. The 'foreigner' could potentially bring in a critical dimension - a refreshed dialogue - to energise debate regarding the reshaping of a built environment; however, this is not always the case. Beyond the obvious technical expertise the foreigner adds to the project – the perceived universal applicability of which, in itself, is not bereft of a problematic political dimension - the interventions remain global and are seldom localised due to lack of knowledge of site within specific locales. Perhaps paradoxically, this demand has now been given added impetus by the desperate need for expansion outside the West in the light of the present economic downturn that has changed the architectural profession forever.

Burns and Kahn define the understanding of site under three distinct areas of concern:

the first ... is the area of control, easy to trace in the property lines designating legal metes and bounds. The second, encompassing forces that act upon a plot without being confined to it, can be called the area of influence. Third is the area of effect – the domains impacted following design action.³

These concerns have important scalar implications, both in terms of the actual physical extent of the sites but also