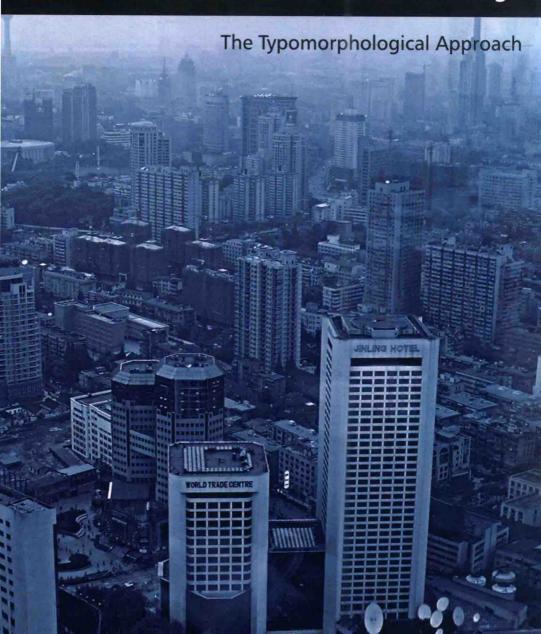


### Fei Chen and Kevin Thwaites

## **Chinese Urban Design**

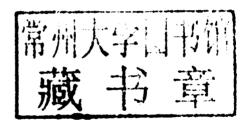


# Chinese Urban Design

The Typomorphological Approach

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Published by Ashgate Publishing Limited Wey Court East Union Road Farnham Surrey, GU9 7PT

Ashgate Publishing Company 110 Cherry Street Suite 3-1 Burlington, VT 05401-3818 USA

www.ashgate.com

#### **British Library Cataloguing in Publication Data**

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

#### The Library of Congress has cataloged the printed edition as follows:

Chen, Fei.

England

Chinese urban design: the typomorphological approach/by Fei Chen and Kevin Thwaites. pages cm.—(Design and the built environment)

Includes bibliographical references and index.

ISBN 978-1-4094-3388-0 (hardback)—ISBN 978-1-4094-3389-7 (ebook)—

ISBN 978-1-4724-0252-3 (epub) 1. City planning—Social aspects—China.

2. Architecture and society—China. 3. Urbanization—China. I. Thwaites, Kevin. II. Title.

HT169.C6C424 2013 307.760951—dc23

2012051551

ISBN 9781409433880 (hbk) ISBN 9781409433897 (ebk – PDF) ISBN 9781472402523 (ebk – ePUB)



Printed in the United Kingdom by Henry Ling Limited, at the Dorset Press, Dorchester, DT1 1HD

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### Acknowledgements

Witnessing the dramatic and rapid transformation of Chinese cities, I have had the ambition during the years of my PhD at the University of Strathclyde, to find a tool in design to assist Chinese urban development that is responsive to the culture and the people. Chapters 3, 4, 5 and 7 have drawn materials from my doctoral research conducted between 2005 and 2009 under the direction of Professor Wolfgang Sonne initially and Dr Ombretta Romice since 2006. Dr. Ombretta Romice inspired and helped me at various points on my journey towards the PhD with her great academic experience and invaluable suggestions. Research at the University of Strathclyde was made financially possible by the University of Strathclyde Research Scholarships for three years and an award from the China Scholarship Council thereafter. I was aided by additional travel funds from the University of Strathclyde during those years and from the University of Liverpool since 2010 for attending international conferences, where constructive feedback was received from experts in the field. Many of their names are listed in the bibliography. In particular, Professor Jeremy Whitehand and Dr Kai Gu, who generously offered me useful comments and continuous encouragement.

With expertise in the integration of environmental psychology within landscape architecture and urban design, Dr Kevin Thwaites commented on my PhD dissertation and helped me develop my doctoral research into this book which is now much boarder in scope and rich in vision. In particular, Dr Thwaites took the lead in writing Chapter 6 and the introduction. He has also contributed to all other chapters.

I was grateful to receive assistance from my colleagues and friends on the collection of materials and field survey in Nanjing. They were Yuan Liu, Xinyu Wang, Jian Lu, Zhengyu Ni, Jiajia Cheng and Qingqing Liu.

I thank the two anonymous reviewers of Ashgate, on behalf of both authors for their helpful comments and criticisms on the revision of the initial book proposal. I express my gratitude to Ben Devereau for the beautiful illustrations he has produced for the book and the local photographer Fangyu Feng for his kind permission to use his photos, as well as other copyright holders of the images presented in the book. Sources of these are acknowledged in the List of Illustrations. All other non-referenced illustrations are produced by myself.

Finally, my special thanks go to my parents and husband for their love and great support.

Fei Chen, Liverpool

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#### Introduction

This book is titled Chinese Urban Design, rather than Urban Design in China, to emphasise the understanding that urban design is an endogenous concept firmly based in the Chinese culture and tradition. This understanding is the prerequisite for socially and culturally responsive urban design practice that we hope to promote at present and in the future. The book also offers what will contribute to the development of new approaches to cultural-socially sustainable urban design more widely, with potential to embrace cultural contexts other than those in China. An unprecedented pace and scale of urban redevelopment and expansion in Chinese cities in recent years provides a unique opportunity for exploration of the relationship between urban form and rapidly increasing urban populations. Our main focus of concern here is that an accelerating growth in large scale urban design solutions that are rapidly planned, designed and delivered can bring with it significant threats for enduring cultural identity in cities. Prevailing approaches, often dominated by architectural statements of power and prestige, symbolic of international economic status, risk severing new city development from connections with traditions which link urban form with social processes. There is concern that this may ultimately weaken our urban sense of identity, rooted in time-sensitive evolutionary processes of change and adaptation, distancing urban form and fabric from regional and local qualities that have hitherto expressed the cultural identity and distinctiveness of place.

Large scale urban development is by no means confined to the Chinese context: indeed growing urbanisation worldwide is giving rise to ever increasing numbers of so called megacities (those with populations in excess of ten million inhabitants) that, for some, have come to symbolise the 'greatest social experiment that humanity has ever undertaken', that of unprecedented migration from the countryside to cities. Whether these megacities serve humanity for good or ill depends on the decisions we will take in shaping, managing and using them. Optimising the chances that the growth of megacities will lead to socially beneficial outcomes is inevitably a complex and multi-dimensional challenge which we cannot hope to address within the scope of this book. The question we wish to explore here lies with what those concerned with urban design decision making can contribute. We ask, specifically, are there spatial and form related dimensions to the optimisation of social benefit that we can identify, describe and ultimately

<sup>1</sup> This is quoted from Andrew Marr's *Megacities*, BBC Broadcasting, November 2011.

apply that will give the greatest social experiment of humanity a better chance to deliver socially sustainable outcomes?

The Chinese context is important in this respect because the sheer scale, extent and characteristics of urbanisation in recent years serve to amplify the relationship between urban form, human functioning and cultural expression. This dramatic change is particularly astonishing in Chinese cities due to their remarkable cultural continuity over thousands of years. Its exploration can, therefore, act as teacher helping to highlight where there is potential for new approaches that may help us respond to the demands of contemporary urban growth in more socially benign ways and which may be translated into other global contexts. The common denominator we choose to focus on here lies with how the world's cities can continue to expand and renew to accommodate growing populations and their changing needs and lifestyles whilst retaining a sense of their distinctiveness as expressions of cultural identity.

Typomorphology recognises that socially sustainable approaches to urban design rest upon acknowledging two things challenging for professional processes of planning and design, and for the policy frameworks that guide decision making. The first is that cities are in many ways organic and evolutionary in their nature, reflecting the lives and values of citizens in the way that space and material fabric become arranged. It is this idea of a city, essentially as an expression of culture and locality that contributes to identity and distinctiveness. A second intimately related issue is that cities possessing these qualities are highly time-sensitive. Processes that have shaped their form and fabric can be read and understood through the way they have influenced change and adaptation according to prevailing circumstances through time. Socially sustainable cities are in essence chronological records of social forces made manifest through the dynamic, changing and adaptable nature of their physical and spatial order.

For the professional planning and design agencies charged with a responsibility to deliver physical form the idea of a city as an evolutionary socio-spatial system presents significant challenges at the point of design decision making. In traditional periods, changes of urban form were essentially grass-root and piecemeal so that cultural identities were reflected in traceable morphological changes. This has completely altered in modern times with the growing development of technologies and professionalism. To value the cultural identity, in architectural and urban design theories and history, the profession has been attempting to identify and understand that evolutionary process. However, looking back and responding to past forms can often result in historical pastiche, which may hold substantial aesthetic appeal, yet may have limited relevance to contemporary ways of urban life. Projecting ahead with futuristic, often technologically driven solutions, can lead to the privileging of monumentality, similarly out of line with the evolutionary nature of urban social life. The scale and pace of such development in city expansion worldwide reflects processes of manufacture rather than growth and may well lead to urban populations whose lives are at odds with, and at extremes distorted by, the urban fabric they inhabit.

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In response, typomorphology seeks to present a theoretical framework founded on the principle that the identity of urban environments is important to their social sustainability and that identity must be founded on response to traditions that are locally embedded. This does not mean calls for a return to the nostalgia of past forms: on the contrary, typomorphology is progressive and innovative in its aspirations and values. This is reflected in a seven element conceptual framework proposed in the book which underpins a practical approach, which can be readily incorporated into contemporary processes of professional urban design in China, providing an approach to urban analysis and design decision making. In this practical form, typomorphology empowers planning and design professionals with the tools needed to make culturally responsive evaluations of urban settings and to then guide design decisions, at a range of scales, which deliver new urban forms moving forward in time yet which are connected to and develop from local cultural identity.

Typomorphology is simultaneously a way of thinking about urban form and structure that places issues of identity and local distinctiveness at the forefront of decision making, and a way to operationalise the decision-making process. It draws from European scholarly work that has influenced the development of ideas about typology and morphology and we will show how the mutual reciprocity of these intellectual foundations combine to provide the framework of typomorphology which is then made applicable to urban design in the Chinese context. In this form typomorphology transcends the primary concerns for visual continuity predominant in its background influences into an approach focused on the wider concern with place-making and the contribution this makes to cultural identity in city development. This also presents an understanding that urban form is not only visual and symbolic, but also retains expression of social meaning and residents' psychological attachment. By this means it provides practitioners with a unique and innovative means with which to ensure that local traditions continue to evolve and sustain as a fundamental part of city identity.

In this book, we have taken a critical view on the Chinese urban planning and design system which holds in part responsibilities for the problems and challenges in the particular Chinese political cultural economy. We demonstrate how typomorphology as a design tool can be integrated into the system and fill the vacuum of effective design guidance in its operation. This then requires further research beyond the scope of the book to test the methodology in much wider applications and to evaluate real social impact following implementation. Again, we acknowledge that the operation of urban form through urban design is not the sole means through which socially sustainable urban development can be promoted. Other measures in design theories, design processes and implementation are all valuable in their complement.

The book progresses in three main parts which first establishes the historical background of Chinese city form and ideas behind the development of typomorphology before moving on in Part II to show how typomorphology reveals a theoretical structure of Chinese urban form as consisting of seven elements at

different levels of scale and resolutions of study. The city of Nanjing provides a principal case study through which we will discuss a typomorphological reading of the city. The final part of the book moves from the use of typomorphology as an analytical tool into its use in urban design practice, again using the case of Nanjing to develop and propose a set of design guidelines for the city.

Part I, History and Theory, first examines the continuity of urban form in China establishing urban forms as products of social, cultural and political conditions that have shaped the evolution and continuity of Chinese cities. This begins by highlighting the way that primitive urban spatial production is intimately connected with the functional need to accommodate basic social activities relating to routine daily living, family and social groups. We discuss how cities evolved as regional administrative centres and as expressions of the relationship between humans and conceptions of the cosmos. The design elements of imperial urban forms transformed cities into political symbols connecting the natural and human worlds to become symbolic as a common social infrastructure for governance. The evolution of cities as socio-economic organisations and as representations of culture develop further design elements at different levels of scale all of which gradually become culturally embedded, establishing a grounding of continuity through the persistent use of basic design principles. The transformation of Chinese urban form in the Modern era sees significant changes in the socio-cultural influences on city development. The growing influence of Western principles and after 1949, the impact of socialist ideology, further fuelled a dismissal of traditional cultural concepts, replacing a predominance of craftsmanship with mass production. We will then show how the detachment of urban form from tradition has exacerbated a loss of cultural identity in recent years under the influences of rapid urbanisation, growth in globalisation and the expression of these through economic reform, privatisation and urban expansion. Part I concludes by turning to the theoretical foundations of typomorphology, discussing the concept of type and how this relates to the schools of typology and morphology. We discuss how these are brought together in a new framework of typomorphology highlighting the conceptual relationship of Chinese urban design and typomorphology to establish the applicability of the approach in the Chinese context.

Part II, *Understanding the Design Context*, moves on from the background established in Part I to examine the role of typomorphology in developing an understanding of design context, focusing in particular on the Chinese city of Nanjing. We first explain how a theoretical framework of Chinese urban form is conceived in terms of seven distinguishable yet related elements at different levels of scale. The seven elements together constitute an analysis and design language which is particularly relevant to Chinese city form and provides a framework of understanding through which to explore the typomorphological characteristics of the city. This establishes the spatial relationship between each of the seven elements, their time sensitivity and the evolutionary way in which city form is transformed across time yet remains in continuity through a relationship of morphological regions and how these are influenced by typological processes.

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This helps to develop a theoretical model placing the seven elements identified into a typomorphological framework, first applied to reading the urban forms of Nanjing and later, in Part III, how this analysis influences the development of design suggestions for further development in the city.

The final part of the book, Urban Design Practice, moves typomorphology from analysis to design practice. Here, we first explore the nature of urban design guidance in both western and Chinese contexts. This highlights a relatively well established theoretical framework focused on human and social aspects of urban design in the West, coupled with a tendency for this to be organised as language-like structures which can then be used in the reading of existing urban settings and in design processes. In contrast urban design theoretical structures are comparatively less well developed in China, especially in relation to social aspects, where urban design practice is just emerging and not well supported by the urban planning legislative framework. We suggest that the theoretical and pragmatic elements which constitute the typomorphological conceptual framework may have potential to contribute to the development of stronger theoretical foundations in Chinese urban design, addressing in particular the limitations inherent in the present system which obstruct the delivery of solutions responsive to tradition and cultural identity. From this theoretical position we then move forward to demonstrate how typomorphology can connect city analysis to design practice by developing a pattern language of the seven elements discussed in Part II for the city of Nanjing. Part III concludes by discussing the specific advantages that typomorphology offers in helping to sustain the identity of Chinese cities through focusing on place-making attributes, rather than purely visual ones.

Typomorphology is an attempt to build, through scholarly investigation and application in real-world contexts, a theoretical framework capable of bringing the identity of Chinese city development to the forefront of urban design practice. It responds specifically to a prevalent and widespread limitation in current approaches which detaches urban design from the core values inherent in localised traditional expression. The importance of tradition and cultural expression are core to the theory and practice of typomorphology and through its use as a decision making tool they can be made an explicit part of the development of contemporary, innovative and above all socially responsive urban design solutions. Presented here in this book, typomorphology has been developed from the perspective of the Chinese urban development context and is proposed specifically for its potential to address key limitations in Chinese urban design. However, as we have acknowledged, examples of architecture and urban design which may be technically excellent, economically efficient and aesthetically impressive, yet of significantly restricted social relevance, can be found in contemporary urban expansion planning the world over. In this respect we anticipate that, with localised adaptation and interpretation, typomorphology could well provide a theoretical and practical foundation relevant to the delivery of cultural-socially sustainable urban design in many different cultural contexts.

## PART I History and Theory