

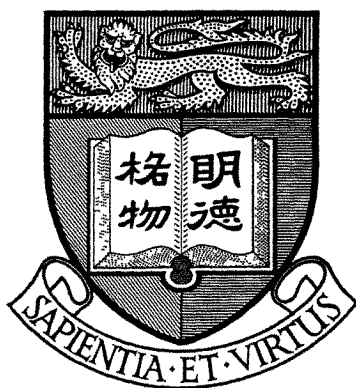
Urban Planning and Planning Education Under Economic Reform in China

edited by
Anthony Gar-On Yeh, Xueqiang Xu
and Xiaopei Yan



Centre of Urban Planning and Environmental Management
University of Hong Kong

UNIVERSITY OF HONG KONG
LIBRARIES



Urban Planning and Planning Education Under Economic Reform in China

© Centre of Urban Planning and Environmental Management,
University of Hong Kong, 1997

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 without the prior permission of the publisher.

Published by
Centre of Urban Planning and Environmental Management
University of Hong Kong
Pokfulam Road
Hong Kong

ISBN: 962-7589-05-5

Contents

List of Contributors	viii
List of Figures	x
List of Tables	xi
Preface	xiii
Economic Reform and Urban Planning	
1 Economic Reform and Urban Development in the Changjiang Delta Region <i>Daoqi SHEN</i>	3
2 Planning and Development of the Shanghai CBD Under Socialist Market Economy <i>Zhongmin YAN</i>	25
3 Relevance of Hong Kong's Development Experience to Chinese Cities <i>Anthony Gar-On YEH</i>	35
4 Preliminary Discussion on National Economic Reform and City Planning <i>Jinshang SUN</i>	75
5 An Inquiry into the Questions Concerning Urban Planning in Market Economy Using Hangzhou's Development as an Example <i>Yuxiang MA</i>	95

6	Impacts of the Market Economy on Urban Planning in Shenzhen <i>Huasheng SUN</i>	103
7	Macro Adjustment and Control of Urban Planning in China <i>Qingquan WEI</i>	121
8	Improvement of the Chinese Urban Planning System Under the Challenge of City Economic Development in China <i>Bomin LIU</i>	131
9	Challenges and Opportunities - Can Western Planning Theories Inform Changing Chinese Urban Planning Practices? <i>Mee-Kam NG and Fulong WU</i>	147
Economic Reform and Planning Education		
10	Urban Development, Urban Planning, and Planning Education in China Since 1978 - Retrospect and Prospect <i>Xueqiang XU and Desheng XUE</i>	173
11	The Problems and Corresponding Actions in China's Urban Planning Education Since the Economic Reform and Open Door Policies in 1978 <i>Xiaopei YAN and Desheng XUE</i>	199
12	China's Urban Planning and Urban Planning Education <i>Bingzhao CHEN</i>	207
13	Contemporary Urban Planning and Planning Education Problems in China <i>Wenxuan GU</i>	215
14	Discussion on Urban Planning Education <i>Liangyong WU</i>	221
15	From the Past to the Future - Transforming Urban Planning Education in China <i>Qi LIU and Lin LIN</i>	229
16	Thoughts on Urban Planning Education Since the Beginning of the Reform and Opening to the World <i>Guangyu HUANG and Yaozhi HUANG</i>	245
17	Change Our Perception and Accept New Challenges - Urban Planning Education at the Department of Geography, Peking University <i>Yixing ZHOU</i>	251

18	Urban Development and Urban Planning Education <i>Gonghao CUI</i>	259
19	The Future of Urban Planning Education in China - A View from the West <i>Brahm WIESMAN</i>	267
20	The Relationship between Urban Planning and Environmental Management - Implications for Planning Education <i>Peter HILLS</i>	283
21	Urban Planning Education in China - A Statistical Study <i>Min ZHAO and Sheng ZHONG</i>	295
	Appendix	
	List of Urban Planning Schools in China	313

Contributors

Bingzhao CHEN, Chairman and Professor, Department of City Planning, Tongji University, Shanghai

Gonghao CUI, Professor, Department of Geoscience and Oceanography, Nanjing University, Nanjing

Wenxuan GU, Vice-President and Senior Urban Planner, Academy of Officers, Ministry of Construction, Beijing

Peter HILLS, Director and Professor, Centre of Urban Planning and Environmental Management, University of Hong Kong, Hong Kong

Guangyu HUANG, Professor, Department of Urban Planning, Chongqing Architecture and Engineering College, Chongqing

Yaoshi HUANG, Academy of Urban Planning and Design, Chongqing Jianzhu University, Chongqing

Lin LIN, Lecturer, Centre of Urban and Regional Research, Zhongshan University, Guangzhou

Bomin LIU, Director, Institute of Urban Planning, Department of Architecture, Southeast University, Nanjing

Qi LIU, Chairman and Associate Professor, Department of Geography, Zhongshan University, Guangzhou

Yuxiang MA, Chairman and Professor, School of Economics and Management, Hangzhou University, Hangzhou

Mee-Kam NG, Lecturer, Centre of Urban Planning and Environmental Management, University of Hong Kong, Hong Kong

Daoqi SHEN, Researcher, Nanjing Institute of Geography and Limnology, Chinese Academy of Sciences, Nanjing

Huasheng SUN, Chief Urban Planner, Shenzhen Research Institute of Urban Planning and Design (SIUPD), Shenzhen

Jinshang SUN, Senior Engineer, Liaoning Urban and Country Construction Institute of Planning and Design, Shenyang

Qingquan WEI, Deputy Director and Associate Professor, Centre of Urban and Regional Research, Zhongshan University, Zhongshan

Brahm WIESMAN, University of British Columbia, Vancouver BC, Canada

Fulong WU, Ph.D. Candidate, Centre of Urban Planning and Environmental Management, University of Hong Kong, Hong Kong

Liangyong WU, Professor, School of Architecture, Tsinghua University, Beijing

Xueqiang XU, Director and Professor, Centre of Urban and Regional Research, Zhongshan University, Guangzhou

Desheng XUE, Ph.D. Candidate, Centre of Urban and Regional Research, Zhongshan University, Guangzhou

Xiaopei YAN, Deputy Director and Associate Professor, Centre of Urban and Regional Research, Zhongshan University, Guangzhou

Zhongmin YAN, Professor, Geography Institute of Western Europe and Northern America, Eastern China Normal University, Shanghai

Anthony Gar-On YEH, Assistant Director and Reader, Centre of Urban Planning and Environmental Management, University of Hong Kong, Hong Kong

Min ZHOU, Professor, Department of Urban Planning, Tongji University, Shanghai

Yixing ZHOU, Deputy Chairman and Professor, Department of Urban and Environmental Studies, Peking University, Beijing

Sheng ZHONG, Research Assistant, Department of Urban Planning, Tongji University, Shanghai

List of Figures

3.1	Urban Development in Hong Kong	47
3.2	Pedestrian System in Central District	52
8.1	The Previous Plan	133
8.2	The Final Implemented Plan	134
8.3	The Sketch Map of Zhangshu Clothing Market Environment	137
8.4	The Hierarchy of City Planning Objectives	140
8.5	The Relation between City Planning and City Development Practice	143
8.6	Relations among City Planning, City Development Objectives and City Management	145
9.1	Evolution of Planning Theories	149
9.2	A Typical Rational Comprehensive Planning Process	150
9.3	Hierarchy of Plans under the 1989 City Planning Act in China	160
10.1	Relations Among the Economic Reform and Open Door Policy, Urban Development, Urban Planning and Urban Planning Education	173
10.2	Population Proportion of 4 Rank-Size Cities to the Whole Urban Population in China, 1978, 1991	178
10.3	Urban Population Growth Rate of 4 Rank-Size Cities in China, 1978-1991	178
10.4	Growth of the Number of Cities in Three Regions in China, 1949-1978, 1978-1991; Growth of Urban Population in Three Regions in China, 1953-1978, 1978-1991	182
10.5	Shift of the Gravity Centres of Cities and Urban Population in China, 1953-1990	182
10.6	Expansion of Urban Planning Contents	186
10.7	Process of Urban Planning Work	189

List of Tables

1.1	Administrative Units Under the Jurisdiction of Different Cities in the Changjiang Delta Region	4
1.2	National Positions of the Cities in the Changjiang Delta Region under Recent Economic Development	13
2.1	CBHI and CBII of the Main Roads in Shanghai	28
2.2	Classification of Vertical Utilization of Buildings along Bund, Nanjing Road and Xizang Road (%)	29
3.1	Number of Planners and Population/Planner Ratio in Hong Kong	37
3.2	Population Densities of Selected Cities in Asia, United States, Canada, Europe, and Australia in 1980	45
3.3	Employment Densities of Selected Cities in Asia, United States, Canada, Europe, and Australia in 1980	46
3.4	Residential Population and Population Density in Hong Kong	48
3.5	Revenue from Land Sales (in million HK\$)	57
6.1	New Urban Planning System in Shenzhen After 1990	114
7.1	Population Planned for Some Cities in Guangdong Province	123
10.1	The Number of Cities and Urban Population in China in 1949, 1978 and 1991	175
10.2	Urban Population Growth of 4 Rank-Size Cities in China in 1978-1991	177
10.3	The Number of Cities in Three Regions (Eastern, Middle and Western) in China in 1949, 1978 and 1991	180
10.4	The Urban Population of Cities in Three Regions (Eastern, Middle and Western) in China in 1953, 1978 and 1991	181
15.1	Departments and Colleges that an Urban Planning University Includes	236
15.2	The Specialities of Urban Planning	239
15.3	Stages of Urban Planning Education	240
21.1	Degrees offered	297
21.2	Duration of Programme	297

21.3	Date of Origin	297
21.4	Content of Knowledge (Theory) Courses	299
21.5	Undergraduate Urban Planning Courses	300
21.6	Undergraduate Urban Planning Courses in Social Science Programme	301
21.7	Undergraduate Urban Planning Courses in Engineering Programme	302
21.8	Programme Emphasis by Institutional Type	303
21.9	Annual Students Admissions	304
21.10	Satisfaction with the Number of Planners Available	305
21.11	Source of Planners	305
21.12	Future Recruitment	306
21.13	Desired Education Level	306
21.14	Desired Knowledge	307

Preface

The Centre of Urban Planning and Environmental Management (the then Centre of Urban Studies and Urban Planning) of the University of Hong Kong co-organized a *Conference on Planning Education* with the Geography Department of Zhongshan University on 10-15 September 1983. The Conference was held at Zhongshan University, Guangzhou and funded by the Hong Kong Pui Wah Foundation. It was attended by over 70 participants from universities, planning departments, and research institutes in China and Hong Kong.

It has been ten years since this Conference was held and China has developed very rapidly in these ten years. Rapid economic development has led to many urban development and planning problems. The introduction of free market mechanism and housing and land reforms has given a different operation environment for urban planning. There is an urgent need to develop a planning system to meet the needs of the new planning environment and to plan for the rapid development of cities and towns. If cities and towns are not planned and developed properly, their economic development will be hindered by their land use, transport, and environmental problems. As a follow up of the 1983 Conference, the Centre of Urban Planning and Environmental Management of the University of Hong Kong and the Centre for Urban and Regional Studies of the Zhongshan University organized a *China Urban Planning and Planning Education Conference* on 13-17 December 1993 in Zhongshan University, Guangzhou. Over 116 participants, 99 from different cities in China and 17 from Hong Kong and Canada, participated in this conference. The Conference reviewed the changes in urban development and planning and the impact of such changes on urban planning education. It also discussed the need of urban planning education and guidelines for curriculum design to meet the changing urban planning environment in China. The complete set of the conference papers has been published by the Science Press in Chinese with the title *China's Economic Reform and Chinese Cities: Development, Planning, and Planning Education*. This

monograph is a selection of papers from the Conference and invited papers that discuss urban planning and planning education under economic reform in China.

We would like to thank the Hong Kong Pei Hua Education Foundation and Fok Ying Tung Foundation for sponsoring the Conference. We would also like to thank the assistance of Miss Evelyn Lee Hoi Yee, Miss Josephine Lo Yuk Man and Miss Rosemary Barnes in preparing this monograph.

Anthony Gar-On Yeh, Xueqiang Xu
and Xiaopei Yan

December 1996

**ECONOMIC REFORM AND
URBAN PLANNING**

1

Economic Reform and Urban Development in the Changjiang Delta Region

Daoqi SHEN

INTRODUCTION

The Changjiang (Yangtze) Delta Region is one of the regions in China where the policies of economic reform and opening to the outside world were put into practice earlier than in other areas. In 1990, following the announcement by the nation to open up the new Pudong Development Zone in Shanghai, a seminar on the planning of Changjiang delta area and the area along the Changjiang was called again by the State Council in June 1992 to work out a strategic plan to concentrate efforts to do a good job in developing this new development zone first and then opening up the coastal area along the Changjiang step by step and, in so doing, to promote the development of Changjiang's delta region and the industrial zone on both of its banks. Thus this delta region has had its own clear and recognizable scope of administrative divisions.

The Changjiang Delta Region embraces 14 municipalities, namely, the municipality directly under the Central Government Shanghai, and the provincially-administered municipalities Nanjing, Zhenjiang, Yangzhou, Suzhou, Wuxi, Changzhou Nantong in Jiangsu Province; and Hangzhou, Jiaxing, Huzhou, Shaoxing, Ningbo and Zhoushan in Zhejiang Province respectively. In 1992, these municipalities had jurisdiction over one zone¹, 72 counties (cities)², 988 designated towns and 1,338 townships (Table 1.1) with a total area being close to 100,000 square kilometres and a total population of 72,720,000.

Table 1.1 Administrative Units Under the Jurisdiction of Different Cities in the Changjiang Delta Region

Cities	Number of Administrative Units				Name of Cities or Towns
	Zone	County	City at County Level	Designated Town	
Shanghai	1*	6	2	46	Pudong (<i>new development zone</i>), Nanwei (<i>county</i>), Fengxian (<i>county</i>), Songjiang (<i>county</i>), Jinshan (<i>county</i>); Qingpu (<i>county</i>), Chongmin (<i>county</i>)
Nanjing		5		50	Jiangning (<i>county</i>), Jiangpu (<i>county</i>), Liuhe (<i>county</i>), Lishui (<i>county</i>), Gaocheng (<i>county</i>)
Wuxi		1	2	64	Jiangyin (<i>city</i>), Yixing (<i>city</i>), Wuxi (<i>county</i>)
Changzhou		1	2	49	Liyang (<i>city</i>), Wujin (<i>county</i>), Jintai (<i>city</i>)
Suzhou		1	5	96	Changshu (<i>city</i>), Zhangjiagang (<i>city</i>), Kunshan (<i>city</i>), Wujiang (<i>city</i>), Taichung (<i>city</i>), Wuxian (<i>county</i>)
Nantong		3	3	72	Qidong (<i>city</i>), Rugao (<i>county</i>), Tongzhou (<i>city</i>), Hainan (<i>county</i>), Rudong (<i>county</i>), Haimen (<i>county</i>)
Zhenjiang		3	1	49	Danyang (<i>city</i>), Dantu (<i>county</i>), Jurong (<i>county</i>), Yangzhong (<i>county</i>)

* Referring to the Pudong New Development Zone

Table 1.1 Administrative Units Under the Jurisdiction of Different Cities in the Changjiang Delta Region (Cont'd)

Cities	Number of Administrative Units				Name of Cities or Towns
	Zone	County	City at County Level	Designated Town	
Yangzhou		4	6	102	Taizhou (<i>city</i>), Yizhen (<i>city</i>), Xinghua (<i>city</i>), Gaoyu (<i>city</i>), Taixing(<i>city</i>), Jingjiang(<i>city</i>), Baoyin (<i>county</i>), Hanjiang (<i>city</i>), Taixian (<i>county</i>)
Zhenjiang		3	1	49	Danyang (<i>city</i>), Dantu (<i>county</i>), Jurong (<i>county</i>), Yangzhong (<i>county</i>)
Hangzhou		5	2	124	Xiaoshan (<i>city</i>), Jiangde (<i>city</i>), Tonglu (<i>county</i>), Fuyang (<i>county</i>), Linan (<i>county</i>), Yuhang (<i>county</i>), Chengan (<i>county</i>)
Ningbo		3	3	113	Yuyao (<i>city</i>), Cixi (<i>city</i>), Fenghua (<i>city</i>), Xiangshan (<i>county</i>), Ninghai (<i>county</i>), Jinxian (<i>county</i>)
Jiaxing		3	2	62	Haining (<i>city</i>), Pinghu (<i>city</i>), Jianshan (<i>county</i>), Haiyan (<i>county</i>), Tongxiang(<i>county</i>)
Huzhou		3		40	Deqing (<i>county</i>), Changxing (<i>county</i>), Jian (<i>county</i>)
Shaosing		2	2	95	Zhuji (<i>city</i>), Shengyu (<i>city</i>), Shaoxing (<i>county</i>), Chengxian (<i>county</i>), Xinchang (<i>county</i>)
Zhoushan		2		26	Daishan (<i>county</i>), Chengsi (<i>county</i>)
Total	1	43	28	988	

In terms of cultivation, the delta region of the Changjiang has had a time-honoured history of more than 5,000 years. For a long period of time, this region, having been subjected to an intensive exploration by Man in coincidence with the population growth and aggregation, has become a region characteristic of higher population density and of the most numerous cities among the world's largest river deltas. By the 1990s, the nation's development strategic plan speeded up the economic reform in this region as well as the urbanization progress in the entire region and brought a new turning point to further urban advancements.

URBANIZATION PROGRESS AND URBAN DEVELOPMENT FEATURES IN THE 1990S

Rapid Increase of City Numbers and Urban Population in Coincidence with the Expansion of the City Proper

At the end of 1992, there were 36 cities in this delta region, an increase of 22 more than 1982. During the past decade, the urban population had an increase ranging from 12.28 million to 18.40 million, with the population size and grade in cities at different levels being basically in order and the administrative designated levels also being completed. At the same time, the designated towns were promptly on the increase in number, amounting to 988, an increase of 656 from 1985. Whereas, the construction of regional infrastructures was gradually perfected which then gave an impetus to the further strengthening of the network system between cities and towns.

In the process of carrying out the national policies "*to strictly controlling the scale of bigger cities and rationally expanding medium- and small cities*" as well as family planning among those cities in the Changjiang Delta Region, the birth rate of urban population was markedly on the decrease, and its natural birth rate was notably lower than the average level in cities all over the country. It is due to the reform and open-door policy, the abolition of the instructive grain production and deregulation of the grain prices as well as the abolition of the urban grain rationing system in the whole country, that both the urban mechanical growth population and the transient population increased in great quantities. The more prosperous a city is, the larger a transient population will enter into it. It is estimated that such transient population accounts more often than not for 20% to 25% of the urban non-agricultural population. Moreover, the rural township enterprises and the agricultural labour force depend mostly on the outside labourers to maintain their production. Presently, the whole area of this river delta is at a population agglomeration stage. So far as a

city is concerned, with the population floating spontaneously from one administrative area into another in large quantities, it is very difficult to keep balance between what jobs are to be given and what skills are to be offered by those spontaneously floating labourers; a variety of infrastructures cannot satisfy the requirements of the continuously growing population, which makes the urban life decline in quality and adds difficulties to the management of urban affairs. Hence, a lot of social problems emerge.

In the wake of reform and the open-door policy, and to meet the requirements of socio-economic development, the city proper is rapidly expanding, in which the construction of new development zones has become the main reason for extending the city proper in stretches. Before 1984 in the delta region, the urban size both in terms of population and the city proper in various cities had been subjected to measures of strict control. Since 1984, following the approval by the state of the exploration of economic technologies of the coastal open cities, three of them, namely, Shanghai, Nantong and Ningbo in the Changjiang Delta Region, have established economic and technological development zones generally from one kilometre outside the built-up area or at the urban fringe as a beginning of the construction of a new urban district. In 1990, a decision was issued by the Central Government to open up the Pudong New Zone, which will cover a total administrative area of up to 522 square kilometres. The new zone attains 350 square kilometres as against 324 square kilometres of the old city proper at Puxi, whereas the suburban area will be expanded accordingly, with the Baoshan county being changed into the Baoshan district, the Jiading county into the Jiading District, the Shanghai county being partly incorporated into the Zhabei District and partly into the Minhang District respectively. Thus, the city proper in the Shanghai Municipality began to expand outward to a wide extent.

To seek a solution to the difficulties in urban congestion and the redevelopment of old cities, as well as for the necessities in economic development, quite a number of cities have started an upsurge of new district construction. Take Suzhou for example, in the past 25 years (1950s to the 1980s), there was an increase of only 7 square kilometres in the urban land used for urban construction. In recent years, in order to seek a solution to protecting the ancient city as well as the land shortage both in production and livelihood, it has been officially approved and announced to work out programmes for the construction of a new district covering an area of 26.4 square kilometres in the west part of the city proper and a holiday resort district for tourism at state level, with an initial planned area

of up to 11.2 square kilometres at Xikou. And what is more particular is the recent setting up of an industrial park at Suzhou which, attaining an area of 70 square kilometres at the Jinji Lake area in the east part of the city, will be jointly funded along with a company from Singapore. These three new districts, once completed, will bring a tremendous increase in Suzhou's urban land use.

Also, since the three counties- Wuxian, Wuxi and Wujin - are being located immediately on the border of and surrounding their respective central cities, namely Suzhou, Wuxi and Changzhou, have either joined with or separated from the three cities for several times in history, the original county seats were incorporated into the city proper where the county governments used to handle their official business. For the past years, those neighbouring counties have been accelerating their development by means of cancelling counties and establishing cities. In order to make further development of the economy and culture in the county, these three counties, known as the most prosperous in southern Jiangsu, have planned in recent years to build up new county seats. The new county seat of Wuxian is situated at the south of Suzhou city, extremely close to the city proper, covering an area of 20 square kilometres at its first stage project; the new county seats of Wuxi will be set up at Dongting town, 4.5 km away from the railway station of Wuxi city, with a Planning area of 20 square kilometres, whereas the new county seat of Wujin will be chosen at a distance of 3.4 km from Changzhou city, with its first stage planning area of 20 square kilometres. It is because these new cities are built up closely near to the central city, with their infrastructures being connected with each other, that in space they are reflected to be expanded in a vast expanse of urban land area. This brings practically a further expansion of urban land into a stretch between the three cities of Suzhou, Wuxi and Changzhou.

By the year 1993, eight economic technological development zones at state level (totalling 30 in the whole country) had been approved to be erected at the delta region of the Changjiang, in which the Kunshan Economic Technological Development Zone will be self-financed under the approval of the state. Later, an upsurge of constructing the economic technological development zones and the high technology- development zones was set off in other cities or counties one after the other. In the wake of upsurges resulting from the exploration of varied new zones, the land used both for urban construction and for non-agricultural production in this delta region kept on expanding.

Transformation of the Administrative Systems Between City and Town in Order to Upgrade the Organizational Systems Between City and Town and to Promote Administrative Functions

In the Changjiang Delta Region, the transformation of administrative systems between city and town involves the municipalities, counties and townships at different levels. Among various forms in the transformation of city-town systems in the past years are: a) municipality having jurisdiction over counties; b) the withdraw of prefectures; c) the change from a county into a city; d) the change of a county into a district of a municipality; e) the upgrade of a market town into a designated town; f) the change of a township into a town; and g) a town having jurisdiction over a township. Some forms have been put into common practice throughout the delta region, while some are the first attempts in the nation.

The County (City) Under the Jurisdiction of the Municipality³

Beginning from 1983, an administrative system of “*having a county under the jurisdiction of the municipality*” was put into effect in all cities in the Changjiang Delta Region (and so was the city of Zhoushan in 1987). The practice of placing a county directly under the municipality has brought changes to the original relations between town and country and has increased the administrative functions of the municipality to exercise leadership over a county, thus strengthening a city’s central function. To exercise leadership over a county, there is a need to conduct an overall and unified design and construction with respect to both economy and infrastructures within the urban and rural scope under its jurisdiction. In addition, the rural economy will become the component part of the economic systems in the area under the municipal jurisdiction, a transformation which has effected a change in the relation between city and county and has provided conditions for achieving step by step integration between town and country.

New Emerging Cities

They refer to those new designated cities already practising reform and open-door policy. These include not only cities at county level, but also cities at prefectural level, their original foundations being small cities or towns and their administrative organization belonging to towns under the jurisdiction of a county. It was after the replacement of the prefecture by a city and the replacement of the county by a city that an administrative system in which a city at prefectural level has jurisdiction over a county (or a city at county level) and a city at county level exercises leadership over the township was put into effect. This is a kind of city in a new system

characterized by a city having not only its scope of city proper, but also a wide extent of agricultural hinterland³, showing both an urban society and a rural society that is known as a system which helps to speed up the progress toward an organic whole of the town and country.

In the delta region there is one new emerging city at prefectural level (the city Zhoushan in 1987) and 27 cities at county level. In recent years, except for Wuxian, Wuxi and Wujing in Suzhou, Wuxi and Changzhou of southern Jiangsu, the other counties have all been promoted to be cities at county level, which are connected with each other in space to form a vast area of urban territory.

To Cancel Counties for the Establishment of Districts

This is a transformation of administrative systems in the process of reform and opening to the public in the megalopolis of Shanghai. For the purpose of constructing the new zone in Pudong, 89% of the county Chuanshan will be incorporated into this new zone, and so will the other two counties Jiading and Baoshan, to become the suburbs of the city. To establish districts by removing counties helps those industries relying on the major industries in the city proper to develop a foreign-orientated economy, push forward the advancement of regional economy in the suburbs in a pluralistic direction and lay a foundation for the urban-rural integration as well.

To Withdraw Townships for the Setting Up of Towns and to Practise the System of Having the Villages Under the Jurisdiction of the Designated Town

A designated town is an economic centre within a specific scope of a county. In the wake of rural economic reform, the rural industrial structures have made a change which promoted economic development and gave an impetus to the construction of rural towns. Some of these towns have turned into the central market towns in the process of commodity economic growth, whereas some of these rural market towns have upgraded into designated towns as provided for by the rules of the State Ministry of Civil Administration. In recent years, in the economically developed countryside, these designated towns have been steadily increasing in numbers and the population has been larger in scale. In some of the designated towns are subordinated to the county, the total population of which has exceeded 50% or more than that of the whole county.

All of the towns, where some of the townships are under the jurisdiction of a county (city) in the Changjiang Delta Region, have been promoted to

designated towns. A new administrative system has been put into practice in some counties (cities) where the township is replaced by the town and the designated town exercise leadership over the village. Take for example the city Kunshan which was rectified in September 1989 by the State Council to cancel the county for the erection of a city. In November 1990, an administrative system of the town having jurisdiction over the village began to be put into practice, in which all of the townships under its jurisdiction were approved by the Ministry of Civil Administration to be upgraded as designated towns, known as the “first county without a township” throughout the nation.

Placing the village under the leadership of the designated town is a major reform in the rural administrative system and a product at a specific stage in the rural socio-economic development. This kind of new administrative system is of great advantage to the improvement of management systems in our country, the drawing up of socio-economic development plans, the correct handling of the relations between the central town and its outlying districts, the lessening of contradictions between town and country, the extension of the hinterland of the town as well as the intensification of its attractions and radiation abilities and so on and so forth.

The Urban Internal Mechanism is Changing Markedly in the Process of the Enhancement of Both Regional Economic Strength and Urban Synthetical Strength

Under the strategic plan of the nation’s accelerated reform and open-door pursuit, and taking advantage of its original foundations and locational superiorities, the Changjiang Delta Region has been approved by the state to enjoy a series of nationwide preferential policies and measures. These include, in 1984, the three municipalities of Shanghai, Nantong and Ningbo being made the open coastal cities along the coastal area, in addition to the 11 cities and 60 counties under their jurisdiction which would be opened to the outside world one after another. Also in 1990, Pudong was granted approval to be built into a new zone. What is more, among those subjected to the approval are 8 more economic technological development zones at national level, 2 tourist holiday zones at national level, three tax-protection zones at Waigaoqiao in Pudong; Zhangjiagang and Ningbo, along with the deep-water harbour lying in the coastal Changjiang delta and the port of Beilungang in Ningbo, all being accessible to foreign ships.

Over these years, this river delta region, by getting hold of opportunities and hastening its reform, has achieved prominent success in the all-round economic development. In 1992, 9 cities in this delta region, namely Shanghai, Nanjing, Hangzhou, Suzhou, Wuxi, Changzhou, Nantong, Ningbo and Yangzhou were among the 50 cities that were rated by the State as the best cities with strong development potentials in the whole country. Again, 9 cities were also included in this first batch of cities entitled "excellencies" for investment environment announced by the state. In the whole nation's 2,353 counties (cities), those with the highest 100 financial income accounted for 4% of the total counties of the country and 22.1% of the total financial income of the counties of the whole nation. Among those 10 top counties (cities) on the list, there were 8 which are located in this delta region (Table 1.2).

In the transitional process toward the market economic system, the economy of a majority of the cities in this river delta region depends mostly on the market adjustment. In the three cities Suzhou, Wuxi and Changzhou and those counties (cities) under their jurisdiction, their market economic operation has reached 90% and the function of the market mechanism is steadily strengthening. For the past several years, various large-scale specialized markets and futures markets have successively come into being. The markets of consumer goods and productive materials have advanced most rapidly, whereas those under such categories such as capitals, techniques, information, culture, labour services and real estate are gradually taking shape and have achieved a considerable scale. By the end of 1991, the Eastern Silk Market at the city Wujiang in Suzhou and the light textile market at the county Shaoxing have joined the ranks of the nation's 10 major trade markets.

Since the state pursued a policy to allow and encourage the development of non-public owned firms, there has also been a change in the regional economy in the delta region. The non-public owned economy began to develop in 1984, which has now turned into various types of firms, such as individual firms, private-owned firms and firms with foreign capitals. The type of trades they are engaged in has been deepened and improved both in contents and in levels.

In the Changjiang Delta Region, the industrial output value of townships, villages and those units under the village accounted for 38.8% of the total output value of the same category of the whole nation. In the nine counties (cities) such as Wuxi, Jiangyin and Wujin in southern Jiangsu, the industrial output value of the township industries surpassed 10 billion

Table 1.2 National Positions of the Cities in the Changjiang Delta Region under Recent Economic Development

Whole Nation	Changjiang Delta Region
14 open-door coastal cities	3 cities: Shanghai, Nantong and Ningbo
30 state-level economic-technological development zones	8 zones: Minhang, Hongqiao and Caohejing in Shanghai city; Nantong and Kunshan in Jiangsu Province; Kiaoshan and Ningbo in Zhejiang Province
8 state-level tourist holiday zones	2 zones: Taihu Lake tourist holiday zone, including Xikou in Suzhou, Mashan in Wuxi and Zhijiang in Hangzhou
1992 50 best China's cities in development potential	9 cities: Shanghai (ranking 1st), Nanjing (5th), Hangzhou (12th), Suzhou (15th), Wuxi (17th), Changzhou (28th), Nantong (29th), Yangzhou (34th) and Ningbo (38th)
1992 "40 Excellences of Hard Circumstances" in urban investment of China's cities	9 cities: Shanghai, Nanjing, Wuxi, Suzhou, Changzhou and Nantong in Jiangsu Province; Hangzhou, Ningbo and Shaoxing in Zhejiang Province
In the nation's 2353 counties, the number of counties with the top 100 total financial income accounted for 4%, and 22.1% that of the total amount of the whole nation's counties	8 counties were listed among the top 10 in the list of 100
At the end of 1991 in the nation's 10 major trade markets and 432 townships whose financial income exceeded 10,000,000 yuan	The one: the Eastern Silk Market in Wujiang county (ranking 3rd); The other: the Light Textile Market in Shaoxing county (ranking 5th) Among them, 55 townships in Shanghai; 73 in Jiangsu and 86 in Zhejiang Provinces, all being situated in concentration in the delta region of the Changjiang River

yuan. Up to now, the township industrial output value of most counties and cities at county level has exceeded half of the entire industrial output value. Among the total industrial and agricultural output value, the industrial one has constituted 90% and more. These township enterprises are regarded to be the main players in the rural economy in southern Jiangsu. They have been commonly lifted out of past conditions where they were smaller in scale and backward in technology. They are now either developing toward large corporations or becoming internationalized.

AN APPROACH TO THE TRANS-CENTURY URBAN DEVELOPMENT IN THE CHANGJIANG DELTA REGION

In light of the nation's development strategic plan, the Changjiang Delta Region will take the lead in becoming one of the regions to accomplish basic modernization. In the long-range development strategy, this region has to bring its overall superiorities into full play. To attain this aim, we should not only study its trans-century urbanization progress and the new pattern of urban systems, but also work out the urban planning strategy which corresponds to the socialist market economic systems with which to give guidance to the urban construction and development.

As a rule, the master planning of a metropolis had to be approved through examination by the state at the beginning of the 1980s. Beginning from the 1990s, at the request of state departments concerned, urban plans began to be subjected to revision. In the process of revision, more cities had brought forth a lot of new ideas. However, as compared with the speed of economic development, they seem to comparatively lag behind the time. This is reflected in many respects, such as the prediction of population sizes, and the determination of index systems and the planning frameworks and patterns of urban systems, all of which being unable to extricate themselves completely from the yoke of the traditional planned economic systems.

Since the beginning of the 1990s, large cities in this region have all been working on the revisions of their respective overall urban plans. In the metropolis Shanghai, people are engaged in the synthetical studies on "Shanghai in the 21st Century". In order to fulfill the objective whereby by 2010 Shanghai will be developed into one of the international centres in terms of economy, finance and trade, the people of Shanghai are making efforts to formulate and revise once again the development strategy of "Shanghai in the 21st Century" and its corresponding overall urban plan and calling for the complete revision of the Shanghai's master plan prior to

1995. In Nanjing, based on the needs of trans-century development, it has completed the revisions of its overall urban plan for the purpose of building Nanjing into an internationalized metropolis. To achieve this end, a spacial development outline of a metropolitan circle has been established, thus providing a favourable ecological environment for urban development.

At present, most cities in China take the construction of an internationalized (or international) metropolis as the long-term development objective, although the issue of what the term “internationalization” means remains in dispute. The practical problem is which transformation there should be in urban planning at the time when the city is entering into the regional modernization stage. Moreover, to set up a socialist market economic system, how can we reach a unified understanding and a comparatively consistent way of solving some problems concerned with urban planning ?

On the basis of the trends concerning urban development of the Changjiang Delta Region, while drawing up the trans-century urban master plan, we should put forward the following issues which are worthy of further discussion and studies.

How to Implement Effectively the Urban Construction Policies Set by the State

The national urban planning act was adopted by the 11th Session of the Standing Committee of the National People’s Congress on 26 December 1989 and has been implemented throughout the country since 1 April 1990. The promulgation and implementation of this planning law symbolized a new stage for the cities in China where planning, construction and management should be carried out in accordance with the government decrees. As provided for in the urban planning law, the urban construction policy of “strictly controlling the scale of bigger cities and rationally expanding medium and small cities” has been carried out in quite a few cities.

Along with the reform and open-door policies and the faster speed of economic advancements and construction, central economic cities have become important in the reform of economic systems, even though in terms of population size, attention has been focused on the carrying out of the policies of national urban construction and rigorously ensuring both family planning and household registrations. Nevertheless, on the other hand, the other policies and measures in the process of reform and opening to the outside world will leave one or the other chance for the population and

economy to grow continuously in those bigger cities, which will necessarily lead to the expansion of urban land utilization and the increase in the number of floating population coming from other parts of the country. Hence, in the transitional process from a planned economy toward a market economic system, urban development will more often than not break through the urban patterns and scales laid down by the planned economy.

Take, for example, Shanghai, a megalopolis in China, the natural population growth rate has been in decline year after year, ranging downward from 30.3% in 1952 to 12.2% in 1982, to only 0.2% in 1992. In the urban districts, there appeared a negative increment, i.e., -1.2% in 1992. And among the 12 districts in the city proper, except for Minghang and Baoshan which have been incorporated into new development zones, the other 10 districts have all shown a negative natural population growth rate. In the Municipality Shanghai, the number of annual births has amounted approximately to 100,000. Along with the reform and open-door policy and the requirements in the construction of new zones, the transient population in the city district are increasing at a tremendous rate. Up to 300,000 construction workers from the other parts of the country were to be recruited for the construction of a single project, a figure that is two times as many as that of the annual births. It was preliminarily estimated that the amount of transient population in the city of Shanghai has reached up to 2 millions, accounting for roughly 25% of the urban non-agricultural population. These workers coming to Shanghai from other parts of the country in addition to working on the tertiary industry have put in a lot of hard work in the construction of Shanghai, while those transient population in the non-public owned enterprises have also contributed to the prosperity of the economy and the strengthening of market economic systems. But on the other hand, to some extent, such phenomena have pointed to the fact that the size of the urban population has been out of control.

In the economically prosperous cities in this delta, their population sizes have all over-fulfilled the indexes formulated by their original plan. It would be very difficult to accord with the urban development reality, if the long-range population size and its corresponding index system should be set in accordance with the old conventional calculations in the revisions of the overall plans. As a rule, a city is bound to progress, but the urban population size should not be enlarged beyond certain limits. Hence, we should consider what methods and what policies we should take to calculate and guide a rational population size in the process of long-range urban development so as to effectively implement the urban construction principles

drafted by the state. This is a practical problem calling for an immediate solution in the revisions of overall urban plans.

In recent years, in light of the principle of coordinating socio-economic development and regional ecological environment in the process of regional modernized construction, we have studied the development potentials and possibilities to be offered by the existing natural environment to economic construction and modernization of specific cities. Proceeding from the oxygen and water at the underlying surface, we have assessed the regional supporting ability of the ecological environment. Particularly at regional angles, we have studied the quantitative and qualitative guarantee of the urban water resources as well as the effectiveness of oxygen circulation and oxygen balance. We believe if the issues of urban industrial restructuring and the possible population carrying capacities are dealt with on this basis, then it is possible for us to provide a basis for working out the rational population sizes and the guiding policies and measures for long-range urban development.

An Approach to the New Patterns of Urban System Corresponding to the Trans-Century Socialist Market Economic System

There is an intimate relationship between urban development and the social division of labour, commodity production and market development. The planned economic system existing in the past in China was a kind of system in which the resources were allocated in a concentrated and planned way. The disposition of resources was arranged by the government and the power of arrangement was corresponded to government ranks. It is also known, therefore, as a kind of system composed mainly of the vertical management of departments. In this system, trade was replaced by the allocation of planned products; social capital goods and means of subsistence were distributed by means of ration and allocation. Hence, the market economy was under-developed while the urban functions were limited only to administrative and economic leadership and management from top to bottom. The main forms of commodity circulations were allocated from top to bottom according to administrative rank units; the establishment of financial organizations and social welfare setups were also restricted by the administrative ranks. Instead of making contacts in a horizontal direction, contacts between cities take vertical ones as dominant. It can be said that under the system of a planned economy, the urban function was, as a whole, to be the administrative, economic and cultural centres of different ranks and the urban size was decided almost entirely by administrative ranks.

The contents of an urban system should include three aspects, namely, the city rank and size system; the system of inter-connections between cities (towns), and the urban system. Under the practice of the planned economic system, the urban system is unitary, and there is a lack of exchanges and restrictions between cities (towns). The principal content of a city (town) system in a region is a rank and size system of a city or town. In essence, it is a vertical system from top to bottom and in space it gives expression to a kind of static system.

Since the practice of reform and open door policy, drastic changes have taken place in the economic system of our country and a setup developed jointly by diversified economic elements with public-ownership as the main body has started to take shape. Market effects in the disposal of resources are keeping on expanding and the planned economy is steadily in a transition toward a market economy, a change which is particularly noticeable along the coastal area at the foreground of reform and opening to the outside world. Over the past decade, there was a rapid advance in the urbanization progress along the coastal regions of our country and, in particular, the rural economy was prosperous. In those regions where the urban construction is well-founded, where there is a stretch of cities linking up with each other and where there is a high density of cities or towns, the socio-economy is advancing toward the stage of regional modernization. Cities in such regions are the organic component part in the regional economy. The effects of a market economic system has brought about a change in the form of connections between cities, from an above- to- below type according to the administrative rank system to the strengthening of the horizontal connections between one city and the other. Again, as a result of the further perfection of regional infrastructures, the urban system is developing from the originally static rank system toward the dynamic urban network system. The market economy has also brought into full play the urban locational superiorities of those originally marginal regions or those situated at the cross-section of administrative borderlines. Consequently, if the revisions of urban overall planning take only the urban administrative boundaries into consideration and if urban system planning is worked out from the municipal boundaries under its jurisdiction, it will be all too difficult to suit the needs for regional modernization construction. To undertake trans-century urban planning, we should first of all change our traditional idea of the originally planned economy.

Take the Changjiang Delta Region for example. At present, the urbanization drive in this region is rapidly and steadily under way, with

urban economic development and rural industrialization as the essential power of motion. There we have the administrative system of placing the county under the jurisdiction of the city, the tendency of building an organic whole between town and country, the continuous expansion of those city-like territories and the circulation of a vast amount of population, materials, energy and information between urban and rural areas. In this territorial area connected cities, though there are large numbers of cities and towns spreading evenly here and there, there exist remarkable differentiations among them with respect to economic levels, whereas the status and functions of a city or a town have become increasingly inconsistent with its administrative organizational rank in the urban network systems. The reasons are as follows:

The Reform and Open-Door Policy has Highlighted the Locational Superiorities in a Number of Cities and Towns

Here is an example. Over these years, Suzhou along with the city of Kunshan subordinated to it has seen high-speed economic advances. Among one of the key reasons is that it has fully utilized its short distance from Shanghai, that is, they have grasped every opportunity to accelerate their development by making use of the time difference in the construction of Pudong new development zone in Shanghai. The city of Kunshan lies at the intersection between the two municipal areas of Shanghai and Suzhou. Under the policy of planned economic system, it was subjected to the insignificant influence of the functional radiation from the two key cities, which resulted in a stagnant economic development and in space it was in a depressed position. The implementation in Kunshan of reform and open-door policy as well as market economic systems have smashed the yoke of administrative systems and established at its own expense an economic technological development zone by making use of its locational superiority by being neighbouring upon Shanghai. Only in a short period of two years, Kunshan has witnessed conspicuous accomplishments and has been officially recognized by the state to be an economic technological development zone at state level. Those cities and towns bordering originally upon the provinces, municipalities and counties along with the large constructions like the second bridges of Changjiang, the newly built large-scale airport and so on and so forth, and cities adjacent to the expressways are forging ahead by leaps and bounds owing to their locational superiorities, becoming new centres in the region and rising in their rank positions in the city (town) networks. Hence, nowadays, we should choose those locational superiorities by applying

locational theories as a means to formulate long-range urban system planning and seek a new pattern of urban systems.

A City and /Or A Town is the Central Locality in Different Ranks and Sizes, and the Centre of Commerce and Services in a Specific Region

In pace with the progress in the market economy and the tertiary industry, the circulation of materials, energy, information, techniques and personnel are bound to be promoted between city and town. If we take the central function of a city (town) as the starting point to analyse the functions, sizes and spacial ranking structures in a central place system, we can bring to light the central urban functions and their relative position and effect in the central system. In 1988, Duan Zhenliang carried out a typical survey and calculations in the county Wujiang, an economically developed county (city) in the Changjiang Delta Region, where he divided different central localities into different ranks by means of values of modosum and centrality and found that there were marked differentiations between the territorial structures in the system of central locality and the urban administrative ranks, that is to say, the county town wasn't the number one centre of the whole county. It was shown from the development practice of the past six years that what he calculated conforms to both the existing urban development regularities and the practical conditions. This indicates that the theory of central place may be applied under the market economic system. So far as the compilation of trans-century urban system planning and new urban system skeletons is concerned, may the theory of central place be used as a kind of theoretical methods for in-depth studies?

It is Necessary to Draw up Various Items of Urban Construction-Related Specialized Planning in the Light of Regional Overall Effects

The delta region of the Changjiang is a relatively independent natural unit, on the surface of which are the dense river-lake stream systems all belonging to the same water system of the Changjiang. It is due to the long period of history in exploration, especially the increasing speed of urbanization in recent years and the opening up and making use of natural resources by mankind in this region that there was a change in natural environment and an upset in circulation law, whereas the population and the environmental capacity will be over-loaded in operation. At present, there will be a tremendous change in the relationship between man and environment in the region in the foreseeable future of the 21st century. Such a change will not only speed up the steps of socio-economic advancements, but at the same time bring about unavoidably a series of contradictions and problems inside

this region. Among them, with the exception of those arising from socio-economic development of their own, are the unavoidable natural disasters like rainstorms, floods, typhoons, ground subsidence, earthquakes, etc., all of which call for measures for prevention and control, whereas for those arising from both natural and social factors, it will be even harder for us to overcome them.

A city is a point of agglomeration for population and economy in this delta region which, once hit by natural calamities, will suffer not only enormous damages but will also be irredeemable. Because of the dense cities (towns), the continuous spatial distribution and the close relationships in the process of socio-economic development, in this region effects resulting from any large-size infrastructures (including irrigation works, exploration and renovation of water-soil resources) and any large-scale measures to cope with disasters and for disaster-prevention would possibly be subject to restrictions by natural environment in an area even bigger than a city. Hence, for those catastrophes, contradictions and predicaments caused by both natural and social factors, measures should be adopted by every city concerned, and only by combining these measures with the regional macro-effects can the real results be obtained. In the specialized items of the existing urban planning system, urban designs are made as often as not within the municipal territorial administrative scope, because under the investment channels of the administrative systems and planned economy, there are even traces of "using one's neighbour's field as a drain" in some items of specialized planning.

Among the most common disasters in China's urban areas are floods and waterlogging. In 1990, a year when the worst flood happened, among the 467 cities in this country, amounting to 300 had to undertake the task of flood prevention, in which those whose standards for flood prevention were lower than for those floods once in 20 years accounted for 65%. Being subject to the restrictions of topographical and hydrological characteristics, cities located in the Changjiang's delta had to be committed to flood prevention. Besides, the arduous task to fight against the flood in cities on both river banks, the surface elevation of those lakeside cities like Suzhou, Wuxi, Huzhou and Jiaying around the Taihu Lake was all lower than the flood level in both rivers and lakes, whereas the surface elevation at the Taihu Lake's downstream area was low, belonging topographically to lowland type. For this reason, in case a flood should happen in any region at the upstream, it would drain off downward toward the downstream through the low-lying land. Thus, not only would a considerable amount of cities

or towns at downstream suffer from disasters, but the flood also finally pose a threat to the city of Shanghai. Therefore, there is an urgent need to enhance the understanding of the regional effect of urban disaster prevention and control and adopt corresponding macroscopic measures pertinent to regulation and control so as to improve the resultant relations between the part and the whole.

In China, there is a shortage of water everywhere. The assurance of both the quantity and quality of water resources exerts a tremendous influence directly on urban development. Even in the Changjiang Delta Region where there is a high density of water networks, the water quality has been subjected to contamination owing to the dense population. In this delta region, the per capita water supply is far from sufficient and the regional distribution is in a state of imbalance, with a lot of cities being in a water-lacking predicament. The tendency of progressively high-speed economic growth in urban and rural areas is bound to bring about further a strain on the urban and rural water supply especially on the high-quality living water supply. Hence, to meet the needs of urban development, it is necessary to make an overall arrangement of the exploration of surface and ground water from the viewpoints of either the valley or the region, and carry out transformation of the urban water supply system.

It is shown from realities that in the specialized planning items of urban planning there should also be a new transformation. To attain the regional effect, the specialized planning items should be incorporated separately into the urban planning and the regional planning of the Changjiang's delta in an effort to turn these two types of planning into the major component parts of the regional infrastructural construction.

Notes

1. Referring to the Pudong new development zone
2. City at county level
3. City at county level

REFERENCES

- LIU, Wenlin and Shougen XU (1991), "Studies on Small Cities and Towns Should be Extended Towards the Newly Emerging Cities and Villages", *The New World of Small Cities and Towns*, Selected Works on the Study of Small Cities and Towns in Jiangsu Province, No. 4, Jiangsu People's Publishing House. (*in Chinese*)
- SHEN, Daoqi (1992), "Improve the Regional Effects of the Urban Disaster Prevention and Control Measures in the Changjiang Delta", *Proceedings of the Conference on China's Reduction of Natural Disasters*, Science and Technology Society of China, Meteorological Publishing House. (*in Chinese*)
- XIANG, Songzuo, "At a Most Critical Moment", *The Cause and Effect of China's Marching Toward the Market Economy*, Chapter II. (*in Chinese*)

2

Planning and Development of the Shanghai CBD Under Socialist Market Economy

Zhongmin YAN

INTRODUCTION

Since mainland China started to reform and open its door, its economic system and speed of development have changed greatly. During the period 1978-1993, Chinese GDP increased by 2.3 times, reaching 3,238.6 billion yuan R.M.B. in 1993, and the total amount of import and export trade was US\$195.8 in 1993. With the rapid progress of the economy, the urbanization process has sped up and urban construction is at a level of unprecedented prosperity too. Urban development under the new situation has brought planners many new problems and new demands and has also forced the nature of planning work to change which has involved many aspects, such as planning theory, guiding ideology, planning method and content etc. As far as the development of the tertiary industry is concerned, it "demands suitable land-use for commerce and service to be planned". "Economy centre must have commerce centre, business centre, and business and finance centre (CBD) (Zhou, 1994).

The formation and development of the CBD involves many factors, such as the nature of a city, the scale of a city, its economic development level, regional conditions, transportation facilities, commerce centralization, the national and international status of the city, the historic base of the city, etc. Therefore, it is necessary to make analyses and comparison among some especially big cities, and choose the best way before a plan is made. Now, a preliminary analysis combined with Shanghai conditions is explained.

THE FORMATION AND DEVELOPMENT OF CBD IN SHANGHAI

Former Commercial Centre

The former commercial centre in Shanghai was in Da Dongmen of Nanshi district, which was close to Huangpu River. In 1880s, after Shanghai was opened to the outside world, the commercial centre moved progressively northward when the land concession was made. After 1870, “the humble rooms were got rid of step by step in Nanjing road (present Nanjing East Road), while magnificent houses were being built, and all kinds of signboards were splendid; which were greatly different from the past” (Zhang, 1993). At the same time, the present roads, such Fuzhou Road, Guangdong Road, Fujian Road and Henan Road etc., were gradually becoming commercial streets. By the end of the 19th century, the commercial centre that fell mainly along the Nanjing road had come into being tentatively.

The Development of the 1930s

From the beginning of the 20th century to the 1930s, Shanghai progressively became the biggest economy centre of China, which have changed the function and the formation of the commercial centre district. These changes were mainly shown as the following:

- 1) The Bund became a centralized area of finance in Shanghai, where most of the 28 banks were owned by foreign capitals, and the 58 banks were owned by Chinese capital, as well as stock exchanges and trust companies.
- 2) The central commercial shopping area with the present Nanjing East road as its core was formed. Higher functional commercial streets were formed too, which gave priority to comprehensive department stores and specific shops. The area had the four biggest department stores of China in those days.
- 3) From the east of present Xizang Middle Road (including Xizang Middle road and the blocks which are opposite to People Park) to the Bund, and from the south of Suzhou River to Jinglin East Road, this whole area was the most crowded in China at that time, with high-rise buildings and large mansions. The International Hotel built in 1934 was the highest building in East Asia then, and was also the symbol of Shanghai's economic status. In particular, Nanjing East Road, Waitan, and Xizang Middle Road were seen as the CBD of Shanghai, according to the two indexes measuring the boundary of CBD, namely

CBHI and CBII¹. The Far East Economy Cooperation Organization, established in 1947, and the predecessor of the present Asia Pacific Economic and Social Union, still set up its head office in Shanghai's central business district. This showed that Shanghai remained at that time one of the most important economic centres in the Far East.

Changes After the Foundation of the P.R.C.

The CBD of Shanghai experienced a tortuous process after the foundation of the P.R.C.. During the first 30 years (1949-1978), because the imperialistic nations adopted an economic blockade policy against China, China attached importance to the policy of developing industry, by acting independently, resting the initiative in Chinese own hands, and regenerating through Chinese own efforts. With the relocation of the National Bank to Beijing, foreign and private banks, as well as stock exchanges, stopped their business. The CBD of Shanghai lost its superior function and was in a shrinking and recession state.

Since the start of the 1980s, with the continual deepening of the reform and opening policy, the CBD of Shanghai has stepped into a development period again. In 1992, Shanghai invested 8 billion yuan (R.M.B.) in commerce, equal to the total amount in 5 years of the "Seventh Five-year Plan", which has also promoted the development of commerce and the tertiary industry. By the beginning of 1993, Shanghai had set up 123 financial organizations. National or regional big markets of stock, metal, chemical industry, technology, foreign exchange and so on were founded one after another. The total exchange amount of all kinds reached 1,500 billion yuan in 1994. 30 percent of the world big banks have started their business in Shanghai. Some famous transnational corporations and national companies with powerful strength have also started their business in succession, bringing Shanghai the characters of being a finance and business trade centre again.

SCOPE AND FEATURES OF THE CBD IN SHANGHAI

To define scientifically the scope of the present CBD of Shanghai, in 1991 and in 1994 we twice investigated the construction areas along the street and, using condition of the streets, calculated and hence got the results as followings (Table 2.1) (Tang, 1994).

The analysis of the results in Table 2.1 shows that all the roads have indexes being up to the standards of the index system for CBD, with the exception of Guangxi road's CBII index, which therefore tell us the area

Table 2.1 CBHI and CBII of the Main Roads in Shanghai

	Road Name	CBHI	CBII (%)
From East to West	Beijing East Road	2.34	58.36
	Ningbo Road	1.58	50.53
	Nanjing East Road	4.61	87.30
	Jiujiang Road	2.57	65.02
	Fuzhou Road	3.03	64.74
	Yanan East Road	2.48	55.94
	Jinling East Road	2.88	72.71
From South to North	Xizang Middle Road	2.08	67.50
	Guangxi Road	1.09	35.77
	Zhejiang Road	1.66	50.83
	Fujian Road	2.38	65.98
	Henan Middle Road	2.48	71.07
	Jiangxi Middle Road	2.35	58.38
	Sichuan Road	2.58	55.63
Bund	5.35	79.00	
	Average Value	2.63	62.68

where these roads are located is exactly the CBD of the city. The two indexes of Nanjing Road and the Bund are both higher than those of the other roads; thus these two roads take the leading status in the present CBD. According to the functional features analysis, high grade tertiary industry such as banks, head offices and so on has absolute predominance and there is little retail commerce. Therefore it possessed only the characters of the Central Business Districts. On the other hand Nanjing East Road, being the most important commercial street of the CBD, is dominated by retail commerce. Xizang Road, Fuzhou Road, Fujian Road and Beijing Road come second. According to the two indexes of CBHI and CBII of each road showed in the table, Shanghai's CBD now is a continuous block,

circled by Beijing Road, Xizang Road, Jinglin Road and the Bund, where the tertiary industry has absolute predominance. The average values of CBHI and CBII are 2.63 and 62.58 percent respectively. According to the analysis of the horizontal and vertical use, the characters of the CBD are more obvious. In 1991, the vertical utilization of the buildings along the Bund, Nanjing Road and Xizhang Road were investigated (Table 2.2).

Table 2.2 Classification of Vertical Utilization of Buildings Along Bund, Nanjing Road and Xizang Road (%)

Storey	Hotel	Office	Daily Commerce	Advanced Commerce	Finance	House	Others	Total
Over 6	61.7	23.4	6.1	0.0	4.3	0.3	4.2	100
5	31.8	33.0	11.1	1.6	1.5	7.6	13.4	100
4	24.9	38.3	9.9	2.8	1.2	12.4	10.5	100
3	21.1	24.2	9.9	5.8	0.9	17.2	20.9	100
2	11.7	20.3	12.9	13.5	0.9	22.3	18.4	100
1	7.6	14.7	20.4	17.2	2.3	22.1	29.8	100
Ground Floor	5.0	7.0	39.4	15.9	1.9	1.0	29.8	100
Total	19.3	18.0	19.5	10.6	2.0	11.6	19.0	100

The data of the three streets in 1991 mentioned above, generally reflect the characters of the CBD. The retail commercial street is about 4,300 metres long, 2/3's of the total length of the buildings, and 55.3 percent of the total length of the three roads. At that time Government organizations, offices of enterprises and institutions and hotels did not have a high utilization ratio of the ground floor, only 5-7 percent, but the utilization ratio tended to increase gradually above the ground floor. For example, of rooms on the 4th floor, hotel business had 24.9 percent, offices 38.3 percent, and the two together 63.2 percent. Of the rooms on the 6th floor and above, hotel business and offices in total occupied 85.1 percent of them. But financial business had a lower utilization ratio, less than 2 percent on the ground floor, and 4.3 percent on the first floor and above. This was not suitable for the functions of the CBD. Since 1992, conditions have changed greatly. Some sites of the former financial organizations that used to be chosen for other usages are being used by financial organizations now. In a word, the indexes of CBD and features of land-use in Shanghai are at present suited for the need of the CBD. However, it still has many shortcomings, as

follows. For example, the utilization ratio of central business land-use is low, and that for finance is even lower. Transportation and communication facilities fall behind the advanced level. Of the retail commerce system, common commerce still occupies a fairly high share. Land for housing holds a high ratio, especially the land for low-grade housing. All these reflect that Shanghai's CBD is in a young and developing period, which needs to be planned and transformed further to suit the need of Shanghai's development.

RESHAPING AND PLANNING OF THE CBD IN SHANGHAI

Transforming and Reshaping the Present CBD to Meet the Need of Current Development

The development of Shanghai's economy urgently needs a CBD with a core of finance and trade, and in which the tertiary industry can develop. Yet the present CBD in Shanghai remains young and immature, and the modernization level is relatively low, which is reflected in the following: The population density level is too high, as is the housing ratio. The buildings are very old and the infrastructure, e.g. the roads and communication remain at a low standard, which is therefore very difficult to be transformed. However, the potential to use them and to upgrade them is great, the key of which being to adopt unified macro-planning, apply the law of free land price, raise construction funds and carry out every plan by stages.

- 1) Transforming demand should be defined according to the objective of urban development in Shanghai (namely to be an important international economic, financial and trade centre).
- 2) An overall point of view should be adopted to plan and construct a CBD. To plan and construct its economic structure and distribution, we must situate it into the economic patterns of the whole city, Yangzi River Valley, the whole country, even the world.
- 3) "Reshaping" here doesn't mean resuming the old look of the CBD, but constructing the CBD of the 21st century in the light of prediction and long-term point of view. In particular, infrastructure, ecological environment, office facilities, cultural education and urban management etc. should all be constructed according to the new and high demand of the CBD as the economic core of the whole city and, together with Pudong Lujiazui, as the centre of economic radiation and diffusion of Yangzi River Valley, even of the whole country. They should also be

constructed to prepare it to be the Far East international economic hub.

Speeding up the Development and Construction of Finance and Trade District in Pudong New Area

Taking Chinese economic development, the status of Shanghai and the demand generated by the progress of science into account, we believe Shanghai will be an international economic centre. Therefore economic association and population migration will increase greatly. Capital flow, material flow, information flow and technology flow will be frequent. All these need high efficiency coupled with high quality. For this purpose, only modernized and high-tech communication and transportation facilities can take up this heavy task. Although office facilities and CBD buildings in Puxi area can be transformed, some are already unfit for the present need. Therefore the Lujiazui finance and trade district of Pudong New Area under construction, is indeed an ideal part of Shanghai's CBD, which has an important theme of finance, trade and other services. It is necessary to construct modernized, high quality and high-tech infrastructure in accordance with the future demand of development. Recently, there have been dozens of Chinese and foreign banks and financial corporations starting their businesses, and some new buildings, such as stock exchange buildings, future exchange buildings, etc. are being built, which are estimated to be completed after 1995 in Lujiazui district. At the same time, the commercial service equipments are being perfected around the district. Yet out of the 5.47 sq km area of Lujiazui finance and trade district, more than half of it has not been completed and may not be ready before 2000. For this reason, not the whole district should be included in the CBD. Therefore, the land enclosed by Dongchang Road - Pudong South Road - Tongtaizhan Road in Pudong and the water front of Huangpu River, should be included in the CBD's planning area to form a pattern of dualistic structure of Pudong and Puxi, with an area of 4.5 sq km.

Division of Small Functional Districts

The CBD, a combination of Puxi and Pudong, has differences in both inner spatial-structure and main functions. These differences are related to their development history and different locations, which encourage each district to perform its function well. For example, Huangpu district has worked out three plans of functional division since 1993 in the CBD of Puxi. Associated with regional functions, Shanghai CBD can be divided into four small functional districts.

- 1) Finance and trade district, namely Lujiazui district in Pudong mentioned above, has a planned area of 1.5 sq km. Its functions focus on finance and trade, with tourist and information industries coming second. A group of financial buildings will be constructed here to restore the status of Shanghai as a financial centre. After the completion of the 88-story high Jinmao Building of the Economic and Trade Department, the mansion of Merchants Bureau, and the New Shanghai mansion, they will attract many commerce and trade organizations of China or foreign countries, transnational corporations and relevant auxiliary organizations.
- 2) Trade, finance and head offices district, namely about 1 sq km area from Henan Road to the Bund, which is used to be the financial centre of the Far East Region. The buildings of the former banks have had their old functions restored, and recently focused on the trade and finance function. Finance will gradually assume the first place in Pudong New Area. The status as an economy and trade centre will be strengthened, and some office buildings will change into head offices of the enterprises.
- 3) High grade service district, namely the middle land between Henan Road and Fujian Road, with an area less than 1 sq km. Based on its former features, commerce along Nanjing Road, Beijing Road and Fuzhou Road should be strengthened. Other districts should replace old houses with modern buildings and develop high grade commerce and trade service functions like those of agency, intermediary, real estate, advertisement, accounting, law service, science and technology, information consulting and so on. They should also add high grade service facilities, such as physical education, culture, entertainment and hotel business, open up more green land to beautify the environment and provide entertainment and a high grade tourist service.
- 4) Central commercial district, the 1 sq km area between Fujian Road and Xizang Road. The district is concentrated with retail commerce, with an outstanding function of restaurant business and entertainment. The district should raise the grade and standard of its retail commerce and develop toward the direction of establishing corporations, chain companies and international business and a better shopping environment. It should also divert pedestrian flow away from the main road, improve transportation, transform buildings on both sides, establish an exhibition centre of products and a whole scale business centre, a fashionable dress showing centre and coordinate with the

commercial centre. Advertisement companies, decoration companies and hotels of middle grade or high grade should be built too.

MAKING PREPARATIONS FOR THE SETTING UP OF SUB-CBD

To become an international metropolis, Shanghai will probably break through the space of the 300 sq km centre district and develop into a metropolitan circle of multi-layers and multi-axes. For this purpose, there should be relevant market construction. According to the international trends of suburbanization and CBDs' dispersion, the CBD of Shanghai may share such experiences; it is therefore necessary to think about and make plans on making preparations for the setting-up of a sub-CBD. For example, with the development and transformation of the CBD, the original residents may migrate out and population may decrease. This will decrease daily retail business or force it into areas with more new residential quarters and more residents. The centre of commerce and trade will come into being gradually. Because of the lack of office facilities in the CBD in Shanghai at present, some financial trade organizations have established offices in new areas, such as Hongqiao development region, because this region has many regional advantages such as advanced building facilities, an environment of good quality, being close to Hongqiao International Airport, thus gathering a great number of finance, trade and corporate-type enterprises to set up their offices there. The conditions suitable for forming sub-centres are increasing.

According to international experiences, the scale of a sub-CBD is often smaller than that of a CBD, and its degree of comprehensiveness is inferior to that of the CBD too. A Sub-CBD of ten has small functional districts with a higher degree of specialization degree and is usually made up of one or two leading functions, mostly retail function, but not excluding other specialization functions. Sub-CBDs in Shanghai, besides Hongqiao development district, would probably also appear in Xujiahui, Wujiachang, New station region and Wendeng Road.

In a word, the construction and development of a CBD in Shanghai should transform and reshape the original CBD and promote the Lujiazui finance and trade district, together with Puxi area to form the CBD of Shanghai. At the same time, under overall urban planning, several sub-CBDs should be set up according to need and opportunity, so as to promote the establishment and development of a socialist market system and encourage Shanghai to grow into an international metropolis.

Notes

1. According to the experts, there are two measuring indexes of CBD boundary: the index of CBD's hard core ---- CBHI>1.5, CBII>60 percent or CBHI>2.0, CBII>50 percent; the index of CBD's core brim ---- CBHI>1.0, CBII>50 percent or CBHI>1.5, CBII>40 percent.

REFERENCES

- TANG, Jianzhong et al (1994), "The Plot of the Development of Shanghai CBD" unpublished paper. (*in Chinese*)
- YAN, Zhongmin and NING, Yuemin (1992), "A Brief Discussion About the Transformation and Development of Shanghai CBD", *Urban Problems*, 1992 (4). (*in Chinese*)
- ZHOU, Ganzhi (1994), "Urban Planning", *New Situations and Tasks of Urban Planning*, 1994 (1), p.13. (*in Chinese*)
- ZHANG, Qun (1931), "History of Concessions in Shanghai", Chungwa Press, p.208. (*in Chinese*)

3

Relevance of the Hong Kong's Development Experience to Chinese Cities

Anthony Gar-On YEH

INTRODUCTION

Among all the cities in the world, the urban development experience of Hong Kong is most relevant to the urban development of cities in China. Firstly, the growth is very rapid after the Second World War. Secondly, most land is owned by the government and then subdivided and leased to developers. Thirdly, it is a city with the highest density in the world. Since the adoption of open door policy and economic reform in China, cities are growing very rapidly and are adopting a paid transfer of development rights which is similar to the leasehold system in Hong Kong. Experience in the planning and management of Hong Kong is most relevant to urban development in the cities of China. The paper will discuss some of the experience of Hong Kong in planning and managing the rapidly growing high density environment and discuss some of the bad experiences of Hong Kong which should be avoided in the development of Chinese cities.

Urban development in Hong Kong, which was closely related to its fast pace of economic growth, was spectacular in the past two decades. Property development in the private sector was predominantly in the form of modern high-rises for domestic/commercial/office industrial uses. In the public sector, it was characterized by public housing development. The public housing programme was initiated as a result of the Christmas fire in 1953 which made more than 53,000 people homeless. It is estimated that by now, over 2.4 million people are residing in public housing, representing more than 40 per cent of the total population. Indeed, the public housing

programme in Hong Kong is one of the largest in the world, second to Singapore in terms of proportion of population living in public housing. The quality of public housing has been constantly improved. With the introduction of the Ten Year Housing Programme in 1973, which aimed at improving the living environment of low income people, there have been significant improvements in the administration, management, design and construction of public housing, the redevelopment of older estates and squatter control (Fong and Yeh, 1984).

The spatial structure of Hong Kong has changed from a uni-centre city to a multi-centre city, with development extended to the once rural areas of the New Territories (Lo, 1975, 1986). The long-established urban development pattern on the two sides of the Victoria Harbour - notably Kowloon, New Kowloon and Hong Kong Island - is changing with the population dispersing to the new towns. The proportion of population living in new towns increased from 9.8 per cent in 1971 to 18.8 per cent in 1981 and 28.8 per cent in 1986. It is anticipated that approximately 40 per cent of the population will be living in the New Territories when new towns are all completed. The population distribution of Hong Kong is changing rapidly. Population in the New Territories has surpassed that of Hong Kong Island and approached that of Kowloon and New Kowloon. The city has extended its development from the traditional main urban areas of Hong Kong Island, Kowloon, and New Kowloon to the New Territories, forming a large metropolitan area.

ROLE OF URBAN PLANNING

Urban planning in Hong Kong was largely a postwar activity. Although the Town Planning Ordinance was enacted in 1939, it was not until 1947 that a small Town Planning Unit was established in the Public Works Department and in 1953 that a Planning Branch was set up within the Crown Land and Survey Office of the Public Works Department (Town Planning Division, 1984). (It was in the 1970s, when new towns were in the process of planning and development, that the importance of planning was beginning to be recognized in Hong Kong.) This was followed by a drastic increase in the number of town planners in the Government. The number of planners has increased from 5 in 1960 to 86 in 1980, and 171 in 1990 (Table 3.1). The population/planner ratio has increased from an astonishing low of one planner to 2.2 million people in 1950 to one planner to 34,513 people in 1990. However, the ratio is still much lower than those in the United Kingdom which is one planner to 5,500 people. The Hong Kong

Institute of Planners was formed in 1979. In the past, the Government had to send people to the United Kingdom to be trained as planners. Planners can be trained locally since 1981 with the establishment of the Centre of Urban Studies and Urban Planning (renamed as Centre of Urban Planning and Environmental Planning in 1991) at the University of Hong Kong. The professional two-year M.Sc. (Urban Planning) programme of the Centre is recognized both by the Hong Kong Institute of Planners and the Royal Town Planning Institute in the U.K.. The recent recognition of the importance of planning of the community was manifested by the upgrading of the former Town Planning Office of the Buildings and Lands Department to become a new Planning Department under the new Planning, Environment and Lands Branch on January 1, 1990.

Planning in Hong Kong in the past is conceived as largely demand-oriented (Bristow, 1981). This was true in the '50s and '60s when the major concern was to provide housing and employment to the sudden addition of 2 million population in 1949-52. Layout plans in the urban areas had to be quickly drawn to accommodate the rapidly growing population and economic activities. It was not until the late '60s and early '70s when the population stabilized, that the economy became more healthy, and the

Table 3.1 Number of Planners and Population/Planner Ratio in Hong Kong

Year	No. of Planners	Population/Planner Ratio
1950	1	2,237,000
1955	1	2,490,400
1960	5	615,060
1965	21	171,329
1970	33	119,970
1975	48	92,950
1980	86	58,423
1985	153	35,591
1990	171	34,513

Source: Planning Department, Hong Kong Government

population and housing problems less acute, that more time could be given to planning. As a result, most of the older districts that were developed in the 1950s and 1960s were suffering from low planning and environmental standards.

With the increasing recognition of the importance of planning, urban planning in Hong Kong has changed from demand-oriented planning to more forward planning. The master layout plan approach has been replaced by a structure planning approach in the early 1980s, with lower-tier district layout plans governed by higher-tier sub-regional and territorial structure plans. A three-tier planning system is currently used for urban planning in Hong Kong, from general-strategic to site-specific. The Territorial Development Strategy which was formulated in 1984 and which is currently under review sets out the optional paths and directions of urban development to meet the long term social and economic needs and expectations of the people in Hong Kong. Based on the Territorial Development Strategy, the Planning Department prepares sub-regional planning statements for the five sub-regions of Hong Kong. The Sub-Regional Plans serve as a bridge in linking the Territorial Development Strategy and local/district plans and to translate the territorial goal to the sub-regional level as more specific planning objectives. At the district level there are statutory Outline Zoning Plans and administrative departmental plans. Statutory outline zoning plans show a proposed broad land-use pattern and major road systems. They provide an important link between the Government and the public by giving an indication of the future broad pattern of land-use so as to provide a guide to public and private investment. The Outline Zoning Plan is prepared and approved by the Town Planning Board under the provision of the Town Planning Ordinance.

Town planning in Hong Kong is not without its problems. Some of its problems are due to the late development of town planning in Hong Kong. Many of its functions were taken up by legislation that were enacted before the enactment of the Town Planning Ordinance in 1939. Development controls are fragmented and in some cases cannot achieve the objectives of urban planning. The Town Planning Ordinance, the basis of urban planning in Hong Kong, is not as comprehensive as similar legislation found in other countries (Working Group on the Review of Town Planning Ordinance, 1988). It covers only the existing and designated urban areas and has no direct power of development control and plan implementation. Development control has to mainly rely on other legislation such as the Building Ordinance and lease conditions of land sold or granted (Pun, 1983; Fung, 1988). The

separation of planning from development control and enforcement reflects the past lack of recognition of the importance of urban planning in Hong Kong.

The Town Planning Ordinance only provides the power of the Town Planning Board to prepare and approve an outline zoning plan and to process planning applications for uses that need to be approved by the Town Planning Board. It provides little power for plan enforcement. Enforcement of the Outline Zoning Plan has to be relied upon through other ordinances, licensing authorities and measures, mainly through the Building (Planning) Regulations of the Buildings Ordinance and lease conditions. The only provision in the Ordinance is Section 13 which indicates that "Approved plans shall be used by all public officers and bodies as standards for guidance in the exercise of any powers vested in them" (Town Planning Ordinance, 1939, Section 13). The Planning Department which is the executive arm of the Town Planning Board is unable to take any action for land-use which does not conform with the statutory Outline Zoning Plan if it does not violate the Buildings Ordinance or lease conditions.

New buildings or any change in the structure of the buildings requires that a building plan be submitted to the Buildings Ordinance Office of the Buildings and Lands Department. The Buildings Ordinance empowers the Buildings Ordinance Office to disapprove a submitted building plan which contravenes an approved or draft plan prepared under the Town Planning Ordinance (Buildings Ordinance, 1956, Section 16(1)(d)). It can also provide the rejection of building plans which "would result in a building different in height, design, type or intended use from buildings in the immediate neighbourhood or previously existing on the same site" (Buildings Ordinance, 1959, Section 16(1)(g)). It provides a mechanism to control against incompatible development within a neighbourhood, particularly in areas not yet covered by a statutory plan. In addition, the Buildings Ordinance also contains a set of Building (Planning) Regulations which set out detailed requirements related to the planning and design of buildings, including height, site coverage and plot ratio for controlling the bulk of the buildings. The provision is effective in enforcing planning control on new development or redevelopment which requires the submission of a building plan to the Buildings Ordinance Office. However, it cannot control the change of use of a building which does not require submission of building plans. There is no control over the change of use of an existing building resulting in a contravention of any plan prepared under the Town Planning Ordinance if the change of use does not require changes in the structure of

the buildings and complies with the Buildings Ordinance and the lease conditions.

Another way of enforcement is through lease conditions. The enforcement control over the use of a piece of land mainly comes from the provision of a 're-entry' clause of the lease conditions which allows the government to take back the land if the restrictions in the lease conditions have been breached. There are problems in using this method to control development because many old leases do not have 'restrictive use' clauses. Even where the leases do contain a use clause, it is usually not well defined - such as the term 'non- industrial' which is all-encompassing. Even the term 'industrial' encompasses a wide range of uses which can be from petro-chemical plants to light industries. It also takes a lengthy time to re-enter the land. Land re-entry is not very effective in development control.

One of the basic goals of urban planning is to avoid incompatible land-uses. The inability to control the changes of use within buildings in Hong Kong has led to many incompatible land-uses within buildings. Hong Kong is a vertically-developed city, the compatibility of uses on different flats in a multi-storey building is as important as the horizontal compatibility of land-uses. Incompatibility of land-uses within a building will cause adverse environmental effects to the residents and at the same time, might subject the residents to unnecessary fire and other hazards. Under the existing Town Planning Ordinance, the government cannot control the land-use of a multi-storey building if it does not violate the Building Ordinance and lease conditions. This applies to horizontal land-use too. For example, the use of agricultural land for open storage and car parks in the New Territories after the Melhado case in 1983 which allowed agricultural land to be used for open storage and car parks have caused many traffic and environmental problems in the New Territories.

Town planners in Hong Kong in the early 1970s had recognized the need to revise and update the Ordinance. A seminar was organized in 1973 by the Royal Institute of Town Planners (Hong Kong Branch). Some proposals were made but was not taken up by the government. With the rapid development of Hong Kong in the last two decades, especially new town developments, urban redevelopment, the formulation of the Territorial Development Strategy and the introduction of elected members into the district boards and the Legislative Council, it is becoming clear that the 50-year old Town Planning Ordinance cannot cope with the rapidly changing social, economic and political environment of Hong Kong. A Working Group was formed by the Hong Kong Institute of Planners (HKIP) to review

the town planning legislation in Hong Kong. A series of technical amendments of the Town Planning Ordinance were recommended to the Government in 1986. In 1987, the Executive Council of the Hong Kong Government agreed to revise the Town Planning Ordinance and a Town Planning Review Advisory Group was established by the Lands and Works Branch to review the Town Planning Ordinance. Plan enforcement, public participation and consultation, coverage, compensation and appeal were identified by the HKIP in 1988 to be the major inadequacies of the Town Planning Ordinance (Working Group on the Review of Town Planning Ordinance, 1988). The HKIP made recommendations related to interim planning control, enforcement of planning control, area coverage, public consultation, planning appeals, non-conforming existing land-use, sub-regional plans, environmental impact assessment and conservation areas to the government in 1990 (Working Group on the Review of Town Planning Ordinance, 1990).

Because of historical reasons, the Town Planning Ordinance only covered the existing and potential urban areas which basically included the main urban areas and the new towns in the New Territories. Areas outside these areas were not covered by the ordinance. There was little problem in the pre-war period because most of the population and development was mainly concentrated in the main urban areas of Kowloon and Hong Kong Island. However, with the development of new towns in the New Territories, a lot of development has spilled over to places outside the new towns. Much agricultural land has been converted to open storage areas, for use as car dumps, open air workshops, container storage and vehicle car parks. They have been carried out in a haphazard and disorderly manner, creating incompatible land-use and environmental and traffic problems. To stop the environment from further rapid deterioration, the government proposed to amend the Town Planning Ordinance in July 1990 while the comprehensive review of the ordinance was still underway (Hong Kong Government, 1990). The Town Planning (Amendment) Bill 1990 was passed in January 1991. It extended the jurisdiction of the Ordinance to cover the whole of Hong Kong with new types of zonings such as country parks, green belts, village-type development and open storage uses (Hong Kong Government, 1990). Interim planning control through the use of development permission area plans was used to guide developments in the New Territories when the Outline Zoning Plans, which are statutory plans for development control, are under preparation. The Town Planning Board may designate areas which require immediate planning control as Development Permission Areas (DPAs). The DPA plans have to be exhibited and publicly consulted like

the statutory Outline Zone Plans and will be effective for three years. All development in the development permission areas have to obtain planning permission from the Town Planning Board. To give the Town Planning Ordinance enforcement power to control unauthorized development in the development permission areas, enforcement notices, reinstatement notices and stop notices, similar to those used in Britain, were introduced. An enforcement notice may be served to land owner/occupier/responsible person of unauthorized development, requiring him to either discontinue the development or to obtain planning permission from the Town Planning Board within three months. Reinstatement notice will be served to require the land owner/occupier/responsible person to reinstate the land to authorized development if planning permission has not been obtained upon expiry of the period of the enforcement notice. If the unauthorized development seriously constitutes a health or safety hazard, adversely affect the environment or make it impractical or uneconomic to reinstate the land within a reasonable time period, a stop notice will be served to discontinue the unauthorized development immediately. Any person who fails to comply with the enforcement notice, stop notice or reinstatement notice is liable to a fine and imprisonment. An Appeal Board has been set up to deal with appeals related to objections and refusals of planning permissions of the Development Permission Areas.

The Advisory Group finally completed its comprehensive review of the Town Planning Ordinance and a consultative document was published for public consultation in July 1991 (Hong Kong Government, 1991). The comprehensive review proposed a number of recommendations to deal with the inadequacies of the existing ordinance in the plan-making process, planning applications, development control, areas of special control and non-conforming existing uses. Basically, the Town Planning Ordinance will be renamed as the Planning Ordinance. All planning related regulations in the Building Ordinance will be consolidated in the new Planning Ordinance and all new building development will need to obtain a planning certificate from the Planning Department. The enforcement, stop and reinstatement notices in the Town Planning (Amendment) Bill 1990 will be used for plan enforcement. An independent Appeal Board will be set up to deal with appeals related to objections of the Outline Zoning Plans, rejections of planning applications and planning certificates, and other planning related appeals. Public consultation will be improved in the preparation of the Outline Zoning Plans and the process of planning applications. "Amortization Area" will be used to phase out non-conforming existing use. Non-conforming uses in amortization areas would be required to

terminate or change to conform to the zoned use within certain amortization periods. "Special Design Area" would be apply to areas of special architectural or historical interest within which planning permission would be required for all developments to make sure that they were in harmony with other buildings or the environment in the designated areas. Special Design Area is also applicable to areas, such as prominent ridge lines or prominent and important sites on new reclamation areas, where it is necessary to control the layout and design of buildings. Environmental concerns would be introduced into the planning system by declaring development which may have much impact on the environment, such as a power plant, cement plant and refuse transfer station, as "designated development". Environmental Impact Assessment is needed in the planning applications for "designated development".

The comprehensive review of the Town Planning Ordinance is still at its formulation stage and the proposed revised Ordinance has not gone through the legislative procedure yet. If the recommendations are accepted, Hong Kong will have a better planning system which can have better development control and enforcement, more public consultation and fairer planning appeal. Planning-related regulations now in the Building Ordinance will be transferred to the Planning Ordinance. With the planning certificate and plan enforcement system, new development and change of land-use which do not conform with the zoning plan can be better controlled.

Despite the constraints of the planning system in Hong Kong, urban planning has contributed significantly in improving the urban environment of Hong Kong and will play an increasingly important role in shaping the urban environment in the future, especially after the reform of the planning legislation. The role of planning in public housing and new towns development in the '70s and '80s should not be underestimated. Extensive planning input and co-ordination in land development is required in developing new towns, which on average accommodate 0.5 million people, and constructing public housing estates which, in some cases, house a population larger than that of small British new towns. However, because of the late recognition of the importance of planning, development in the older districts has suffered from the lack of planning. The result is that open space and public facilities are generally under-provided in these districts. With the benefit of planning, the new towns are better designed and have more open space than the main urban area.

Experience in the development of urban planning in Hong Kong shows that the importance of urban planning should be recognized at the beginning

of a new phase of urban development. It is too costly and sometimes impossible to rectify some of the urban development problems that occur due to inadequate planning. A structure plan for identifying the strategy and direction of future urban development is necessary to provide guidance for the preparation of more detailed outline zoning and layout plans. Development control should not be fragmented and should be under the control of the planning system. There should also be means for the planning system to enforce the urban plans, otherwise planning objectives cannot be achieved.

HIGH DENSITY DEVELOPMENT IN HONG KONG

Hong Kong is the city with the highest density in the world. In the study by Newman and Kenworthy (1989), Hong Kong has the highest population, employment and activity density among the largest cities in Asia, United States, Canada, Europe, and Australia. According to their study, the population density of the inner area of Hong Kong is 1,036 persons/ha, which is 5.1 times higher than the next highest density city of Singapore and 6.7 times that of Tokyo (Table 3.2). In terms of employment density in the CBD, Hong Kong is also the highest in the world. Its density is 1.3 times than that of the next highest city of Chicago, and 2.6 times that of Tokyo (Table 3.3).

Hong Kong is made up of the Hong Kong Island, Kowloon peninsular, New Kowloon, and the New Territories (Figure 3.1). In 1991, the total land area was 1,068 sq. km. and the population was 5.6 million, giving an overall population density of 5,385 persons/sq. km.. However, because of the high concentration of people living in the urban areas along the northern coast of the Hong Kong Island, Kowloon and New Kowloon, the overall population density has highly understated the population density in Hong Kong (Table 3.4). In the New Territories where there is less population, the population density is 2,560 persons/sq. km., but on Hong Kong Island, Kowloon and New Kowloon where the population is mainly concentrated in a limited area, the population density is 26,950 persons/sq. km. In the urban area, the density can be as high as 116,531 persons/sq. km., such as in the Mongkok district. When the density is calculated at the street block level, some may be as high as 400,000 to 600,000 persons/sq. km.

High density development in Hong Kong is a result of its topography, historical development and land policy. Over 75% of the land consists of hill slopes. A large proportion of the relatively flat areas are under private ownership, making development difficult. Most of the development is

Table 3.2 Population Densities of Selected Cities in Asia, United States, Canada, Europe, and Australia in 1980

City	POPULATION DENSITY					
	Urban Density (persons/ha)	Inner Area Density (persons/ha)	Outer Area Density (persons/ha)	CBD Density (persons/ha)	Proportion of Population in CBD (%)	Proportion of Population in Inner Area (%)
Hong Kong	293.3	1,036.8	224.4	160.4	0.4	30.0
Asia						
-Tokyo	104.6	152.9	57.8	82.3	1.3	32.3
-Singapore	83.2	201.5	63.1	203.7	6.6	35.2
<i>Average:</i>	<i>93.9</i>	<i>177.2</i>	<i>60.5</i>	<i>143.0</i>	<i>4.0</i>	<i>33.8</i>
United States						
-Los Angeles	20.0	29.6	17.5	29.4	0.1	31.3
-New York	19.8	106.8	12.9	217.1	2.8	39.5
-Chicago	17.5	54.1	11.4	15.6	0.1	42.3
-San Francisco	15.5	58.8	12.9	89.7	1.1	21.3
-Detroit	14.1	48.1	10.6	11.2	0.1	31.6
-Washington	13.2	44.2	10.9	7.5	0.1	21.4
-Boston	12.1	44.8	9.8	125.5	2.7	24.3
-Denver	11.9	19.3	9.8	18.5	0.4	30.9
-Houston	8.9	20.6	7.8	5.5	0.1	16.6
-Phoenix	8.5	19.1	8.3	17.3	0.5	3.7
<i>Average:</i>	<i>14.2</i>	<i>44.5</i>	<i>11.2</i>	<i>53.7</i>	<i>0.8</i>	<i>26.3</i>
Canada						
-Toronto	39.6	56.5	34.0	25.2	0.2	35.7
Europe						
-Vienna	72.1	132.5	59.4	64.9	1.3	31.9
-Brussels	67.4	100.5	49.8	74.1	1.9	51.8
-West Berlin	63.6	83.5	57.2	133.3	0.8	31.8
-Munich	56.9	159.2	48.4	111.2	5.9	21.4
-London	56.3	77.9	48.3	66.4	2.7	37.2
-Frankfurt	54.0	62.5	48.9	65.2	2.5	43.3
-Zurich	53.7	78.9	41.7	44.4	0.9	47.4
-Stockholm	51.3	58.3	46.0	97.0	6.4	49.3
-Amsterdam	50.8	83.3	32.4	108.4	9.7	59.2
-Paris	48.3	106.4	26.0	235.2	5.4	60.9
-Hamburg	41.7	88.4	35.0	26.4	0.7	26.8
-Copenhagen	30.4	59.3	23.6	84.8	2.2	37.3
<i>Average:</i>	<i>53.9</i>	<i>90.9</i>	<i>43.1</i>	<i>92.6</i>	<i>3.4</i>	<i>41.5</i>
Australia						
-Sydney	17.6	39.1	15.8	10.7	0.1	16.7
-Melbourne	16.4	29.3	15.7	24.5	0.2	9.0
-Adelaide	12.9	18.8	12.4	8.2	0.2	11.6
-Perth	10.8	15.5	9.9	8.4	0.7	22.9
-Brisbane	10.2	18.5	9.1	15.3	0.3	21.7
<i>Average:</i>	<i>13.6</i>	<i>24.2</i>	<i>12.6</i>	<i>13.4</i>	<i>0.3</i>	<i>16.4</i>

Source: Newman, P. and J. Kenworthy (1989), *Cities and Automobile Dependence: An International Sourcebook*

Table 3.3 Employment Densities of Selected Cities in Asia, United States, Canada, Europe, and Australia in 1980

City	EMPLOYMENT DENSITY						
	Employment Density (jobs / ha)	Inner Area Employment Density (jobs / ha)	Outer Area Employment Density (jobs / ha)	CBD Employment Density (jobs / ha)	Proportion of Jobs in CBD (%)	Proportion of Jobs in Inner Area (%)	CBD Activity Intensity
Hong Kong	109.7	478.3	65.6	1,258.6	7.3	45.3	1,419
Asia							
-Tokyo	66.3	114.3	19.8	477.0	26.6	84.8	559
-Singapore	37.1	n.a.	n.a.	339.3	24.3	n.a.	543
<i>Average:</i>	<i>51.7</i>	<i>57.2</i>	<i>9.9</i>	<i>408.2</i>	<i>25.5</i>	<i>42.4</i>	<i>551</i>
United States	10.5	13.9	8.9	472.0	4.8	43.3	501
-Los Angeles	9.3	53.4	5.8	828.0	22.9	41.9	1,045
-New York	8.1	25.5	5.2	937.9	12.3	44.9	954
-Chicago							
-San Francisco	7.8	47.8	5.4	713.2	17.0	34.4	803
-Detroit	6.2	19.9	4.8	305.8	6.6	29.6	317
-Washington	8.0	37.5	5.8	584.1	16.1	32.5	592
-Boston	6.2	32.7	4.3	382.8	15.9	34.6	508
-Denver	7.6	16.8	4.9	262.6	11.6	49.7	281
-Houston	5.5	26.4	3.5	442.7	11.6	41.1	448
-Phoenix	4.0	24.0	3.7	66.6	3.9	10.6	84
<i>Average:</i>	<i>7.3</i>	<i>29.8</i>	<i>5.2</i>	<i>499.6</i>	<i>12.3</i>	<i>36.3</i>	<i>553</i>
Canada							
-Toronto	19.7	37.7	13.7	757.1	13.4	47.9	782
Europe							
-Vienna	38.4	112.7	22.9	403.2	14.9	50.8	468
-Brussels	42.1	91.8	15.6	591.5	24.6	75.9	666
-West Berlin	26.6	45.9	20.4	333.3	4.8	41.8	467
-Munich	34.2	192.4	21.2	230.9	20.5	42.9	342
-London	30.2	61.9	18.5	396.8	29.7	55.1	463
-Frankfurt	43.2	74.3	24.7	389.1	18.4	64.2	454
-Zurich	32.5	65.8	16.7	422.1	13.6	65.2	467
-Stockholm	34.4	61.5	16.0	279.6	26.3	74.7	377
-Amsterdam	23.2	46.1	10.3	153.1	29.9	71.7	262
-Paris	22.0	60.0	7.6	399.5	20.2	75.1	635
-Hamburg	23.8	105.5	12.0	407.4	20.0	56.0	434
-Copenhagen	16.2	37.9	11.1	325.1	16.0	44.8	410
<i>Average:</i>	<i>30.6</i>	<i>79.7</i>	<i>16.4</i>	<i>361.0</i>	<i>19.9</i>	<i>59.9</i>	<i>454</i>
Australia							
-Sydney	7.5	39.1	4.9	433.9	13.2	39.3	445
-Melbourne	6.1	40.3	4.3	646.5	15.2	33.2	671
-Adelaide	5.4	25.1	3.7	250.7	14.4	37.3	259
-Perth	4.6	14.6	2.7	120.7	24.1	51.0	129
-Brisbane	4.1	15.6	2.5	345.8	13.9	45.7	361
<i>Average:</i>	<i>5.5</i>	<i>26.9</i>	<i>3.6</i>	<i>359.5</i>	<i>16.2</i>	<i>41.3</i>	<i>373</i>

Source: Newman, P. and J. Kenworthy (1989), *Cities and Automobile Dependence: An International Sourcebook*

Figure 3.1 Urban Development in Hong Kong

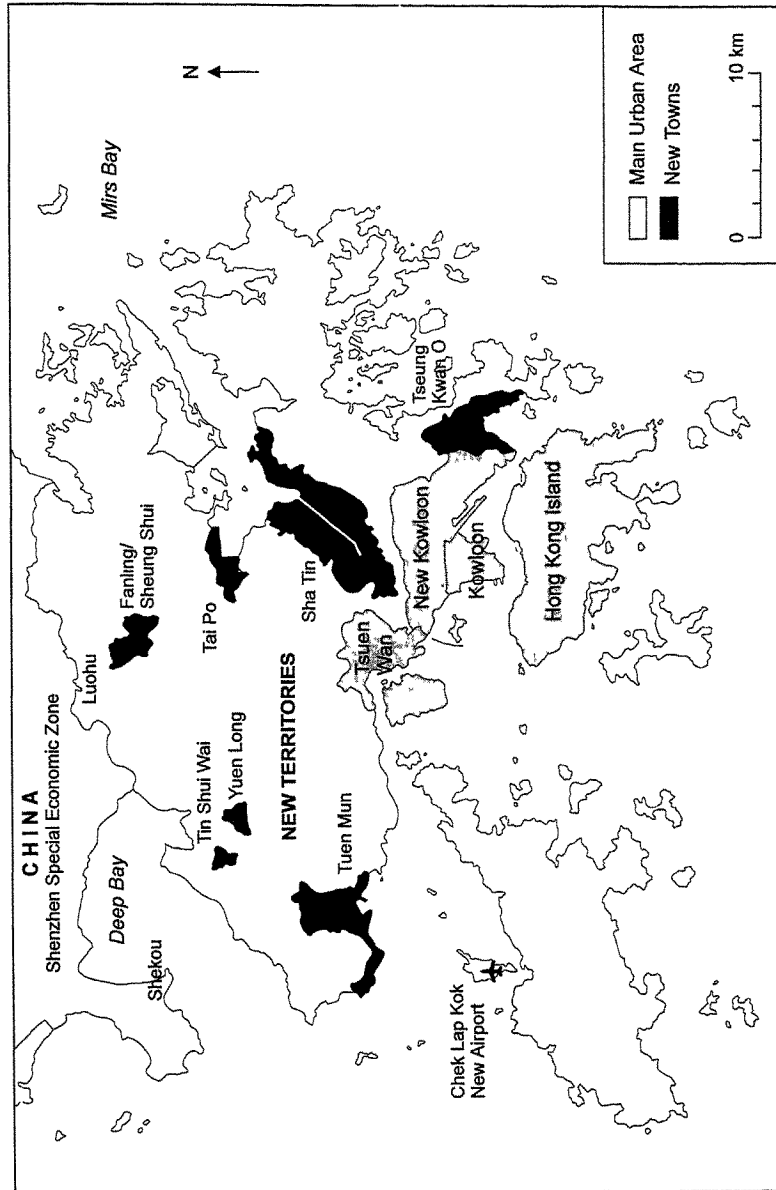


Table 3.4 Residential Population and Population Density in Hong Kong

District Borard District	1981		1986		1991	
	Population (persons)	Density (persons/sq.km)	Population (persons)	Density (persons/sq.km)	Population (persons)	Density (persons/sq km)
<u>Hong Kong Island</u>						
Central and Western	283,916	23,448	257,131	20,854	253,383	20,479
Wan Chai	236,149	23,781	200,403	20,182	180,309	18,209
Eastern	474,237	27,150	500,451	27,387	560,200	30,316
Southern	221,354	5,833	243,474	6,380	257,101	6,701
<i>Sub-total</i>	<i>1,215,656</i>	<i>15,695</i>	<i>1,201,459</i>	<i>15,267</i>	<i>1,250,993</i>	<i>15,811</i>
<u>Kowloon and New Kowloon</u>						
Yau Tsim	176,726	54,714	146,496	45,355	111,692	33,232
Mong Kok	247,912	175,612	206,941	142,718	170,368	116,531
Sham Shui Po	467,994	63,190	433,958	56,875	380,615	48,822
Kowloon City	493,325	54,207	432,894	47,156	402,934	41,759
Wong Tai Sin	503,865	53,947	438,417	46,940	386,572	41,331
Kwun Tong	625,552	55,260	690,739	60,826	578,502	52,562
<i>Sub-total</i>	<i>2,515,374</i>	<i>60,164</i>	<i>2,349,445</i>	<i>55,693</i>	<i>2,030,683</i>	<i>47,638</i>
<u>New Territories</u>						
Kwai Tsing	622,387	7,970	420,049	21,464	440,807	21,158
Tsuen Wan	n.a. ¹	n.a. ¹	245,238	4,159	271,576	4,581
Tuen Mun	120,657	1,529	287,539	3,611	380,683	4,711
Yuen Long	189,441	1,397	211,540	1,545	229,724	1,664
North	115,364	844	146,818	1,074	165,666	1,211
Tai Po	74,356	551	140,504	1,033	202,117	1,496
Sha Tin	118,331	1,797	362,033	5,402	506,368	7,378
Sai Kung	42,531	339	46,074	365	130,418	1,026
Islands	45,968	283	47,236	290	47,459	293
<i>Sub-total</i>	<i>1,329,035</i>	<i>1,448</i>	<i>1,907,031</i>	<i>2,064</i>	<i>2,374,818</i>	<i>2,557</i>
<i>All Land Area</i>	<i>5,060,065</i>	<i>4,878</i>	<i>5,457,935</i>	<i>5,224</i>	<i>5,656,494</i>	<i>5,385</i>

Note : ¹ combined with Kwai Tsing in 1981

Source : Census and Statistics Department (1992), *Hong Kong 1991 Population Census: Summary Results*, Hong Kong: Government Printer, pp. 69 and 70.

concentrated in Kowloon, New Kowloon and Hong Kong Island where most of the flat land is obtained from hill levelling and land reclamation by the government. Population and density in Hong Kong increased tremendously immediately after the Second World War because of the sudden increase in population and economic activities. There was a large influx of refugees to Hong Kong after the change of regime in China in 1949. Its population jumped from 0.6 million in 1945 to over 2 million in 1951. This led to a severe housing shortage, squatting, high density and poor living environment. Land in Hong Kong is owned by the government. It is formed and subdivided before leasing to the private developers through auction and tender. The government has full control over the timing, location and the amount of land to be leased. The sale of land leases is one of the major sources of revenue of the government. In the property boom period, revenue from land sales can be as high as 30% of the total revenue of the government. The control over the sale of land leases is one of the reasons for the high land price in Hong Kong. The high land price makes office and house prices very expensive, leading to high density development.

The development of Hong Kong has been highly concentrated in the coastal strip of Hong Kong Island and Kowloon, along Victoria Harbour. It was not until 1973 when the government pursued the new town development programme that urban development was decentralized to the new towns in the New Territories. Through better planning and design, the new towns have a better living environment and lower density than the main urban area. Despite decentralization to the new towns, the density in the main urban area does not drop and remains high. In some areas, the density has slightly increased rather than decreased because of urban redevelopment.

There are many benefits from high density development. These include efficiency in the use of land, minimization of journeys to work, energy conservation, avoiding urban sprawl and conservation of the natural environment. The high density in Hong Kong has supported and encouraged the use of public transport. Among the large cities in the world, Hong Kong has been highly regarded as one of the cities which has the lowest energy consumption per capita on transportation. High density development is often considered to be associated with crowding, traffic congestion and social pathology. However, at present, there is no definitive conclusion on the effects of high density on social pathology. It is often found that the effects of high density on human beings vary according to culture and habits of people. It seems that the Chinese, especially people in Hong Kong who

are mainly refugees or descendants of refugees, have a high tolerance and adaptation to high density environments. The topography of Hong Kong also helps to diffuse the impacts of high density development of the city. Victoria Harbour, where the city has developed along its water fronts, provides a breathing space for the city, making it appear less crowded. The low-rise mountains at the skyline also diffuse the impacts of high density development, providing a glimpse of the natural environment in the midst of the concrete jungle.

There is a limit to high density development. But, with a given density, good planning and management of the internal and external environments of buildings can lessen the impacts of high density and make it more livable. In Hong Kong, because of the lack of urban planning in its early days of development, the old urban districts are very dense and crowded. Urban planning did not really take place until the 1970s when Hong Kong actively pursued its new town development problem. The environment in the new towns has remarkably improved because of good planning and management although its density is only slightly less than that of the main urban area.

High density may not necessarily be associated with crowding, which is the perception of human beings on the environment. Crowding can be affected by the physical design and layout of the internal and external environments of the building in which the person lives and works, and the culture, habit and socio-economic background of the person. In Hong Kong in the last ten years, there have been some developments in the planning and management of office and residential districts which make high density areas appear less crowded and more livable and acceptable :

A) External Environment of Buildings

1) Better Planning and Design

Through better urban design and layout, buildings are not as near to one another and there are more open spaces on the ground level. Newly developed areas, such as the new towns, have more open space and community facilities. There are plans to apply the new open space standards in redeveloping the old districts of the main urban area.

2) Transport Management

Traffic congestion associated with high density development has been minimized by good transport management to keep the city moving (Wang and Yeh, 1993). This involves giving priority to public transport, development of the Mass Transit Railway, reducing the number of cars on

the road through pricing and using various methods of traffic management. The development of pedestrian system also helps to separate pedestrians from vehicles at the street level, making the streets less congested with cars and pedestrians (Figure 3.2). A bypass has been constructed to divert traffic away from the Central District.

3) Creation of Space from Limited Space

Space is created from limited space by aesthetic improvement of space and full utilization of the limited space. Multistorey car parks, podium block development and roof top gardens and recreation facilities are all examples of the full utilization of space, not only in two dimensions but also in three dimensions. Chinese garden concepts in which sceneries change very quickly in short distances are applied in the design of buildings and parks. There have been aesthetic improvements of urban space by foundation, sculptures and post-modern architecture, making urban space more interesting and appear less crowded.

4) Large Scale Property Development

In the past, most of the developments have been small site development. But recently, office and residential developments have often been very large scale, making it possible to have better layout and provision of community facilities. Property developments are increasingly dominated by a few large developers. The ownerships of nearby properties by the same developer can help to make the application of planning and design to overcome high density possible, such as the linking of nearby buildings of the same developer by a pedestrian system.

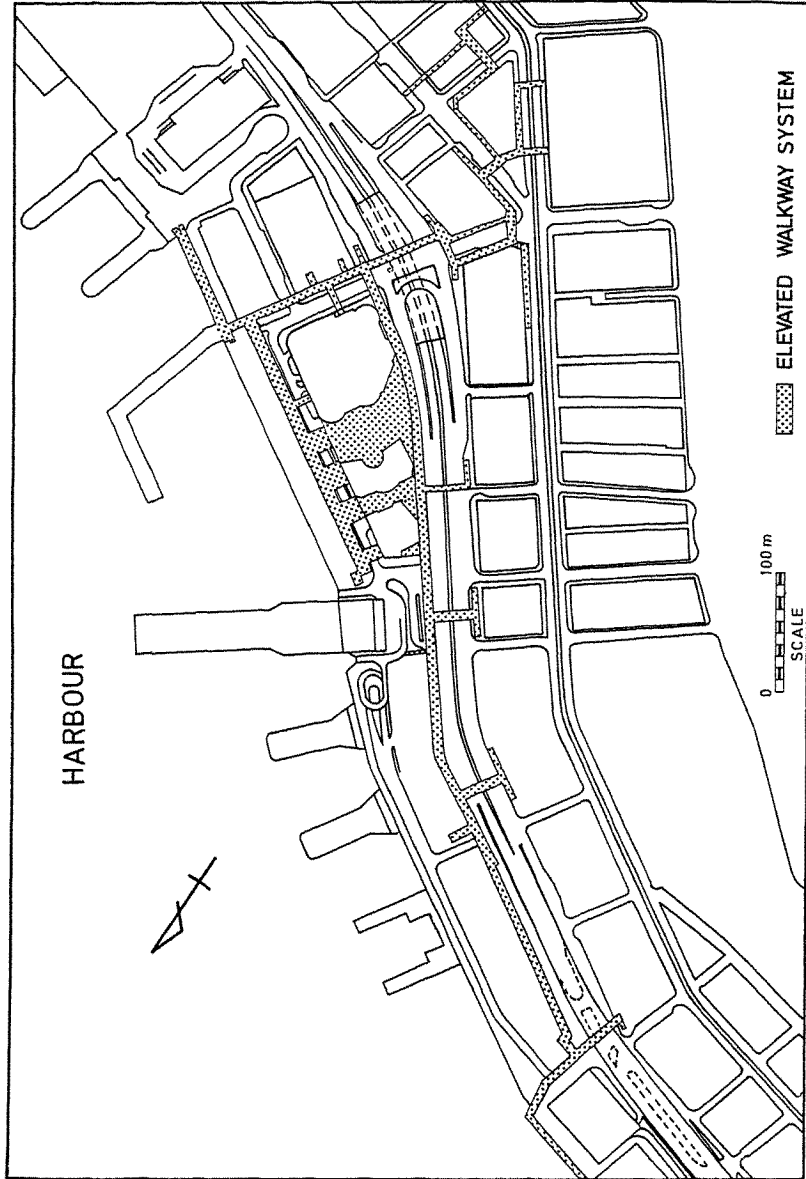
5) Technology

New building materials and design help to break the monotony of a district. Glass walls reflecting sun light and images of nearby buildings help to make the crowded street feel more spacious. The availability of outdoor escalators facilitates and encourages the use of the pedestrian system by the pedestrians.

6) Public Education

“Clean Hong Kong” campaigns have frequently been carried out since the 1970s to educate the people to make the city less dirty and create a cleaner environment. Posters and TV commercials are also produced to educate people of the danger of letting objects fall from tall buildings. These help to make the high density city a cleaner and safer place to live.

Figure 3.2 Pedestrian System in Central District



B) Interior Environment of Buildings

1) Building Management

Deteriorated and dirty buildings will make the environment feel crowded. Owners corporations are encouraged to manage and maintain the services and the environment of their buildings. Security guards are hired to make the buildings safer.

2) Building Design

Large scale property developments enable the development of large lobbies and shopping malls. Interior design with water fountains and Chinese gardens make the internal building environment appear less crowded. Tall ceilings also help to make the inner space of buildings appearing less crowded.

3) Transport

Escalators and express lifts have helped to move people quickly inside buildings. The designation of lifts for different floors helps to reduce congestion.

The above developments which have helped to reduce the impacts of high density by making it less crowded are achieved mainly through the land leasing system, planning and building regulations, public works and the coordination of different government departments. Much of the efforts in better design and layout of buildings are initiated by private developers who consider improvements in urban and building design and the creation of a less crowded environment to be to their benefit. They can sell their properties at a higher price. The above developments are more successfully implemented in newly developed areas such as new towns, than in old urban areas where room for manipulation is limited.

Although the density of some old urban areas has increased through redevelopment, many of the above developments which reduce the impacts of high density have taken place, making them less crowded than before when the density was even lower. Some of the concepts of these developments in creating a less crowded environment have been incorporated in the formulation of the Metroplan (a plan for the future development of the main urban area) (Planning, Environment and Lands Branch, 1990) and the work of the Land Development Corporation which is responsible to redevelop the old districts in the main urban area through public-private partnership (Yeh, 1990).

Much coordination is needed for the planning and management of the exterior and interior building environment for high density development. In Hong Kong, the main government departments involved in the planning and management of the high density environment are :

- Planning Department (*planning*)
- Territory Development Department (*planning and development*)
- Buildings and Lands Department (*land leasing and building ordinance control*)
- Transport Department (*transport policy*)
- Highways Department (*roads*)
- Urban Services Department (*parks, open space, and garbage collection*)
- Environmental Protection Department (*environment*)
- Government Information Services Department (*public education*)
- City and New Territories Administration (*public education, coordination of owners corporation*)
- Independent Commission Against Corruption (*prevent corruption*)

A good urban environment cannot be achieved without uncorrupted and efficient government officials and good coordination among government departments in planning, monitoring and managing the urban environment.

Guidelines for High Density Development - The Experience from Hong Kong

There is a limit to high density development. This paper is not arguing for high density development. It would be nice to have low density development. However, if high density development is needed, better urban planning and management will make the urban environment more hospitable. Hong Kong may be an extreme case of high density development, however, it shows how better urban planning and management can achieve good living environment even under such an extreme high density. The following guidelines for high density development can be developed from the experience of Hong Kong :

Relevance of the Hong Kong's Development Experience to Chinese Cities

- good planning (provision of open space)
- good urban and building design
- adequate public facilities
- good public transport
- good urban management
- good housing management
- coordinated efforts of government departments
- coordinated efforts of citizens
- public education for high density living

High density development is very demanding. Because of the large number of people involved and the little amount of space in which to manoeuvre, there is little room for error. Slight error in urban planning and management can make the environment less hospitable. Urban planning cannot achieve a better living environment alone, it has to be accompanied by good urban management from the city level to the neighbourhood level. Better *planning, design and management* can reduce the impact of high density, making the living and working environment *less crowded* at a fixed density. Citizens also have to be educated to know how to behave in public areas in high density areas. Planners, architects, urban managers, the community and its citizens all have to work together to make high density living possible. Experience in Hong Kong shows that high density, if better planned and managed, can provide an interesting and pleasant environment.

URBAN DEVELOPMENT AND PLANNING UNDER A LEASEHOLD SYSTEM

Land in most cities of the world is freehold land where land belongs to the private owner forever. There are very few cities that have leasehold system where land belongs to the private owner for a specified period of time. Hong Kong is one of the very few cities in the world where all the land is owned by the government and leased to private owners. The leasehold system has been used since Hong Kong became a British Colony in 1842 and much experience has been accumulated in administering the leasehold system and planning under a leasehold system.

The present land tenure system is closely related to the history of Hong Kong. A leasehold system was used as a method of disposing government land soon after Hong Kong became a British Colony in 1842. Except for the New Territories and some land in Hong Kong and Kowloon, most of the land was unoccupied and therefore it was Crown land at the disposal of the Hong Kong Government. Public auction, public tender and private treaty grant are the three basic methods of disposal of government land. The Government's basic policy is to sell leases to the highest bidder at *public auction*. Some lands are not sold by public auction but by *public tender*. These lands are mainly lands where the user is strictly defined and the sale is unlikely to attract general interest, or where the Government wishes to examine in advance detailed proposals for the development of a particular lot. Land for community purposes such as public housing, Home Ownership Schemes, public utilities, schools, churches, clinics, welfare and certain charitable purposes is usually granted by *private treaty grant*. The sales of leases either by public auction or public tender are generally referred to as land sales in Hong Kong which is different from the selling of land under a freehold system. It is the sale of the land lease but not the land.

As lands in Hong Kong were ceded and leased in different periods, the land tenure system, particularly the leasing period and renewability of the lease, vary slightly among Hong Kong Island, Kowloon and the New Territories. The time period of the leases vary from 999 yrs., 99 yrs., to 75 yrs. and the lease can be renewable or non-renewable. Attached to each lease is a set of lease conditions which stipulate the time period, renewability and permitted development of the land.

Land Leasing and Urban Development

The main advantage of land leasing in urban development is the income that it can generate. As can be seen from Table 3.5, in the property boom period it can be as high as 35% of the total revenue of the government. This can offset some of the costs of urban development, such as the provisions of roads, land formation and environmental protection works. Total land sales can amount to over 200% of the total non-recurrent capital expenditure on public works. The total revenue from land sales in 1974-90 accounts for 55% of the total land-related expenditure.

For non-renewable leases, the government can take back the land for public use by not renewing the lease. Extra income can be received when the non-renewable lease is permitted a renewal. It can also capture the

Table 3.5 Revenue from Land Sales (in million HK\$)

Year	New Sales	Lease Modification	Land Regrant	Total Land Premium	Total Govt. Revenue	% of Land Premium in Total Revenue	Total Land Expenditure	% of Land Premium in Total Land Expenditure
1974	242.6	55.9	20.1	318.6	5,305.8	6.0%	1,379.5	23.1%
1975	211.7	63.3	12.4	287.4	5,973.1	4.8%	1,345.8	21.4%
1976	258.1	66.8	21.0	345.9	6,724.6	5.1%	1,125.6	30.7%
1977	350.5	137.4	69.4	557.3	7,575.8	7.4%	1,215.1	45.9%
1978	1,557.9	217.4	56.0	1,831.3	10,232.6	17.9%	1,907.6	96.0%
1979	1,674.0	299.8	34.0	2,007.8	12,557.0	16.0%	2,174.5	92.3%
1980	2,416.6	396.9	31.7	2,845.2	16,796.1	16.9%	2,610.6	109.0%
1981	9,972.1	768.5	29.2	10,769.8	30,290.3	35.6%	7,131.1	151.0%
1982	8,955.3	690.0	31.2	9,676.5	34,312.9	28.2%	7,806.5	124.0%
1983	4,678.8	314.2	55.2	5,048.2	31,097.6	16.2%	2,156.6	234.1%
1984	2,049.5	180.3	37.3	2,267.1	30,399.7	7.5%	2,112.0	107.3%
1985	3,592.9	653.0	21.3	4,267.2	36,342.5	11.7%	6,399.0	66.7%
1986	3,688.2	183.6	23.2	3,895.0	43,695.0	8.9%	6,523.7	59.7%
1987	519.8	120.2	116.0	756.0	48,602.0	1.6%	7,212.2	10.5%
1988	296.1	134.5	30.4	461.0	60,875.0	0.8%	7,988.8	5.8%
1989	308.7	28.1	28.2	365.0	72,658.0	0.5%	9,176.0	4.0%
1990	180.1	3.0	28.9	212.0	82,429.0	0.3%	15,113.0	1.4%
74-90	40,952.9	4,312.9	645.5	45,911.3	535,867.0	8.6%	83,377.6	55.1%

Source: Director of Accounting Services, *Annual Departmental Report, 1974-1990*
 Commissioner for Inland Revenue, *Annual Departmental Report, 1974-1990*
 Hong Kong Government, *Hong Kong Year Book 1974-1991*

additional gain of land value in redevelopment through the modification of lease conditions to permit a higher intensity of development.

In the granting of a new lease or the modification of existing lease conditions, the government can add on planning conditions in the new lease, such as asking the developer to provide community facilities. For example, in leasing the land in Admiralty, the government allows a higher plot ratio in order for the developer to provide bus stations underneath the buildings. In leasing the land in Shatin town centre, the lease requires the developer to build pedestrian flyovers to be connected with the neighbouring buildings. In this way, the planning objectives of separating the pedestrians from vehicular traffic can be achieved at little cost to the government. In the lease conditions of the mid-levels, very often there is the condition for restricting the height of buildings to 35 ft. This can prevent the erection of very tall buildings on the slopes and can protect the blocking of views by one tall building in front of another. Some of the planning gains that normally have to be carried out through negotiations with zoning under the freehold system can be included in the lease conditions.

The government can have maximum control over the amount of land to be put on the market for leasing. It can therefore have control over the pace and direction of development, avoiding leapfrog development which is quite common in other cities. It can withdraw the land from the auctions if the price is not considered to be right. The government always fixes a reserve price for each lot of land offered for public auction and can withdraw the land from auctioning. Lands are rarely sold at the reserve price and normally the actual selling price may exceed the reserve price by a high percentage. The buyers and potential buyers normally take the reserve prices as the minimum that the government would accept for leasing a piece of land. Most lands are sold higher than the reserve price. In a 24-year period between 1962 and 1985, only 22 lots were withdrawn from 1,870 lots offered for land auctions (Wu, 1986). This is very small compared with the number of lots offered for auctions. As the amount of land to be put on the market for sale and the reserve price is controlled by the government, the government is often alleged to be responsible for the high land price in Hong Kong, making it difficult for people to afford house prices.

The land leasing system is also welcome by the private developers because it can help to minimize the risk and uncertainty on development. With the permitted development specified in the lease, the private developers are willing to pay a higher price in land sales because of the certainty of the

development potentials. The lease is also easy to understand because the time period of use and conditions of use are all listed in the lease.

Lease Conditions and Urban Planning

Successful Uses of Lease Conditions

Lease conditions can be effective means of plan enforcement by putting all the planning conditions in the lease. The developer has to comply with the lease conditions for development. Planning conditions can be put into the lease as lease conditions when it is newly prepared or modified.

New Leases

Many leases in the past, especially the pre-war leases, did not have many restrictions. This was mainly because of the lack of foreseeable development potential, the lack of planning and the limitation of the building technology which did not permit the construction of tall buildings at the time when the leases were prepared. After the Second World War, the lease conditions were used as a major mechanism to enforce the zoning plan which did not have enforcement power. The Planning Department is normally consulted in preparing the lease. Planning conditions such as use, plot ratio, building type, building height and design and layout can be put into the lease. It can also specify the types of community facilities that have to be provided.

In some leases, control drawings, podium levels, minimum and maximum gross floor area, site coverage above street levels, maximum number of flats, height of building, non-building area, design and disposition of buildings (including external elevation and finishes), submission of landscape plans, construction of footbridges linking up adjoining developments, location of vehicular access, minimum number of car parking spaces and loading/unloading areas are specified. This gives the government the maximum control over the use of land.

Lease Modifications

For old leases, the only chance for the government to add any lease conditions is through lease modifications when the land owner applies to modify the original lease conditions of his lot for redevelopment. The government can then stipulate all sorts of restrictions and planning gains in the lease.

Unsuccessful Uses of Lease Conditions

Development control in the zoning plan is mainly controlled through the Buildings Ordinance. However, when there is a change of use which does

not require the submission of a building plan or violates the building regulations, lease conditions have to be used for development control. There are many cases where the lease conditions failed to be an effective mechanism of development control and cause incompatible land-use and environmental problems, making it impossible to achieve the objectives of the zoning plans.

Unrestricted Lease

Most of the leases granted before the Second World War were unrestricted leases or with very limited restrictions. They cannot be used for development control when development control under the Buildings Ordinance cannot be exercised.

One of the most notable cases is Kowloon Tong, where a nice quiet low density high-class residential neighbourhood has been degenerated into an area with many incompatible land-uses such as motels, kindergartens and storage. Most of the leases in Kowloon Tong have few restrictions. The leases of Kowloon Tong commonly require the building of “a message or dwelling house” stipulation as to use other than the standard offensive trades clause, are not effective in preventing the establishment of motels, show rooms, kindergartens or commercial guest houses in the previously very high-class residential area (Fung, 1988). The area is zoned for low density residential development. A building plan for residential development can be submitted to the Building Authority for approval. As it does not contravene the Outline Zoning Plan which is zoned for residential use, it can get approval if it meets the requirements of the Buildings Ordinance. Once the building is completed, it can be changed to another use, such as a motel, which is very different from the zoned residential land-use. Under the existing system, as it has not violated the Buildings Ordinance and the lease conditions, it is impossible to enforce the zoned land-use. The residents have to suffer from the resultant incompatible land-use.

Uses are Difficult to Interpret

Some of the uses in the lease conditions are subject to interpretation which may differ from the original intention in granting the lease. For example, the Melhado case of 1983 considered that agricultural land under the New Territories Block Crown Lease could legally be used for open storage, car parking, scrap yards or other temporary uses, as long as no building structures were constructed. As most of the New Territories was not under the Town Planning Ordinance and there is no enforcement provision in the Town Planning Ordinance, this led to the proliferation of open storage in

the New Territories, often at sites not suitable for such purposes, causing environmental and traffic problems.

Limited Restrictions

Development control cannot be effectively carried out when there are limitations but these limitations are not adequate in controlling development. For example, in the Mid-Levels, old leases specified that buildings should be of the same elevation and character of the nearby buildings. It is difficult to stop building height using this clause. In 1973, the government had to use the emergency measure of the Pokfulam and Mid-Level Moratorium to restrict the intensity of development because it was found that existing and committed development had exceeded the road capacity of the area and severe traffic congestion would result if the intensity of development was not controlled.

Remedial Measures to Stop the Loopholes in the Town Planning Ordinance

There were many loopholes in the existing Town Planning Ordinance because it was enacted in 1939. In the last fifty years, only a few amendments have been made. These amendments did not substantially change the ordinance which, to a large extent, still reflected the living conditions, available resources, social aspiration and attitudes, and planning concepts and methods at the time of enactment. The social, economic and political conditions and planning concepts and methods have changed a lot since 1939, especially in the last two decades.

Conflict of Lease Conditions with Urban Planning - The Compensation Issue

The lease conditions have the advantage of giving the owner some degree of certainty of the permitted development when he leases a piece of land from the government or purchases a lease from another owner. Because of such certainty, developers are willing to pay a higher land price for land put on sale in public auction and tender. Lease conditions have been used in the past for development control with some successes, particularly for new leases that were granted recently. But, they were ineffective in development control for old leases which have few restrictions or have restrictions that do not meet the present needs of the community.

Although lease conditions can give the developers some degree of certainty in development, it is very rigid and inflexible in reflecting the needs of the community. Once the lease conditions are written down in the

lease, they will last till the end of the lease period before they can be changed. For renewable leases, lease conditions cannot be changed even at the end of the lease period. As the lease is a contract between the lessee and the lessor, lease conditions are very difficult to change unless the lessee and the lessor agree. Unlike planning, which can be modified from time to time to meet the changing needs of the community, lease conditions can only reflect the needs of the community at the time when they were granted. No matter how carefully the lease conditions are prepared, they may not be able to reflect the changing needs of the community in the future. Most of the old leases granted before the Second World War have few restrictions and are ineffective as a mechanism for development control. Although most of the new leases contain the planning restrictions in the Outline Zoning Plans at the time when they were prepared, it is difficult to predict whether there is a need to change the Outline Zoning Plans in the future because of changing needs and circumstances. If this happens, there will be conflict in development control between the lease conditions and an Outline Zoning Plan made at a later date.

There will not be a conflict between the lease conditions and urban planning if the development permitted in the lease conditions and the prevailing zoning plans coincide. However, there will be conflict if the development potentials specified in the lease conditions at an earlier period are different from the prevailing zoning plan.

Land lease is one of the oldest form of development control. They were used to control the development of land when the land was leased to the lessee by the landlord. It was used at a time when there was little planning and the absence of planning legislation. Because of its ineffectiveness in controlling development, it was superseded by planning legislation and by better enforcement techniques such as zoning regulations and development applications where development control can be changed according to the changing needs of the society.

With rapid urban development in Hong Kong after the war, the problems of ineffective development control using the lease conditions were soon realized. However, when restrictions were imposed on the leased land by a zoning plan, the issue of compensation arises. Although compensation is not payable for planning restrictions by the Outline Zoning Plan according to the existing Town Planning Ordinance, many land owners feel that this is unfair because the zoning plan has restricted their development rights that are specified in the lease conditions.

In the freehold system, where land is owned by the owner without any restrictions, zoning can be used to control and guide land development. Compensation is normally not paid when not all of the development rights are restricted, but compensation will be paid when all of the development rights are restricted, such as the zoning of land to open space, parks or roads. However, in the case of the leasehold system, particularly when development rights are stipulated in the lease, the issue of compensation may arise.

The issue of compensation relating to the development restriction on leasehold land by zoning can be broadly considered under two situations according to the difference in lease conditions. One is related to unrestricted leases and the other is related to leases with lease conditions. The compensation issue mainly arises as a result of the restriction on use and development intensity which limit the value of land and development/redevelopment potentials.

Unrestricted Lease

Most of the leases granted before the Second World War contain no user restrictions on use and development intensity apart from the standard offensive trade clause which prevents the operation of offensive trade. However, this does not mean any form of development can be put on the land. To some extent, they can be considered as freehold land which do not specify the type of permissible development on the land but just the ownerships. In the case of Hong Kong, they specify the period of time that the lessee can use the land. Land development is still subject to control. The development intensity is controlled by the Buildings Ordinance. Limited by the building technology at that period of time, the Buildings Ordinance 1932 restricted domestic buildings to five storeys and other buildings up to three storeys. The plot ratios and site coverage restrictions were relaxed in the Building Ordinance 1955 because of the improvement of building technology. However, the development intensity was reduced in the Buildings Ordinance 1962 because it was later found that the urban areas were too crowded because of the relaxation of the plot ratios and site coverage. No compensation was paid for restricting development by the Buildings Ordinance. Equally, it seems that the issue of compensation for development restrictions by zoning should not exist. Furthermore, no lease modification is needed when the development/redevelopment complies with the Buildings Ordinance and the zoning plan. The prevailing zoning plan may allow a higher development intensity than the time when the lease was granted.

Restricted Lease

In general, in zoning, there is no compensation for planning restrictions for public interest unless all the development rights have been taken away from the land. This principle applies mainly to freehold land. However, it becomes complicated for leasehold land. For a lease without lease restrictions, one would probably interpret it as some form of freehold land which has a specified time limit for using the land. But, one may also interpret it to mean unrestricted development.

There can be different degrees of restriction by the lease conditions. Most of the leases granted after the 1960s contain most of the restrictions that one would normally expect from a zoning plan, such as use and plot ratio, sometimes with additional requirements, such as design and layout and the provision of community facilities. In such cases, the issue of compensation arises.

When the owner would like to modify his lease so that he can redevelop his piece of land to a higher development potential permitted by the prevailing zoning plan but not permitted by the original lease, he has to pay a premium to modify his lease which represents the difference in land value between the modified development and previously permitted development in the old lease. Although some people consider the premium paid for lease modification as betterment tax, it is not. Betterment tax is applicable to all people who gained in their land value because of planning. But, in the case of lease modification premium, not all the owners who benefit from planning need to pay the premium. Premium is only paid by owners who have their leases modified. The requirement of the lessee to pay a premium in modifying their lease conditions is the right of the government as the lessor. In the case of lease modification, the lease conditions are treated as a contractual agreement between the lessor and lessee and the lessee has to pay the lessor in modifying lease conditions.

The government seems to treat the lease conditions differently when it comes to restricting the development potentials of the lease. The issue is not compensation due to planning restriction but whether compensation should be paid when the lessor, which is the government, cannot fulfill the conditions in the lease. One may argue that a lease is a private contract between two parties which has to comply with the legislation. If the legislation imposes restrictions on the contract, there is no obligation for the legislation to pay compensation to the affected party. Government ordinances may override private contracts, but in the case of land leases in

Hong Kong, the situation is different. The lease is not a private contract between two private parties but a contract between the government who is the lessor and the lessee. The lessor is the government, who is also responsible for preparing the legislation in restricting land development. Furthermore, in the case between two private parties, when the conditions in the lease cannot be fulfilled because of the restrictions by government legislation, the lessee may ask the lessor for repayment.

One of the advantages of the lease conditions is the certainty of development potential that it can give to developer. The more specific the lease conditions, the more certainty that it can give. However, recently, the certainty that the lease conditions can give to land developer has come into question. The existing Town Planning Ordinance does not have the power of development control. Development control is mainly carried out by the Buildings Ordinance which specifies that building plans must conform to the prevailing Outline Zoning Plan, disregarding the conditions in the lease. Compensation is not payable for planning restrictions by the Town Planning Ordinance. There are few cases in which financial losses have been incurred to the developer because of changes in planning restrictions and the question of the certainty of the lease conditions is put into doubt. In the case of Kwai Chung, an old industrial area in the New Territories, a piece of land was sold recently with many lease conditions in which plot ratio was one of them. The plot ratio was based on the permitted plot ratio of 15 in the Building (Planning) Regulations of the Buildings Ordinance. However, soon after the land was sold, the Outline Zoning Plan was modified which lowered the plot ratio to 9.5 because the Town Planning Board considered that the environment of the area was very bad and the plot ratio needed to be lowered. The developer paid a premium calculated using a plot ratio of 15 that was specified in the lease conditions and soon found that his plot ratio was reduced to 9.5 by the change of the Outline Zoning Plan. The developer suffered a financial loss of the reduction of 5.5 in the plot ratio. Another case is in the Mid-Levels on Hong Kong Island where the slope is very steep. A building plan on a lot with an unrestricted lease was submitted and approved according to the plot ratio of 7.0 permitted by the Outline Zoning Plan at that time. The Outline Zoning Plan was soon changed and the plot ratio was lowered to 5.0 because the traffic in the area cannot cope with the intensity of development. The building plan was modified and was required by the Building Ordinance to be resubmitted for approval by the Building Ordinance Office. The amendment was rejected because the plot ratio of 7.0 contravened with the Outline Zoning Plan. This also caused much financial loss to the developer who bought the unrestricted

lease and obtained an approved building plan for a plot ratio of 7.0 but soon found that his development was limited to a plot ratio of 5.0 before the building was constructed. Some of these incidences also occurred in lease modifications when the government received a premium for lease modification but the permitted development of the modified lease was soon reduced by the revised Outline Zoning Plan before the building was constructed. One may argue that land development involves many risks, such as great fluctuations in demand and land prices. Planning restriction is also one of these risks. However, the lease conditions made between the government and the lessee seems to minimize such risk but in the above cases it did not. The developers affected by the above cases are arguing for compensation. There must be good reasons for changing the zoning plan for the interest of the public. But, by changing the zoning plan, it creates conflict between the lease conditions and urban planning and leads to the issue of compensation.

Double standards have been used by the government in dealing with lease conditions. Under the existing system, a premium has to be paid to modify a lease to enable higher development potential that is not permitted by the old lease but permissible by the prevailing zoning plan. But, compensation will not be paid when the zoning plan limits the development potentials that are specified in the lease. On the one hand, the government honours the lease when it comes to lease modifications. Owner are asked to pay a premium on the difference between the previously permitted development and the modified development. On the other hand, the lease is not honoured when development is restricted and there is no compensation to the owner. If planning is considered to be an infringement of property rights, the restrictions of permitted development in a lease may be a more serious infringement of property rights because the lease is a contract between the government and the land owner. It seems unfair when the lessee has to pay extra-premium to the government for modification of the lease to have higher development intensity whereas no compensation is paid when the lease conditions are limited by the zoning plans. It may be true that government legislation can override lease agreements between two private parties. But, in the case of Hong Kong, the lease is between the government and a private party and not between two private parties. The issue of compensation is a contractual conflict between the lessee and the lessor (the government) that has to be settled among themselves or by the court. There has not been any test case in court where the lessee has claimed damages (compensation) for the breach of contract of the government as a result of planning restrictions.

Whether compensation should be paid by the lessor to the lessee when the lease conditions are breached by the lessor (the government) should be decided by the court. The issue of compensation is far reaching. If compensation needed to be paid because of the breach of the contract between the government and the lessee, it would cost a lot of money to the community or may make planning difficult to implement. The community may not be able to afford to pay compensation. To avoid the payment of compensation, development permitted by the lease conditions, but not in the public interest, may have to be allowed to develop, making it difficult to achieve the objectives of the zoning plan.

At present, the conflict between lease conditions and urban planning is less severe because development which does not violate the Buildings Ordinance and the lease conditions cannot be controlled. The Outline Zoning Plan through the Buildings Ordinance can only control new development which needs the submission of a building plan. It cannot control development which does not need to submit a building plan and which does not violate the lease conditions. With the introduction of plan enforcement in the Planning Ordinance, this conflict will be sharpened because the previously uncontrollable development will now be under the control of the proposed Planning Ordinance. There should be a change in the land leasing system in order to avoid the potential conflict between the lease conditions and the Outline Zoning Plans. Development control related to use and development intensity should be under the Outline Zoning Plan and should not be contained in the lease conditions. It is problematic to use both the lease conditions and zoning together as mechanisms of development control because of the inherent conflict between them.

The issue of compensation related to the conflict between the lease conditions and urban planning is something that Hong Kong has to face in the future. This issue should also be considered seriously by places which are introducing a leasehold system.

Urban Planning Under Leasehold System - Lessons from Hong Kong

A leasehold system was used as a method of disposing government land soon after Hong Kong became a British Colony in 1842. The lease period ranges from 75 years to 999 years and some leases are renewable and some are not. Most of the leases in the pre-war period contained little restrictions on the use and development intensity. They just specified the lease period and whether they could be renewable. This was partly because land was relatively inexpensive and there was little development in Hong Kong and

partly because legislation on building and planning was either non-existence or in a rudimentary form. The Building Ordinance was first enacted in 1889 and the Town Planning Ordinance was enacted fifty years later in 1939. It was only after the Second World War that development was rapidly taking place in Hong Kong and there was a rapid rise in land value. As there was no provision of enforcement of the Outline Zoning Plan in the Town Planning Ordinance, the lease conditions were used together with the Buildings Ordinance for development control and plan enforcement. There was also a need to specify clearly the permitted development and development restrictions in the lease so that the government could calculate the premium that should be charged for lease modifications and the developer could calculate the amount that he would bid in land sales based on the permissible development in the lease. Since the 1960s, the lease conditions became increasingly more sophisticated. They not only specify the use and the plot ratio but also the number of car parks and design criteria. They are also used to obtain planning gains by putting the provision of community facilities in the lease. The Planning Department is normally consulted in preparing the lease conditions. By incorporating the planning conditions as part of the lease conditions, most of the new leases can be used effectively as a mechanism to control the use and development intensity of new development and, in some cases, achieve planning gains. However, it is the old leases that have little restrictions that are causing environmental problems and incompatible land-uses, making it difficult to achieve the objectives of the zoning plans. The Hong Kong Government has recently tried to correct this by proposing to revise the Town Planning Ordinance. Among other proposals, it proposes to give the Planning Department the power to enforce the Outline Zoning Plan through enforcement, stop and reinstatement notices. Although this will enable the planning system to achieve its objective better, it raises the issues of compensation on the breaching of the lease conditions between the lessee and the lessor (the government). Whether the government should pay compensation to the lessee when the development rights specified in the lease conditions were restricted has yet to be decided by the court. However, the issue of compensation is far reaching to urban planning. If the government has to pay compensation because of breaching of the lease conditions as a result of development control of the Outline Zoning Plan, it either has to find money to pay the compensation or allow the lessee to develop his land according to the development intensity specified in the lease. In the latter case, the planning objectives of the plan cannot be achieved and the community at large will suffer. The conflict between lease conditions and urban planning need to be resolved.

The experience in land leasing and urban planning in Hong Kong shows:

- 1) A carefully prepared plan must be done before leasing the land otherwise it is difficult to use the lease conditions to control development. One of the problems facing Hong Kong is that old leases were prepared at a time when there was little urban planning. It is difficult to use them as mechanisms of development control for the current zoning plan.
- 2) Lease condition is not a good method of development control because once it is fixed it will last until the end of the lease period. It cannot be changed according to the changing needs of the community.
- 3) Compensation issue will arise when the permitted development in the lease conditions is reduced by the Outline Zoning Plan that is prepared for the interest of the public. The compensation issue may make plan implementation very expensive and difficult.
- 4) Development control should be vested in the planning legislation and not in the lease conditions. Zoning plans can be changed from time to time to reflect the needs of the community and can be used more effectively in development control.
- 5) There are inherent conflicts between lease conditions and urban planning. Lease conditions aim at certainty to the developer, which is in contradiction with urban planning which needs flexibility to cope with the changing needs of the community.
- 6) Land leasing can be used to control and guide the direction of urban development. The amount and location of land to be leased can be under the control of the city government. By specifying the period of completion of development, the problems of land speculation and vacant land can be avoided.
- 7) Land leasing through land sales is also a good source of income for the city government. Lease modifications can enable the government to recapture some of the rising land value. However, land sales and lease modifications are not a reliable source of income from land. They constitute a high percentage of revenue from land when the land price is high but under normal situations, rates and property tax are a more stable source of revenue from land.
- 8) The control of the amount and reserve price of land sales may encourage high land prices, leading to inflation. One of the criticisms of the land

sales policy in Hong Kong is that it creates high land prices, making housing difficult to be afforded by the people.

- 9) Lease modification premium is not betterment tax. It is not applicable to all the people who benefit from the increase in land value due to planning. Only those who have their leases modified have to pay the lease modification premium. Other measures, such as rates and property tax are better methods of capturing betterment due to planning.

The experience of Hong Kong in urban planning under a leasehold system seems to be quite unique at present. However, with the increasing use of land leasing as a mechanism to dispose nationalized land in China and Eastern Europe, the experience of Hong Kong will have wide applications. As shown in the experience of Hong Kong, if used properly, land leasing can generate a substantial amount of revenue for the city and can achieve planning gains which cannot be easily achieved under a freehold system. However, to use it effectively, the conflict between urban planning and land leasing should be avoided.

Large cities in China like Shenzhen and Guangzhou, are beginning to use land leasing through land auction and tender to dispose and manage their land (Walker, 1991). Shanghai has used land auction and tender in disposing some of its land, such as Hongqiao Economic and Technological Development Zone since January 1988. Most of the leases in China are like those in Hong Kong where the use and development intensity are specified very clearly so that the developer can calculate how much he should bid for a piece of land. As the development rights are specified clearly in the lease, there is certainty to the developers and they will be willing to pay a higher price for the land. However, the planning environment may change in the future which may make the lease conditions unable to meet the changing needs of the community. It may be very expensive and difficult to implement a zoning plan if compensation has to be paid when there is a need to restrict development permitted in the lease conditions. The planning objectives of the zoning plan cannot be achieved if the government cannot afford to pay compensation and has to allow the development permitted in the lease to be developed in spite of the need to control such development in the zoning plan in the interest of the public. The present government and community may benefit from the revenue generated from the land sales with the lease conditions. But, future government and community have to pay for changes in the environment which may differ greatly from the time when the lease conditions were prepared even if they were very carefully prepared at the time of granting

the lease. The problems related to the lease conditions facing Hong Kong today may be faced by the Chinese government in the future if the lease conditions system, which is similar to that of Hong Kong, is used.

The experience of land leasing in Hong Kong is not a good one. If China is going to use land leasing as a land-use management strategy extensively in its land reform, it has to avoid the mistakes that Hong Kong has made. Otherwise, just like Hong Kong, it will benefit from the high land prices that it can obtain in the short run, but has to face the problem of massive compensation or major difficulties in development control in the future.

The conflict between land leasing and urban planning is not unavoidable. With a small modification to the land leasing system in Hong Kong, such as land is leased without planning conditions and land is leased with planning conditions which will expire at a specified period of time after granting the lease, the conflict can be avoided. Land leasing with land leased with planning conditions which will expire at a specified period of time after granting the lease seems to be the best method because it can give certainty to the developer and, at the same time, give the community a control over land-use and development at the end of the specified period of time. At the time when the land is leased, planning conditions are specified which will be effective for a certain specified time period. This period can be the same as the time period for completing building construction that is normally specified in the lease. No matter how the zoning plans are changed during the specified period, the development permitted in the lease can be allowed to develop. Within this period of time, the government has to pay compensation to restrict the permitted development and the developer has to pay a premium to the government to modify the lease to a higher development intensity permitted by the prevailing zoning plan. Most of the development has to take place within the specified period, otherwise the government can take back the land. After the specified period, the planning conditions will lapse and the lease is treated the same as a lease without planning conditions. The government need not pay compensation to the developer for planning restrictions without taking away all the development rights and the developer needs not pay a premium to the government when the prevailing zoning plan allows him to redevelop his land into higher development intensity.

CONCLUSION

The experience of Hong Kong may not be totally relevant and appropriate to the development of Chinese cities. But among all the cities in the world, Hong Kong is most similar to Chinese cities, particularly its density of development and leasehold land tenure system. Its development experience is useful to Chinese cities because it is highly regarded as one of the cities in Asia that is developing and working very well (Yeung, 1990). There is still much room for improvement in its urban planning system, particularly its planning legislation, but there is much to be learnt from its urban planning and management system, especially on how to avoid the mistakes that have been made in handling the conflict between urban planning and the leasehold system.

REFERENCES

- BRISTOW, M.R. (1981), "Planning by Demand: A Possible Hypothesis about Town Planning in Hong Kong", *Hong Kong Journal of Public Administration*, Vol. 3, No. 2, pp. 199-223.
- Buildings Ordinance*, Hong Kong: Hong Kong Government.
- FONG, Peter K.W. and Anthony G.O. YEH (1984), "Public Housing Programme in Hong Kong: 1973-83", *EAROPH Journal*, Vol. 1, pp. 1-10.
- FUNG, Bosco C.K. (1988), "Enforcement of Planning Controls in Hong Kong", *Planning and Development* (Journal of the Hong Kong Institute of Planners), Vol. 4, No. 1, pp. 21-26.
- Hong Kong Government (1991), *Consultative Document: Comprehensive Review of the Town Planning Ordinance*, Hong Kong: Hong Kong Government Printer.
- Hong Kong Government (1990), *Consultative Document: Interim Amendments to the Town Planning Ordinance*, Hong Kong: Hong Kong Government Printer.
- LO, C.P. (1975), "Changes in the Ecological Structure of Hong Kong 1961-1971: A Comparative Analysis", *Environment and Planning A*, Vol. 7, pp. 941-963.

- LO, C.P. (1986), "The Evolution of the Ecological Structure of Hong Kong: Implications for Planning and Future Development", *Urban Geography*, Vol. 7, No. 4, pp. 311-335.
- NEWMAN, P. and J. KENWORTHY (1989), *Cities and Automobile Dependence: An International Sourcebook*, Aldershot, Hants: Gower.
- Planning, Environment and Lands Branch (1990), *Metroplan: The Foundation and Framework*, Hong Kong: Strategic Planning Unit, Planning, Environment and Lands Branch, Hong Kong Government.
- PUN, K.S. (1983), "Urban Planning", in T.N. CHIU and C.L. SO (eds.), *A Geography of Hong Kong*, Hong Kong: Oxford University Press, pp. 188-209.
- Town Planning Division (1984), *Town Planning in Hong Kong*, Hong Kong: Town Planning Division, Lands Department.
- Town Planning Ordinance*, Hong Kong: Hong Kong Government.
- WALKER, A. (1990), *Land, Property and Construction in the People's Republic of China*, Hong Kong: Hong Kong University Press.
- Working Group on the Review of the Town Planning Ordinance, Hong Kong Institute of Planners (1988), "Issues of Town Planning Legislation in Hong Kong", *Planning and Development* (Journal of the Hong Kong Institute of Planners), Vol. 4, No. 1, pp. 2-7.
- Working Group on the Review of Town Planning Ordinance (1990), *Review of the Town Planning Ordinance of Hong Kong*, Hong Kong: Hong Kong Institute of Planners.
- YEH, Anthony G.O. (1990), "Public and Private Partnership in Urban Redevelopment in Hong Kong", *Third World Planning Review*, Vol. 12, No. 4, pp. 361-383.
- YEUNG, Yue Man (1990), "Cities that Work: Hong Kong and Singapore", in Yue Man YEUNG, *Changing Cities of Pacific Asia: A Scholarly Interpretation*, Hong Kong: The Chinese University Press, pp. 187-209.

4

Preliminary Discussion on National Economic Reform and City Planning

Jinshang SUN

INTRODUCTION

Since the implementation of the reform and open policy and under the guidance of the theory of establishing the socialism with Chinese features, the economy in China has been developing and has attracted world attention. Cities are developing rapidly and there is an unprecedented chance to further develop. At the same time, we are facing challenges in city planning and construction due to the establishment of the socialist market system.

Mumford, a famous city planning expert, once said, “the factor that really affects a city’s construction is the profound reform of politics and economy.” City planning is a kind of governmental performance. So far, the economic and political development in China is in the process of transforming from planned economy to a market economy. So, city planning in China will undergo significant reform and development.

THE FRAMEWORK OF THE ECONOMIC AND POLITICAL REFORM IN CHINA

The economic and political reform in China began with the third meeting of the Eleven National People’s Congress in 1978. Between 1981-1983, the rural economic system reform was undertaken. In 1984, it came to the urban economic system reform. The great success of economic reform in rural areas has expedited the urban economic reform and made it develop further. We have experienced reform in areas ranging from economy to

education, science and technology, culture, and from the countryside to the city. Deng Xiaoping's momentous talk in Southern China in early 1992 and the convening of the 14th National People's Congress and its third meeting poured a new air of life and vigor to China's economic reform and modernization and pushed the city's economic reform and modernization to a new, fast-developing period. This has made all kinds of development zones emerge and all sorts of reform plans and actions continuously come into the world. The main framework of reform are as follows:

Establishment of the Socialist Market System

It reached a conclusion in the third meeting of the 14th National People's Congress that the aim of the economic reform in China is the establishment of the socialist market system in order to further liberate and develop productive forces. By a socialist market system we mean that economic activities must follow the law of value and adapt to the changing relation between supply and demand. Resource distribution can be affected under national macroscopic control and the information feedback can be used to coordinate the supply and demand. At the same time, the socialist market system uses economic policy, laws about the economy, planning and necessary governmental administration to strengthen the national macroscopic control over the market and guides the market to develop correctly.

Transformation of Governmental Functions

The transformation of governmental functions at all levels will have momentous and profound effects on the deepening of the reform and perfection of the socialist market system. Governmental functions after the reform are mainly overall planning, formulating policies, information guidance, cooperating, providing services, checking and supervising. In addition, we should further reform in such departments as planning, investment, administrations and finance, strengthen the auditing and supervising organization, establish and make perfect the governmental macroscopic control over the market and strengthen city construction and administration in order to give a city the central and leading role in the regional economy.

Further Opening-up to the Outside World

In order to achieve multilevel-led and all directional opening to the outside world, and to make use of the funds, resources and technical and administrative experiences from abroad, we should step further to opening-

up to the outside, to develop coastal economic development zones, to develop open cities and economic and technological development zones along the coast rivers and roads and to develop tourist development zones and high-technology development zones. We should speed up the construction of the border cities in the northeast, northwest and southwest regions and their opening to the outside world. We should further open the cities along the Changjiang River, speed up the development of Pudong in Shanghai, turn Shanghai into one of the international financial, shipping and trade centres in the world to bring along the development of the Changjiang Delta and the Changjiang River Valley. We should speed up the opening and development steps in Guangdong, Fujian, Hainan, littoral area of Bohai Sea and central Liaoning area, and try to make the modernizations a reality in Guangdong and other areas to catch up with “the four little dragons” in several years.

Devoting Major Efforts to Developing the Tertiary Industry and Optimizing the Industrial Structure

According to the contrasting analysis of the development of industrial structure between China and some other countries, we know that the industrial structure in China is in a very uncoordinated situation. The secondary industry makes up a very high proportion, higher than that of some medium developed and developed countries; the tertiary industry makes up a small proportion, much lower than that of the developing countries. This makes our industrial structure stay in the elementary stage of “Two-one-three”, and it does not fit into the development of our market economy. In 1992, the government issued “The decision on speeding up the tertiary industry” to make the increase in rate of the tertiary industry reach 11 percent per year. So we can say that the tertiary industry will develop rapidly in the 1990s. This is a problem we must study seriously when we undertake city planning.

Rationalizing the Economic Distribution of China

This is a crucial reform. China has a vast territory and has quite different physical and economic conditions in different regions. So we should, according to the national plan, follow the principle of “adapting to local conditions, capturing each other’s advantage, undertaking rational distribution and developing in coordination”. This is to bring about a reasonable distribution of regional economy and sound development. In the east littoral areas, we should give our emphasis on the development of the foreign-orientated industry and products with low consumption of energy

and water resources, no pollution, high earnings of foreign currency and high technology. In the central and western areas with rich resources and potential, because of the lack of funds, technology and talented persons, we should first liberate the minds, renew ideas, strengthen the construction of basic infrastructure in urban and rural areas, develop the industries and products of advantage and a foreign-orientated economy in order to get rid of poverty, bringing wealth and development into urban areas. Different regions should adopt an overall point of view without pursuing a system of one's own, avoid unnecessary repetition of introduction and construction and establish cooperation and coordination among the areas in order to rationalize the urban economic distribution all over the country.

Taking Vigorous and Steady Action to Speed Up the Construction of All Sorts of Development Zones

Since the Spring, 1992, inspired by Deng Xiaoping's talk during his inspection tour to the south, many kinds of development zones have sprung up like mushrooms. According to the statisticians, there are more than 2,700 various development zones at the county level and more than 6,000 ones if one includes the "development zones" set up by township villages. In Liaoning province there are 149 development zones (95 by towns). Among them, 65 ones are along Shenyang-Dalian Highway, with 1.883 km² planned area (in which 156.8 km² are developed at start), making up 43.6 percent and 61.6 percent of the provinces development zones respectively. Although there is a decline in the number of development zones in the country after harnessing and rectifying, the effects of city planning should not be ignored.

Devoting Major Efforts to Build Up the Market System

A market system is, in a sense, a legal economy. There should be perfect laws to guarantee and regulate the establishment and perfection of the market system. So, we should strongly emphasize the development of our legal system in order to unite the reform and opening with the development of law. We should speed up economic legislation, perfect our commercial and criminal law, pay close attention to creating laws to regulate the main body of the market, maintain the market order, strengthen the macroscopic control, perfect the public insurance and promote reform and opening to the outside world. Laws and regulations should also be made in the development of cities and countryside so that the legal system suited for the socialist market economy can take shape by the end of the century. At present, we should pay particular attention to "city planning laws", establish the "supreme"

position of the law, strictly adhere to the law and strengthen the establishment and administration of city planning in order to replace the rule of man by the rule of law and to bring a new prospect to city planning.

THE SITUATION OF URBAN ECONOMIC REFORM IN CHINA

It is said in the “decision on the economic system reform” of the Party’s Central Committee that “at present the economic benefit is very low in cities and there is a great potential untapped in the urban economy..., so to speed up reform is the internal demand in urban economic development”. It is also emphasized that only through resolute and systematic reform can the urban economy grow and flourish, cater for the demand generated by the country’s prosperity and open to the outside world. It is only in this way, can the urban economy really play the leading role, and promote the whole national economy to develop further”. Therefore, since 1984, the urban economic reform has been tested in more than 50 cities such as Shanghai, Changzhou, Chongqing, Wuhun, Shenyang and Dalian, and then it has spread to every city around the country. The situation of urban economic reform in China is as follows:

Expanding the Autonomy of the Enterprises

In 1992, “The principles on administrative reform of public-owned industrial enterprises was issued by the State Council. It stipulated that an enterprise has 14 items of autonomy. This is one of the main characteristics of the market economy. In the market system an enterprise can make some decisions of its own according to the market demand. As the main body of market competition, enterprises could assume responsibility for their profits and losses and decide their management for themselves. “An enterprise has the right, according to market demand and the national industrial policy, to decide itself their products and their kinds and qualities”. An enterprise has the right to invest in any enterprise and institution in any industry of any region of the country”. An enterprise has the right to recruit workers, to develop into the tertiary industry and service industry, to raise funds on its own and to undertake technical reform and initiate various industries. How to satisfy an enterprise for its demand under its enlarged autonomy and how to bring the construction of an enterprise into the track of city planning and administration in order to prevent the enterprise from doing things in its own way and being chaotic in occupying land and in construction, are big challenges facing city planning.

Creating and Implementing the Leading and Central Role of the City

“The decision on the reform of the economic system” was adopted by the Party’s Central Committee in the 3rd meeting of the 12th National People’s Congress. It points out that the city is the centre of the national economy, politics, science and technology, culture and education. It is the place where modern industries and the working class gather and it takes a leading role in socialist modernization. These cities will gradually form an economic zone based on big or medium sized cities. These cities will have different scales, styles of open and network. “The city government should concentrate its efforts on the city planning, construction and administration, strengthen the construction of public services, make comprehensive management of the environment...”. But in the present process of the construction of a market system, the leading role and the central position of cities haven’t been put into full play. This is illustrated by the following: (1) The “supreme position” of city planning has not been completely set-up. (2) The construction of cities and towns has not been completely integrated into the five-year economic plan of the country. (3) The urban system at different levels has been far from perfect. (4) There is a lack of funds for city and town construction. (5) Most of the small cities and towns lack attraction and radiation and have difficulty in playing the leading and central roles. With the deepening of the reform, the full play of the leading and central roles of the cities will provide more favourable conditions to city planning and construction.

Putting into Effect the System of “City Leading County”

Spreading the system of city leading county is one of the important parts of China’s administrative reform and it is also an important component of China’s economic reform and an important national strategic decision. It has a profound significance for separating the city and countryside, for carrying out overall planning and reasonable distribution, for promoting the construction of small cities and towns and for speeding-up the integration of city and county. It is also important to the establishment of the networks of cities, towns and economic zones, where both the cities and countryside and the workers and peasants are integrated , and where the big and medium cities will be the centres, the countryside will be the bases and the small cities and towns will be the bridges. Such a system is also crucial in increasing economic, social and environmental benefits in cities and the countryside. Therefore, since 1984, the system of city leading county and town leading village has been practised in some provinces in China. As early as in 1958, the administrative system of city leading county has been

carried out in Liaoning Province, and is now going to have important effects in speeding-up city planning in China.

Developing the Full Potential of the Central Cities

By central cities we mean the big and super cities with advantageous geographical conditions, well-developed communication and transportation systems, sound economic foundations, high technology, high levels of management, perfect infrastructure, good information flow, well-developed trade both for home and abroad and wide connections in the economy and in society. These cities include Shenyang, Dalian, Harbin, Changchun, Wuhan, Xian, Chongqing, Nanjing, Hefei, Zhengzhou, Guangzhou, Guiyang, Kunming and Lanzhou. We should develop the full potential of these central cities in order to speed up the development of the regional economy and urban constructions.

Strengthening the Construction of the City's Ecological Environment

It is an important aspect of national urban economic reform and an urgent problem to solve because of negligence and malpractice in the past work. So we should, besides setting up and carrying out the legal administrative system for the urban environment, be resolute in carrying out the policy of simultaneously planning and developing the construction of the economy, the city and countryside and the environment. We should abolish the antithesis between economic construction and other constructions which can bring environmental problems thereby restricting urban development. Therefore, we should maintain the policy of united planning and rational distribution and the principles of making those who pollute manage the problem and "combining prevention with administration, with stress on the former". We should break up the close system where each things in his own way but should instead determine the aim and the plan of urban environmental construction on the basis of the natural environment and ecological balance. We should also use the economic lever of tax and investment to make enterprises renew equipment, adopt new crafts, materials, technology and energy sources which will bring no pollution or low pollution, change fuel structure in cities and plant trees around cities to develop the urban ecological environment develop into a sound circulation.

Carrying Out Comprehensive Development in the City

Comprehensive development in the city is one of the important technical policies already issued and carried out by the government for the urban and rural construction. It is one of the important ways of practising city planning

and perfecting public infrastructure and facilities. Such comprehensive development can ensure that the city's construction is in the process of socializing production according to "the six unities". By "the six unities" we mean the unity of planning, unity of land resumption, unity of design, unity of demolition, unity of complete sets of construction and unity of administration. In the "law of city planning" issued in 1990, it stated clearly that the development of new districts and the demolition of old districts must follow the rules of united planning, rational distribution, suiting measures to local construction, comprehensive development and complete sets of construction. The comprehensive development in the city has outstanding advantages. They are (1) it can help to economize land, labour, materials and funds; (2) it can help to practise the basic construction in the order of "underground first and then the above"; (3) it can help to make a good job of the complete sets of construction of public and basic infrastructure; (4) it can help the reform of both the urban house and the principles of land-use; (5) it can help to socialize city life; (6) it can help to open up a new channel of raising funds for city construction. At present, we are badly in need of reorganizing the comprehensive development markets, perfecting the policy for comprehensive development and related rules and regulations, practising the guarantee of quality and regulating investment structure in city construction and raising comprehensive development rate.

Strengthening the Construction of Infrastructure in the City

Infrastructure in the city mainly includes water supply and drainage, electrical power, heat power, gas supply, post and communication, public transportation, environmental sanitation, the protection of the environment and park greening. It is a comprehensive engineering system for the city's economy, public service and people's living. It is also the foundation of the city's development. Since the reform and the opening-up to the outside world, although there has been a big development in the city's infrastructure, it still lags behind economic development and the need of people's living. This is mainly due to (1) the very stow construction of the city's infrastructure in the past; (2) the low priority of infrastructural development, as it was classified as the non-productive investment; (3) lack of funds and difficulty in satisfying the need when it only depends on governmental investment; (4) lack of vigour and momentum because of its free use to the public; (5) difficulty in united planning, rational distribution and cooperative construction because of dogmatism, with scattered investment resulting in redundant construction and heavy waste. Therefore, in the reform of the

economic system, we should attach importance to urban infrastructure and the complete sets of construction and try to do as follows: (1) to make a united construction plan; (2) the city government should be in charge of the united planning and administration. (3) to put into use the paid use of the infrastructure.

Carrying Forward the Reform of the Paid and Finite Use of the Nation's Own Land in the City

For a long time, the system of free and infinite use of lands has resulted in the waste of land and an unrationalized land-use structure in the city. The following are some examples: (1) the proportion of land for industrial use in the city is much more than that for the use by the tertiary industry; (2) the land for industrial use takes up the living space, and as a result, the living space takes up roads, squares and scenery. For city planning in the past, we used land according to their functions instead of their values. Now we should bring land, a productive factor, in-line with the market economy, use the differential land rent and law of value to better the renting and lending work of national land. The reform of the principles of land-use in the city has a great influence upon city planning.

Devoting Major Efforts to the Reform of the Housing System in the City

Changing houses in the city into commodity and private property is the main and important part in the reform of the economic system. In the past, houses were mainly built by the government. This led to not only the financial burden for the government, but also the uneven allocation of dwelling houses. It does not help to arouse the enthusiasm of building up houses by enterprises and masses either. Deng Xiaoping and other leaders have pointed out that there should be a reform of the housing system in the city and some experimental steps to speed up the reform. Enterprises and private firms are allowed to build and buy houses, gradually spreading the reform of housing systems to the other cities of the country.

Hopefully, the above nine steps of economic reform in the city will have a deep influence on the reform and development of city planning in China.

CAREFULLY 1CHANGING THE IDEAS OF CITY PLANNING

In the 1950s, our country's city planning came into being. In order to suit the needs of socialism and industrialization, we have learned from the

U.S.S.R. about their economic system and have met many difficulties and setbacks from then on. We didn't resume and begin a new period of flourished development until after the 1980s.

Rapid Development of City Planning in China

With the help of reform, the opening-up policy and the modernization construction in the last 10 years, we have overcome various difficulties and kept forging ahead on city planning until now. We have made great achievements in the theory, practice and legal framework of city planning.

The following are some examples:

- 1) Speeding up urban construction
The number of cities increased from 193 to 517 between 1972-1978. That of towns has gone-up from 2000 to more than 14,000. The urban population has increased to more than 2.3 billion. The level of urban construction has improved from 12.5% to 23%;
- 2) Speeding up the development of village and town enterprises and transforming the surplus labour in the countryside, all on the path of socialist urban construction with Chinese features;
- 3) Working out and carrying out each type of city planning;
- 4) Speeding up the construction of cities and town systems in districts, cities and provinces;
- 5) Speeding up the construction of basic city infrastructure and improving the environment for investment;
- 6) Greatly improving the living standards of cities, towns and villages - the living area has been increased from 3.6 square kilometres to 7.1 square kilometres between 1979 and 1992 for each person on average;
- 7) Enriching the contents of city planning, gathering many experts, combining their knowledge and achievements in the areas of economic sociology, vital statistics, environment and geography;
- 8) Speeding up the legal system construction of city planning;
- 9) Making the plan of dividing a city into several districts and the plan of control and construction in detail, etc.

Of course, all the above are not proceeding in a balanced manner. Different people have different ideas about all of them. We ought to undertake further investigations and improve city plans.

The legal system and the rules of management are not perfect. The contents of city planning need correction and the staffing structure needs changing. Urban design is not wide-spread. It is a long way to meet the needs of modernization and our market economic system. So only through further reform and building-up of the organization for city planning which suits the development of the market economy, can we keep city planning alive and vigorous. British expert Adwar Pacson has pointed out that, "The need of changing the forms of cities and towns is generated by economic and social changes. Only a change in the economy can produce the demand needed to allow material factors to change correspondingly. In the course of building and improving the market economic system, the reform of our land system, the development of real estate, the appearance of the tertiary industry and the building of the market system have all brought various needs to city planning.

Carefully Changing Planning Ideas and Views

People's points of view belong to the category of ideology. Whether the people would change their points of view according to changing conditions would have an important effect on the reform and inventions of city planning. A rigid way of thinking and sticking to conventions can hardly lead to creation. So it is very necessary and urgent to change one's point of view according to the change of situations and to widen one's scope of thinking.

Enhancing One's Regional Understanding

Cities are closely connected with regions. As the *Constitution in Athens* says, "A city is closely connected with and greatly influenced by the region it lies in. Developing either of them without any plans and orders will lead to the confusion of a city and the declining of a village". Therefore, we should heighten our awareness of the regions and carefully carry out regional investigation and planning, changing the misconception of over-concentrating on the constructions without thinking about the regions and scientifically deciding on a city's functions, scales, advantageous features and network.

Enhancing Understanding of Cities' Network

A city, a connection of such systems, as population, economy, society, etc, cannot exist alone in space. In order to meet the needs of economic

development and people's living standards, it will inevitably develop in groups and will have the features of network, structure and system. But we used to consider the planning of individual cities and were lacking ideas of the network cities and towns, resulting in serious adverse effects. This problem has mostly been solved by now. Some cities and provinces have already set the plan for their city and town systems in the last ten years. But this situation is still not widespread. The influence of outdated thinking is still in existence. Up until now, some units and individuals still think that the planning of city systems is useless. Therefore, they haven't made up their minds to carry on such planning yet. Even if some units and individuals have made the plan of a city system, they have commonly put it on the shelf and have not put it into practice. Enhancing the conception of a city network is a pressing matter of the moment and a long-term plan.

Enhancing Understanding of Multi-Purpose Use

People form the main body of a city. The use of space is the foundation of a city. A city is a multi-levelled and multi-foundational spacial regional system with intensive population, an intensive economy, intensive society and intensive science and culture. Therefore, city planning should be made on the basis of comprehensive thinking on city construction. Some experts have pointed out, "A city construction project is only a city carrier, a "shell" and "form", while such systems, as population, economy, society, science and technology, environment are the contents of city construction. "Contents" should decide on the "forms", forms should serve "contents". This philosophical metaphor reveals the dialectically united relations among the key elements of a whole city. Especially, now, under the condition of make economy, we can't only be busy with making up material plans of housing system, erecting pipelines and building roads, etc. To start with, we should carefully investigate and do some research on population, economy, society, science and technology, culture and environment, and find out their features and work out plans. Only on the basis of these, can we produce a good city construction plan.

Enhancing Understanding of Policies and Rules

For a long period of time, city planning in our country has been restricted by old ideas. We have been used to making-up construction plans and that we believe that researching and carrying out planning policies and rules belong to the duty of the administrative department. As a result, we have produced many problems for the future. If we still insisted on old ideas, under the system of a market economy, the result would be worse. Because

a market economy is a legal economy, it will be in a state of confusion if we are short of legal regulations. So our country will adopt laws, rules, regulations and policies etc. to make necessary administrative interference in order to manage, adjust and control the market economy. So, city planners should learn and make good use of the related rules and policies apart from improving and carrying out planning rules and management. Only in this way, can we make our city construction get onto the right track of using laws to govern cities. We should stick to regulations, act on laws and prevent such problems from happening, like unprincipled compromise in the face of money or certain pressure, especially the pressure of foreign merchants.

Enhancing the Sense of Continuous Changes

Under a market economy, it is necessary for city planners to enhance their sense of constant changes. A market economy is different from a planned economy. It is rapidly changing. A market economy is an economy of great plasticity and elasticity. It can't meet the needs of the changeable market economy if we only seek to attain the perfect ultimate aim, overemphasize the plans and norms in a dogmatic manner and make static plans without leaving some room for maneuvering. Therefore, not only should city planning be a macroscopic long-term strategic plan. But, it should also have aims and strategies for different periods, and be able to make rolling plans according to the development of marketing economy to form dynamic planning. For certain strategic plans such as the city's development directions, distribution and scale, we should allow for unforeseen circumstances so that the plans can meet emergency situations.

Strengthening the Understanding of Treating the City and Countryside as an Organic Whole

This is an important concept relating to strengthening the sense of area and the conception of the network of city and town. The city and countryside are like two wings in our society, supplementing each other, promoting each other and restricting each other. Because of various reasons, such as the system itself, for a long time, there has been an imbalance of development in cities and the countryside and a big difference between cities and the countryside. There now exists a prominent structure of dual economy in cities and the countryside. There are many reasons for that. The important one of them is that cities and the countryside were not planned and built as a whole. Thus strengthening the understanding of treating the city and countryside as an organic whole is an urgent task for city planners. Cheng

Zhangxian, an expert of city planning, once pointed out, “The scope of city planning is still restricted in the built-up area. City is city and countryside is countryside; they are not considered together in planning”. At present, under the condition of market economy, there has emerged the economic network and market system of treating city as the centre, combining the city and countryside and making industry and agriculture profit from each other. Therefore, strengthening the understanding of treating city and countryside as an organic whole is an internal demand for the development of our market economy. So we should broaden our outlook, go out of the urban area, manage well the system of city, county town and countryside in order to industrialize the city and modernize the countryside. We can draw lessons from the experience of Dailian where an office of taking city and countryside as an organic whole was set up.

In addition, in the system of a market economy, we should strengthen the sense of competition, opening, preeminence, ecology, comprehensiveness, research, service and so on.

ESTABLISHING A SYSTEM OF CITY PLANNING TO ADAPT TO THE MARKET ECONOMY

With the establishment and development of a market economic system, various development zones, development companies and groups and land leasing activities have sprung up vigorously. These have made profit-oriented city management one of the important works in city construction. Large-scale developments in the city, as a whole and in the long run, may bring harm, and may even result in “constructive destruction”. Therefore, establishing the working system of our city and planning to adapt to our market economy as soon as possible is very urgent and necessary.

Strengthening the Strategic Study of City Development

The strategic study of city development is an overall plan of a city’s development in the regional strategy. In general, it includes the strategic aims of a city’s development and strategic measures and steps. This is one of the main bases of the government in transferring functions and strengthening its macroscopic control of city development. This can also lead to the development of the regional economy and the planning for city and town. So, the strategic study of city development should be an important part of the overall planning of the city and the planning of our city and town system.

In the market economy, the strategic study of city development should first begin with the height of developing the market economy, establishing the working system of the market economy and strengthening macroscopic control. We should concentrate on the local region, take a broad and long-term view, face the outside world and seriously study the aims, emphasis, ways and steps in city development.

Seriously Making and Carrying Out the Plans of City and Town Systems

The plan of a city and town system is concerned with a city and town network, taking big or medium cities as centres, concentrating on main traffic roads and with different functions and reasonable distribution.

Seriously making and carrying out plans of city and town systems has a realistic and historical significance of the reasonable distribution of population, cities and towns and productive forces. It is important to the guidance of the making and the implementation of a city plan. The establishment of the market system and public service system of different levels in the country, the speeding up of the construction of the organic whole of city and town, the prosperity of the regional economy, the coordination of the population/resources/environment and the improvement of the environment. Therefore, the Central Committee of the Party has stipulated in "The Suggestion in the Seventh Five-Year Plan" and "The Law of City's Planning". (carried out in 1990) that it should launch the planning of the city and town's systems planning in the national wide, provincial city and county levels. This type of planning has been developed in some provinces and cities but it still lacks balance and has differences in understanding. Some have been deeply affected by traditional ideas and don't regard such planning as significant and necessary; some have made plans just for inspection and have done it in a mechanical way and did not want to carry it out. These don't fit the market economy and the development of city planning and are very harmful: (1) It does not benefit the coordinated development of big, medium and small cities. (2) It is then difficult to change the situation of over concentration of population in the centre cities. (3) It is harmful to the perfection of the regional market system. (4) It is then difficult to form and perfect the city and town's system of different levels. (5) It is harmful to the speeding up of the construction of the city and countryside as an organic whole and to the development of urbanization with Chinese features. (6) It is harmful to the improvement of the economic, social and environmental conditions in cities and towns. Mr. Jingyuan, an expert of city planning, has pointed out, "Under the condition of city leading

county, some city plans have still put their attention on developing the centre city as much as possible. They have seldom thought of making the centre city, counties and towns as a coordinated network in order to speed up the economic development of the entire area and the raising of the people's quality.

Changing the Way of Calculating City Population

It is very important to determine scientifically the scale of the city's population. It is the basis for the determination of the quantity of planned lands in the city. The type of buildings, the number of storeys, the components and number of service parts, the capacity of transportation, the standards of roads and the kinds of vehicles and public buildings.

In the past, we calculated the scale of city's population with the method of the balance of labour forces and the method of comprehensive analysis. With the method of the balance of labour forces, we use the principle of distributing work according to certain proportions basing on people's jobs and age, to determine the number of people who serve the city, the number of people who don't serve the city and the number of people who are supported by the others. We then calculate the ratios of these categories to the whole population to work out the planned population. With the method of comprehensive analysis, we can work out the sum of the number of natural increase in the planning period. The former is easy and mechanical increase to calculate, but the latter is difficult because of its randomness. In the system of market economy, the attraction and radiation of the cities have enlarged sharply to form the pattern with broad opening and circulation, which makes it difficult to tell which economic activity is for the city and which is not. It creates difficulty in determine the basic population and the service population. So, in the system of market economy, we should adopt the globally-used division of the three industries, to calculate the scale of the city's population. In addition, we should include the floating population in the city's population.

Devoting Major Efforts to the Study and Planning of the Real Estate

In the new period of a changing the national economic system, the study and planning of the real estate is very important to the working out and revision of the city's plan scientifically. It mainly includes: (1) The valuation and planning of the use of lands in the city. In addition to investigating the hydrographic and engineering geological conditions of the land, we should analyse the advantage of the land and classify the land, and then produce the differential land value chart. (2) Using the differential land rent to

optimize the structure of the land in city. The production rate of the land should correlate to the value of the land; the purpose and location of the land should correlate to the value of the land. (3) Estimating investment and production to keep the balance and circulation of the construction funds of the city.

Regulating the Structure and Functions of the City's Land

Under the planned economy, when the structure and functions of the city's land are considered, we always emphasized the industrial regions and lands for industrial use and ignore the lands for the tertiary industry, for planting trees, for roads and for open square. This does not fit the development and the need of the market economy. So we should properly regulate the structure and functions of the city's land. (1) In the prime sections of the city's centre, we should use them to mainly develop finance, business and trade and set up central business districts. The storehouses and factories that occupy the centre areas should be removed as soon as possible (2) With the regulation of industrial structure in the city, we should reduce the proportion of land for industrial use and gradually raise the proportion of land for roads, planting trees, for squares and for the tertiary industry. (3) In the sections where universities, colleges and institutes are concentrated, we should set up some high-tech enterprises (without pollution and disturbance to the residents) or set up high-tech industrial districts.

Strengthening the Planning Construction and Administration of All Kinds of Development Zones

Since the Spring, 1992, various development zones have been developed in every province, city, county and town. This is very important to attract investment from abroad, introducing advanced technology and the experience of administration, promoting the reform and opening-up to the outside world, strengthening the basic construction in the city, and promoting the development of the city's economy. However, the weaknesses of macroscopic control have resulted in too rapid an emergence of many development zones. This has not only resulted in the over-occupation of the farm lands and wasting of the construction funds, but also brought about many problems for city planning. Some people have built up development zones in the sections that should not be occupied; some development zones have not been planned or permitted or have not been seriously planned; some development zone are far from cities, lacking support and convenient transportation; some are set up along the main transportation roads and have interfered with the traffic; and some have

not been seriously debated, lacking the introduction from foreign countries and the basic installation and funds. Therefore, it is a very important task to strengthen the planning and the administration of all kinds of development zones. We should (1) establish a united administrative agency for all kinds of development zones; (2) depending the old cities, we should fully utilize the city infrastructure to reduce investment and to speed up development; (3) abandon the closed style construction and administration in the development zones, but include them into city planning. In order to develop the sale and exchange of lands. (4) The plan of development zones which do not reach standards should be revised and be seriously planned. The starting zones' planning should include in-depth details of control. (5) The provincial government should formulate a united preferential policy and work out a unified policy of land sale and pricing standard, so as not to undersell, which might then harm the nation's profit.

Establishing and Perfecting the City Planning System

In recent years, although national city planning has been deepened gradually, the development of city planning is in an uneven manner and has not reached enough depth and scope, considering the need of the market economy and the upgrading of our city planning. Therefore, it is very urgent to establish and perfect the city planning system as soon as possible. Generally speaking, the national city planning system should coordinate with administrative division system to form a more integrated series in both vertical and horizontal directions. In the vertical direction, it includes land planning, regional planning, city's general planning zonal planning and planning for construction in detail and city design. In the horizontal direction, it mainly includes the content of planning. Although it pays particular attention according to the planning of different levels, it generally includes strategic planning of social development, population planning, environmental planning, transportation planning, planning for industrial distribution, planning on the use of land, planning on the construction of basic installation, planning on the development of science and technology, planning on culture and education and planning on medical treatment and sanitation. In every planning sector, it includes several lower-levelled planning systems. In addition, we should establish the system of city study, city planning and city design.

Speeding Up the Modernization of the Means of City Planning

It is very important to speed up the modernization of means of city planning in order to fit the need of the development of market economy. In the last

decade, the techniques of city planning in China, in general, have been backward and is still falling short of the need of the market economic development. Therefore, in city planning, from now on, we should use such high-technology as computer, remote sensing and satellite to modernize the ways of city planning.

To sum up, in the process of establishing the socialist economic system, the reform of national city planning will, in the coexistence of opportunities and challenges, come into a new development period and have a good prospects. Therefore, in China's city planning circle, we should seize the opportunities and face the challenges, enthusiastically engaging in the reform and invention and striving for establishing the city planning system and a study of city planning with Chinese features fitting for the development of the market economy!

REFERENCES

- JIANG, Zhemin (1992), "Speeding Up The Step Of Reform And Opening To The Outside World And Construction For The Modernizations, Strive For Many Victories In The Socialist Construction With Chinese Features", report in the 14th Party's Congress Meeting. (*in Chinese*)
- WU, Liangyong (1991) "Looking The Composition Of China's City Planning System-Discussing From The Development And Puzzle Of Modern Cities In The West", *City Planning Review*, March 1991. (*in Chinese*)
- WU, Liangyong (1993) "Greeting The Great Reform In The Work Of City Planning", Speech In The Senior Discussion On Protection And Development Of The Old Cities, *City Planning Review*, No. 3, 1993. (*in Chinese*)
- XU, Mingtian and Yang DONG (1993) "City Planning Of China Under The Development Of The Socialist Market Economy", *Urban Planning Forum*, Vol. 5, 1993. (*in Chinese*)

5

An Inquiry into the Questions Concerning Urban Planning in the Market Economy Using Hangzhou's Development as an Example

Yuxiang MA

INTRODUCTION

With the establishment of the market economic system, urban planning in China is facing many new conditions and problems. At present when the work of making and revising the overall urban planning of the cities has been widely undertaken, sufficient consideration should be given to the great influence of the market economy on urban planning in order to adapt it to the new conditions of the reform and opening to the world. In the 1990s, with the continual deepening and widening of the reform and opening-up to the world all over China, great changes have in fact taken place at the strategic positions, development orientations, scopes and structures of our cities. Therefore, a new urban development strategy for the 21st century should be designed anew and our overall urban planning should be revised to be adapted to the market economy at a higher and new level on the basis of the original overall urban planning. So we must first of all adopt the conception of a socialist market economy and consider carefully and deal correctly with the relationship between planning and the market; at the same time we should sum up our experiences and actively engage ourselves in the reform and deepening of the work of urban planning itself. The following are the ideas that I have generated from an inquiry into the questions concerning urban planning in the market economy.

LOCATIONAL AND REGIONAL ANALYSIS

First, we need to give prominence to the analysis of locational background in the development of cities and to keep a timely and close watch on the radical changes outside the cities, so as to have them adapted to the whole regional economy, and the various opportunities and challenges offered in the development of a society and to enhance the open and selective nature of urban planning. The general analysis of locational background by gradation is one of the important bases for modern urban science. Breaking the close traditional shackles of “talking of cities as they are”, such an analysis lays emphasis on the objective consideration of the matter and energy in motion between the city and the region and between the cities themselves, on the overall evaluation of a good regional transportation and communication network and on the influence of the remarkable changes from outside upon the inside structure of the city. It proves and makes clear the city nature of cities, their main function and development orientation, so as to make urban planning both practical and adaptive to the new times and to adopt a flexible and open type of planning, spanning higher in space and longer in time, leaving plenty of room for practical implementation.

Take, for example, the analysis of locational background in the development of Hangzhou. Owing to the gradual shift of focus of the world economy from the Atlantic coastal areas to the Pacific coastal areas, the economy of many countries and areas along the west coast of the Pacific has been, or is booming, and the speed of growth of the economy and the adjustment of economic structure at high level have become the focus of world attention. Enjoying the exceptional advantages of their geographical locations, the coastal areas of China have been carrying out the policy of overall opening-up to the world and of the development of the economy in the 1990s. Located in the central area of the western belt of the Pacific, Hangzhou, in undertaking its urban planning, should take the above-mentioned new conditions and opportunities offered by the general situation in the world as the first consideration, both in area and in time, in the general macro-analysis of its locational background. With the deepening of the reform and opening-up to the world, Hangzhou will surely be influenced and attracted by the above-mentioned general world situation, and its export-oriented economy is sure to develop more effectively. But, in the development of the coastal cities through their mutual help and competition, Hangzhou still enjoys its fame at home and abroad as a tourist city of cultural and historical interest, on the basis of its beautiful cultural

and natural landscape, which best shows its exceptional advantages. So, proceeding from the reality of Hangzhou and the demands of the international tourist market, Hangzhou, adopting a broader perspective, should open up various holiday spots in the Hangzhou Zijiang State Holiday and Tourist Area along the Qiantangjiang River and “the two rivers and one lake” area while keeping and developing the strengths of the tourist attractions around the West Lake and the tradition of the historically famous city. In such ways, it can further build itself into an attractive key scenic and tourist city of regional and world fame, meeting the needs of the new situation arising from both the opening up of Pudong and the new rise of Shanghai as a super international city. And from the highly theoretical viewpoint of the division of work, we should further make sure that the principle function of Hangzhou as a city being “one of China’s important scenic and tourist cities and famous historical and cultural cities” is the scientific basis for the first consideration.

During the of 1990s, the focus for the development of an export-oriented economy in the coastal areas has shifted from the Zhujiang Delta in south China to the Yangtze Delta with Shanghai, which is in the middle of China’s coast, as the centre. The Yangtze Delta with Shanghai as the centre is situated in a place where the domestic and foreign economies overlap. It is both China’s biggest city “growth pole” and the strongest urban economic radiation source, and is one of the areas which are densely populated and have the greatest potentials for economic development. Of the 35 cities whose total output value is over 10 billion, 12 belong to this area, making up one third of the total. Of the 10 counties of the strongest economic strength, 8 are located in this area. The Yangtze Delta area will play an important role in linking China’s economy to the world economy. The above-mentioned conditions and opportunities can be regarded as the second consideration of region and space in the macro-analysis of locational background, owing to the fact that Hangzhou is situated in the place where the two developed economic areas Zhejiang and the Yangtze Delta adjoin. As Hangzhou has this dual nature in location and region, it is important to strengthen its competitive position and handling capacity by making full use of its forceful distributing ability arising from its status as the provincial capital. At the same time, it is also important to strengthen Hangzhou’s cohesive and spreading ability arising from its status as the most important city in Zhejiang, by bringing into full play Hangzhou’s locational advantage as one of the cities south of Shanghai in the Yangtze Delta area. Situated at the crossing point of the western hilly areas south of the Yangtze Delta and the Hangzhou Gulf in the east, Hangzhou is the only passage from Shanghai

to south China and south-west China and will also be an evacuating centre in Ningbo, sharing considerable freight volume of the inland areas south of Shanghai. Being a pivotal inland city in the rear area behind the two ports of Shanghai and Ningbo in the triangular area of Shanghai-Hangzhou-Ningbo, Hangzhou's locational advantage will further be brought into play, with the Hangzhou-Changxing railway open to traffic, with the construction of double-track railways of Zhejiang-Jiangxi, Hangzhou-Ningbo, and with the opening to navigation of the connecting project of the Grand Canal-the Qiantangjiang River. It is further reinforced that Hangzhou is being recognized as one of the important developing cities, with the progress of "the campaign of opening East China", with the construction of the second great passage from north to south (from Shangqiu in Henan to Hangzhou), with the building of the Shanghai-Hangzhou-Ningbo expressway, with the decision-making of the new airport in south China and with the completion of the third Qiantangjiang River Bridge. This transport function, like the above-mentioned scenic-tourist function, is of greater importance than that of a provincial scale. This new city function is not only beneficial in distributing large volume of personnel, goods and news and in promoting markets and developing the economy, but will also improve conditions for investment and the basic infrastructure of a scenic-tourist city, so as to build Hangzhou into a comprehensive city of a higher level. Therefore, in the second regional and spatial analysis of Hangzhou's locational background, the second basic function of Hangzhou as "the comprehensive centre city south of the Yangtze Delta" is further made clear.

The above-mentioned great changes in the outer environment of Hangzhou will exercise more and more influence on the development of Hangzhou. This great "push and pull" force, which results from the changes of physical factors outside the city, will first gather along the north-south passageway in the east side of Hangzhou, thus leading to more use of land towards the east outer fringe. In the urban planning of Hangzhou, the above-mentioned conditions and opportunities offered by the outer environment can be regarded as the third consideration of region and space in the comprehensive macro-analysis of locational background. In the past, owing to limited land, Hangzhou, in its construction, had to take measures to make use of every bit of its space or to extend to the edge of the city. Because of the obstruction of the south-east railway and the Qiantangjiang Bridge, the use of city land obviously tends to extend to the northwest plain area, and this in turn makes Hangzhou look narrower and more banding, thus bringing about greater difficulties in the management of the city traffic and the rational layout of the city. Thus, the trend of land usage now is

contrary to that of the 21st century which will emphasize the southeast. Therefore, according to the forecast of the use of city land in the long-range plan, it is not suitable at present for Hangzhou to go on extending towards the northeast in its construction and instead it should extend towards the southeast, following a more flexible and open plan.

POPULATION FORECASTING

Secondly, we should improve in a serious manner the analysis of forecasting the growth of the city population and should forecast the influence of the socialist market economy and the population policy on the change of the city population on the basis of the history and the present conditions of the population in a particular region. Especially with the development of the market economy, population floats more constantly; the floating population grows in number and their average time for stay has become longer. The groups who stay in the city without residence longer than a year and the daily floating population have become an important part not to be ignored in our present urban planning, considering their number and their influence. It is imperative to overcome subjective inclinations in the city population plan, to integrate the advanced forecast methods which combine quality with quantity by taking in new means and ways of the neighbouring sciences, and to enhance the level of science and farsightedness in the city population plan.

According to the third census in 1982, the population for the city proper of Hangzhou was 1.1916 million, and in 1990 in the fourth census, it reached 1.4762 million, with an increase of 0.2846 million in 8 years, of which the yearly average natural growth of population was more than 10 thousand, making up 29%, while the yearly average net moving-in population was more than 25 thousand, making up 70%. In view of this, the moving-in population is the main growing source of Hangzhou population growth. This in-migration growth can in fact be divided into two parts: one is the net moving-in population with registered permanent residence, and the other, without. According to Hangzhou official statistics, the former made up 42% of the general net moving-in population and the latter, 58%, in 8 years. From this it is quite obvious that the inhabitants without registered residence made up the majority of the net moving-in population. This group of people not only play a remarkable role in the development of the city economy but also share the city land and other basic city facilities, and they have little difference from those with permanent registered residence. They occupy an important place in the change of the population, and the cause of their

change is very complicated. So, the control of the change of this group of people has in fact become the key to the forecast of the population change in the future. It will no longer meet the need of the development of economy if the city population continues to be calculated by counting the permanent registered residence only. Besides, the daily floating population has become a new problem to urban planning. For example, the daily floating population in Shanghai is 2.5 million, and the population who stays more than 3 months is 1.3 million including 0.5 million construction workers from outside Shanghai. The size of this population tends to grow daily¹.

To urban planning, the question of what constitutes the city population, what are the standards of and the means of processing statistics of a population and what forecast pattern has been used which has long been complicated and debatable. At present, in the new system of the socialist market economy, the city population question is faced with some new and complicated conditions. This is not only related to the practical question in urban planning but also to the theoretical question about the process of urbanization and the accuracy and comparability of the standards of urbanization. Therefore, to improve in a conscientious way the forecast analysis of the city population will provide the important scientific basis in strengthening the macro-control of, and in developing in a healthy way, both urbanization and urban planning, and in expounding and proving, and forecasting the proper development speed and the layout of towns.

ANALYSIS OF LAND USE

Thirdly, we should lay more emphasis on the analysis of contradictions in using land in the development of cities and should scientifically keep track of the historical law of development in the economic and social structure of cities and the new historical tasks, so as to strengthen the space-oriented trend in urban planning and the varied layouts in the regional pattern. The size of city population is often restricted by the use of land in the development of the economy. The earlier than expected break of the planned limit of the city population, the unconformity of the socio-economic development of the city with the city space, and the agglomeration and scale economies of the city under the market mechanism, all result in the lack of expanding space for the cities in carrying out their historical tasks. So, at present, it is unavoidable, necessary and also rational to increase in a proper way the population in cities, expand accordingly the use of land and rationally adjust the urban regional structure, in integration with the reform of the old city and the building of the new area, and the development of real estate.

For over 40 years, Hangzhou's industry has laid a remarkable foundation and a strong, comprehensive and fully-varied system, with light processing industries as its main part. But, because of the inner dependence and backward equipment of the traditional industries, the variety and quality of goods are identical with those of the neighbouring cities and they increasingly lack competitiveness. With the development of Pudong as the turning point, a good momentum is appearing in the speed-up of the reform and opening to the world in Hangzhou. In order to carry out the new historical tasks placed before city development, and to better bring into full play Hangzhou's connecting and medium role, it is necessary to develop substantially the third industry, speeding up the latter's conformity to the field of circulation. And this will in turn promote the growth and development of Hangzhou's markets of means of production, finance, technology, consultation, news, personnel, services and real estate, speeding up the third industry to improve and perfect the economic structure in Hangzhou. This would develop substantially the export-oriented economy and increase the export capacity in Hangzhou's economic structure, with the third industry as the lead. Under the present new situation of speeding up the reform and opening-up to the world, whether or not to have international competitive power has become an important yardstick of the economic structure's vitality in the coastal cities. So, it is necessary for Hangzhou to try to develop the third industry in a new starting point and to promote its development in quality and standard and towards internationalization. It is necessary to create a good inner environment and to use the outer good conditions, with Pudong as the "window" and channel to enlarge the scope of using foreign capital, technology, material and selling market, and to set up more joint and cooperative foreign industries. We should lay emphasis on developing products of new and high technology and on heightening the technology of traditional industry to bring out a general rise in quality in industry.

Hangzhou is a key landscape and tourist city, a famous cultural city of historical interest, the largest comprehensive city centre south of the Yangtze Delta area and the capital of Zhejiang. Such nature and basic functions of Hangzhou show its role in the development of the macro-regional economy and its potentials. But there is a heavy burden for Hangzhou in its use of land and in carrying out its historical tasks, especially the lack of due space for its expansion. According to the communiqué of the fourth census in 1990, the inhabitants in Hangzhou were 1.47 million. According to the forecast by the research group of the Population Research Institute of the Hangzhou University, the number of inhabitants in Hangzhou will be

1.78 million by 2000, and by 2015, the maximum figure will reach 2.08 million. The population size of a city is restricted by the scope of the use of land arising from the urban economic development. The Hangzhou city proper now covers an area of 430 square km including the West Lake area. The actual use of land per person is on the low side, whereas the use of land by industry is on the high side and the distribution of use is irrational, thus resulting in a sharp contradiction between population and the use of land. According to practical experience in urban planning in cities both at home and abroad, it is unavoidable, necessary and also rational at present for such a vigorous city as Hangzhou to increase in a proper way its population and to expand accordingly its use of the new area. The key to the question lies both in following the push of the market economy and in the strengthening of the macro-adjustment by the administrative organizations.

Notes

1. *Wenhui Daily* 13 November 1993

6

Impacts of the Market Economy on Urban Planning in Shenzhen

Huasheng SUN

INTRODUCTION

The Standing Committee of National People's Congress of China approved the "Regulation on Special Economic Zone (SEZ) in Guangdong Province of P.R. China" in 1980. The State Council approved the establishments of Shenzhen, Zhuhai, Shantou and Xiamen SEZs in the same year. Shenzhen, as the earliest opened window and experimental base in China for the open door policy and system reform, has hereafter gone ahead with the rest with regard to the development of a market economy and, impelled by the market economy, "Shenzhen speed" has also emerged simultaneously.

What are the interrelationships between the market economy and urban planning practice in Shenzhen under such circumstances? What are the features in this respect compared with other cities? Reviewing the practice of the previous decade, it seems that the market economy has already permeated directly or indirectly into many aspects in urban planning. This topic will be discussed as a preliminary analysis in this article.

MARKET ECONOMY AND SOCIALIST MARKET ECONOMY

Market Economy

- ① Market economy is a kind of system which operates according to the rule of commodity value and of reproduction. The production of commodities and their circulation are generally adjusted by the relationship between supply and demand through price fluctuation, as well as their distribution and consumption activities operated partly through the market. Besides,

the essential factors such as finance, labour force, technology and information, including the distribution of resources are all put into the market.

The competition within the scope of production and management, including real value and price in various sales boundaries naturally exist under the effects of relationship between supply and demand and the rule of value.

Up until the present, every country in the world has been working hard on the development of its outward economy. It is very familiar to us about the export of products and global trade, even the establishment of processing zones for export, free trade zones and economic development zones, etc. We may say that there is a global market economy of a very large extent and of high potentiality.

The generation of a market economy is not operated through letting things drift alone in the light of quotations in the market, but with the macro-adjustment by government concerning the development targets as a whole. Meanwhile, the fundamental base for operating the market economy should be an overall legislation and enforcement system, since the state and city government no longer have direct intervention, guidance or standardization over the market behavior. The government would work out policies for various developments of different industries through indirect means, such as control and readjustment of the economy by financial and taxation methods, the social redistribution process, drawing up laws and rules, etc.

The management and administration of the market economy should be transparent to the public. The main principle is in terms of commercial competition based on fair dealings and impartial treatment during the whole processes, such as inviting bids, submitting tenders, auction on properties, etc. It also includes an announcement of the firms' or individuals' financial situations to the public if necessary, even through qualification examinations, notarization, audition and carrying out the punishment clauses to prove this transparency.

Socialist Market Economy

The initiation of a socialist market economy in China comes from the conclusion of the previous stage of open-door policy practice, which was originally conducted by Deng Xiaoping in theory, policy, guiding principles and measures. Eventually, a resolution was carried in the 3rd Plenary

Session of Central Standing Committee of 11th Representatives Congress of Communist Party of China (CPC) and was titled "Decision on Some Issues of Establishing the System of Market Economy by the Central Committee of CPC". The date of promulgating the Decision was the 14th November, 1993. Before that, the socialist market economy had been put into practice in Shenzhen SEZ and other SEZs for about ten years. It had been experimented and explored in earnest to see whether worthy experiences existed. Considering that the socialist planned economy has been continuously carried out before the initiation of system reform, it has great historical significance and is unprecedented to transform the former system into a market economy.

The main part of a socialist market economy is public ownership, with non-public ownership as a supplement. State-owned, community-owned and privately-owned undertakings co-exist as well as state-run, community-run and individual-run enterprises. Besides, there are joint ventures invested by domestic and foreign funds or solely by foreign fund prevailing in SEZs, as well as coastal and other main cities.

The majority of the distribution system is based on one's contribution or labour efforts and non-contribution is placed as a supplement in order to make people get richer one after another and toward a common sense of prosperity.

⑤ Furthermore, the national plan in a socialist market economy is one of the macro adjustment means of the government. Those concerns about the non-existence of any plan for the market economy are unnecessary since the emphases in the plan are decisions on strategic targets, forecasting and control of total output, readjustment of industrial structure and corresponding location of productive poles, as well as those key projects' development.

The above-mentioned circumstances, both in the market economy and socialist market economy, were embodied in Shenzhen in the past decade and have exerted onto urban planning great influence and effects in varying degrees. This aspect will be described in the following text.

NEW SITUATIONS BROUGHT ABOUT BY THE MARKET ECONOMY IN SHENZHEN

The Generation Process of the Market Economy in Shenzhen

The generation process of the market economy in Shenzhen can be divided into two stages:

The first stage was from 1981 to 1986. During those years, the price restrictions of agricultural and non-staple food were initially relaxed, and then, followed by that of crops and oils until all of them could be sold under market price instead of former coupon services. 97% of the total commodities had market price and more than 95% productive materials were provided by the market. Furthermore, the majority of the labour force were provided by the market too. A contract system between employer and employee was practiced and wages were floated. The establishment of the tender system was brought by a huge scale of construction projects in the early years. In 1984, some of the administrative departments were transformed as economic entities and thus formed the enterprises separated from government direction. The policy for operating an enterprise was to deal with multiple kinds of trades, with one of them being dominant.

The second stage was from 1987 up until now. In 1987, a leasehold system on land-use was started whereby part of the urban land-use rights could be transferred. In 1990, the first stocks exchange market was opened and type B of stocks for abroad were issued soon afterwards. In 1992, the commoditization of housing was basically realized. Dwelling ownership can be obtained by market price and occupancy right without ownership can be bought by scanty profit sale or subsidized sale according to the buyers' different conditions. This kind of reform of the former system of allocation of housing was bestowed as an honor by the UNCHS. Currently, reform in shareholding for enterprises is underway to make definite the relationship of property rights as a primary issue. Besides, reform of the financial system as a means toward the further implementation of the open-door policy and a world city are reinforced by an intense publicity campaign.

The System and Mechanism of the Market Economy in Shenzhen

Up to the present, markets for productive materials, consumption goods, labour force, real estate business, finance, foreign currencies exchange, property transfer, futures, new technology, fixed assets auction and qualified personnel have already been established. The major trends are to get gradually more open and to conform to the international practice. The foreign exchange market, for instance, was only open to foreign investors in Shenzhen, but later opened for the local enterprises. Individuals were permitted to enter into that market for dealing. The total sales value was 3.37 billion US dollars.

The main bodies in the market are enterprises. Since ownership and operational rights were permitted to be separated in the light of the *New*

Constitution modified by National People's Congress in 1993, a new direction of system reform was made further explicit and Shenzhen has taken a step ahead of the rest. The ownership of the majority of enterprises in Shenzhen will soon be transformed from state-owned into a mixed ownership with shares jointly held by the state, corporation bodies and public individuals. This was issued in city government's resolution following a serious study with the relevant agencies and quite a few modifications, either in content or in written language. Enterprises will be managed independently under the circumstances of a market economy and will assume sole responsibility for their profits or losses and develop according to their own capacities. The fittest will survive. As the central government has already vested the local legislation power to Shenzhen municipality, the city government is thus able to conduct the healthy growth of the market economy through exercising her administrative power to supervise the enterprises, creating a separate flow of profit and tax revenue and establishing intermediate organizations, such as trade associations, brokerage corporation, solicitors and auditors offices. etc.

Features of the Market Economy in Shenzhen

Except the above-mentioned, other features exist, as follows:

Firstly, the percentage of those enterprises with three kinds of foreign investment is growing year by year and these enterprises have become the main bodies in some industries such as electronics, clothing and the toy industry.

Secondly, it is impossible for the city government to assign mandatory productive plans to the enterprises since the arrangement of production in those enterprises with three kinds of investment is done according to the order forms from world markets and a great part of their products are for export. So the extent of governmental control and adjustment is quite narrow and rudimentary. Meanwhile the control means are quite different from that of other cities.

Thirdly, it is quite rare for the city government to invest in factory buildings but most have investment from development corporations. The land has been put into the market as a paid essential productive factor and has been capitalized upon.

Fourthly, concerning the distribution of profit, most enterprises with three kinds of investment have been based on the capital contribution and as a subordinate means, on the contribution of labour by the staff and

workers. In government-run enterprises, staff and workers' salaries or wages are distributed according to their labour contribution, while individual businessmen earn their income from their deal.

Fifthly, the majority of commercial and service industries are non-state-run and the service industries are basically operated under a collective contract system or by individuals.

Sixthly, infrastructure and supporting facilities at the city level is invested in by the city government, which is also in charge of their construction. On the other hand, the real estate business or development corporations are responsible for investing in various categories of buildings, site levelling and underground piping, including part of the supporting facilities for a community or an estate.

NEW REQUIREMENTS POSED BY THE MARKET ECONOMY IN SHENZHEN ON URBAN PLANNING AND COUNTERMEASURES FROM THE PLANNING FIELD

The fundamental requirement posed by the market economy on urban planning is to transform the planning concept, i.e. to shift from drawing up a plan according only to the planned economy to planning according to the socialist market economy. Urban planning must take account of commodity economics, market needs and the rules of reproduction under the direction of the guidance plan (control and adjustment), instead of computing the urban development speed only by the rigid data from planned productive value, based on the economic plan worked out by the government to define the urban functional structure, population size, land-use scale, distribution of various kinds of resources and infrastructure. It is essential that future development be forecasted scientifically, using the variation and growth of the market economy as a variable data system and a plan must be done in advance as early as possible, or adjusted promptly.

A balance between the interests of both the public and non-public sectors was recently taken into account within the scope of planning in Shenzhen, as well as between public-run and private-run undertakings since the main body in the socialist economy is public ownership, with non-public ownership as a supplement and even including joint venture ownership and foreign investor's sole ownership in Shenzhen. It can be further extended to the balance between the interests and benefits of both the public and the firms. The land development intensity, for instance, in real estate business, such as plot ratio and other assigned targets, have been defined with

consideration of the interests of both the overall city and the development corporations. In traffic planning, planners and traffic engineers have already set up jointly a sub-system of public transportation with a multiple-run vehicles operation, public buses contracted by individuals and private-run mini-buses, and have mixed this sub-system into an integrated overall system, i.e. rail, air and water transportations.

As mentioned earlier, there is no longer any system for “eating in a big pot” in enterprises of Shenzhen, and moreover, no “iron rice bowl” in any industry and a contract system has already been carried out in the distribution of income according to one’s labour contribution. On the other hand, investors’ income was defined by the proportion of their investment, so planners in Shenzhen have paid more attention to the economic result of a project since both the labourer and investors attach importance to the efforts to get better profit. Personally, I do not think that a subjective desire on defining a city’s scale and arrangement plus the investment estimation are equal to a plan. Rather, it seems to be appropriate if planners could figure in a plan in the light of a train of thought on input and output both for government and enterprises and then get feedback for checking the rationality of a plan proposal. I have conducted with a team the planning of an international industrial city in the western district of Zhuhai and have done an analysis on industrial development and economic benefit with input and output calculations. We realized then, through that practice, that a scheming stage focusing on economic and environmental effects is needed. After that project, we did some scheming works and were involved in the scheming in Shenzhen and it suggested better results. For instance, in the planning process for the Mawan Sea Port Area of South Petroleum Group, we did the scheming work in cooperation with the investor side and arranged a multi-functional storehouse area where storage, transport, processing, examining, packing, ordering goods, transaction and exhibiting have been arranged in a seriation instead of for traditional storage only. A software center for the flow of goods, where the resource of sea port transportation was connected with Shenzhen and overseas, was eventually planned and that can be expected to have greater economic effects and be conformed to the guiding principle to the enterprises operation - “focusing on one category of trade, promoting diversified deals” in the market economy.

Another task for planners raised by the market economy in Shenzhen is to create the market environment which refers to both the hardware and software ones for accommodating activities in the market economy, in which some of the tasks are not the responsibility of planning but that of economic

administration and macro-readjustment. Nevertheless, planning is liable for some tasks or being cooperative to the administration. They are:

- 1) The delivery of production targets in assigned economic plans to enterprises have gradually disappeared from city government.
- 2) Accompanied by the macro-readjustment and control from city government, planning agencies and institutes are responsible for providing support in drawing up plans for the development of various industries and to assist in guiding the adjustment of industrial and product structures, as well as to calculate the employment population composition of various industries with its corresponding land-use scale and location, to readjust the functions of former industrial land-use by virtue of a drastic change of the product structure or the line of production, and finally to make amendment to the former zoning and assigned targets.
- 3) A hierarchy, location and facilities of market systems are submitted and defined in a plan. The current needs in Shenzhen are to improve and supplement the market system with essential factors and special trades. Meanwhile, some trends in special streets for stocks exchanging and financial deals have emerged.
- 4) It is necessary to build a better business environment. In comprehensive and district plans, a CBD area was set up and installed with up-dated communication equipment and was provided with convenient traffic and services, including streets where banks and stock exchanges will be located in concentration. In the early years of carrying out the open-door policy, creating a better investment environment to absorb foreign funds was indispensable. However, it is not adequate that only an investment environment exists for the market economy in Shenzhen in recent years, but an environment for the market economy is essential too. Some such conditions were thus generated through the efforts of different levels of planning - from an urban development strategy, to comprehensive, district and community planning.

The future aim for Shenzhen's development is to link gradually with the international market and to perfect and deepen the system reform. One of the measures was the establishment of bonded zones within SEZ, through which an experiment for a more open management system within relatively small boundaries is likely to be realized, together with the absorption of foreign investment and advanced technology under more direct and preferential conditions. Futian Bonded Zone, for instance, covers an area

of only 1.8 sq.km. Originally, it was planned as a bonded zone for manufacturing, but it was found out that there were not enough funds invested on manufacturing projects, even though it is located on one side along the joint border of Shenzhen SEZ and Hongkong, only five minutes drive away from Huanggang Port and quite near by to Guangzhou-Shenzhen-Zhuhai express. After an analysis of this problem, its original function and role was shifted into a multi-functional mixed zone with high-tech industry, bonded storing, tertiary industry and private houses, as well as dormitory apartments. The adjustment planning both in research and physical arrangements have already been completed. This transformation caused the enthusiastic boom of investment in various projects. Things revealed that planners should be sensitive on the suggestions of a rapid change of market economy and should assess the new situation. At the moment, planners in Shenzhen are exerting themselves in how the city can be developed as a world city in the 21st century and putting it into the ongoing revision of comprehensive planning as a future direction of city development.

The contents of a world city consist of the mechanism for operating the world market economy supported by city facilities and qualified standards of various environments¹.

With the rapid urbanization of Shenzhen and the marketization of the labour forces from 1981 to 1986, the proportion of temporary-registered population has remained as much exceeding that of the permanently-registered ones. In 1992, the proportion between the above two groups was 2:1. If 300 thousand floating people was added, the total amount of temporarily-registered and floating people might far exceed the permanent ones. This phenomenon is caused by the attraction to the employment opportunities in the flourishing market economy. The great disparity in the proportion of different categories of population is a special situation in all SEZs and it cannot be explained by routine calculation methods in planning process. Planners and planning implementors in SEZs become aware that the special population structure is an objective reality and thus must be treated seriously. Although those temporarily-registered and floating people do not reside permanently, they create productive value on the one hand and usually use facilities and have needs for the services on the other hand. It warns planners to define the scale and distribution of infrastructure based on the facts, which is far from those calculated from the past planning models and based only on the number of permanently-registered population, even a surplus percentage may be added.

One of the macro controls and readjustments to the market economy is to adjust the structure of industries. The second general investigation on tertiary industry is underway in Shenzhen. Planners have preliminarily found the percentage of tertiary industries with the aim of following the "Four Asian Little Dragons". The primary and secondary industries will decrease in proportion to the increased tertiary industry but the process will suggest under the present strength and conditions of Shenzhen the decrease in primary industry and the increase in secondary and tertiary ones. It will reach the stage of an increasing tertiary industry only after the economy has grown into prosperity. We have analyzed the population composition in three industries and forecasted their growth together with the aim of developing a world city and pursuing the "Four Little Dragons". The composition of employment in three industries will reveal a profile of the growth of market economy in Shenzhen and it will have important significance to other substances of the plan relating to the population structure. For instance, the dominant manufacture can be determined by analyzing this respect.

As mentioned above, Shenzhen went ahead of the rest in the transformation from unpaid appropriation into the leasehold system of urban land. This steady step reveals that the distribution of the urban land resource has already operated in the market and has thus great significance in its tremendous change. The land-use planning has already been changed from land allocation only in the light of the government economic plan into that of the balance between the government plan and the leasehold of land. Some new situations have appeared hereafter as follows:

- 1) *The categories of land-use can be classified into those for government use and those for leasing.*

The former are lands for public uses such as road, squares, crossings, green belts and civic facilities, and they are not permitted to transfer the land-use purposes but can be built and managed by absorbing the foreign or domestic investment. The latter are those lands which have been approved by the government and with lease contracts signed by lease organizations. Planning in Shenzhen thus contains the above two parts of arrangements from different angles of considerations. The prerequisite of government land-use plans are for public interests while the considerations for those of leaseholders are mostly on their benefits but still must be coordinated with public interests. The first thing that planners must do is delimit clearly the boundary between those two categories of lands. In particular, the government land bounds should be extended to sufficient dimensions to meet the needs of future development.

2) *There are two aspects concerning the lands for leasing.*

The first thing to be done is to draw up outline zoning plans in accordance with the requirements of the higher level plans, and district plan on land-use functions and average development intensity and then to make demarcation of bounds into public and leasing uses with assigned targets respectively. After the approval of the city government, the function of every plot with its assigned targets are put into leasing contracts as part of the provisions for the leaseholders to abide by. Then, a detailed plan of contract plot should be submitted from the leasee for application of approval. The Urban Planning Administration (UPA) will examine whether the detailed plan is confirmed with the zoning targets. The second thing that must be done is to create the conditions by which benefits can be derived from developed land, including planning for piping, grading and facilities of municipal works. All of these plans must be implemented and constructed according to the rule of constructing those underground first and on the surface, second. These constructions will improve the investment environment and increment of land value. With this means, Shenzhen Municipality has earned a huge amount of rental from the whole process of planning, leasing and collecting the rental. The rental is only spent on infrastructural development and construction is underway.

3) *The transformation of land-use functions*

A new situation has already emerged in Shenzhen whereby not only the land-use functions after being planned but also those after appropriation and built-up have been transformed. This is not in terms of illegal or squatter constructions but have to do with the activities of transformations caused by city growth and the development of market economy. What is happening currently in Shenzhen are those transformations of the original land-use function resulting from the needs for up-dated or improved public utilities or conditions, or where some of the factories have been moved to outside the SEZ, even Shenzhen. The reasons for the former type of transformation are urban growth, the increase of the cost of products, the original land being too narrow to expand factories, finding new locations as an experimental base to get up-graded products, and even meeting the needs of high-tech professionals' apartments. What planners did in Shenzhen was prompt planning for new transformation and negotiation between new functions and former ones. As regard to the compensation to land occupiers or leaseholders, it is a very complicated special field full of stressful challenges and can only be done by officials on behalf of the city government.

With the above requirements from various aspects resulting from a market economy and the necessities for the perfect rule by law for operating a market economy, urban planning must create the conditions for the establishment of the rules both for a market economy and implementation of plans. In 1990, a significant reform of the planning system took place in Shenzhen. Generally speaking, it is a new planning system formed as a Shenzhen system based on both the regulations in the Chinese Urban Planning Act and references from the system in Hong Kong. Table 6.1 shows the framework of the new system.

In Table 6.1, the government is in charge of 1-4 in the left column and 1-5 in the right column while development corporations are responsible for 5-6 in the left column. All are drawn up by Urban Planning Institutes.

UNDERSTANDING FROM EXPERIENCE

Firstly, regional analysis must be enhanced from the angle of a market economy and expanded to the extent of the world market. It may include political, geographical, resource and economic situations and the development trends of various cities, areas and countries in different regions. Analyses must then be done on the relationship between this city and the

Table 6.1 New Urban Planning System in Shenzhen After 1990

Plans According to <i>Urban Planning Act</i>	Plans Added by Referring to the Planning System in Hong Kong
1) Comprehensive Plan	1) Urban Development Strategy Code and Regulations of Planning
2) District Plan	2) Sub-regional Plan
3) Detailed Plan for Control Detailed Plan for Development	3) Outline Zoning Plan
4) Plans of other Specialties	4) Development Zoning Plan
5) Detailed Plan for Improvement	5) Layout Plan
6) Site Plan	6) Plans of other Specialties

regions around it as well as on the comparison of advantages and shortcomings, and also competition, mutual supplement or pursuing necessities and possibilities drawn forth from them. The future development orientation and steps of realization will be hereafter found out. In the "Urban Development Strategy" worked out in 1990, we have done a five-circled regional analyses. They are respectively Shenzhen - Hong Kong, Shenzhen - Pearl River Delta, Shenzhen - Guangdong province, Shenzhen - Coastal cities along south-east China Sea shore, Shenzhen - South-east Asia and West bank of Pacific Ocean. A new strategy of urban development of Shenzhen was thus put forward.

Secondly, the frequencies of revising and adjusting the former plans should be increased to adapt the features of rapid growth and the many shifts of the market economy. The substances in plans must be prepared to catch up with those rapid growth and shifts, even racing against time as early as possible. Naturally, planners have to understand and analyze the market economy instead of being just outsiders.

In 1986, Guangdong Provincial Government approved the comprehensive plan of Shenzhen SEZ, which was worked out for the first time. It was adjusted firstly in 1989 due to the excess in city scale of the original forecast. District plans were drawn up in the same year. In 1990, the planning system in Shenzhen was reformed and an Urban Development Strategy of Shenzhen was worked out in the first instance, in which we studied the future development direction of Shenzhen. Up to 1991, despite the initial economic prosperity in the most part of the suburban county, Bao An was realized, and there still was an imbalance concerning the county as a whole. So planning for three sub-regions within the county had been practiced at the same time until the institution of the county was promoted in 1992 as the two city districts of Shenzhen municipality. New district plans were drawn up soon afterwards since the two new districts were vested with new roles. After ten years of development, Shenzhen was confronted with new tasks in 1993 toward further reform and more opening as well as with challenges of future directions. Additionally, the urban economy has rapidly developed, with population size being fast growing, land-use and utility resources inadequate, traffic congested, supporting facilities insufficient and environmental quality deteriorating. Other facets of development were simultaneously keeping pace with the above situation, such as the construction for Pinghu-Nanshan feeder from Beijing-Guangzhou Railway, reclamation work both for the eastern and western sea port, and the transformation of land-use functions inside and outside SEZ. All of the

above factors are impelling forces to urge the revision of the former comprehensive plan. Apart from this, district and community plans, outline zoning, detailed and other specialized plans were readjusted at the same time. In this decade, planners in Shenzhen are devoting themselves in varying degrees to bringing into line the benefits from social, economic and environmental aspects. Despite their efforts, it cannot be regarded that their planning works are attaining the plane of guidance for future development in advance. From this respect, we may be aware that however important the planning work is it must keep abreast of the pace of market economy.

Thirdly, enough concern on the gradual union with the world market economy is indispensable either in planning for SEZs or for open-door cities with the approach of keeping abreast with the new trends and tendencies of the world market economy to create a better market environment for linking with it. Outward economy in Shenzhen has remained flourishing and can be expected to be more prosperous in coming years. The sovereignty of Hong Kong will return to the motherland in 1997 and the aim of one country - two systems will be realized, so that the inter-relationship between Shenzhen and Hong Kong will be closer in the fields of both domestic and world markets. That is why such issues in linking them up have emerged already, i.e. how to join up open-door cities in the mainland including Shenzhen itself with the outside world economy through Shenzhen - Hong Kong urban entities. This has predicted already the requirements and needs on transport and freight flow, telecommunication and information services, etc. It seems to indicate that the regional analysis must include the mutual relationship between the domestic and world market economy.

Fourthly, to legalize the market economy activities, plans should be prepared with substances which are more legal and operative. The traditional comprehensive plans have their approval levels and are thus legal. By virtue of the growth of the market economy in recent decades, particularly the practice of the leasehold system and the rise of the real estate business, detailed plans for control were impelled to be worked out with reference to some foreign countries' experiences. Beginning from 1990, a lot of outline zoning plans were formulated in batches which are very similar to the detailed plan for control as one of the measures to manage land-use. Outline zoning plans have more statutory character in terms of their legal binding force after they are approved. Those assigned targets and regulations in a zoning plan are put into the lease contract for land development and signed jointly by the city government and development organization. Apart from this,

many organizations delivered detailed plans for development after detailed planning proposals have been approved by the government as a base of utilities designs, site layout and architectural designs. They can be used partly to implement the site preparation. The above mentioned outline zoning plans and detailed plan for development are both operative during the process of implementation.

Fifthly, planners must be involved in the process of scheming for a project before the actual planning in light of the actual situations. It was testified that the traditional way of planning or designing work immediately after the project was approved and entered in the economical plan without any participation in scheming has had many after-effects. In Shenzhen, some planners have already changed this traditional habit in their practice. A project for a subway in Shenzhen for instance, the Transportation Authority organized railway design, urban planning institutes and operation department to work out jointly a pre-feasibility study. After the experts' appraisal, the feasibility study can be followed up and then a project set up to begin planning. Another instance is the skyscraper located at the end of the main axis in Futian Central Area. It was also studied and schemed jointly by investors, planners, designers in various professions, building researchers, geological prospectors and engineers.

Sixthly, planners must play a supporting role to the city government in macro adjustment and control on urban economy and participate in research work for a better plan while attaching equal importance both to hardware and software. The adjustment of the tertiary industry in Shenzhen for instance, is a key job held by city government, in which we studied the growing of tertiary industry and inter-relationship with other industries. Then we got the result of development scale, employment population size, land-use requirement and its location. All of these measures were realized in the urban development process.

CONCLUSION

Either from the decision of future economical systems by the state or from the past practice of a market economy in the urban area, a market economy itself has leading significance both to urban planning and the urban economy, especially in SEZ cities. Therefore, how to create adequately urban conditions for healthy development of a market economy is undoubtedly a task produced by recent history. Nevertheless, it covers a series of transformations of theoretical concept, working substances, multi-disciplinary expansion and cooperation. Planners are confronted with much

more challenges and new situations to be explored and become familiar with.

Urban planning is not omnipotent. The growth of a market economy needs more supports from economical system reforms, the establishment of appropriate mechanisms functions, a perfect legal system and authoritative leadership. What a city can provide is only a fit spatial environment and physical facilities with better management.

Although a market economy plays an important role in urban planning, the task of planning is not only for a market economy. Urban planning should play a role in creating a better environment, which is always healthy both for citizens bodies and minds, as well as making various functions of a city yield well in social and economical aspects. What is described in this article is only the exploration of the reform issue of urban planning from the angle of a market economy and comments on this topic are welcome.

Notes

1. SUN, Huasheng (1993), "Pondering on Shenzhen to be a World City", findings of a Seminar on "Shenzhen, a World City", China Economy Publication. (*in Chinese*)

REFERENCES

- Central Committee of Communist Party of China (1979), "Resolution of Central Committee of CPC on Some Issues of Establishing Socialist Economy", 3rd Plenary Session of 11th Central Committee of CPC. (*in Chinese*)
- DENG, Xiaoping (1993), "Highlights of a Speech at Wuchang, Shenzhen, Zhuhai and Shanghai, etc." from 18 January to 21 February of 1992, *Economic Reference*, 6 November 1993. (*in Chinese*)
- General Office of Shenzhen Government (1993), "Notice on Revision of Economic Plan for 2000 and Some Special Plans of Shenzhen", 10 September 1993. (*in Chinese*)
- LI, Nan Ling (1993), "Market Mechanism establishes Shenzhen", distributed by Xin Hua News Agency, *Shenzhen SEZ Daily*, 12 November 1993. (*in Chinese*)

- LI, You Wei (1993), "Government Report" at the 5th Conference of the 1st People's Congress of Shenzhen in 19 April 1993. (*in Chinese*)
- LIANG, Wen Sen (1993), "On Market Economy in Shenzhen", *Shenzhen Trade*, 13 May 1993. (*in Chinese*)
- Shenzhen Government (1993), "Implementation of the Ordinance on Transformation of Management Mechanism of State-owned Industrial Enterprises by Shenzhen SEZ", 14 January 1993. (*in Chinese*)
- Shenzhen Government (1993), "Way on Reorganization of State-owned Enterprises into Stock Limited Companies" (17 August 1993), *Shenzhen SEZ Daily*, 4 September 1993. (*in Chinese*)
- Shenzhen Urban Planning Administration, China academy of Urban Planning and Design (1986), *Comprehensive Plan of Shenzhen SEZ*, March 1986. (*in Chinese*)
- Urban Planning Act* (1989), China.
- Year Book of 1992 Statistics* (1993), Shenzhen Statistics Bureau.
- ZHENG, Liang Yu, Hong MA and Sheng Quan GAO et al (1992), "Seminar on the Theory of Economic Coordination in Shenzhen with Other Provinces and Agencies in '90", *Shenzhen SEZ Daily*, 26 September 1992. (*in Chinese*)
- ZHONG, Wen Yi (1992), "Attempt of Introducing Market Economy", *Wen Hui Daily* (Hong Kong) Going Down in 1992. (*in Chinese*)

7

Macro Adjustment and Control of Urban Planning in China

Qingquan WEI

INTRODUCTION

After Mr. Deng Xiaoping inspected Guangdong Province in 1992, there was another boom in the Chinese economy after the adoption of the Open Policy. With the dramatic development of the economy, there are more and more cities and the sizes of these cities are becoming larger and larger, too. But in recent years, the overestimation (Pengzhangre) of the city size has been planned larger and larger; the urban function and urban character have been defined inaccurately and illogically and more and more cities have been planned, so it is necessary for us to probe into the problems of how to understand the overestimation in urban planning and how to improve the macro adjustment and control of urban planning in order to make urban planning of direct city construction more effective and to make urban planning the scientific basis for city management.

PREDICTION, ADJUSTMENT AND CONTROL OF THE FUTURE CITY SIZE

One of the tasks of General Planning is to define city characters, size and development and to utilize the city land reasonably. It is defined in item 19 of the Urban Planning Law of China.

City size is an important basis for city construction and city management and is also the main basis for the differentiation of the city size level. City size has direct effect on the reasonable distribution of cities,

the general allocations of city space, the city structure and the management of constructions. According to item 4 of the Urban Planning Law of China, the size of large cities should be limited and those of the medium-sized and small cities should be developed reasonably.

In city or town planning in recent years, the overestimation of the future city size is a common trend. For example, according to the General Plan carried out in the cities of the Guangdong Province, the population of the town proper will reach 30,000-50,000 in 2010; that of the county seats will reach 150,000-250,000 or even 300,000-350,000. Almost all small cities will develop into medium-sized ones, with their population being 300,000-450,000 and all of the medium-sized cities have been planned to be large ones with the population of 500,000, or even extra-large cities with a population of over 1,000,000.

Table 7.1 shows the planned population of some cities in Guangdong Province for 2010. Some of them are being planned now and have not been defined or been approved by a leading body at a higher level. Anyway, it shows a general trend that the city population will increase dramatically in the next 20 years.

The overestimation of the population and land scale appears in the planning not only of the city proper, but also of the whole city. For example, there are 20 towns in Boluo county. According to the General Plan for the county, the population planned for each town proper for 2010 is over 50,000 and that for the county seat is 350,000.

Yet the population of the whole Boluo county in 1992 was only 690,000. For another example, there are 10 towns in Gaomin county, which is a small county separated from Gaohe county, the population of one of the 10 towns will reach 250,000 according to the General Plan for that town, and the population of the whole Gaomin County now is only 250,000, . It means that the population of that town will be the same as the whole county at present after 18 years. According to the General Plan for each city / county of the Guangdong Province, the population of the whole province will be over 80,000,000, which is 18,000,000 more than that in 1992.

The reasons for the overestimation of the population in planning are as follows:

Historical Compensation

The household management system of our country has been characterized by the segregation of the cities and the countryside. It limited the population

Table 7.1 Population Planned for Some Cities in Guangdong Province

City	Population in 1990	Population Planned for 2010
Guangzhou	2,950,000	4,500,000
Shenzhen	480,000	4,500,000
Zhuhai	200,000	3,000,000
Huizhou	190,000	2,300,000
Zhanjiang	410,000	2,000,000
Maoming	190,000	1,200,000
Zhongshan	180,000	900,000
Zhaoqin	240,000	800,000
Jieyang	120,000	450,000
Shanwei	120,000	700,000
Meizhou	140,000	400,000
Chaoyang	160,000	450,000
Puning	60,000	300,000
Huadu	44,000	400,000
Sanshui	57,000	250,000
Shunde	160,000	700,000
Kaiping	64,000	350,000
Xinhui	100,000	500,000
Taishan	64,000	300,000
Yunfou	45,000	450,000
Luoding	40,000	450,000
Gaozhou	56,000	300,000

movement between cities and the countryside and limited the flow of the labour force from the countryside to the cities, so the countryside had surplus labour but the cities did not have enough labour. With the reform of the economic management system of China, the development of the commodity economy and the adjustment of the industrial structure of the towns, a lot of rural surplus labour has moved to the town/city to the manufacturing sector and service sector, so that the city size can suit the needs of economic development.

The Needs of the Rapidly Developing Economy

There are several factors affecting the enlargement of the city size. The main factor is the needs of economic development. It is hoped that it will be modernized within 20 years or so in Guangdong Province and the GDP will be 500 billion RMB yuans in 2000 and 1,600 in 2010. So the yearly growth rate of the economy must maintain 12-13% in the next 20 years. Each city/county made their economic and urban development plan with the same growth rate or even higher ones. The realization of high level economic development needs enough labour. The planners in many cities estimated the population according to the economic development level, industrial structure and the overall productivity, etc. For example, when the planners made the General Plan for Zhongshan City, they first planned the industrial production to be 100-200 billion RMB yuans in 2010, then they defined the rate of industrial workers to the whole population to be 25% and then they estimated the population by the possible productivity. The population will reach 2,500,000 in 2010, but that in 1991 was just 1,168,500.

The Control of Land Through Planning

Many governments control the land through planning. They commonly overestimate the built-up area when undertaking their General Planning. One of the reasons is that there are so many unstable factors that it is not easy to estimate the area exactly. The towns/cities will have enough land for development with the enlargement of the built-up or planned area. The other reason is that more land can make more money. So the "Environmental Capacity of Land" has become a population estimating method. The land area of one town/city is defined first, and then the maximum permitted population can be defined according to the land quota per person. For example, in Dayawan of Huizhou City, the land area suitable for construction is 200 Km² and the city construction area per person is 105-120m² according to the city construction standard for the economic special zone, so the

permitted population is estimated at 1,050,000-1,900,000. Then, 1,600,000 was regarded to be the suitable population for this area.

The Overestimation of the Temporary Population

Within the speedy development of the economy within the past 10 years in Guangdong Province, there have been more temporary people who work and live in the cities but whose households are in other areas. According to the official statistics, the temporary population in Guangzhou City in 1980 was 300,000, but now it is at 1,450,000, which is 40.3% of the whole permanent population; that in Zhuhai City is 250,000, 47.5% of the whole permanent population; that in Shenzhen City is 2,600,000; those in and out of the special zone are 1,010,000, 1,590,000 respectively which are 2 and 3 times their whole permanent population. The percentage of the temporary population to permanent population in the Pearl River Delta and other coastal towns is estimated to be about 40%. This is also the main reason for the overestimation of population.

The Unscientific Analogy

Many towns were inspired by the speedy economic growth in the coastal special zone cities. Shenzhen and Zhuhai used to be frontier towns, or fishing towns; after just 10 years or so, they have become medium-sized, or in fact extra-large cities. The conditions in many towns are just slightly inferior to these two cities. It is thought that it is possible for other towns to develop as speedily as these two special zone cities, so the population in these town was overestimated.

The Effect of Scale Benefit

Many people think that the larger the city size, the higher its economic and social efficiency. So they usually overestimate the city size.

The enlargement and overestimation of the city scale are inevitable phenomena in China in the transitional stage from the initial to the middle urbanization stage. But the "overestimation" caused by those reasons mentioned above is abnormal and should be adjusted and controlled. The best way is to adopt an urban system planning. The suitable scale for each town/city can be planned through regional planning. The purpose of the adjustment and control is not to limit the urban development, but to enlarge those cities that should be enlarged and limit those cities that should be limited. The adjustment and control is not to limit the development index of each town/city through traditional planned allocation, but to predict the competition ability and development and change trend of each town/city

under market competition. It can then define the general size of every city and town. The adjustment and control should be elastic so that the General Plan for every city and town can suit the needs of change.

URBAN FUNCTION AND MAIN DEVELOPMENT DIRECTION

Urban function means the position and function of the city and town in the regional economy and social development. It also means the division of responsibility and function in the urban network of the whole country and regional urban system. The urban function is the base of the direction and layout of urban development. Defining the urban function accurately is useful in choosing construction projects suitable for the city and town, in reflecting the urban character and in offering reliable technological and an economic basis for planning projects in that town and city.

In recent years, some phenomena have arisen when defining the urban function:

The Word “Center” Being Used Too Often

When making plans, the planners used to define a certain city/town to be the center of politics, economy and culture, but now to be the center of politics, economy, culture, transportation, science & technology and information or even the financial center. In general, a town/city is always a certain regional center, so it is suitable to define a certain city/town to be a center of some aspects, but not too many, or it will be meaningless.

The Characters Defined Are Ambiguous and Cannot Reflect the Position and Function of the City/Town

One of the economic and technical development zones in Guangdong Province was planned to be a new seashore city. It was expressed in its General Plan that “basing on the favourable geographical condition, convenient land of water transportation and good deep-water harbour, and steering by high & new technology, it will mainly develop foreign-orientated water transportation and technology intensive 4 foreign-orientated manufacture. It will also coordinate and develop business, tourism and harbour trade, and it will become a comprehensive, international & foreign-orientated economic and technical development zone within the framework of marketization, internationalization and standardization. It will moreover, become an international modern seashore city with the industries of transportation, energy, manufacture, tourism and harbour trade”. This

expression is too complicated for people to understand the main function and development direction of the zone.

Lacking Urban Specificity

The urban function was commonly defined as “a comprehensive town with many functions”. In fact, every town is comprehensive with many functions because the function of the town land can't be too simple and it should have a production zone and a living zone and the land for such infrastructure as business & trade, finance, science & technology and culture. “Comprehensive with many functions” should be the common character of towns/cities. For example, in the newly-made General Plan of a certain coastal city in Guangdong Province, the city function was defined as “a foreign-domestic-orientated international city in Southern China”. There is nothing wrong in the definition itself. But it lacks urban specificity because the function of being foreign-domestic-orientated is the function not only of the coastal cities but also of other inland cities.

Emphasizing the Manufacturing Sector, but Overlooking the Tertiary Sector

The tertiary sector has not been given enough attention for a long time. So when defining the urban character, the industrial sector has been emphasized and the industries which would be developed have been defined in detail, but the tertiary sector has been defined too generally.

Planners Lack a Dynamic View

The horizon of general planning is 15-20 years. It is very difficult to predict the industrial structure and the urban function in the regional economic development in the following 15-20 years because the industrial structure is dynamic and will change greatly. This is the time, especially under the conditions of a market economy, when there are so many uncertainties in economic development. There is not enough attention in planning to reflect the dynamic trend of the industrial structure accurately on the basis of the present characters and development trend.

Unreasonably Raising the Position of and Increasing the Function of the City Under the Influence of a New Trend

Every inland river port city has been defined as a “modern” river port city. The coastal harbour cities have usually been defined as “modern” harbour cities mainly developing foreign-orientated industries regardless of whether

there is enough water resource or not. Moreover, in a “modern international city” it has been commonly defined as the character of the coastal cities.

In order to accurately determine the nature of cities and towns, it is necessary for planners to analyse the regional socio-economic development and then to determine the economic development direction of the town/city and its position and main function, based on the principles of reasoned economic distribution and regional division of labour. It is also necessary to carry out regional planning in order to make urban planning scientific and low-orientated and to offer the basis of defining the urban characters, scale, position and development direction. But the fact is, in our country, regional planning was adopted only after the general planning of a town/city. The planning procedure has been out of order. Furthermore, there is still no legal approval procedure and approved standard of regional planning.

THE EFFECT OF THE ADJUSTMENT OF ADMINISTRATIVE DIVISIONS ON URBAN PLANNING

Replacing township with town and replacing county with city are the new elements of the adjustment of administrative division in recent years. The towns are the places of intense non-agricultural population and industry and the center of politics, economy, culture, transportation and science & technology. But after replacing township with town, replacing county with city and making the city lead the counties (Shiguanxian), the concept of “city” has been different from the conventional concept in both our country and foreign countries. “City” has become an administrative management unit. It now has the following characters:

- 1) In terms of regional space, a “city” is not a “spot” but an “area” with large rural land. The density of buildings and infrastructure has decreased greatly.
- 2) In terms of economic functions, there are not only an industry sector and tertiary sector, but also much agriculture.
- 3) In terms of the population structure, there is a large non-agricultural and also agricultural population. The agricultural population in many towns/cities is greater than the non-agricultural population.
- 4) In terms of land allocation, the land for non-agriculture is greatly less than that for agriculture. This is quite different from a conventional city/town.

These new characteristics of the newly-designated cities and towns are in conflict with the traditional theory and method of city statistics and it is hoped that the ideas of urban planning be renovated to fit the new condition. The new planning theory should be built with a view of integration and even a new indicator system of urban planning should be built. Planners should analyse the development of not only the manufacture and services but also agriculture, and make them develop in conjunction with each other. They should consider not only the division of the manufacturing zone and the distribution of industries but also the setting-up of the commodity base of agriculture and the relationship of agriculture and manufacturing, not only the living condition of the people in the city proper but also that in rural area; not only the improvement of all kinds of infrastructure in non-agricultural agglomerations but also their relation to the surrounding areas.

8

Improvement of the Chinese Urban Planning System Under the Challenge of City Economic Development in China

Bomin LIU

INTRODUCTION

The 1990s marks the emergence of China's new development stage and its attractive high economic growth. The focal points of the Chinese city economic development started moving to every part of the country and to the world. The urban import-oriented construction is to be replaced by an export-oriented one. Therefore, the main goal for Chinese local governments is to attract more foreign investments, introduce new projects and develop the tertiary industry and the city real estate. In consequence, the plans for developing such zones varying from municipalities to counties and towns are drawn up one after another; the funds for city developments have become pluralized and the functions of local governments tend to be regulated. The city development activities are therefore being subject to the market economy. A city plan will be either regarded as nothing but a form if it fails to predict the changes of city construction or regarded as a useless fossilized plan if the plan fails to stop the negative effects arising from the completed projects. Thus, flexibility and feasibility have become the concerned breakthrough of urban planning reforms.

PERPLEXITIES OF CITY PLANS IN CITY ECONOMIC DEVELOPMENT

The present urban development construction has been pushed into the market economic environment by the export-oriented urban economic development patterns, so the national criteria are no longer used as the rules for city

construction. Although the nature and scale of a development zone is generally decided by a local government, the formulation of a development zone, to a high degree, is influenced by the market economy which is acting as an invisible hand. The guiding ideology for the Chinese urban planning system at present is still based on the planned economy and is dominated by the ultimately idealized planning models, which cannot face the actual conflicts. In the rapidly changing economic situations, the conflicts of interests between the subject and individual of the city development, as well as local governments and urban planning management departments, are becoming obvious, which has resulted in numerous construction projects regardless of the local environmental conditions, the regional economic interests and even the interests of the development zone. The number of projects imported and the contracted investments signed are considered as the achievements of a local government, which are being frequently shown off on radio and in newspapers. Nevertheless, the feasibility of the city plans are questioned by the consequent insufficient but necessary municipal facilities, the mutual "civil-war"-type of price suppression and the cultural and educational projects being squeezed out from the original plans by the projects that can earn money one after another.

The Initiative of City Development Activities and the Passivity of Urban Planning

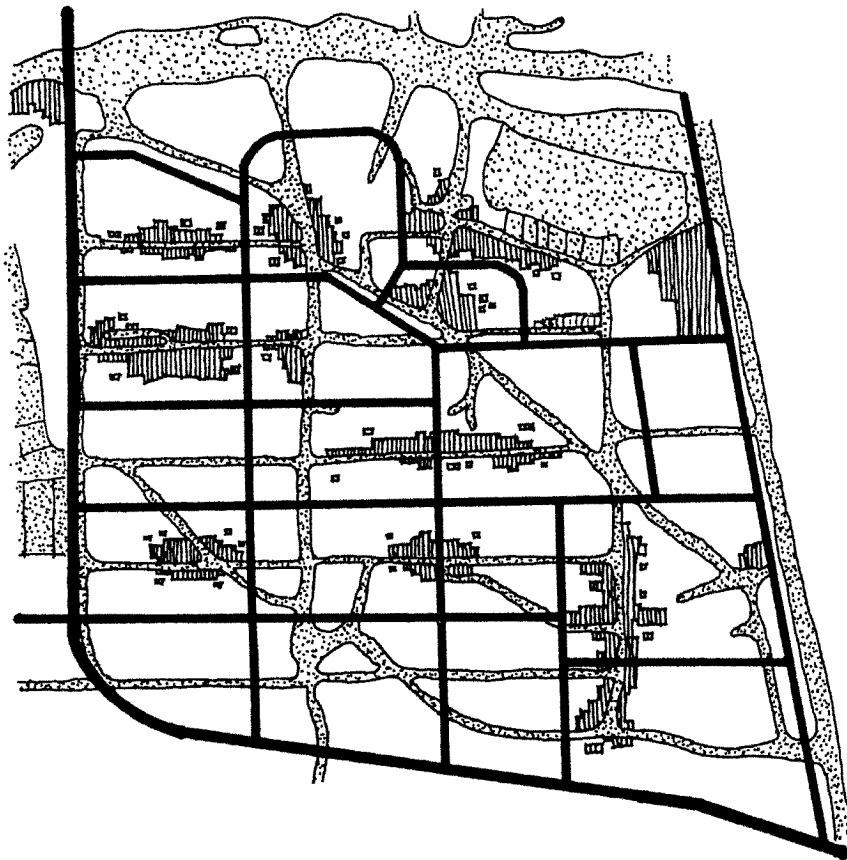
City development relies on its economic growth. As the vehicle of economic activities, its work should be focused on the economic growth, which will bring about changes on cities in every respect. Therefore, government economic policy-making is often future-oriented and the city development activities are increasingly active. It is the overall benefit that urban planning puts emphasis on, so it will be passive and backward if a plan is based on the planning data contrary to the changes of the actual situations. For example, it took eight years for Yi Wu municipal government in Zhejiang province to build up a large modern commodity market with more than 14,000 stalls. The 62.5-hectare market was developed from the first generation of spontaneous roadside country fair trade with a construction area of 60,000 square metres. Its volume of business in 1991 was 100.33 million yuan apart from 30 million yuan profits tax. In addition to this, it has become the leading force of the local economy, for it has not only promoted the development of the local traffic, city construction, post and telecommunications, but also the rise of the town and township enterprises, family industry and tertiary industry. However, the small commodity market is reconstructed at the speed of every two years within eight year's time.

Its overall plan was not worked out until July, 1990 and revised only after a year, which is a typical case of plans being subjected to economic development. This sort of passive relationship is also reflected in the ideas of planners. To show the extension of a city's water networks and context, a development zone in a city at the south of Yangze River is formally planned into one river-one street pattern. However, it is the land along the street that has the best economic benefit and the river pattern often overlaps villages, so the cost of the city's basic installation construction is increased. In the meantime, the land along the planned roads cannot be fully utilized, which will produce low economic benefit. Therefore, in practice, the idea of the above context eventually yields to the economic benefit (Figures 8.1 and 8.2).

Figure 8.1 The Previous Plan



Figure 8.2 The Final Implemented Plan



The Suddenness of City Development Activities and the Inertia of Urban Planning

Under the increasingly competitive social environments, there are two main characteristics for the economic activities of city development: one is to grasp opportunities and the other is the emphasis on past development profits. City development construction influenced by the above mentioned opportunities and profits sometimes produce some sudden behaviour beyond the expectations of planners. It generally takes a longer time to draw up an urban general plan and a plan will be revised after it is put into operation several years later, so its content and expression mode are relatively stable.

In city development construction, such spontaneity may greatly influence the present urban planning, sometimes even lead to the contradiction between government policy-making and the planning objectives, which runs the risk of ruining the whole planning conception. For instance, to scramble for the project of a large cement factory to be invested for 600 million yuan by the state, a city in Anhui province had to accept the condition that the site of the factory must be built on the city's new development areas with fine surroundings, so the pollution from the cement factory covered the whole city's new development areas. Consequently the city's development pattern was totally spoiled, which made the original land-use planning useless. This suddenness sometimes also assumes that a plan will be influenced by the disagreement between the development investors and the planning administrative personnel in their pursuit of objectives even if the development project is worked out according to the intentions of planning designs. This phenomenon is typical in real estate, because the characteristic of the real estate industry is its low marginal cost and high marginal revenue¹. The real estate businessmen generally give priority to the floor space ratio in choosing lands in addition to the conditions of locations. In one development zone at the south of Yangze River, the foreign businessmen are willing to be granted the right of use of a plot of 600 mu land originally planned as a residential area at the price of 3 times more than the original land price, which is, we have to say, a rare chance for the local government that has run into debt, but the floor space ratio of the land originally planned should be increased to 3 from 1. Apart from the land to be used for the necessary municipal facilities and roads, public construction and afforestation, the floor space ratio of the residential area is actually increased to more than 4, almost occupying one-third of the overall planning residential land. Therefore, the ordinary residential parts will be replaced by high-storey and high density residential parts with superior quality. The problem now is whether the future service object is the ordinary residents. If not, how should we solve the problem of residential land for these residents? Then the initiative to decide will be at the other persons' disposal, because either the government concerned evades the problem or the planning agencies fail to provide some concrete proof to influence the decisions of the government.

The Short-Term Behaviour of City Development Activities and the Long-Term Interests of Urban Planning

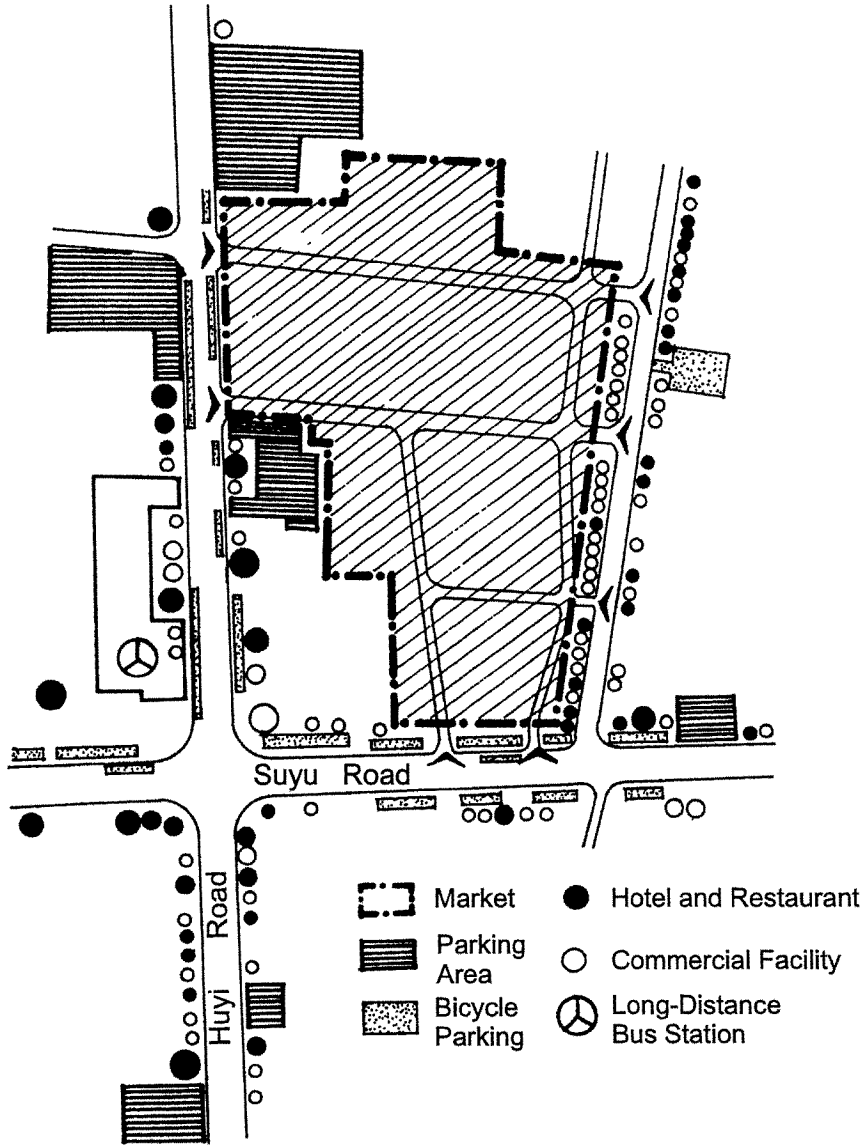
What is most important for the land investors and development businessmen is to see how the invested funds produce the maximum profits in the shortest time; the short-term objectives have, therefore, become the most important

criteria in weighing-up the feasibility of a project. An urban plan is seen to reflect the objectives of a city's social economic development upon a physical plan, whose ultimate expression mode is the social physical pattern and the long-term development interests of a city 20 years later. The development of city construction usually goes through such phrases as infancy, growth, climax, decline and redevelopment. The construction of city development zones is obviously in its infancy and the policy of a local government is often influenced by its political achievements. The result is the macro-objectives to vitalize the city economy are replaced by the short-term behaviour one by one. Take Shanghai Hong Jiao Development Zone as an example, where 28-30 pieces of land can be sold out at RMB\$2,300 for each square metre (approaching the price of the developed countries), while it is common to rent a plot of land at the price less than 100 yuan in other development zones. Thus it can be seen that the opportunity to develop the economy will be lost if the long-term interests are over-emphasized, whereas it is prone to burden the future cities and damage the public interests if the short-term interests are over-emphasized. In 1985, to promote the economic development of the city and town, Zhang Shu Clothing Market was set up on the basis of the original country fairs, near the border section of the city and the country by Zhang Shu municipal government. Toward 1991, the market, based on its environmental superiority, had developed into a large market of 80 mu with 6,000 stalls and the volume of business of 350 million yuan in addition to the 17 million yuan state tax revenue. The market in some way promoted the development of the local economy. However, hundreds of relevant accessory service spots were formed automatically in the region of about 100m from the cross of the two regional highways; hence over 400 motor vehicles, 300 motorcycles, 70 tricycles and 1,500 bicycles were scattered about the region in addition to the thousands of people every day². Consequently the crossroads were blocked up frequently, which finally made the local government put in huge funds to move the highways elsewhere so as to be away from the Market (Figure 8.3).

TENTATIVE IDEAS ON THE CONSTRUCTION OF URBAN PLANNING REGULATION SYSTEM

Man is the controller of city construction, so the decisions from the persons representing different interests are the direct motive of construction activities. The contradictions between the urban development craze caused by the market economy and the city planning management actually resulted from the difference in the benefits of the policy decisions. This difference in interests does not only exist between planners and investors, but also between

Figure 8.3 The Sketch Map of Zhangshu Clothing Market Environment



planning management departments and governments, even among city supreme policy makers. Since many plans lack flexibility, a planning management department sometimes fails to influence the decision of a project before the construction of a project contrary to the plan is under way, while the planning management department fails to stop the negative effects caused by the completed projects because of the lack of control in force of the plan. The main functions of an urban plan are undoubtedly to manage and control; therefore the transition of urban planning to control-type of planning and the establishment of the planning legal system are all endeavors to strengthen the planning control force. The actual planning control process is generally dynamic whereas the planning control contents are often static; therefore, the control of the control-type of planning is required, i.e., the self-regulation system of urban plans, reinforcing the control of the rational planning contents and revision of the irrational ones, so as to ensure that urban plans are consistent with the development of policy decisions.

Setting up An Intermediate Regulation Agency to Promote the Interaction of Planning, Administration and Policy Decision-Making

A fine city is not planned out but is the outcome of many concrete decisions, so an excellent plan can promote the production of correct decisions from governments. The objective of the reforms of the control-type of planning carried out recently is to promote the coordination of planning and administration. This, however, usually exerts little effect upon the decision of the local government that generally plays a decisive role in city development. It is insufficient to rely on a plan itself to influence policy decisions; therefore it is necessary to reform the present planning system.

The Chinese planning system at present goes as follows: a city planning institute draws out a plan first, then the plan is submitted to a management department for operation after it is permitted by the government concerned. The actual planning process is organisation, operation and revision presenting a feature of continuity. The decisions from a government are constantly changing as the national situation and local environments change. The plans drawn up in times of change by the planning departments often fail to cover the continuous changes of such decisions.

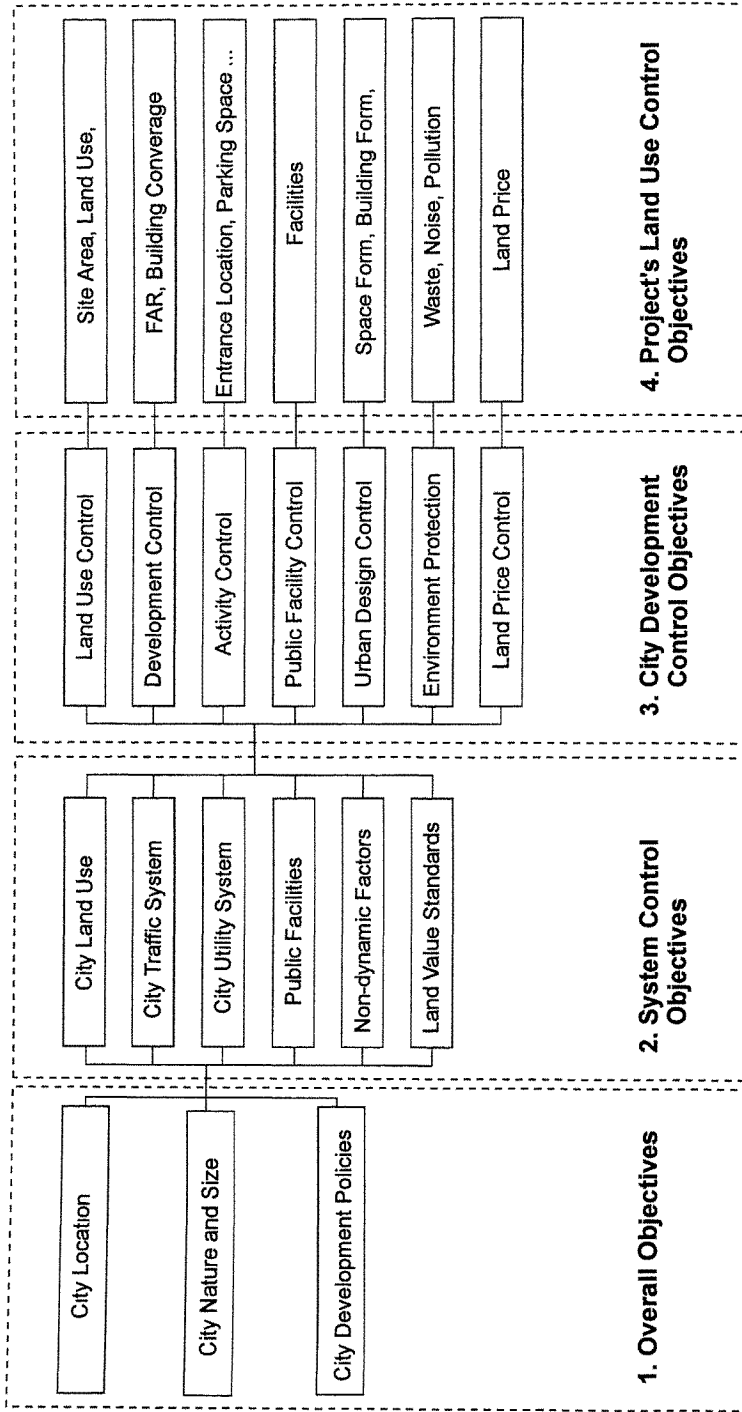
Moreover, the urban planning management department is generally not involved in the whole planning process, so when an accomplished plan contradicts actual facts in operation, the management personnel, besides their limited capabilities, often have nothing to consult, because they are not fully informed of every decision which leads to the plan. No convincing

idea is provided when a planning department is required to participate in a policy decision. Many people complain that a feedback system is lacking for planning, but the fact is that planning management departments are often not capable of processing the constant information fed back intermittently to the planning departments and other government departments from real life, with the result that they are also incapable of modifying the original plan. A city planning institute is often business-oriented, and a plan is therefore undertaken as a task, so the institute should not be depended on for the continuous modification required by reality. A plan alone cannot realize the interaction of planning, management and policy-making unless a city development and planning decision research agency is set up between the government policy-planning institute and the planning management department³. The agency should be composed of members of research personnel on government policies, urban planning experts and planning management personnel. The members should not only participate in the whole process of city planning, the policy decision-making and consultancy service of the government and development construction department, but also gather all sorts of feed-back information to adjust a plan when necessary, draw up operation regulations and measures for a plan, entrust the research institute to investigate the questions of substance on urban development, and coordinate the relationships of government policy decision-making, planning and administration.

Tapping Planning Flexibility and Reinforcing Planning Feasibility

The primary condition for the participation of urban planning in city developing policy decisions is that a plan itself must be of flexible, i.e., the capacity for emergency on the condition of not reducing the total value of a plan when policies are changed. It will be quite rigid to apply the final achievements to the construction of a city developing zone, so a city controlled plan generally fixes the controlled quota on the finally designated land. If a planning content is divided into levels of overall objectives, controlled system objectives, development and construction controlled objectives and projects' land-use controlled objectives, there will be many choices for objectives and plans and much room for emergency when planning goes into the next level from the above level. Among the four levels, an urban overall strategic development is the overall objectives; guaranteeing a city to function normally is the controlled system objective, promoting the city's construction activities to allow them to develop systematically so that the regional coordination and balance can be regarded as the developing construction controlled objectives. Setting up the

Figure 8.4 The Hierarchy of City Planning Objectives



controlled planning quota and measures of the supervision of concerned projects and development process is the projects' land-use controlled objectives (Figure 8.4).

In the process of city planning, the ability of a planning organisation to alter is increased from the high level to the low level, while a plan being the achievement of physical planning, the ability of a plan expression to alter will be reducing with the drop of objective levels. Therefore, sudden changes are easily adjustable in planning and the changes can not be included in a plan when the plan is completed. The control of the low-level planning is required to guarantee the realization of the high-level objective since the value orientation of city developing decisions will rise in value from the low level to the high level, whereas the flexibility of the low-level planning is needed to satisfy their choices since the value orientation of development businessmen's decisions will rise in value from the high level to the low level. So the effective means to enhance a planning capacity for emergencies is to make full use of the flexibility of the planning process. The concrete suggestions are (1) planning can be divided into macro-planning, urban systemic structure planning, controlled district planning and controlled detail planning according to the levels of planning objectives. The contents of different levels of planning are relatively independent. Various controlling regulations and measures should be established for the management personnel according to different planning functions so as to balance and solve the actual contradictions within the low-level planning as best as possible. (2) The planning regulation system should be based on the overall requirements of an urban development and the endurance of an urban basic accessory system. The three-level controlled objectives of districts, blocks and plots can be set up respectively and the overall requirements can be distributed into functional districts, blocks and land plots. The management personnel should be provided with planning operation and regulation manual books in order that they could consider the planning regulation as the planners do. The planning focal points of city developing zones should be escalated to the control of districts, blocks and land plots and a control-led system should be used as criteria for project negotiations in case land are used inefficiently or inappropriately.

Strengthening Planning Functions to Break the Role of Single Management

A city development generally relies on a city integrative developing plan, i.e., a guiding plan should be worked out for a city in respect of economy, society, administration, finance and installation construction⁴. Urban

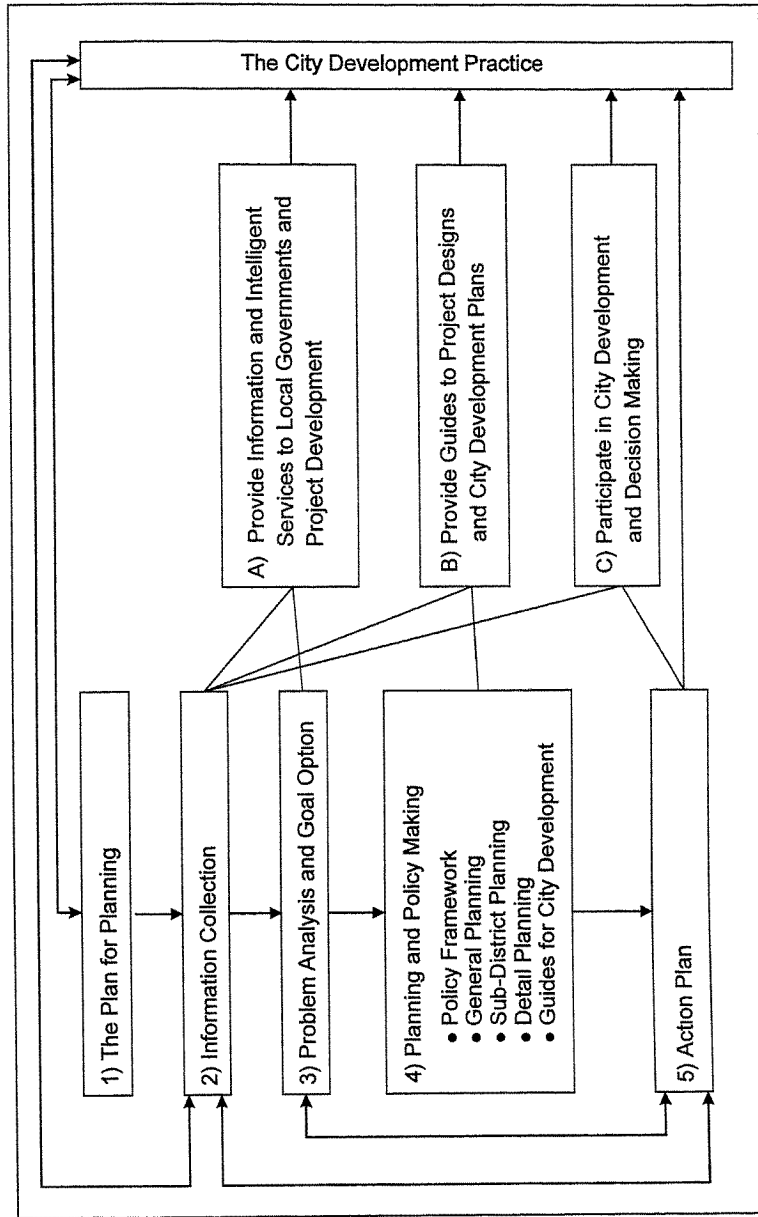
planning is generally incapable of influencing a city development since it actually only undertakes the tasks in respect of comprehensive developing construction. Only if the enthusiasm of a government and development investors are roused can planning objectives be realized as city heads to all-round export-oriented development and construction. So, planning should be able to take part in the policy-making of governments, investors and constructors and therefore with the city construction. An urban planning is generally based on the requirements put forth by a government and operated at the process of investigation and research, problem analysis and objective decisions as well as planning making and management operation. The majority of local planning in China is enclosed, so the effect of all procedures for the ultimate achievements is for the use by the management departments. However, the manipulation of plenty of manpower and intelligence in each procedure is not entirely evident in the ultimate achievements. Therefore, intellectual achievements should be fully used in the process of planning. In the organization of planning, every step should serve the following, and meanwhile, planning phasic achievements should also be attained, in order to expand the functions of planning, from controlling to guiding, consulting and participating, which can serve the society thoroughly (Fig. 8.5).

A plan is not simply operated literally, so there is some consultation between planning administration and operation in varying degrees due to the difference between planning and the reality. Therefore, strategic planning focused on solving practical problems is required to reinforce the regulations of planning operation so as to get the understanding of the public and the cooperation of societies. The guiding texts on urban planning operation and regulation should be supplied according to the planning feasibility and the quality of management personnel for emergencies. In addition to this, planning should, with the help of the planning consultancy and policy-making research agencies, take part in and direct the decision of developing practical construction projects, and feed the changes in planning back to the planning policy-making agencies so as to revise plans on time and form a benign circulation for the planning itself.

Setting up the Planning of Planning Objectives to Form Complementary Functions with Physical Planning

Overall urban planning is relatively integrative and concrete, but it appears somewhat conservative and lacks an adequate ability to adjust as far as city developing criteria are concerned, which is probably due to the phasic reason and the limitation of physical planning. With the legal status of urban planning strengthened, planning will be increasingly lacking flexibility,

Figure 8.5 The Relation between City Planning and City Development Practice



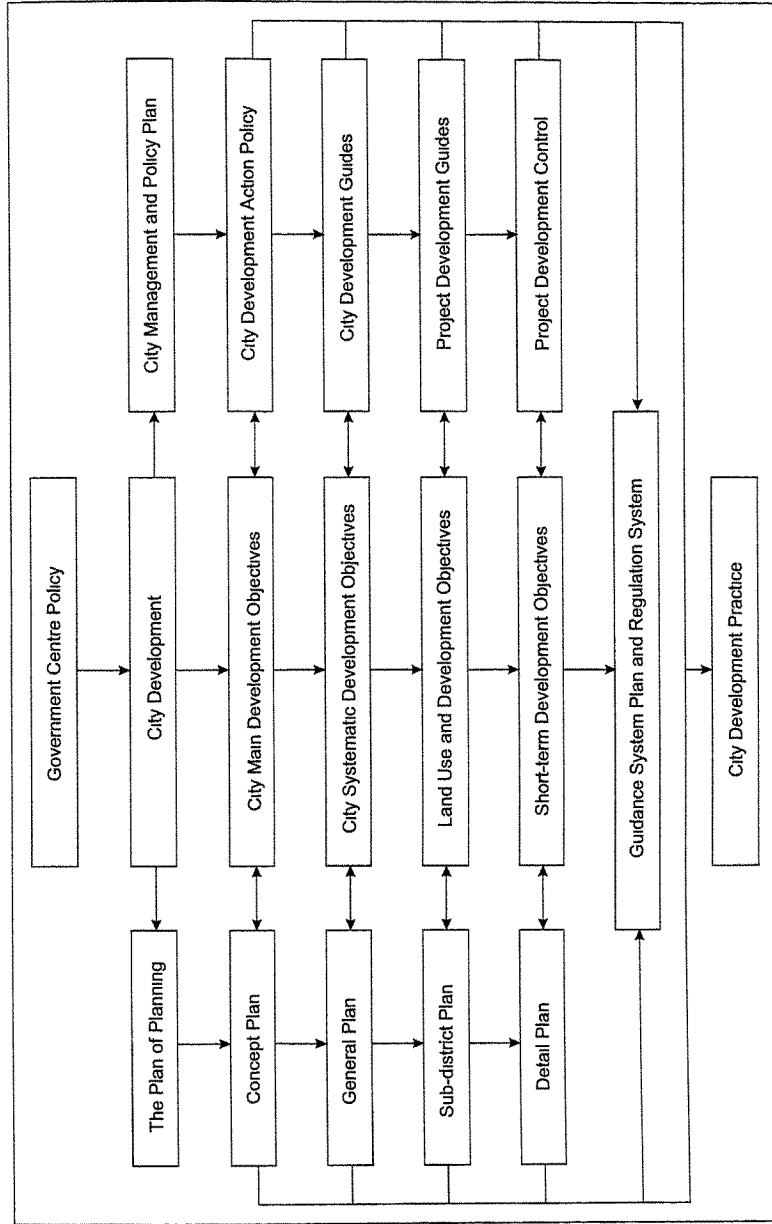
such as American Zoning and Singapore Master Planning contrasted with the increasing social changes. Therefore, it is not easy for the physical planning objective system. Planning needs to form a complete planning structure of urban planning and relevant urban development policies (Figure 8.6).

Objective planning generally corresponds with urban planning when a plan is being made; objective planning can be adjusted according to the changes of situations when the plan is put into operation. With this, scattered problems can be brought into systemic objective planning to make use of the guiding role of urban development and use the policy decision that can solve problems and replace the rigid contents in a plan. This sort of decision can influence the revision of the development policies from governments and lead to urban special planning and the establishment of a special operation team to cope with the problems beyond the present planning capabilities so as to adapt to the demands of urban economic development and set up the objective framework for future planning for the purpose of forming complementary functions with planning.

CONCLUSION

With the formation of the mechanism of a socialist market economy, the principle part of urban construction investment has turned from the government to the whole society and the functions of governments have turned from planned control to laws and regulations and standard-directed control. Consequently, both the urban developing construction activities and government administrative decisions are influenced by the market economy and it is impossible for urban planning to predict accurately the physical pattern of future cities. There is not even one urban planning pattern that can be copied exactly for a certain city. Therefore, the regulation system of urban planning itself will be the tendency of the urban planning reforms. Urban planning, acting as the lever of regulating urban development, must strengthen its mutual participation in society and gain the understanding and cooperation of the public; urban planning, being the administrative function of governments, must take part in the development of policy-making in planning, sustain its guiding capacities and turn from rigid planning to flexible planning so as to change its passivity and promote the benign circulation of urban planning and the construction of the city.

Figure 8.6 Relations among City Planning, City Development Objectives and City Management



Notes

1. "Marginal cost and revenue" is a basic economic concept. In real estate development, it refers to the cost and revenue increment that every one unit of construction brings and is calculated on the basis of the original overall construction area.
2. According to the Record of Spot Investigation of the Clothing Market in Zhang Shu City dated 8 and 9 March 1992.
3. The quantity can be increased according to city scale and actual needs.
4. Gao Yun-shan et al. (translated) (1988), *The Encyclopaedia of City Problems*, Hei Long Jiang People's Publishing Press, p.1095.

REFERENCES

- CHAPIN, F. Stuart (1979), *Urban Land Use Planning*, Urbana: University of Illinois Press.
- HEALEY, Patsy et al (1988), *Land Use Planning and the Mediation of Urban Change - The British Planning System in Practice*, Cambridge: Cambridge University Press.
- HONG, Yin-xing (1992), "Socialist Economic Market - the Theoretical Mainstay of China's Reforms and Opening to the Outside World", *Nanjing Daily*, 29 July 1992. (in Chinese)
- LEVY, John M. (1988), *Contemporary Urban Planning*, New Jersey: Prentice-Hall, Inc.
- LU, Min-ren (1987), *Economics*, Taipei: Shang Min Press. (in Chinese)
- PACIONE, M., *The Perplexity and Outlet of Modern Cities - The Problems and Planning of Sixteen World Metropolises*; translated by WONG Song-tiao, Chong Qing Publishing Press. (in Chinese)
- SHI, Nan (1992), "Zoning and Planning Control", *City Planning Review*, No.2, 1992. (in Chinese)
- WU, Liang-yong (1991), "Prospects of the Formation of China's Urban Planning System", *City Planning Review*, No.5, 1991. (in Chinese)

9

Challenges and Opportunities - Can Western Planning Theories Inform Changing Chinese Urban Planning Practices?

Mee-Kam NG and Fulong WU

INTRODUCTION

The primary aim of this paper is to see if Western planning theories¹ can provide insights for the changing urban planning practice in China as a result of rapid economic reforms and urban development. The paper is divided into five sections. Following this introductory section, section two is an overview of Western planning theories. It will be argued that the traditional scientific mode of the rational comprehensive (RC) planning model, which aims at the production of master plans as the final output, has become less relevant in coping with rapid changes in today's society. Through reviewing other planning theories, it will be argued that "politics"² has to be involved in the formulation of goals and objectives. The implications of these theoretical debates on urban and regional planning will also be discussed. Section three relates the changing urban planning practice to the history of urban and economic developments in China. Section four argues that the new mode of urban planning which emphasizes on production of long-term blueprints has failed to guide and control urban development in an age of dynamic sectoral reforms. Section five concludes the paper and discusses the lessons Chinese urban planners may learn from Western planning theories in dealing with development problems encountered in the course of economic reforms and the Open Door Policy.

WESTERN PLANNING THEORIES

Geneses of the Various Planning Theories

The birth of the industrial revolution and capitalism was accompanied by two contradictory traditions in planning theories. On the one hand, we saw the birth of “scientific planning”: the faith in a meritocracy of scientific and technical elites, in an objective social knowledge, in the possibilities of a directed process of social change and in the ultimate harmony of social relations fine-tuned to an ever-widening social consensus (Friedmann, 1988:8). On the other hand, we saw the rise of anarchism and historical materialism which advocate a change of power relationship and a reversal of the domination of the proletariat by the powerful industrial capitalists. Both traditions would like a change of social relationships. The former chooses the means of social reform while the latter chooses social revolution.

Scientific planning reached its fruition after the First World War. The Great Economic Depression in the late 1920s and 1930s proved that governments needed to control the irrational market forces through science and careful planning. Planning was required to arrest market failures and promote economic development.

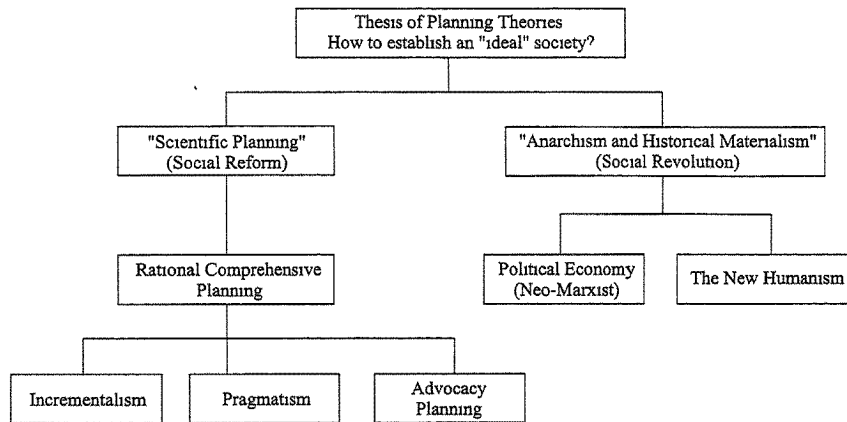
After the Second World War, with the development of systems analysis, policy science and “social physics”, etc., “scientific planning” and technical reason have almost become synonymous with progress and development. Developed nations concluded that their prosperity was attributed to the application of science and technical knowledge in economic and social activities. Newly independent nations believed that adopting Western technical knowledge would lead them to the road of prosperity and economic growth. It was assumed that “value-free” scientific and technical knowledge should be universally applicable.

It was not until the late 1960s when the global economy began to restructure and the pledge of the Development Decade (1960s) began to falter that people started to doubt the promise of science to ever-growing human prosperity. Global economic restructuring has led to unemployment problems in many parts of the developed world, especially those places with strong unions and high production costs. Also, those governments which have been heavily involved in the provision of social welfare have faced fiscal crises. The number of poor people in the developing world has been increasing. People began to query the promises of scientific planning.

To respond, some prefer the “invisible hand” to planning. Others try to modify and improve scientific planning. Yet others, who have been inspired by the other planning traditions of anarchism and Marxism, ask for a change of power relationship in society to redress the problems of global economic restructuring and growing poverty in the developing world.

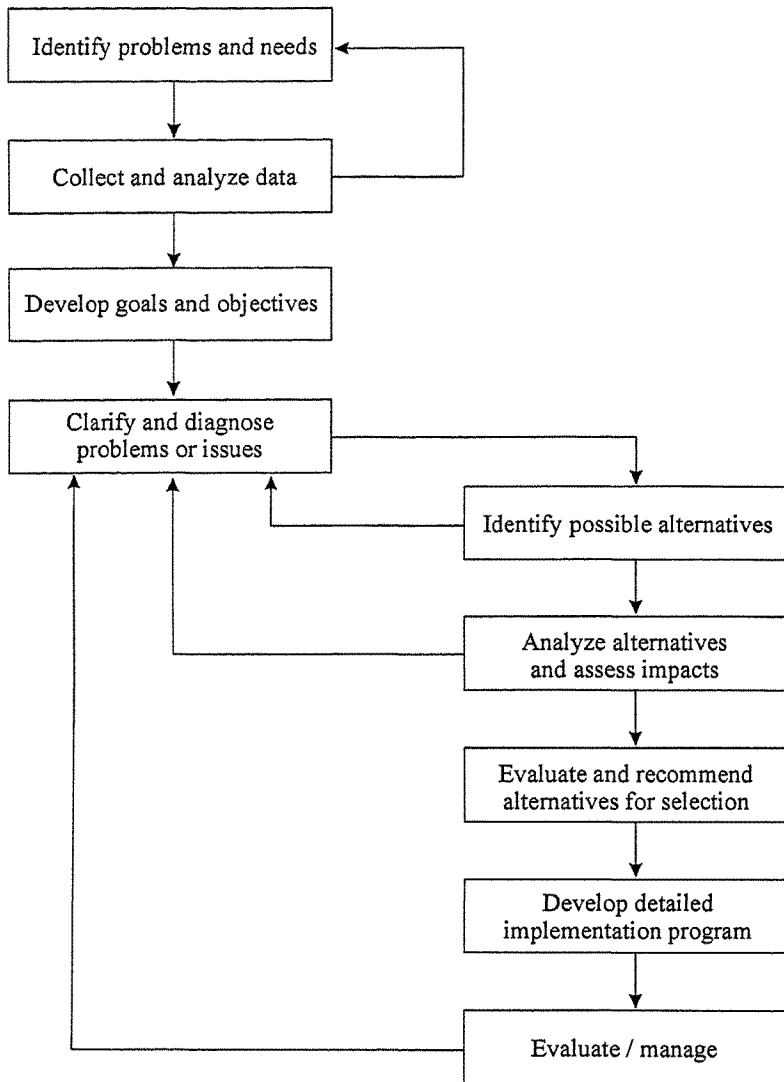
Because of these socio-economic and political changes, there has been a proliferation of planning theories over the last two to three decades. Figure 9.1 shows the relationships of the major planning theories. “Scientific planning” (RC model), is in fact a procedural planning theory. It believes that the collective mind of planners can scientifically identify the public interest. It maintains that the standard steps depicted in the model (Figure 9.2) will automatically lead to a rational planning process. Mannheim calls this type of rationality as “functional rationality”, the efficient relation of means to given ends. However, procedural planning theory cannot determine the given ends which should be the province of “substantial rationality”³.

Figure 9.1 Evolution of Planning Theories



A number of implicit assumptions in the RC model has attracted criticism from other schools of thought. The procedural planning theory assumes an important role of the state in societal guidance and there is no problem in building-up consensus in society. The government is assumed to be benevolent and scientific planning is to make the government’s rule more effective by identifying objectively the best interest of the general public. In other words, the RC model puts no faith in politics as a means to

Figure 9.2 A Typical Rational Comprehensive Planning Process



Source: American Society for Civil Engineering (ASCE), Manuals and Reports on Engineering Practice No.9 (1986, revised ed.) *Urban Planning Guide*, New York: ASCE, p.9

search for the public interest. The government, with the aid of professional planners, are the best candidates to serve the social good.

Moreover, planning problems, unlike closed problems, can seldom be resolved once and for all. Many planning problems have been described as “wicked problems”, the root causes of which cannot be traced. Solving them will eventually lead to the development of other equally “wicked problems”. In other words, there cannot be a single definite way of solving these kinds of planning problems.

Hence, in the 1950s and 1960s, incremental planning theorists such as Charles E. Lindblom, began to question the seemingly universally applicable “scientific” planning model. Can planners alone be rational enough to analyse complex social phenomena the extent of which may not be fully known? If full information is not attainable, how can planners be so sure that their analysis is complete and without fault?

More importantly, people with different social status will look at issues from dissimilar angles and perspectives. Very often, a decision is made not because of analysis but because of compromises and interactive negotiations among various players in the planning process. That is, planning in the real world is dissimilar to what is depicted in the procedural planning theory. The public interest cannot be identified by scientific analysis alone; politics of various kinds is involved.

The promise of procedural planning theories to social justice and harmony was further questioned in the Western countries when social problems proliferated in the 1960s. The assumption implicit in traditional planning practice that the government is benevolent, was questioned. People became disillusioned about the commitments made by the governments in pursuing the public interest. Different minority groups began to organize and fight for their own civil rights. It was against such background that advocacy planning emerged in the United States.

Advocacy planning theorists such as Paul Davidoff (1965) and Allen Heskin (1980) are not against planning *per se*. They are advocating “a plural form of planning” in which different stakeholders will be educated by professional planners on planning techniques so that they can make their own planning proposals for debates in the political arena. In other words, they try to argue that planning expertise should not be for the government’s consumption alone. It is important for planners to serve and represent different groups, especially those powerless and minority groups which often lose out in the political process.

However, it is difficult for planners to represent all conflicting interests in the planning process. Moreover, as the advocate planners have not questioned the fundamentally skewed power structure of society, they have been criticized as ineffective in furthering the interests of the poor. Frances Fox Piven (1972, pp. 47) even argued that by substituting politics with planning, the poor and powerless are diverted from the types of political action in which they are most likely to be effective.

The turbulent 1960s and 1970s have led to the resurgence of [neo-]Marxist (political-economy) studies in the planning field. Neo-Marxists argue that planning is part of the state's activities to guarantee the smooth reproduction of the existing social relations of production and hence capital accumulation by the capitalists. In other words, planning, which is supposed to be scientific, objective and neutral, serves to legitimize and mystify an unequal allocation of scarce resources in the capitalist society.

Since the existing social structure is unfair and unjust to the poor proletarians, collective actions such as social movements should be organized by the oppressed to restructure the power relationship and re-institutionalize a different planning practice. While the political economy approach has sensitized planners to relate urban and regional planning mechanisms and policies to the broader economic and political forces, it falls short of suggesting the ingredients of "a different planning practice".

To respond, two streams of planning theories come into being. Both of which attempt to address the question of linking knowledge to action. The first one is what Patsy Healey (1982) calls "the new humanism" advocated by John Friedmann (1979, 1987), Donald Schon, etc. The second one focuses on pragmatic planning actions and plan implementation, i.e. "getting things done".

The new humanism tries to overcome the contradictions between theory and practice through social learning in small communities where exploitation and oppression is absent and people always engage in meaningful dialogue on an equal basis. In other words, instead of relying on the state to pursue "top-down" societal guidance in the public interest, planning has to come "from below", within the communities. It asks for a much more important role to be played by the average citizen in the planning process. It is through their daily politics that their general interests are defined and planning is done.

John Friedmann (1987, pp. 344) has argued that there is a need to recover the political community. It is important to shift the power axis of

society from the vertical, which connects the domain of the corporate economy to the state, to the horizontal, which relates civil society to political community. The means to achieve this political end is by social learning and consolidated efforts of the political community.

Faced with economic uncertainties and political changes, the other stream is concerned more with how things can be done. Instead of advocating for more planning, the stream tends to argue that market forces should be allowed to play a more important role in economic development. Instead of regulating the private sector's economic activities, there should be more public-private partnership in urban and regional development. The approach represents a retreat from addressing all those philosophical issues which underlie other planning theories.

One may argue that planning theories have gone a long way to realize that procedural planning theory and planners alone cannot fulfil the task of identifying the public interest and the setting-up of socially desirable goals and objectives. While there is no definite answer to how these goals and objectives should be set-up, there seems to be a common understanding that the problem, somehow, has to be resolved in a fair political setting. In other words, planning should be done transparently and allow concerted efforts to be made by various players in different stages of the policy-making, planning and management processes. Therefore, whether planners possess all the technical and scientific knowledge becomes less important. Planners, as well as all other actors, in the planning process have to decide what should be the rules of the game (institutional set-up) in the polity so that decisions can be made after meaningful, adequate and equitable public debate within a reasonable time-frame.

Implications for Urban and Regional Planning

How could all these theoretical development and arguments inform the urban and regional planning practices?

As pointed out earlier on, a lot of planning problems are “wicked problems” which cannot be resolved in simple ways. Moreover, in order to solve complex social problems, planners' input alone is inadequate. Since the public interest and the value-laden goals and objectives have to somehow be decided in the political arena, the traditional ways of professional urban and regional planning have been increasingly criticized and changed. Rational comprehensive planning which mainly aims at the production of a master plan has been regarded as an outdated way to tackle the more and more dynamic and complex urban and regional development problems.

Planners have to admit that the urban planning and management processes by nature are both technical and political. Relying solely on procedural planning theories and a few Western-originated urban and regional development theories would not be adequate in fostering growth and development in an historically specific context of an urban area or a region. Theoretically, in order to gain a perceptive understanding of how a particular urban area or region develops, urban planners have to solicit the views of various actors in the urban and regional arena, including both the public and private sectors and the average citizen. Such a step helps to build an “intelligent insight into the complex social reality” (substantial rationality).

Hence, various typical planning issues have to be addressed. Who should be consulted? How should they be consulted? What should their roles be? Who is going to make the final decisions? Whose value(s) should the final decision [on the general interest and goals and objectives of a particular planning project] be based on? After considering issues related to substantial rationality, many other institutional and managerial issues (“rules of the game”) have to be considered.

For instance, what are the proper roles and balance of power between physical planners and other sectoral policy-makers in the government? How should the central government relate to local government in terms of policy formulation and implementation? What types of institutional arrangements can best facilitate interaction and co-operation between the public, private and non-governmental sectors and the civil society throughout the policy-making, planning and management processes? What roles should each of these actors adopt at the planning, decision-making and implementation stages?

More importantly, it is realized that planners alone cannot make a good enough plan. The public interest, very often embedded in the formulation of goals and objectives of a plan, has to be discussed, compromised and finalized in the political arena. Equitable access to the political arena for a reasonable and meaningful debate by all relevant actors about their interests in the planning process is therefore very important. Furthermore, in order to make the plans work, certain rules of the game have to be set up and agreed upon. For instance, how to compromise democratic participation and efficient decision-making? What should be the appropriate institutional establishment for plan formulation, implementation and monitoring? etc.

With these questions in mind, let us move on to examine changing urban planning practices in the Chinese context.

CHINESE URBAN PLANNING PRACTICE IN A HISTORICAL PERSPECTIVE

It can be argued that urban planning practices and developments in China have undergone several stages of development as a result of changing political circumstances in China in past decades. Broadly speaking, after the rehabilitation period (1949-1952), the Chinese government utilized “scientific” planning imported from the Soviet Union in order to speed up industrialization in the First Five Year Plan period (1953-1957) which reached its apex in the Great Leap Forward (1958-1960).

The disastrous Great Leap Forward caused serious economic problems. Land-use planning, which led to the production of blueprints, became the scapegoat of all the failures. Urban planning was then abandoned, not only in the early 1960s but also throughout the Cultural Revolution (1966-1976), when political conflicts prevailed in China and economic development was pushed aside. It was not until 1978, when China ended all conspicuous political struggles and concentrated on economic growth and development, that people began to perceive urban planning as essential to guide rapid land-use changes resulted from the reforming socialist economy and the newly-introduced market forces in various parts of China.

1953-1960: “Scientific” Planning for National Economic Development and Industrial Growth

During the rehabilitation period (1949-1952), emphasis had already been shifted from rural areas to cities. “Only after recovering and developing production in the city, and transforming consuming cities to productive ones could the power of the people’s government be consolidated” (Mao, 1964:1317-1318). However, there was yet no comprehensive planning and construction work was sporadic and concentrated on problematic areas.

It was only during the First Five Year Plan (1953-1957) that urban planning was identified as a means to co-ordinate national economic development. Urban Construction Commission were set up in 39 cities (Zhang, 1990:182-186). Cities were divided into three categories according to their capacity in accommodating key national projects: key cities (eight), expanding cities (21), and rebuilt cities (14). With the help of Soviet experts, the first version of the Procedures of Urban Planning and Design was drafted in 1952⁴.

Planning was used to guide the 156 Soviet-aided key national projects, most of which were industrial constructions. Planners were involved in the selection of factory sites, design of the layout, functional zoning and provision of service facilities and redevelopment of existing built-up areas. In fact, industrial land-use planning became the central pillar of urban planning and industrial investments more or less determined the direction of spatial development in Chinese cities.

As the economy was centrally controlled, local governments had little revenue for local development. Moreover, production was emphasized at the expense of “non-productive” infrastructure such as housing. Nevertheless, each industrial project had to allocate part of its investment on infrastructure provision. As most industrial projects were commanded by the central ministries, the number of centrally allocated industrial projects would determine local urban development within a city.

Industrial investment was planned by the state in the Five Year Plan. From 1953 to 1957, the eight key cities received 5.5 billion yuan of capital investment, 17.63 per cent of which, i.e. 0.97 billion yuan, was invested in urban construction. In 1954, the Regulation of the Division of Responsibility of Capital Construction Investment was promulgated by the State Planning Commission. It listed the items that should be constructed by factories, various industrial departments or other departments such as the departments of commerce, education, etc.; or the municipalities.

In 1956, the Ministry of Construction was set up to take care of urban planning. In provinces and municipalities, Urban Construction Bureaux were set up. By the end of the First Five Year Plan, the number of urban planners in China reached 5,000 (EBUCC, 1990:147).

The emphasis on heavy industrial development reached a climax during the Great Leap Forward (1958-1960). Rural labourers were recruited by industrial enterprises and a total of 20 million peasants went to the cities (Kirkby, 1985:133) amidst collectivization of the rural sector in the countryside. Urban population increased from 99.49 million in 1958 to 130.73 million by the end of 1960. The number of cities increased from 177 in 1957 to 208 in 1961.

To accommodate these sudden and rapid changes, “grand” master-plans were made⁵. However, most of these plans were made without sound investigations of local situations. The blueprints only represented the over-ambitious ideas of senior government officials. Unrealistic projection of population growth had led to planned expansion of the cities. As a result,

the already inadequate provision of services and infrastructure in these cities lagged further behind industrial construction. In 1958, the percentage of investment in urban construction decreased to 2.19 per cent of the national capital investment and in 1961, it dropped to 0.7 per cent.

1961-1977: Urban Planning - the Scapegoat for Chaotic Urban Development and Victim of Political Struggles

Economic recession followed the Great Leap Forward: starvation in the countryside and failure of industrialization in the urban areas. In 1961, the Central Committee of the Chinese Communist Party (CCP) decided to reduce the number of projects. Most of the local small enterprises were closed and 9.5 million workers were sent back to the countryside. Urban population dropped by 13 million. The number of cities decreased from 208 in 1961 to 169 in 1964.

Urban planning which had produced the “grand” master plans became the scapegoat and was blamed for generating urban expansion and the subsequent problems. The Urban Planning Bureaux and related organizations were disbanded. In 1960, the National Economic Planning Conference announced that urban planning be abandoned for three years. In fact, it had been abandoned for almost two decades.

On the other hand, to arrest the deteriorating urban infrastructure, from 1961 onwards, urban maintenance fees (five per cent of profits) were levied on industrial and commercial enterprises for municipalities to construct service facilities. In 1962, the total urban maintenance fee was 4,500 million yuan. However, large infrastructural projects were still budgeted by the central government.

Industrial development was still emphasized but more on the development of “third line” construction in the interior regions for strategic reasons. The aim was to set up a second industrial system to maintain the defense ability of the country should foreign attacks be launched on coastal areas.

To save the disastrous consequences of the collectivization process in the countryside during the Great Leap Forward, urban development was encouraged in rural areas to help eliminate the gap between cities and the countryside. The new objectives of urban planning, according to the then Premier Zhou Enlai was to “combine industry with agriculture; city with countryside; benefit production; facilitate people’s livelihood” (Ma, 1979:839).

However, the launching of the Cultural Revolution in 1966 made the realization of the above objective a distant possibility. The Cultural Revolution was marked by struggles amongst different political factions and mass conflicts. Politics took command and economic development was neglected. Buildings were converted to different uses, very often, incompatible with one another. Private houses were confiscated. Investment in urban construction decreased below the maintenance level. Urban layout became very chaotic and there was a shortage of housing and service facilities. By 1976, only two cities, Panzhihua, an iron and steel city in southwest China and Tangshan, a city destroyed by an earthquake in 1976, had plans for urban development.

It was not until 1978 when the political struggles were settled and economic reforms were launched that urban development and planning resumed their importance in the agenda of national development.

1978- : A New Mode of Urban Planning

The Third Plenary Session of the Eleventh National Congress of the Chinese Communist Party held in December 1978 initiated a series of economic reforms in China and opened China to the global economy.

In 1978, the Third Meeting on National Urban Affairs was held by the State Council and the importance of cities in national economic development was recognized. The Conference also required local governments to prepare master plans and detailed construction plans based on the national economic development plans. Urban planning institutions were re-established in many cities.

In 1980, the Urban Planning Conference was held by the State Planning Commission. The policy of “controlling the size of large cities, rationally developing medium cities and actively developing small cities” was put forward. In the Conference, it was made clear that the mayor of the municipalities should supervise planning, construction and management of urban developments.

The Provisional Regulations of Preparing and Approving City Plans and the Provisional Standards of City Planning were promulgated in 1980. In 1984, the State Council announced the Regulations of City Planning. The Regulations stipulate various issues from classification of cities, urban development goals and policies to the preparation, approval and enforcement of urban plans. The Regulations also rule that all construction work should apply for land and building permits. Municipalities then also announced

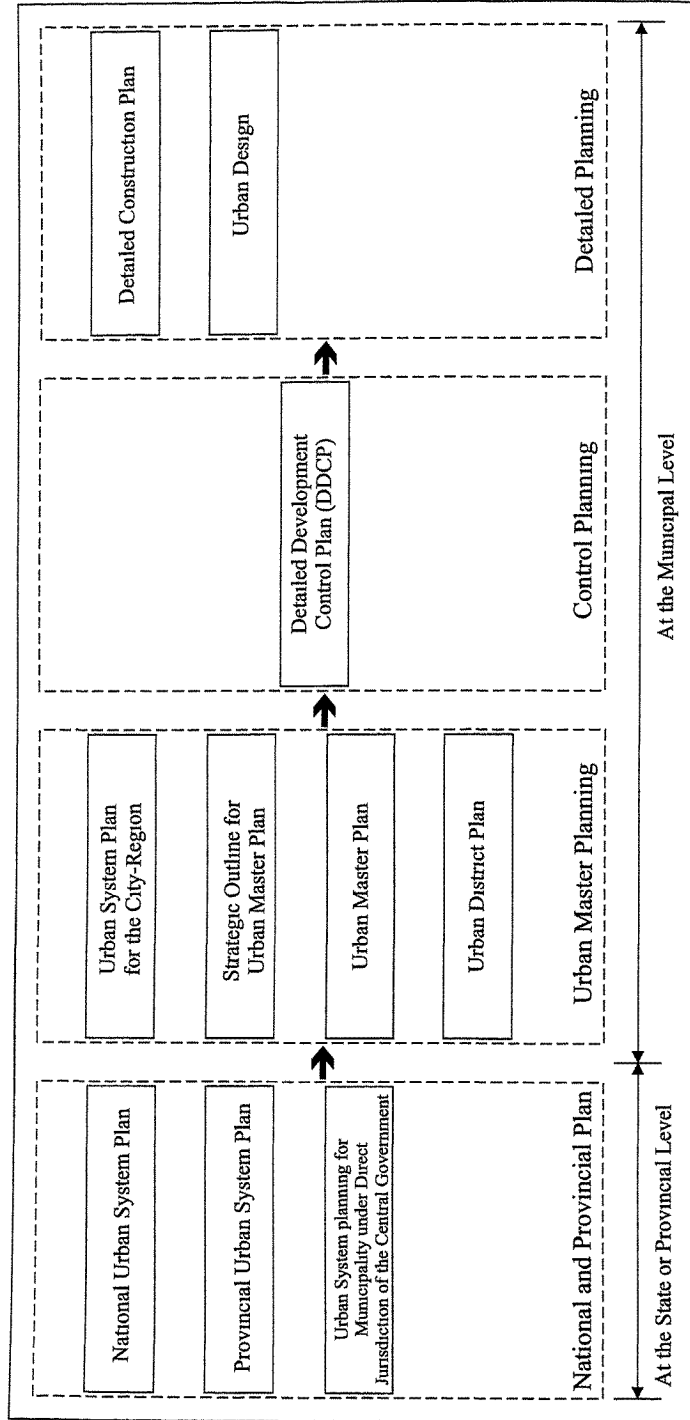
their management regulations to complement the Regulations. By the end of 1986, 96 per cent of the designated cities and 85 per cent of the county towns had prepared their urban master plans. The number of urban planners increased to 15,000. Towards the end of 1989, 339 of the 353 cities and 1,695 of the 1,980 county towns had prepared their urban master plans. Amongst these, 282 and 1,293 of the respective city and county town plans were approved.

In 1989, the City Planning and Environmental Protection Acts were announced. In 1990, Provisional Regulations on the Granting and Transferring of the Land Use Rights over State-owned Land in Cities and Towns and Provisional Measures for the Administration of Foreign Investors to Develop and Operate Plots of Land were enacted. In 1991, the first set of national standards in urban planning--National Standards of Urban Land Use Classifications and Planning Standards (National Standard Number GVB137) was promulgated.

The City Planning Act was enacted in 1989 and it can be argued as a milestone in the history of urban planning in China. The Act consists of six chapters and forty-six articles. The Act not only consolidates various practices listed in previous planning-related regulations, such as the need to obtain permits for all construction works, it also rationalizes various levels of plan formulations which had been introduced by provincial and local authorities to meet the changing needs of the economic reforms since 1979. In the past, there were only two types of plans: urban master and detailed construction plans. However, the system of plans listed in the 1989 City Planning Act is more complicated. Figure 9.3 shows the new planning hierarchies.

Under the new system, there is a different hierarchy of plans. At the highest level is the urban system plans. The State Council, provincial governments and municipalities under the direct jurisdiction of the central government are responsible for preparing urban system plans to provide guidance to local municipalities. Based upon the national and regional development strategies, these parties have to: predict the level of urbanization and changes in industrial structure; estimate the size and distribution of cities with reference to the location of productive activities and transportation network; designate city functions; plan new cities; establish the priority of urban development and estimate their impacts on the population size and land demand and plan for the development of regional infrastructure, its layout and appropriate implementation policies.

Figure 9.3 Hierarchy of Plans under the 1989 City Planning Act in China



It should be noted that in China, the conceptualization of city plans is separated from the actual design and production of the plans. At the national level, the conceptualization of the plans is the responsibility of cadres in the Planning Department of the Ministry of Construction under the State Council. Actual preparation and production of plans is the responsibility of the China Academy of Urban Planning and Design, geography departments in universities and academic institutes, Academy of Social Sciences, and policy study offices. Such a division of labour also applies to provincial and municipal levels.

The municipal governments are responsible for producing urban master plans and detailed local plans. However, before a master plan is produced, two types of plans are required. The first is an urban system plan for the city-region and the second is a strategic outline plan for the urban master plan.

An urban system plan for the city-region is required to guide the preparation of urban master plans. This level of planning was introduced as a result of the re-delimitation of city boundaries to include rural counties in the mid-1980s. The plan is used to guide future direction of urban expansion, new town construction, distribution, functional specialization and the rank size of towns.

Theoretically, the strategic outline plan for the urban master plan should link the long-term national economic plan with the region-wide urban system plan and provide a basis for the preparation of master plans⁶. The strategic outline may be complemented with a sketch plan at a scale of 1:25,000 to 1:100,000. Since this strategic outline plan will state the city's socio-economic development strategy and set priorities in developing different economic sectors, there is a lot of intra-governmental politics involved in the plan conceptualization stage.

Based on these plans, local municipalities will prepare urban master plans which co-ordinate land and infrastructure development required by various sectors⁷. The planning horizon of the master plan is 20 years. Usually master plans include both text and maps of scales 1:10,000 to 25,000 in large cities and 1:5,000 to 1:10,000 in small cities.

Under the master plans are the district plans to allocate population and different land-uses among various urban districts. The map scale is usually 1:5,000.

The lowest hierarchy of plans consist of two elements: the detailed development control plan (DDCP) for development control and detailed construction plan and urban design for detailed planning. The former was introduced to meet the needs of land reforms. DDCP is used to control land-uses and development intensity. The planning horizon of the detailed construction plan is usually five years.

Urban master plans made by municipalities directly under the central government are approved by the State Council. Master plans of provincial capitals and cities with over one million population are examined by the respective provinces and autonomous regions and approved by the State Council. Other plans are approved by the respective municipalities.

URBAN PLANNING AND SECTORAL REFORMS

Before the 1960s, municipal governments had little power compared to the central government. The urban space was commanded by various sectoral departments and their subordinated work units. Municipal governments, therefore, could hardly control development.

The introduction of the new mode of urban planning means that the municipal government has more power in land-use planning. However, the introduction of market forces after the economic reforms have made development control more difficult. In fact, the introduction of partial market mechanisms in the planned economy has produced a dual-track system which allowed those who have political power ample opportunities to benefit in the mixed economy. In the absence of an open democratic political system in China, the conflicts of interests have to be resolved through personal relationships and “back door” dealings. Moreover, evidence has shown that the officially prepared blueprints, very often outdated when finished, cannot effectively cope with the dramatic changes in various sectors. The following shows some of the examples.

In the agricultural sector in 1978, the Central Committee of the CCP issued the “Decision of Accelerating Agricultural Development”. The household responsibility system was set up and markets for agricultural products were opened. In 1985, the Number One Document issued by the Central Committee of the CCP encouraged peasants to engage in rural industries and sideline production which led to a proliferation of small towns based on town and township enterprises. As a result, valuable agricultural land has been turned into industrial uses. Development pressure is particularly intense in urban fringe areas along the coastal regions where

rural enterprises are most successful. However, since the urban planning system only handles city and town land-use planning, spatial development at urban fringes becomes very chaotic and problematic.

Furthermore, the rural reforms have released a lot of surplus labour, especially in inland provinces where rural enterprises are not so successful. To search for jobs, these surplus labour ("floating population") migrate from inland to coastal provinces. It has been reported that in Guangzhou and Shanghai, one third of their population are not permanent residents. The presence of the "floating population" has created a lot of difficulties for planners to make population projections and plan for an adequate physical and social infrastructure.

In the housing sector, after 1979, sources of investment in housing were diversified. The central, local governments, enterprises and urban individuals have all invested in housing. From 1979 to 1985, a total of 121.3 billion yuan was invested in housing construction and 825 million square metres of new housing were built. During the Sixth Five Year Plan (1980-1985), housing investment had amounted to 21 per cent of the total capital investment. In fact, since 1979, 60 per cent of all the investment in housing was raised by the enterprises.

In 1991, the state enterprises invested 49.48 billion yuan in constructing 111.09 million square metres of housing. Urban individuals invested 12.51 billion yuan in building 68.08 million square metres of private housing. The ratios of investment and area of housing completed by state enterprises and urban individuals were respectively 3.95:1 and 1.63:1.

Enterprises could jointly or individually build houses or buy houses from real estate corporations. Individuals were allowed to build houses with their own materials. In 1983, the State Council announced the Regulations of Management of Housing Construction by urban individuals. The Open Cities in the coastal regions also appealed to foreign capital in building commercial houses⁸. In fact, the commercialization of housing was experimented within eight large and medium-sized cities (Fong, 1989:35). In 1987, public housing units were sold to individuals at discounted prices on an experimental basis.

Moreover, the city governments, instead of work units, begin to play a co-ordinating role to develop housing and related infrastructure. The work units are then encouraged to "buy" housing from the municipal governments. The introduction of market mechanisms and economic incentives in the

housing sector has made it difficult for master and detailed plans to serve the purpose of development control.

In the industrial sector, the role of organizing productive activities, especially for medium and small projects, also shifted from sectoral departments to the municipalities. In 1983, the State Council endorsed the Ministry of Construction's suggestion that urban planners should participate in the feasibility study of national capital projects, site selections of which should conform to urban plans. This policy not only integrates planning with economic programming, it also, to some extent, allows local governments the power to intervene in construction projects controlled by sectoral departments.

However, when municipality governments have more control over production, they also assume an increasingly important role in providing social facilities. In other words, the reforms require the local governments to go beyond physical land-use planning to co-ordinate sectoral economic and social planning as well.

In 1984, fiscal reform was introduced throughout the nation. Enterprises began to be taxed. Urban construction tax was also levied: seven per cent of total profits for enterprises operating in designated cities and five per cent for those in county towns. Since 1985, 113 cities have collected fees on gas and water consumption. More than 30 cities generate revenue through tolled roads, bridges, tunnels and drainage systems.

In fact, the central government's budgetary funds in fixed assets had decreased from 88.2 per cent in 1957 to 6.8 per cent in 1991. The extra-budgetary funds, however, increased. Sources included (1991 figures) domestic loans (23.5 per cent), foreign investment (5.7 per cent) and "self-raised" funds by the enterprises (52.3 per cent). In other words, a considerable portion of the total investment is now outside the control of the central government⁹. In order to attract more investment and generate more revenue, local governments have become very competitive and protectionist.

In order to make work units use land more efficiently, a policy based on the principle of "paid land-use" was introduced. For instance, since 1981, land-use fees have been levied in Shenzhen based on the type of land-use, location of the site and the lease period (Yeh, 1985). At the beginning, only foreign investors were charged land-use fees. The measures were soon applied to domestic enterprises as well. In 1984, Fushun began to charge land-use fees at a rate of 0.3 to 0.5 yuan per square metre.

To fully utilize land as a factor of production, a land market needs to be created. Yet, in order not to jeopardise the socialist economy, the right to use land is separated from the issue of land ownership. In other words, the state still owns the land and only the right to use land is transferred through payment. In 1987, a local company in Shenzhen was the first to gain the right to use a piece of land through negotiation. In the following months, land-use rights were transferred through bidding and public auction. In 1988, transfer of land-use rights was made official by the National People's Congress. In the same year, the State Council promulgated the Regulations on Land Use Tax Collection in Cities and Towns which symbolized the end of a free supply of land.

As the local authorities are given the autonomy to control its land resources, "unregulated land-uses" can be found in many Chinese cities. For instance, schools may be turned into retail shops, restaurants, hotels or anything that is profitable. Also, the introduction of the principle of "paid land-use" has allocated land to different uses based on the criterion of economic efficiency, as suggested by the land rent theory. However, economic efficiency gained in land-use allocation may not necessarily contribute to the public interest in the long run, especially when it is not monitored by an efficient planning process legitimized by an appropriate legislative framework.

While there was a temporary setback of the Chinese economy after the 1989 Tiananmen incident, economic reforms reached a new high after Deng Xiaoping visited southern China in early 1992. The year witnessed a boom in real estate development and the proliferation of Economic and Technological Development Zones. Land leasing increased, not only involving small parcels in the city proper but also large tracts of undeveloped land in urban fringes. By the end of 1992, the Chinese government had generated 50 billion yuan (USD 8.7 billion) by leasing land rights to investors (China Daily, 1993).

With the rapid development of the real estate and property sectors, urban planners have assumed an increasingly important role. Cadres in the planning departments have become more powerful in monitoring land development. However, booming localism and a "de-planning" environment, along with the decentralization of decision-making power to the hands of local governments, have made municipalities eager to pursue economic growth and development rather than "development control". Since China will continue to develop its mixed economy and a multiple-ownership system,

there is an urgent need to improve governmental management and to balance divergent interests.

The changing political economy in China has presented profound challenges to urban planners. Could Chinese planners learn anything from evolving Western planning theories, in tackling all these thorny issues in the course of rapid economic development? This is the topic that we now turn to.

WHAT COULD CHINA LEARN FROM WESTERN PLANNING THEORIES?

From the above analysis, it can be argued that urban planning has been perceived as a process of pure physical and engineering design. Planners are regarded as technicians and have no say in the decision-making process. Similar to other work units, planning departments are supposed to carry out the party's policy effectively. They are monitored by the built-in party component within the administration, rather than constrained by the legislation or city plans. Therefore, we find that Chinese planners have resorted to the production of more and different types of plans to tackle the problems triggered by the post-1978 economic reforms. This reflects that the Chinese urban planners still have a lot of faith in the traditional scientific planning model which aims at the production of master blueprints to direct the future towards desired goals and objectives.

However, we have also discussed that the plans produced could hardly cope with the dynamic economic development in China. While more and more plans are produced, they are not being implemented. Rapid sectoral reforms very often make these medium to long term plans obsolete. The situation is worsened as planners do not have the executive power to implement the plans. In the course of economic liberalization, economic growth is much more preferred to development control and sustainable development. As a result, municipal governments and private sectors are more interested in brisk physical development rather than the implementation of a particular blueprint.

Also, as noted previously, conceptual planning is separated from the production of blueprints in China. The former is very often done among cadres representing various government departments behind closed doors. While this might work well in the past when China pursued a centrally planned economy, this planning practice can no longer cope with the situations in a mixed economy. The changing political economy of China

has brought more and more actors into play in the increasingly complex urban development process. A lot of planning problems encountered in today's China are indeed "wicked" planning problems.

As argued in the second section, "wicked" planning problems cannot be resolved by planners alone. Theoretically speaking, it is not desirable to rely on a limited number of actors in the planning process to make all the decisions. Different stakeholders should have a fair chance to participate in the policy-making, planning and management process and contribute their wisdom and ideas to tackle the planning problems.

This recognition of the need to open up the planning system and allow a fair and equitable participation of various vested interests naturally means a shift of emphasis on the production of blueprints to the institutionalization (setting up the "rules of the game") of a co-ordinated policy-making, planning and management process. In other words, planners' role should not be confined strictly to the production of blueprints according to the decisions made by cadres behind closed doors. Planners, given their knowledge and expertise, should be legitimate candidates in making policy decisions and having the power to execute the plans that are produced. In order to serve the community better, planners should be given the power to co-ordinate with different sectoral policy makers to produce plans which address the needs of society.

Boosting the importance of the planners' role in the policy-making, planning and implementation processes is not enough. The top-down mode of planning alone can no longer meet the challenges of dynamic sectoral reforms. Bottom-up efforts need to be solicited to make planning more effective. All these mean that the government has to take a more proactive role in the planning process: opening up the planning system, allowing increased participation by various parties and establishing the "rules of the game" (institutions) in a fair and equitable manner. Only then can "wicked" and complex planning problems be understood in better ways and collective wisdom be utilized to solve problems intelligently.

Notes

1. There are three types of planning theories. Theories in planning generalize and explain urban and regional development and planning in different societies. Theories of planning discuss about procedures related to planning and policy decision-making. Theories for planning

debate how planning is a rational and life-enhancing human activity. In this paper, Western planning theories will focus on theories of and for planning. In other words, we are not talking about theories which explain how urban and regional development takes place in a specific context.

2. Politics here does not refer to real-life politics which can be found in all human organizations. Rather, it represents the aspiration of an equitable and fair political process through which people debate, compromise, plan, co-ordinate and implement their community's collective future.
3. "Substantial rationality" is an intelligent insight into the behaviour of concrete complex social systems. In other words, during every step in the planning process, planners, among others, have to judge and evaluate the contextual and historically specific situations before they can decide on how to proceed. On one hand, they have to make specific, focused and strategic choices which may vary from person to person, depending on their own value judgements and perspectives.
4. Largely copied from the Soviet urban planning system, the Procedures specified the principles, ways of conducting economic analysis and types of plans. However, due to a shortage of planners, the State Construction Commission (SCC) notified local governments in 1956 that the types of plans be reduced from 16 to 5. The five types of plans were: current land uses, draft plans, sketch plans of engineering projects, recent construction plans and suburb plans.
5. For instance, Yingchuan, an industrial city of 0.1 million population in northwest China was planned to reach a population of one million in a few years time. In Haikou in the then Hainan Island, it was planned to accommodate 0.8 to one million population in 1958. Yet thirty years later, the city has only 0.26 million population (State Statistics Bureau, 1990).
6. It should analyse the technical and economic bases of development; set the goal of socioeconomic development; clarify the role of the city in the region; point out the function, size and general layout and direction of development.
7. The contents of urban master plans include: definition of the boundary of planning areas; projection of population and land-uses during the plan period; direction of urban expansion; layout of land-uses; location

of city centres; external and internal transportation linkages; infrastructure plans; cultural and recreational plans; redevelopment plans; suburban and new towns development plans; etc.

8. It was reported by Reuter on August 25, 1993 that in Tianjin, China's third largest city, 10 million square metres of land was leased for 50 years at \$1,230 per square metre. The accompanied condition was that the developer had to rehouse the incumbent residents in dilapidated one-storey houses.
9. According to the Journal of Commerce, August 6, 1993, as much as 45 per cent of the national economy is shared by the private business sector. The non-state sector is estimated to encompass more than 30 million people. There are officially 15 million "individually run" businesses, defined as employing eight or fewer people; and 140,000 "private businesses" with more than eight employees. Total assets of non-government firms were estimated to be at least 100 billion yuan (USD 17 billion).

REFERENCES

- DAVIDOFF, Paul (1965), "Advocacy and pluralism in planning", *Journal of the American Institute of Planners*, Volume 31, Nov. 1965, pp. 331-338.
- Editorial Board of Urban Construction in Contemporary China (EBUCC) (1990), *Urban Construction in Contemporary China (in Chinese)*, Beijing: China Social Sciences Press.
- FONG, Peter K.W. (1989), "Housing Reforms in China", *Habitat International*, 13, 4, pp.29-41.
- FRIEDMANN, John (1979), *The Good Society*, Cambridge, Mass.: MIT Press.
- FRIEDMANN, John (1987), *Planning in the Public Domain*, N.J.: Princeton University Press.
- FRIEDMANN, John (1988) "Reviewing Two Centuries", *Society*, November/ December, 1988.
- HEALEY, Patsy, MCDUGALL, G. and THOMAS, M. (1982), *Planning Theory: Prospects for the 1980s*, Oxford: Pergamon Press.

- HESKIN, Allan (1980), "Crisis and response: a historical perspective on advocacy planning", *Journal of American Planning Association*, 46, no. 1 (January), pp. 50-63.
- KIRKBY, R.J.R. (1985), *Urbanization in China: Towns and Country in a Developing Economy 1949-2000 A.D.*, London: Croom Helm.
- LINDBLOM, Charles Edward (1977), *Politics and Markets: the World's Political-Economic Systems*, New York: Basic Books.
- MA, Laurence J.C. (1979), "The Chinese Approach to City Planning: Policy, Administration, and Action", *Asian Survey*, 19, 9, pp. 838-55.
- MANNHEIM, Karl (1949), *Man and Society in an Age of Reconstruction*, New York: Harcourt-Brace. (Orig. 1940).
- MAO, Tse-tung (1964), *Selected Works of Mao Tse-tung*, Beijing: People's Publisher, pp. 1317-18. (*in Chinese*)
- PIVEN, Frances Fox (1979), "Whom does the advocate planner serve?" in Richard A. CLOWARD and Frances Fox PIVEN, *The Politics of Turmoil: Essays on Poverty, Race and the Urban Crisis*, New York: Pantheon Books.
- Reporter of China Daily (1993), 7, "Cities Chosen as Pilot for Real Estate", *China Daily*, May 5, 1993, p.3.
- State Statistics Bureau (1990), *The China Urban Statistics Year Book 1990*, Beijing: China Statistics Press. (*in Chinese*)
- YEH, Gar-On Anthony (1985), "Physical Planning", in K.Y. WONG and D.K. Y. CHU (eds), *Modernization in China: The Case of the Shenzhen Special Economic Zone*, Hong Kong: Oxford University Press, pp.108-130.
- ZHANG, Binchen (1990), "Review of Forty Years of Urban Planning in China", *The Almanac of China's Urban Economy*, Beijing: China City Publisher, pp. 182-86. (*in Chinese*)

**ECONOMIC REFORM AND
PLANNING EDUCATION**

10

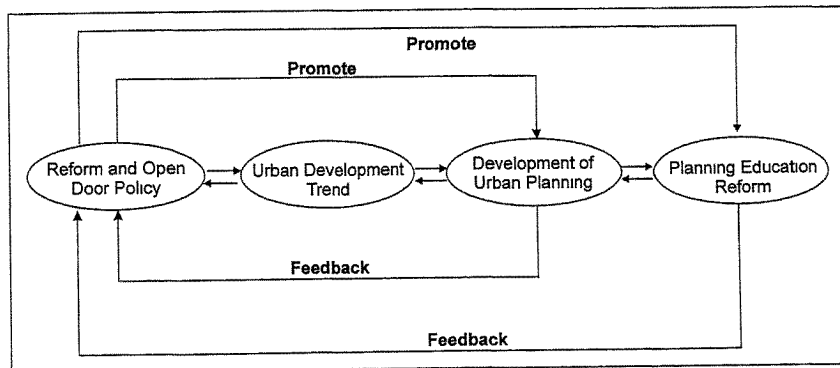
Urban Development, Urban Planning, and Planning Education in China Since 1978 - Retrospect and Prospect

Xueqiang XU and Desheng XUE

INTRODUCTION

It has been 15 years since the start of the economic reform and open door policy in 1978 in China. During these 15 years, the cities have grown rapidly and they are playing more and more important roles in the whole country's social and economic development. This change has also brought a lot of new questions and urgent problems for urban planning and planning education in China. (Figure 10.1).

Figure 10.1 Relations Among the Economic Reform and Open Door Policy, Urban Development, Urban Planning and Urban Planning Education



In this paper, we will look back at the main characteristics of urban development in China in the last 15 years, review the new problems in urban growth and their challenges to China's existing urban planning system and also explain the main reasons for these characteristics, problems and challenges. The reform and adjustment of urban planning and planning education in dealing with the changing environment are also discussed. The transformation from the planned economy to a market economy has just begun. With the rapid development of the cities, the transformation of urban planning and planning education from the old system to a brand new one will need a rather long period of time in which we will devote a lot of exploration and hard work.

THE CHARACTERISTICS AND PROBLEMS OF URBAN DEVELOPMENT IN CHINA SINCE 1978

China's Cities Have Experienced Remarkable Development Since 1978, While Urban Planning Cannot Be Geared to the Fast Growth

China's economic reform began in the rural area. Policies such as the family-united-contract-responsibility-system, while encouraging a diversified economy, greatly promoting town-owned enterprises, permitting peasant-run factories and providing business in cities, relaxing the census register and permitting the buying and selling of food in a free market etc, have caused millions of surplus labourers to move from underdeveloped regions to developed regions, from inland regions to coastal regions and from rural areas to cities.

The great amount of population migration brought a 17 million increase of urban population per year in the whole country. By the end of 1991, the urban population had increased by 3.5 billion, and China has become the country owning the second largest urban population second only to India in the world. If we add the number of temporary residents in cities, the amount of urban population will be much higher. In the 30 years before 1978, the urban population had only increased by 2 million per year. Yet, because of the fast urban economic growth and how the urban government has got stronger administrative power and more privileges than a county government, "the wave of administrative promotion from a county to a city" has swept across all the provinces. 22 new cities were set up per year in the whole country, while the number before 1988 was only 2 (Table 10.1). With this speed of growth, China will have more than 800 cities and more than 5.5 billion urban population, which will be almost 50 per cent of the total

Table 10.1 The Number of Cities and Urban Population in China in 1949, 1978 and 1991

Year	No. of Cities	Average Annual Growth Rate	Urban Population (In Million)	Average Annual Growth Rate
1949	136		5,765	
1978	191		11,994	
1991	479		34,602	
1949-1978		1.18		2.47
1978-1991		7.33		8.49

Source: Calculated according to the statistical materials of the National Statistics Bureau

population by 2010. No wonder that an official of the World Bank has said that China would become a giant of urbanization in the near future¹.

As the urban function enlarged and the urban population increased, the urban land has rapidly and enormously expanded outward. The area of built areas of all the cities in the country has grown from 8,842 square kilometres in 1984 to 13,792 square kilometres in 1991², with a net increase of 4,950 square kilometres, which was 56 per cent of all the urban built area in 1984. The expansion of urban land was fastest and the most remarkable in the coastal cities. The urban land-use system has changed from allocation without payment to allocation with payment. More and more real estate companies have appeared, and a real estate market has been set up. All these phenomena have accelerated land development in the suburban areas. The rural land has rapidly changed into new urban areas, so building sites could be found everywhere almost in every city. It has been proved by countless facts that urban fringe areas can easily accept the output of the technology, administration and capital from the city; the land value here rises fast, and it can get the most benefits in the course of urban development. At the same time, because of the separation of administration,

this area is also the most disordered area in the city. Urban fringe areas in bad condition can seriously hinder the expansion of a city.

While the cities are developing at such a high speed, the content, method, and staff of urban planning cannot cope with this rapid development. Many unqualified urban planners are doing planning work, and some planners qualified in the past have become unqualified when facing the planning work under the present situation. On the one hand, some people emphasize learning from the western countries and building the cities to new and higher international standards. On the other hand, many urban residents, including some decision-makers, are short of knowledge on modern cities; they neither have an idea of the objective laws of urban development nor have the concept of building and managing the cities according to these laws. With inadequate investment in urban infrastructure and the growing amount of new investors and immigrants entering the cities, many cities are facing various urban problems, such as excessive use of infrastructure.

The Urban Rank-Size Structure Transformed Towards “A Schedule Shape”, Which Went Against the National Policy of “Controlling the Large City”³

The policy of “controlling the large city” has been adopted for a long time, and it had retained a certain role before 1978. But after the economic reform, the power of administrative intervention has gradually reduced; instead the consciousness of following economic principles has been greatly emphasized. As most extra-large and some large cities are located in the coastal regions or at important nodes of transport, they have naturally become the forefront of external opening and economic reform and the bases for attracting overseas investment, where investors can obtain more profits than in other regions. Thus, contrary to the policy of controlling the development of large cities, the extra-large and large cities have been growing at a high speed during this time; many large cities in 1978 have grown into extra-large cities, which have increased the proportion of extra-large cities among all the cities. With the increase in the active economy and rapidly growing town-owned enterprises, the economic power of small cities has increased. This has enlarged the urban land area and population. The population, land and the proportion of small cities in all cities have increased remarkably. The urban rank-size structure has transformed towards “a schedule shape” (Table 10.2; Figures 10.2, 10.3). Perhaps this is the reflection of the dual upward and downward directions of urbanization in China and it is also a challenge to the policy of control.

Table 10.2 Urban Population Growth of 4 Rank-Size Cities in China in 1978 - 1991

	Small Cities		Medium Cities		Large Cities		Extra-Large Cities		Total	
	Population (in million)	%	Population (in million)	%	Population (in million)	%	Population (in million)	%	Population (in million)	%
1978	1,124.9	14.0	1,856.5	23.4	1,985.2	25.0	2,988.2	37.6	7,954.8	100.0
1991	3,322.1	21.5	3,776.2	24.4	2,030.2	13.1	6,334.5	41.0	15,463.0	100.0
Average Annual Growth Rate	8.69		5.61		0.17		5.95		5.25	

Source: Calculated according to the statistical materials of the National Statistic Bureau

Figure 10.2 Population Proportion of 4 Rank-Size Cities to the Whole Urban Population in China, 1978, 1991

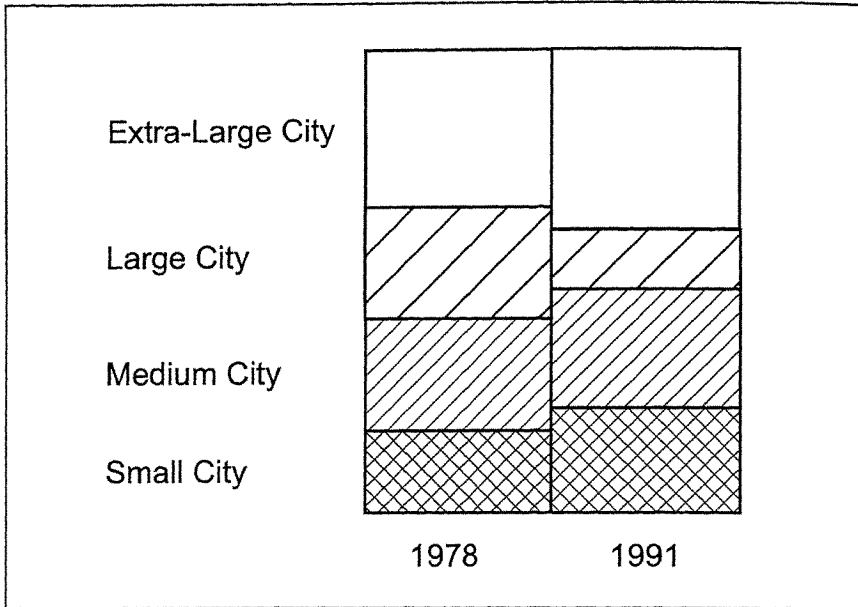
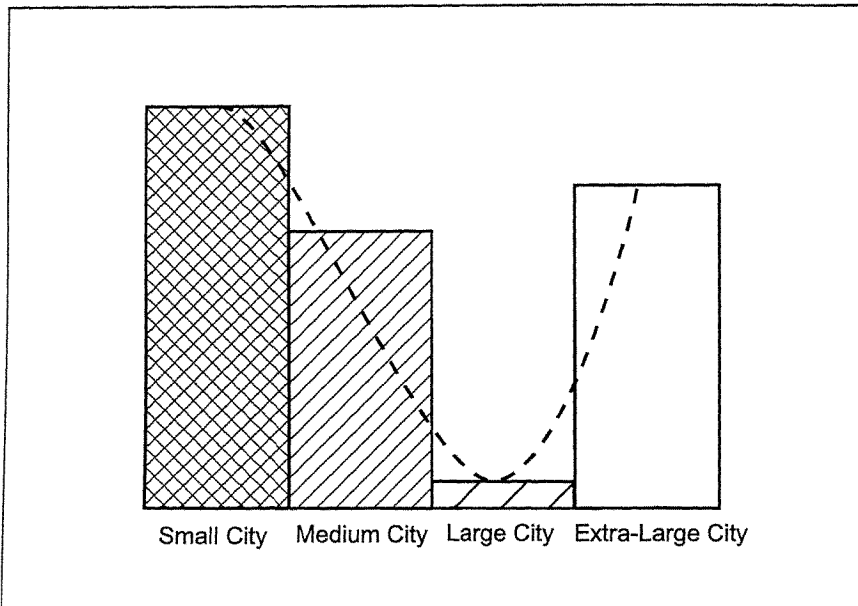


Figure 10.3 Urban Population Growth Rate of 4 Rank-Size Cities in China, 1978-1991



Spatial Disparities in Terms of Urban Development Have Increased, Which Will Probably Result in Social Crisis in the Future

Before the economic reform, the “three northes” (northeast, northwest and northern China) and the “three lines”(southwest and northwest China) were emphasized in regional development⁴. This policy has made the national economy evenly distributed in the whole country. Since 1978, the policy of unbalanced development has been adopted. The setting-up of special economic regions, externally open cities, economic and technological development areas in the coastal regions in eastern China and the rapid growth of foreign capital and the introduction of technology, equipment, information and inland investment and labour force, all these have resulted in a much faster economic growth in coastal areas than in inland areas. The number of cities and urban population have also increased faster in coastal areas than the inland. The gravity centres of the city distribution and urban population distribution have shifted from towards the north and the west before 1978 to towards the south and the east after then; regional inequality has become more serious. In the relatively developed regions, such as Jing (Beijing) - Jin (Tianjin) - Tang (Tangshan) - Hu (Shanghai)- Ning (Nanjing) - Hang (Hangzhou), Shui (Guangzhou) - Gang (Hong Kong) - Ao (Macau), etc, some megalopolises have emerged (Tables 10.3, 10.4; Figures 10.4, 10.5).

Although unbalanced development has been widely regarded as a feasible development approach, the increasing spatial disparities of economic and urban development have already brought some social issues, such as mental imbalance, economic blockades between different regions and other extreme behaviours. They may lead to other social crises in the future.

The Urban Function Has Changed More Rapidly and Become More Complicated, Which Has Outstanding Conflicts with the Old Land-Use Spatial Structure

Previously, cities were regarded as the products of capitalism in China, whilst today they are treated as the foundation of the socialist physical and spiritual civilizations. The country has encouraged the functional decentralization of central cities in order to promote the development of the surrounding rural areas. This important strategic change has led to the following transitions in cities: 1) the urban functions have changed rapidly and become more complicated; 2) cities have changed from being previous production centres to comprehensive centres with more functions, from low level centres of politics, economy and culture to high level centres of

Table 10.3 The Number of Cities in Three Regions (Eastern, Middle and Western) in China in 1949, 1978 and 1991

Region	1949		1978		1991		1949-78		1978-91	
	No. of Cities	%	No. of Cities	%	No. of Cities	%	Annual Growth Rate (%)	Annual Growth Rate (%)	Annual Growth Rate (%)	Annual Growth Rate (%)
Eastern	69	50.0	69	36.1	191	39.9	0.05		8.15	
Middle	82	40.4	82	42.9	194	40.5	3.38		6.85	
Western	40	9.6	40	21.0	94	19.6	3.95		6.79	
Total	191	100.0	191	100.0	479	100.0	1.18		7.33	

Source: Calculated according to the statistical materials of the National Statistics Bureau

Table 10.4 The Urban Population of Cities in Three Regions (Eastern, Middle and Western) in China in 1953, 1978 and 1991

Region	1953		1978		1991		1953-78		1978-91	
	Urban Population (in million)	%	Urban Population (in million)	%	Urban Population (in million)	%	Average Annual Growth Rate (%)	Average Annual Growth Rate (%)	Average Annual Growth Rate (%)	Average Annual Growth Rate (%)
Eastern	3,204	61.04	5,464.9	45.6	17,032.0	49.2	2.16	2.16	9.14	9.14
Middle	1,258	23.97	4,353.0	36.3	12,157.0	35.1	5.09	5.09	8.22	8.22
Western	787	14.99	2,176.2	18.1	5,413.0	15.7	4.41	4.41	7.30	7.30
Total	5,249	100.00	11,994.1	100.0	34,602.0	100.0	3.36	3.36	8.49	8.49

Source: Calculated according to the statistical materials of the National Statistics Bureau

Figure 10.4 Growth of the Number of Cities in Three Regions in China, 1949-1978, 1978-1991; Growth of Urban Population in Three Regions in China, 1953-1978-1991

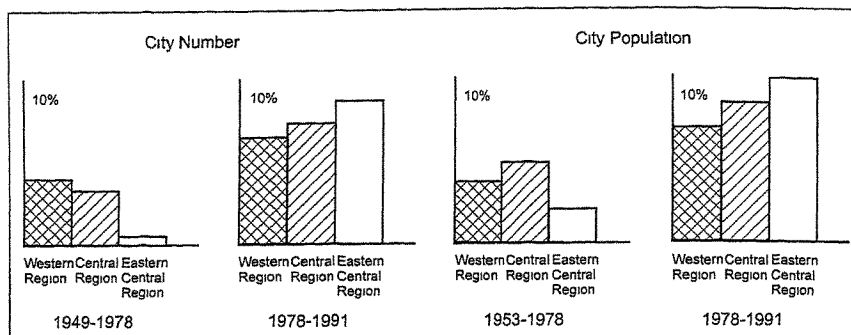
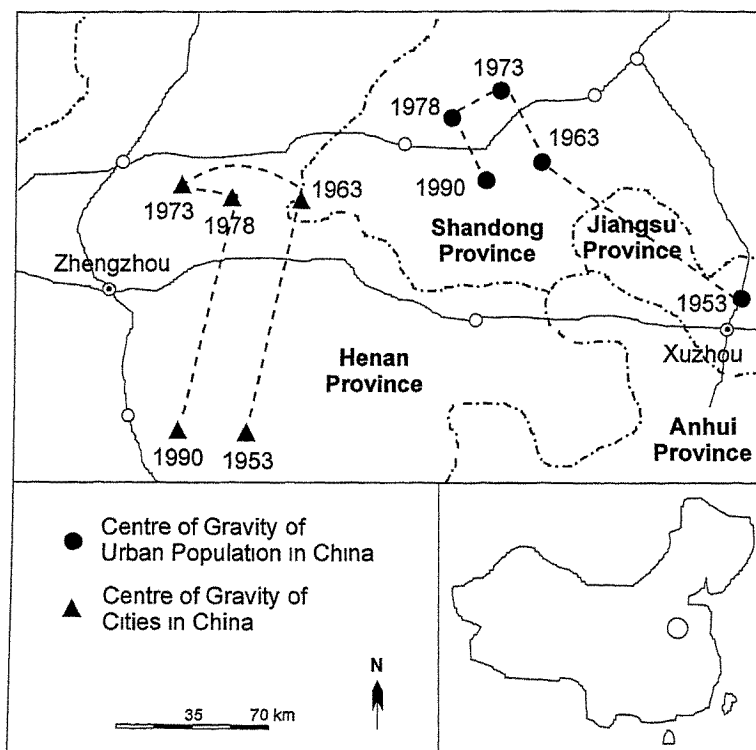


Figure 10.5 Shift of the Gravity Centres of Cities and Urban Population in China, 1953-1990



administration, industry, commerce, trade, finance, information, transportation, communication, culture, education, science, technology, art, tourism and various services; and 3) more and more functional sectors serving the cities themselves have appeared and the specialization levels of these sectors have become higher. Some cities, particularly the coastal large cities and extra-large cities, have started to have international functions, since they have greatly promoted the development of an external economy, communicating with the outside world and taking part in international competition.

But the change of urban functions has been in traditional urban spatial structure under the previous free allocation land-use system. In order to resolve this problem, we must rebuild urban functional structure and spatial structures which are complicated tasks.

The Mobility In Or Out of the Cities Has Increased, Which Has Brought About A Lot of Problems to the Cities' Infrastructure

Before the economic reform, the necessary materials of production and consumption were allocated upward and downward. Urban residents at that time did not seem to have enough time and money to move in the city, or they did not need to go out. Thus, cities at that time were "stable cities" with little flow and a low frequency of population and materials movement. After 1978, because of the rapid development of cities and rural areas, the functional specialization levels of different cities have risen and the mutual economic complementarity between urban and rural areas and between different cities has increased. A much more horizontal and vertical flow of population, capital, materials and information, etc, between cities and urban and rural regions has appeared. With the increase in land-use specialization in every part of the city and the rise in people's living standard, the lives of the residents have been richer and more varied, so the demand of movement has remarkably increased and the types of movement have also become more complex. The flows of population, capital, materials and information among different functional parts within a city have correspondingly increased and the movement frequency has risen too. The enormous flows in the cities exist not only during the day time but also at night, which reflects that a modern city is a huge moving system.

But now, many cities have felt that they do not have adequate infrastructure, such as transportation, communication and computer networks. They cannot cope with the various increased flows. This has

seriously hindered normal urban development. Many cities have to spend much capital on infrastructure construction.

The process of economic reform and opening to the outside world in the last 15 years has greatly stimulated urban development in China. There is both pleasure and sadness in this process. It is certain that both pleasure and sadness are the reflection of development and that urban planning will play an important role in resolving these recently emerging problems.

URBAN PLANNING IN CHINA MUST BE SUITABLE FOR THE SOCIALIST MARKET ECONOMIC SYSTEM

It was clarified in the 14th National Congress of Chinese Communist Party that the aim of China's economic reform was to set up the socialist market economic system and to promote the basic role of the market under the national macroscopic adjustment and control in the distribution of natural resources⁵. The adjustment of the market will greatly increase, whilst direct plans will greatly decrease, so step by step, as the carriers of various economic activities, cities will run according to the market laws. Under this condition, the principles like "The national economic plan is the foundation of urban planning" and "urban planning is one of the particular contents of the national economic plan" will lose their practical meanings and the old urban planning model of "determining the function of a city on the basis of national plans and allocating urban land-use on the basis of planned projects" will be out of date. These questions are now being discussed widely, such as how China's urban planning fits the systematic change from planned economy to the market economy and how to enhance the leading role of urban planning in urban development and the adjustment and controlling role in the spatial allocation of all the projects in the cities, so that urban planning can stimulate urban development⁶. In order to achieve the aim of planning and building modern cities for China in the 21st century, we think the following concepts must be emphasized or renewed under the new condition:

Concept of the Market Economy

We now must learn the system of a market economy, research and know its direct and indirect influence, and also its positive and negative influence. The socialist market economy must have a perfect macroscopic system of adjustment and control, in order to lead the national economy to develop harmoniously, rapidly, constantly and soundly and to promote the progress of the whole society. We think that urban planning is one of the important

parts of the administrative macroscopic adjustment and control systems, so urban planning should not be weakened but should be strengthened, and the tasks of planners should not be reduced but should be increased!

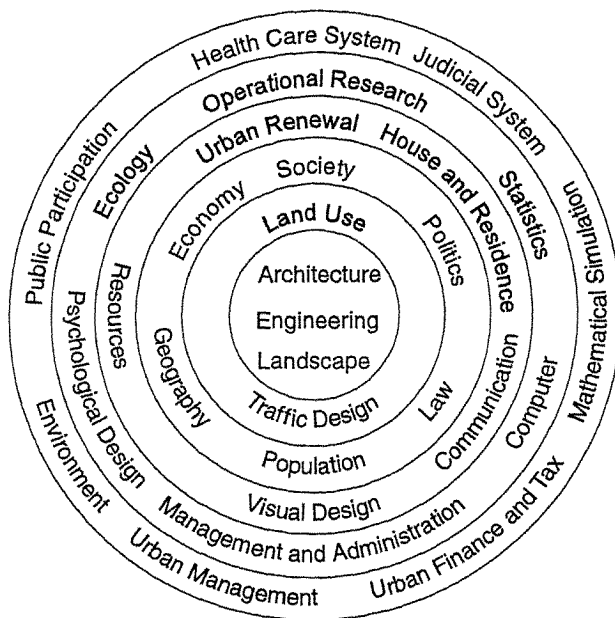
It was decided to carry out the reform of the price system at the Third Meeting of the 14th National Congress of Chinese Communist Party, to set up the market price system and to promote the formation of the commodity market and the modernization of the commodity circulation field; the most important is to form and develop the markets of finance, labour force, real estate, technology and information⁷. It is clear that urban planning must serve the establishments of the above-mentioned markets. For example, strengthening the conception of urban land value theory, adjusting the land spatial structure and development intensity according to the land price levels. In order to adjust the sale and transfer of land-use, and the fast growth of urban real estate, urban planning must serve the construction in advance. As for district planning and detailed planning, the planning of the central district, particularly the CBD, must be emphasized, so as to lead comprehensive land development through planning and improve the urban market system. At the same time, enough attention should be paid to the planning of the mixed areas of rural and urban land-use in order to fit the demand of rapid urban spread.

With the formation of the market economy, the origins of funds for urban construction will not probably be direct planned allocation but they will instead be revenue from land-use, land sale, land transfer, house sale, and the fees for urban infrastructure use. The change of the origins of funding will definitely change the contents and ways of urban planning. Urban planners must analyse the balance of funding in the course of urban development and construction with the use of cost-benefit analysis and input-output analysis for large construction projects. The old planning standard (“thousand-people-index”) principle of allocating land will probably be replaced by the new balance of funding principle.

Concept of Comprehension

It is well known that original urban planning was a discipline closely associated with architecture, real estate administration and engineering. It was based on design, emphasizing engineering technology, architecture, art and other physical techniques. But with the social, economic and urban development, the contents and involved disciplines of urban planning have expanded rapidly⁸ (Figure 10.6), because a modern city itself is a complicated and comprehensive object, and its basic elements are not

Figure 10.6 Expansion of Urban Planning Contents



gathered together disorderly but combined organically. Thus if we want to know and resolve one urban problem, we must put it in the proper context of the city, analyse it comprehensively and research all the involved elements, otherwise we cannot avoid making mistakes. In the course of the preparation of the old urban plan, the so-called “blueprint of urban development”, the social and economic development of the city, and the regional and environmental elements were not researched comprehensively, therefore the directing role of the blueprint is questionable. Under the condition of planned economy, the planning department sets out projects, while urban planners allocate land for these projects. The separation between the plan making process and plan implementation has hindered the implementation of urban plans for a long time. Under the market economy, the determination of projects will be more complicated. If urban planners do not research the social and economic problems, do not involve in the determination and decision of site, and do not put forward the reasonable opinions according to the comprehensive situations grasped by the planning department, the city will be in a consistent passive position!

In fact, at the early beginning of this century, it was undoubted in the West that urban planning was comprehensive. The president of Columbia University in the United States of America once pointed out in 1929 that

urban planning was not a special field for any single discipline, it was a work involving many disciplines, including natural sciences and social sciences. If urban planning is considered as a single discipline, it must be one-sided, limited, unfit and unpractical only when the ultimate state of a city had been known, urban planning could be a single-discipline⁹.

But in the 1970s, some planners in China refuted this. "Social economic problems should be analysed, but this is not our planner's task, and we also do not have the capability to do it". In the workshop on urban planning education held in Zhongshan University in 1983, although most of the representatives acknowledged that urban planning was interdisciplinary and comprehensive, there were still some scholars saying that China's urbanization level was low then, the main problems of urban planning were those involved in architecture and engineer, so only the planners starting from architecture play the leading role in the stage of urban planning while the others play minor roles¹⁰. Until 1992, some planners still thought that "urban planning is the planning of land-use and the allocation of architecture space and physical environment, the key points of urban planning in China were still land-use, architecture and engineer". They thought that this was with the actual situation of China which was different from that of western countries¹¹. All these thoughts are understandable and to some extent reasonable, because these planners start from architecture and engineering and urban problems were indeed comparatively simple on account of the separation between economic plan and urban planning. We believe it will be popularly admitted that urban planning is interdisciplinary and comprehensive, as urban problems are becoming more complex and varies. What should be emphasized is that the nature of multi-disciplinary approach is not for a single planner but for all the staff or the work of urban planning.

Concept of Movement

This is not a new question either. Modern cities, particularly large cities and medium cities, are huge developing systems with high frequency and intensity. This feature has become clearer and clearer since the economic reform. It can be forecasted that this feature will be more remarkable as the market-oriented economy develops in the future. So static urban planning based on static concepts will be conflicting with the present development of cities.

Starting from the idea of movement, we should not excessively emphasize that urban planning is an effect but a process. An urban planning based on legal procedures should certainly be relatively static, it can not be

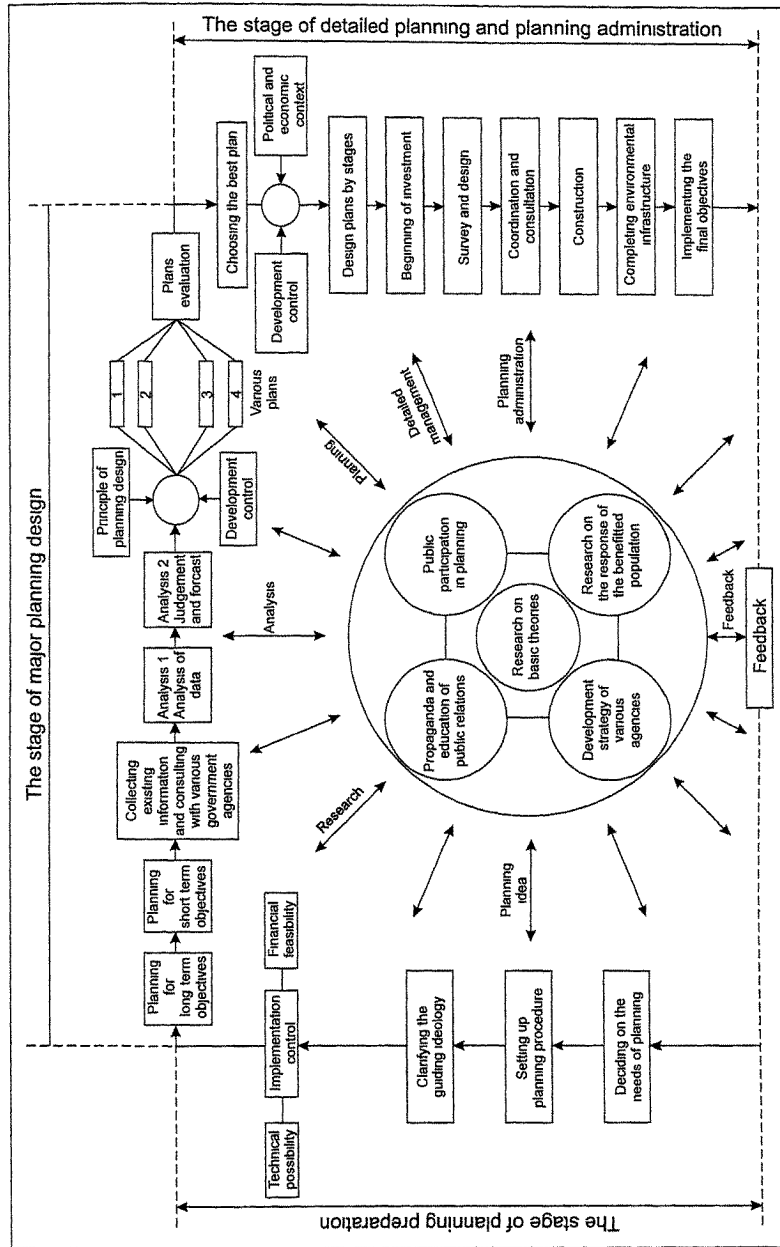
changed freely by anybody. But in modern time, with the great increase of information and changeable elements, the capability of governmental control becomes weaker, a wise investor will change his plan of investment and development at any time when there is any change in the market. The external condition forces us to adjust our plans in order to suit the changing situation and give best play to the directing role of urban planning.

On the basis of above-mentioned ideas, more and more planners have recognized the importance of planning administration, some of them even think that planning administration is a part of planning itself. To guarantee the efficiency of planning, consistent supervision is necessary. Supervision to the implementation of projects becomes an important process of planning and various feedback information, such as new materials for planning's adjustment, are accepted in planning itself. So we can change and adjust urban planning according to the new conditions at any time. Feedback is a social approach of testing policies and behaviour (Figure 10.7). In this process, planners have no time to rest!

In regard to the concept of movement, planners are often advised to carry out flexible planning. The plan can be changed with the change in change socio-economic environment. This is the art in development and planning. Whether this can be achieved depends on the combination of the actual situation of each city with the planners' knowledge. We think that this flexibility is not only reflected in planning in providing land to meet the needs of different land-uses in advance, but also in reacting to the change of function and structure within it. In order to increase planning flexibility, urban planners should gradually set up a planning information system, research in advance the operation of the market-oriented economy, the trend of social economic development, and the influence of regional development to urban development.

The concept of movement is the concept of development. All cities, large or small, must face the questions of both development and control. The previous one-sided emphasis of control of large cities was not reasonable. Urban planning should make a good condition and seek a better environment for the future urban development. Development control is a remedial and preventive way, while to industries, it is obstructive. Guiding development is better than development control in promoting urban development. If the concept of development can be really accepted in urban planning, the relation between urban planning and the actual society will be improved greatly.

Figure 10.7 Process of Urban Planning Work



Concept of Law

In China, the society has been ruled based on leader's ideas and administration for a long time. As the socialist market-oriented economy develops, a lot of investors hunting profits will take part in the market competition and the market law are replacing administrative control. Urban planners must balance the relations between investors' short term profits and the social long term interests, interests between different owners, or between few owners and the public, in order to keep the city operate coordinately. So the system of being ruled by human must be replaced by that of ruling by law, we should balance all the people's interests and guarantee their rights according to laws. At the same time, we should also achieve the spatial distribution and other goals and objectives specified in urban planning in order to decrease substantially the negative effects caused by the market competition.

In the previous urban planning, there was scarce of public participation, the main reason for this was that there was only state owned economy, the family houses were allocated by the government, the public education level was low, the public could only get little information, so they had no interest to participate in urban planning. With the implementation of economic reform, the development of the market-oriented economy, the change in the system of ownership, and the improvement of public communication, public participation will be increased. Urban planning also needs public participation to make itself practical and avoid the decision maker's one-side subjective wiliness. But it must be seen that without exception the public participate in urban planning for their own interests, so there must appear a lot of conflicts between some single person's or group's short term interest and all people's long term interests. Urban planners must resolve all these conflicts according to fact, law and their own knowledge, through necessary administrative ways. So the more developed the market-oriented economy, the more the public participate in urban planning, the stronger the conception of law should be.

Concept of 'Human Being is the Main Component of a City'

Here we ask a simple question, "For whom do we plan for?" Both the physical planning based on architecture and design and the social economic planning must answer this question. It has been well admitted that human being is the main component of a city. The essence of a city is a settlement of human life and production. The ultimate aim of urban planning is to

produce a good urban environment to meet people's ever increasing and changing material and spiritual needs.

One of the characteristics of the present and future urban residents is their remarkable difference. This difference is not only reflected in the age, sex, race, education, occupation and position. Even within the same group, there exists differences, whether in personal value conceptions, hobbies and habits, ways of living, or in the choice of ways and contents of studying, working and recreation. In addition, such differences will increase as the society advances. Urban planning must meet the needs of these differences in urban development.

Another characteristic of present and future urban residents is their large mobility. This is not only reflected in the population mobility and migration among cities and within a city, but also in the rise of going-out frequency, particularly the rise of going-out not for studying and working. Urban planning must produce suitable spaces outside for various persons, coupled with convenient, rapid and comfortable transportation.

In order to serve human beings, we must make the living space retain special features suitable for the residents there. If urban planners only pursue for economic effects but ignore social and environmental effects under intense market competition, a city will be planned and changed into a city without any special construction, symbol or shape, and this city will lose its vitality and individual character. Then neither can this city make people living there have the feeling of being distinguished from others, comfortable and congenial, nor can it give foreigners deep impression. So in the eyes of modern people, this kind of city will be insignificant.

The serving objects of China's urban planning are the present and future Chinese. Most of the cities in China have a long history and cultural habits. If we copy mechanically the Western models in disregard of China's specific conditions and Chinese cultural habits, the effects will run in the opposite direction from our purpose. This is what a planner should try hard to avoid.

URBAN PLANNING EDUCATION MUST BE GEARED TO URBAN DEVELOPMENT AND THE CHANGE OF URBAN PLANNING

In the last 10 years, remarkable changes have taken place in China's urban planning education. In order to meet the need of urban development to planning talents, more urban planning special fields have been set up and

the number of training planners has been enlarged; not only did lots of engineering colleges restore the old, or set-up new special fields of urban planning, but also some comprehensive universities set up the special fields of urban and regional planning based on economic geography. To meet the need for different levels of planning talents, many universities and colleges have both undergraduate and vocational students studying urban planning, many universities have also started training master and doctor students on urban planning, some specific universities only for grown-ups began to teach urban planning knowledge by correspondence or in evening schools; to suit the comprehension of urban planning, urban planning majors in engineering colleges began to learn subjects like regional planning and urban geography, etc, in order to increase the students' social economic knowledge; planning majors on science started accepting the knowledge on architecture and engineering, in order to strengthen the students' practical abilities.

But compared with urban development and the transition of urban planning, planning education still lags behind. In order to promote urban development and planning transition, planning education should be given priority to its development, so that enough planning talents can be trained for the 21st century.

Set Up A Large Scope Education System

Urban planning education is not only for training planners, but also for widely popularizing planning knowledge of different levels to investors, decision-makers and the public through various ways, so that they can understand planning, correctly participate in planning, cooperate in planning on their own initiative, and the interests of individual person or group can obey the interests of the public, this can ensure the successful implementation of urban planning. To accomplish this task, the universities, the planning departments and all the planners have a responsibility!

Train More Planners Through Enlarging the Size of Planners Training Programme

New cities have been appearing, the sizes of cities have been enlarged, the contents of urban planning have been increased, so present planning staff can not meet the demand of these changes in absolute numbers. If we suppose that per 10 thousand urban residents there is one planner and we have 3.5 billion urban population now, we need 35 thousand urban planners, until 2010 when urban population will increase by 5.5 billion, then urban planners will increase by 60 thousand, there will be 3,600 new planners per year. Because of this rapidly growing need of urban planners, the scope of

planners' training must be enlarged. Enlarging the training scope should mostly focus upon tapping the potential of existing planning schools or special fields, according to their facts, properly enlarge their training size and strengthen their efficiency. From the need of discipline distribution, more planning special fields should be established in disciplines besides architecture, engineering and geography. From the need of regional distribution, we should establish more urban planning schools and special fields in regions where there are still no planning schools or special fields.

Train Planners in More Disciplines

Because of its comprehensiveness, urban planning needs the participation of many disciplines and needs many disciplines to train planners so as to improve the structure of the planner staff. We can often see planners in a planning department who are from different fields, some are planning majors, whilst others are computer majors. The planning majors do not know how to use computers, whilst the computer majors do not know how to do planning. If they do not have a common language for necessary communication, then they cannot work properly.

From the 1970s to the 1980s, there were three disciplines of urban planning specialization - in architecture departments of engineering colleges or universities, in architecture schools, and in economic geography in comprehensive universities. All of them were trained planners. The former two have more students than the latter. The division of them is that urban planning specialization in architecture and engineering focused on urban design, stressed detailed planning and understood comprehensive planning; urban planning specialization in architecture department focused on comprehensive planning, stressed detailed planning, and understood regional planning; urban planning specialization in economic geography focused on comprehensive planning, stressed regional planning and understood detailed planning. This division conformed to the actual situation at that time and was widely agreed by most of the planners. But with the need of urban development and urban planning, planning has changed much. On the one hand, the former two disciplines introduced some economic geography courses and increased some subjects besides architecture and engineering, while urban planning specialization in economic geography also introduced some courses on architecture and engineering so as to increase the ability of the students in planning practice. The name of some specializations was also changed into economic geography and urban and regional planning. Some have even changed wholly into urban and regional planning. On the other hand, because of the need for practical work, the

former two accepted some tasks of regional planning, while the latter accepted some detailed planning too. Thus, the difference among the three disciplines of urban planning is being reduced.

We think that the disciplines involved in training planners are still too few to meet the need of urban planning. Besides the existing three special disciplines, some disciplines such as sociology, economics, administration, law and computers, selective courses on urban planning should be taught. Some of them can even establish urban planning specializations based on the needs of the nation. The existing three special disciplines should also add courses like planning law and public administration, etc. Computers should be popularly used in urban planning. What should be emphasized is that every discipline should keep its special features in training planners.

Discussion on “Special Talent or the All-Round Planner”

The purpose of planning education is to train planners for the future. Since Harvey S. Perloff said that planners were all-round talents with one special ability, there have been a lot of discussions about special talent or all-round talent. In the workshop on urban planning education held in Zhongshan University, Guangzhou, in 1993, most scholars approved the idea of “training all-round planners with one special ability”. They considered that all-round talent is not a planner that can solve all problems, but it is a planner with wide knowledge and a certain ability for comprehensive analysis and who is able to adjust easily to urban planning.

It is impossible to master all the disciplines involved in urban planning, but a planner can master at least one discipline and have a special ability. At the same time, he must have enough knowledge on how the other parts influence urban planning, so as to cooperate with the other specialists and avoid making mistakes on account of the limitation of his knowledge¹².

According to the idea of the Technology Institute of Massachusetts, the United States of America, the special talents can be divided by functions (for example, housing, transportation, land-use and health care, etc), by regional scope (zone planning, urban planning and regional planning), also by the roles of planners in planning (administrator, designer, adjustor, defender, appreciator and futurist, etc). Although the dividing ways for specialists in different countries and time are different, this train of thought is at least desirable.

In order to train planners into all-round talents with a special ability, every discipline should have their own major courses consisting of basic

courses and special basic courses, which include basic theories, concepts, common methods and skills. Many groups of selective courses should be taught so that students can choose suitable courses according to their own interests. The major courses can be taught by many disciplines, while the special courses, such as housing, transportation, public facilities and environment, etc, can be taught through an inter-disciplines approach. The main problem is the connection and overlap of major courses and special courses. For example, students taking courses of physical geography, Chinese geography, etc, may not know the relation of these courses to the special courses. To resolve this problem, what is important is the comprehension of the teachers' knowledge, the specialty of the courses and the students' learning knowledge. Because some of the planning teachers are from a certain single discipline, it is difficult to bring about infiltration among disciplines by teaching. So what the students learn is the mechanical dissemination of knowledge of some disciplines, but not comprehensive knowledge of inter-disciplines.

Because of the need for organization of courses and different teachers' special fields, the teaching of each subject is independent, the whole courses are the assemblage of involved subjects, which are overlapping. Sometimes this overlap is very serious, for example, a theory is taught in the course of urban planning, the course of regional planning, also in the course of urban geography. Some subjects are independent, there is little connection between them, and the teachers seldom prepare for the courses together to link-up to the teaching principles, so students often feel confused about the direction, aim and operation of the special field. So we must strengthen the systematisation of the courses' contents, around one special problem or practical task, through researching, imitating and practising, comprehensively teaching and using theories, methods, skills and techniques, so that students can link-up and grasp all the knowledge of different disciplines.

Train Planners in Different Levels

Planning talents should not only be from different disciplines, but also be in different levels. The first level talents are the vocational students. For 2-3 years, they study the basic knowledge of urban development and urban planning, practise drawing, presenting or other special skills, and after graduation they can go in for the concrete skilful work in large cities, or work in the planning administrative departments in small cities. The second level (also the main level talents) are the undergraduates. The education of this level is for training the advanced engineers and technicians on

comprehensive planning, detailed planning and planning administration, or the special talents on one part of urban construction planning. The third level talents are graduates. Because the all-round talents with one special ability can not be finish training in the four-year undergraduate education, they must be kept in training in graduate education or practical work or accept the following education after graduating. Undergraduates on economics, sociology, geography and computer science can all study urban planning for master degrees. Whilst undergraduates on urban planning can also study economics, sociology, geography, law and computer science for master degrees. Except for these, the system of major and minor and the system of double degrees can be adopted in order to train more inter-disciplined urban planners.

The number structure of the planning talents in 3 different levels should be like a shape of a pyramid; the bottom of the pyramid consists of planners from different disciplines and the top of the pyramid consists of inter-disciplined planners or all-round planners.

Emphasize and Improve the Practical Environment of Planning Education

Practice is very important to urban planning education. It is important to strengthen the quality of the planning practice in training the students' abilities of collecting and analysing data and solving practical problems. Working out and comparing plans in practice are the key parts in training students' creativity. The training of urban planning practice should use all the knowledge that is taught in the curriculum. At present, the general practice is that students collect data and the teachers work out of the plans are undesirable. Facing the problem of the lack of funds in universities, planning practice is often connected with the production task. It is helpful for training students to do some real practical work, but we must prevent the negative effect of market-oriented economy. We cannot excessively emphasize the economic results and pay too much attention on the fast speed in finishing the planning tasks and overlook the training needs of students on such projects.

CONCLUSION

China's economic reform and open door policy has given strong impetus to urban development and the reform of urban planning and planning education. Triggered by economic reform and the open door policy, China has stepped into a brand new period of urban development. It has obtained some

achievements in the transition of urban planning and planning education. But, after experiencing the first two systematic changes from “socialist planned economy” to “planned and assisted by market-oriented economy” to “planned commodity economy” to “socialist market-oriented economy”, “it will be a long lasting process to establish the socialist market orienting economy in China, and it will be a complicated, systematic, great social project”¹³. We can predict that it will also be a long lasting process to set up a good operating system of urban planning and planning education that can meet the needs of the new socialist market-oriented economy in China. It will need the cooperation and hard work from all parts of the society and various disciplines.

Notes

1. HAMER, Andrew (1993), “Urbanization in China: Retrospect and Prospect”, Workshop on China’s Urban Development, Hong Kong, November 1993.
2. *Statistical Yearbook of China’s Cities* (1985, 1992).
3. Urban population rank-size structure in China: small city, 100-200 thousand; middle size city, 200-500 thousand; large city, 500 thousand-1 million; super-large city, more than 1 million.
4. Easter part, 12 provinces: Beijing, Tianjin, Liaoning, Hebei, Shandong, Jiangshu, Zhejiang, Fujian, Guangdong, Guangxi, Hainan; Central part, 9 provinces: Heilongjiang, Jilin, Neimenggu, Shanxi, Henan, Hubei, Hunan, Anhui, Jiangxi; Western part, 9 provinces: Shanxi, Ganshu, Ningxia, Xinjiang, Qinghai, Xizhang, Sichuan, Yunnan, Guizhou.
5. “Some Decisions of the Central Committee of Chinese Communist Party about Establishing the System of Socialist Market Economy”, *People’s Daily*, 17 November 1993.
6. ZHAO, Shixiu (1992), “Changing Urban Planning Conception, Providing Advanced and Perfect Service, and Promoting the Harmonious Development of the Economic Reform and Various Constructions”, *City Planning Review*, Vol 4, 1992.
7. See 1.

8. ZHANG, Shong (1992), "My Views about the Basic Theories on China's Urban Planning", *City Planning Review*, Vol 5, 1992.
9. GUO, Yanhong (1984), "Several Questions on Urban Planning", *Urban Planning Research*, Vol 2, 1984.
10. ZHENG, Huaizheng (1984), "New Tendency of Urban Planning Education", *Urban Planning Research*, Vol 2, 1984
11. See 5.
12. XU, Xueqiang (1984), "Encourage More Disciplines to Participate in Research on City and to Train Planning Talents", *Urban Planning Research*, Vol 2, 1984.
13. "Quickening the Steps of Reform, Opening and Modernization Construction, striving for Greater Victory of the Socialist Cause with China's Special Style", *Compilation of Documents in the 14th National Conference of Chinese Communist Party*.

11

The Problems and Corresponding Actions in China's Urban Planning Education Since the Economic Reform and Open Door Policies in 1978

Xiaopei YAN and Desheng XUE

INTRODUCTION

Good urban planning depends on good planners and good planners depend on good planning education. Urban planning education is influenced by urban planning, while urban planning is influenced by the economic system, development level and social need. The economic reform since the end of the 1970s has resulted in the rapid social and economic growth in China and as the spatial carriers of social economy, cities have achieved remarkable development too. Urban planning, from being denied to being approved, has also experienced a difficult course and remarkable change during this time. The departments of research, education, design and administration on urban planning have been rapidly restored or improved and urban planning work has become popular all over the country. The recently restored planning education has trained lots of planners for planning departments. But with the launch of the reform and external opening-up policy, and the determination of socialist market-oriented economic system, China's planning is facing more and more problems in guiding ideas, theories, methods and skills. So the reform of planning education is urgently needed.

THE MAIN PROBLEMS IN CHINA'S PLANNING EDUCATION

Planning Education Lies Behind the Demands of Urban Development and Urban Planning Work

It was a long time before the economic reform that China adopted the ex-Soviet Union's planning education system under a planned economy. In the

last 10 years, three kinds of planning special fields have been formed, based on architecture and engineering, or economic geography and in order to meet the need for more planners, the training size has been enlarged, the training levels have been increased and more courses of other disciplines have been introduced into planning education. But planning education cannot still completely step out of the old system characterized by a planned economy. On the other hand, China's cities have been gradually run according to the rules of a market-oriented economy. The rapid urban development and fast transition of urban planning is giving a higher demand for both planners' quantity and quality. So, looking at the whole condition, planning education lies behind urban development and urban planning.

The Scope of Planning Education is Too Narrow

Today's planning education in China is still only for training planners; planning education for the public is still quite undeveloped, the result is that most of the leaders and common citizens have little knowledge on urban planning at all. Most of the leaders do not have enough planning knowledge. In the course of decision-making in urban planning and construction, they often depend more on their own wishful thinking and personal experience than the principles of urban planning. This has objectively caused many faults in urban construction. Many leaders in various municipal departments can not participate in urban planning positively. Even when they reluctantly take part in urban planning, they can not usually deal correctly with the relations of the interests between their own departments and that of the whole city, they often pay more attention on their partial interests than the whole. This has seriously decreased the efficiency of urban planning and brought many obstructions for the formulation of urban planning. In the previous years, although some urban planning training classes for different level leaders have been held and this has helped to enrich these leaders' planning knowledge, this can still not completely change the situation. Secondly, some investors do not have enough planning knowledge. Since the economic reform in China, some private investment (aside from national and collective investment) has been put into urban construction. Influenced by their main purpose of courting profit, these private investors are eager to participate in urban planning. But having little planning knowledge, they can not achieve this aim factually and appropriately. Thirdly, planning knowledge is still not popular in common citizens, although people have gradually paid attention to urban planning since national urban planning was promulgated in 1990. It is still a long way off that the common citizens participate urban planning.

The Contents and Ways of Planning Education Are Too Old

This is mainly reflected in the following ways: Firstly, the books on planning are old and discuss the introduction of early physical planning; there are no necessary introductions to new theories, methods, skills and cases of urban planning. The program's curriculum is partial to training of planning skills, while being scarce of studies on the knowledge of value standards, planning concepts, sociology, economics, history, law, policy and management, etc. Secondly, there is little inter-discipline interchange in the courses' organization. Although each existing planning special field has increased the number of some courses of other disciplines, the choice of the courses is based on the teachers' knowledge, background and ability, but not on the improvement of the course structure, which results in the organization of the courses being unsystematic. Thirdly, there are few links between the teaching of different levels of planning and design like master planning, zone planning and urban design. So students do not have a complete idea of the whole planning process and they can neither give a unified arrangement to all these planning and design nor adjust their relations in the practical planning work. Fourthly, China's traditional planning teaching is personal and is mostly done in the classroom. Although some planning practices have been arranged in the education plans, because of the time for practices is too short, and the planning practices are often arranged with some tasks, the main aim of practices is often changed to finish the tasks as soon as possible but not training students' practical abilities. So, students have few chances to take part in practical planning work and some of them are not competent in practical planning after graduation.

The Teachers' Knowledge is Outdated and the Teaching Staff is Not Stable

This is a popular problem in universities in China today. The existing planning teaching staff was set up under the planned economy, the previous closed-door policy slowed down the updating of teachers' knowledge. Faced with new situations of rapid social economic development under the wave of economic reform, the old planning knowledge does not have a role any longer, so it hinders the training of qualified planning talents. Greatly pushed by the market-oriented economy, people's value conception changes. The phenomenon that physical labour can earn more income than the mental labour and the relaxation of the talent mobility policy have led to the large decrease in teachers, particularly teachers of architecture and planning in universities. So, the teacher's comprehensive level declined and there have appeared some cavities of young or middle-aged teachers in the whole staff.

THE ACTIONS OF URBAN PLANNING EDUCATION REFORM IN CHINA

Urban planning education is a complicated system touching upon lots of areas, so its reform is also a systematic project and a long-lasting task. From now on, the reform of planning education should be conducted in accordance with the present problems, so as to adapt to the national market-oriented economic system, the need of urban development and the change of urban planning.

Overall and Continuous Research on Urban Development and Urban Planning Under the Market-Oriented Economic System

In order to change the situation whereby planning education lies behind the transition of urban planning and to train qualified planners for the future, urban planning educators must watch closely the newest development of the cities and planning, so that they are able to change the contents of planning curriculae according to the new problems and phenomena, absorb new thoughts, knowledge, and skills, particularly the planning theories and methods under a market-oriented economic system, into the planning education and make sure it catches up with the changes of urban planning work.

Expand the Training Program to Train More and Better Planners

It is predicted that the need for urban planners will increase about 4 thousand per year in the following 20 years, while some present planners will not be able to meet the demands of new urban planning. So, on the one hand, as the present training size is continually enlarged, new planning training points must be increased and the comprehensive planning university consisting of many disciplines can be established at a suitable time in the future. On the other hand, except for the special training of planners in planning schools or colleges, more education venues like night college, through a correspondence or journal course, holding planning training classes for the planners on the job, should be adopted. Not only can these ways be helpful for increasing the quantity of planners but also for training planners at different levels, and improving the structure and quality of the planning staff.

Widen the Scope and Increase the Levels of Planning Education

Urban planning relates to almost all sides of a city, and it needs cooperation and participation of all these sides. In the light of the level of planning knowledge in China, we must firstly introduce urban planning through

publicity, so as to gradually make people realize the importance of urban planning, help them learn planning concepts. Secondly, we should also widely popularize planning knowledge, even put some necessary planning knowledge into compulsory education, so as to train the public with the abilities to participate in urban planning. Thirdly, we should develop some special planning education for the municipal leaders, private investors and social groups. It needs hard work from all the people to develop the public planning education.

Enrich the Teaching Contents, Strengthen the Communication Between Different Disciplines and Set Up Core Courses

In the light of the present situation that planning education contents are too old to the development of urban planning, we should increase some courses such as value standards, planning concepts, sociology, economics, history, law, policy and management, etc. This objectively demands that planners are trained in more disciplines. In order to guarantee the planners from different disciplines to communicate, understand and cooperate with each other, the communication between different disciplines should be greatly strengthened, particularly the communication between the two existing planning special fields of architecture and economic geography. On the basis of this communication, the core courses for all the planning special fields in China should be established and they should include the following items: the conception and theories, methods and skills, practices and planning work, etc. In the near future, a series of high quality text books on all the above-mentioned core courses should be edited and published to better teach the subject of planning. The core courses should be the same because they are the basis of communication between planners from different disciplines, whilst in the organization of the other courses, different disciplines should teach different contents according to their own special characters.

Improve Teaching Methods and Strengthen Planning Practice

Under today's new situation, the needs of urban planning becomes the final criterion of training planners. We must connect planning education with practical planning work and absorb feed-back information from it. So, the traditional close teaching method must be completely changed and planning practices must be strengthened. Firstly, we can invite some experienced planners on the job to teach some courses to the students. Secondly, we can increase the simulated planning work. Thirdly, on the basis of teaching inside school, we can bring students to participate in some practical planning tasks, or we can appoints students to the urban planning departments for a

period of time before the graduation, so that they can have a chance to take part in practical planning as they finish their thesis or designs.

Train More Talented Planners in Planning Administration and Heighten the Quality of Planning Administration Staff

Planning administration is one of the important parts of urban planning. Most of the planning administrators now in China are common administrators with little planning knowledge, although a few of them are urban planning majors. Because of the difference between planning and planning administration, they are not able to fulfill the task in a short space of time. This is an important reason for the dislocation of planning administration from urban planning. In the future, according to the speciality of planning administration, special administrators, different from planners but closely connected with urban planning should be trained.

Strengthen the Laws Connected with Planning

Creating and strengthening the laws involved can not only help to guarantee urban planning and construction, but can also guarantee the proper social position of planners. It is also an important way to promote the planning education reform. In the future the special laws about planning education should also be worked out, in order to lead and restrain the reform and change of planning education.

Improve the Involved Social Supervising System in Planning Education

To establish and guarantee that qualified planning schools and planning education exist, the following strict social supervising ways should be adopted: The first, to establish the system of planners' registration, so that the teaching work can be conducted on the basis of the registration standard. The second, to set up the national appraising committee for urban planning schools or special fields for approving the foundation of a new planning school, appraising the teaching contents, the teacher staff, teaching ways and effects regularly, so as to guarantee the quality of all the planning schools and training points. The third, to establish a social academic communication organization on urban planning, like the planning institutions in western countries, so as to push the popular communication among planners and feed the new problems, new contents and new thoughts in urban planning back to planning education on time.

Develop the Research on Planning Education

The research on urban planning education is the basis for keeping its vitality, but now this is a weak point in China. In order to reinforce the depth and width of planning and promote its healthy development all the staff in different disciplines and departments of planning should be aroused to participate in this research work.

Avoid the Negative Effects of a Market-Oriented Economy, Establish Qualified and Stable Planning Teaching Staff

Planning teachers are the essence of planners' spirit. The teachers' quality directly influences planners' quality. One of the important sides of urban planning education reform in China is to strengthen the construction of the teacher staff. The first is stabilizing the number of the teaching staff. This depends on the actual action of "heightening teacher's position and increasing teacher's income" in the society. The second is improving teachers' quality through continuous studying and refreshing of their knowledge. Only by reform, can a qualified planning teaching staff be set up and this staff can maintain a perfect knowledge structure and age structure.

THREE MAIN QUESTIONS IN THE COURSE OF PLANNING EDUCATION REFORM IN CHINA

We think that we should pay enough attention to the following three questions in the course of planning education reform in our country:

Combine Drawing on Other Countries' Advanced Experience with Conforming to China's Reality

The developing level of urban planning and planning education in a country has close relations with its level of social economic development. The western countries, even some Asian industrialized countries, have got more advanced planning education than China, so in the course of establishing China's planning education system, the international advanced experience must be drawn on. For example, the advanced planning theories, methods and skills, are an important part of our opening-up policy in China. At the same time, the planning education in our country must have its own special characters, which suits China's particular situation and it must be helpful for training planners to not only master western planning theories and skills but also understand China's reality.

Combine Inheriting the Old System with Bring Forth A New One

China's urban planning has a long history during which there have evolved many theories and ways fit for China's situation. The planning practice in the more than forty years since the foundation of the People's Republic of China has also brought us many worthwhile planning thoughts, such as the rules of "jointly get rich" and "give full play to the government's adjustment function to achieve the rational distribution of production", etc. These rules have been well manifested in the old planning education in China. In the course of future planning education reform, we must firstly inherit these worthwhile thoughts, and then bring a new planning education system fit for China's new market-oriented economy.

Combine Meeting the Recent Need for Planners with Considering the Future Development of the Discipline Itself

"It needs ten years to raise a tree, while one hundred years to train a talent"; planning education is a matter of fundamental importance for generations to come. But under the market-oriented economy, people often tend to hunt profits, so the reform of planning education in China should not only meet the new needs of planners, but also give consideration to the future development of the discipline itself. For example, in the arrangement of the program's curriculum, we should not only suit recent practical planning work, but also pay attention to the long-term theoretical research. So urban planners must carefully work out a good planning system for the reform of planning education.

CONCLUSION

The reform of planning education in China is a long lasting, great and systematic project. It cannot be finished only by the universities and planning departments, besides the hard work of the planning and educating circles. It is necessary to obtain the support from all the society, including the government and all the people. The economic reform and external opening-up, the social economic development, urban development and the transition of urban planning in China, are now in the course of advancing. Corresponding to this process, the reform of planning education will also be a long lasting process.

12

China's Urban Planning and Urban Planning Education

Bingzhao CHEN

RECENT PROBLEMS IN CHINA'S URBAN PLANNING

Renovation of Urban Planning Model Required by Fast Economic Growth

The traditional planning model is facing a challenge, owing to the rapid urban development precipitated by fast economic growth. In the past, the general plan of a city was designed on a "20-year long-term and 5-year intermediate" basis. Even during the time when the economy was developing moderately, there were hidden problems in using this kind of model - a short-term practice with a long-term prospect. And now, many problems have cropped up, the main one being the more and more frequent revision of the general plans.

There are risks involved in the model of "a short-term practice with a long-term prospect". The reason is that quantitative development and an accumulation of things to a certain degree will lead to a qualitative leap. Twenty years does not seem to be short time for such a long-term plan. However, 20 years may be only a period of quantitative change for the development of city. Planners will usually overlook the qualitative change that is to happen. Once the quantitative accumulation brings forth the qualitative leap, planners will suddenly realize that the present urban structure, which has already been settled, will hinder a more rational layout of the city and the further development and modernization of the city. It is no use regretting; what they can do is make radical changes on the old structure.

The necessity of mapping out a long-term plan of urban development has been put forward through practice. While drawing up the plan, it is necessary to consider the prospects for a longer period, to put a larger area of space and a deeper inner space into perspective. Society, economy and resources have to be taken into account when considering the whole process of urbanization; maximum expansion of the urban area has to be predicted. On the basis of all these, the structural layout of the city can be mapped out strategically, which forms the guidelines for the general plan of the city as well as for the short-term urban development plan and district plans.

Inevitably, with the renovation of planning models, urban planners are expected to be well-informed about the regions, society and economy and to master the ways and means of systematic analysis and scientific prediction in strategic studies.

Renewal of Concepts and Contents of Urban Planning Required by the Transition of the Planned Economy to a Market-Oriented Economy

For a long time, the land utilized was distributed by municipal urban planning administration in accordance with the urban development scale and at a certain ratio of the total demand of land, in such a way as 100 seats are arranged for 100 attendants, each taking his proper seat. And the construction land for a project is allocated, free of charge, by the national planning administration after its approval of the project. All these reflect the concept of everything according to its plan.

Now, in the market-oriented economy, the land for construction is distributed through the market. Investments in construction are made in different ways; investors make their investments according to the market. Thus, the government, instead of focusing on its active job of planned distribution, is now engaged in the passive job of management and control. Now that land, upon entering the market, is characterized as a commodity, there should be the possibility for investors to choose among plots of land to invest in and the traditional model of “allocating each attendant a seat” is no longer appropriate. However, land is a unique commodity with the unique characteristic of space. Unlike other goods, the application of which makes no impact on other people except the buyer himself, neighbouring plots of land, because of their spacial connection, are sure to have either positive or negative effects on each other. The construction of infrastructures on neighbouring plots are binding on each other in time and space. Besides, the systematic arrangement and huge investment make it necessary for urban

infrastructures to be constructed in groups, in a systematic way and in good order. It is the government that should, through its management and control, guide the investors, diminish the negative efficiency, bring into full play the positive efficiency, protect the investors' profits and ensure the rational development of the land in the city.

In view of this, the planners must investigate the market, study the law of land price and understand the real estate business. They must, first of all, free themselves from the concept of a planned economy and seek a model of urban planning suitable for the rule of the market-oriented economy, that is, to give the developers many alternatives instead of "allocating only one seat for each attendant". The model, in line with the implementation and management of a plan, should guide and standardize the land market and a mechanism for land markets with fair competition should be established.

Accordingly, planners are supposed to study the policies, measures and relevant laws, make analysis and estimations with modern technology and establish land information systems, with a view to reinforcing management over urban planning and raising the efficiency of management.

Urgent Demand for Upgrading Urban Design by the Ever Acute Conflict Between the Quality and Quantity of Construction Resulting From Large-Scale Construction

Recent fast economic growth has pushed forward large-scale urban construction. There were once as many as 2000 development zones of various types all over the country, covering 1000 km² or so. And now around 500 development zones remain after rectification. Living quarters are erected on an average scale of one square meter per capita each year¹. The unprecedented high speed and large scale construction has provided planners with the greatest opportunities of practice. However, there is a great shortage of experienced and qualified planners. Even university undergraduates are appointed to make plans, while experienced planners, with heavy work loads and tight schedules, cannot give thorough consideration and meticulous thinking before a final plan is made. Consequently, though numerous plans have been mapped out for the large areas which are under construction in various cities throughout the country, there are not many satisfactory ones; only a few are original while most have borrowed ideas from others. The main reason is that there are not enough competent planners and designers, especially urban designers, to meet the needs of the present upsurge in construction.

Not much effort has been made on urban design research for general plans. Though experience has been accumulated in urban scene planning for some cities and provinces and preservation planning for historically and literarily well-known cities over the past years, no remarkable achievements have been made yet and these aspects and theories have not been systematized.

On the other hand, better effort has been made on urban design for detailed plans. Nevertheless, not enough attention has been paid to the integration of natural and human environments with the focus on people. Planners and architects often rely on their own preference rather than the residents' interests. Besides, they have conducted limited research on social psychology, culture, local features and public involvement.

It follows that urban planners should lay more emphasis on their understanding of the architectural environment and pay more attention to overall considerations.

Besides, more efforts should be made to study the environmental view with the application of CAD 3-dimensional animated drawing technology, which is a much better improvement on the traditional way of studying the model from a bird's eye view. It is also necessary to develop CAD softwares applicable to China's standard and requirements of planning and design. Other ways to solve the problem of the shortage of planners and designers are: staff training, popularization of CAD technology and the upgrading of design efficiency, etc.

URBAN PLANNING TEACHING PROGRAMS OF DIFFERENT ACADEMIC LEVELS AND VARIOUS TYPES REQUIRED

Ever since the implementation of the reform and open door policy, cities in China have been developing rapidly owing to the fast economic growth. Meanwhile, both the transition of the planned economy to a market-oriented economy and large-scale construction have brought forth a lot of new problems involved in the model, the contents and the quality of urban planning and design. Inevitably, urban planning education should be adapted to comply with all these developments.

One of the important features of the urban planning discipline is its comprehensiveness. Under the present situation, more emphasis should be laid on this feature; that is, to prospect even longer and further ahead and look even wider and deeper. Besides the basic knowledge of architecture and architectural engineering, urban planners are expected to acquire such

a wide range of knowledge as geography, sociology, economics, ecology, environmental engineering, behavior psychology, aesthetics, law, history and system engineering, before they are able to integrate all these elements for the complicated system of a municipality. With the renewed concepts and modern technology, as well as a wide range of knowledge, urban planners will be able to study comprehensively all the issues involved in urban planning, to analyse qualitatively and quantitatively, to make predictions, to study policies, measures and management regulations, to undertake physical planning, to make urban design plans and develop new technology, all of which constitute the so-called "knowledge explosion". It is really very demanding for a planner to acquire such a wide range yet very expertise knowledge. How can he fulfil such a goal?

Fortunately, a lot of interrelated courses, such as geography, divisional economics, management, and surveying have turned towards city planning. And the trend of the development of the urban planning discipline is towards merging all the above courses. The universities in China which offer urban planning programs can complement each other, each with its own distinguishing features of programs resulting from its background and strong points. Some offer only bachelor degree programs; some offer both undergraduate and postgraduate programs, while others offer the architecture program with a specialization in urban planning. And in their teaching, some universities lay emphasis on regional planning, some on master plans, while others on urban design. Thus, personnel specialized in different aspects of urban planning can be trained to meet the country's need. There is no need to demand a unified teaching program or requirements. At least, for the time being, it is complementarity not comparability that should be emphasized.

Another important feature of the urban planning discipline is its practicality. Though urban planning includes some basic theories like "futurology", the discipline basically belongs to applied sciences; it directly serves the society and economic construction. Thus, urban planning education should be closely related to a nation's economic construction. Unlike developed countries which are fully urbanized, our country, still at the stage of rapid urbanization, needs large numbers of competent urban planners who can undertake practical planning and at the same time those who can engage in research on urban planning.

The Department of Urban Planning in Tongji University, together with the Urban Planning and Architectural Designing Institution, the State Laboratory of Modern Urban Planning Technology of the University, each

with its own background and characteristics, are making joint efforts to develop undergraduate and postgraduate programs and strengthen continual education, thus forming a complete set of urban planning programs.

Of all the programs, emphasis should be on the bachelor degree program in order to meet the practical requirements of the present upsurge in our nation's urban construction. The bachelor degree program should focus on the basic training of practical urban planning with architecture and architectural engineering as its basis, supplemented with social economics. At the same time, attention should also be paid to broadening the students' knowledge by offering such courses as sociology, economics, system engineering, environmental ecology, behavior psychology, aesthetics, law, management and the application of modern technology, so that the graduates will be qualified to take up the job of practical urban planning and be well prepared for further qualifications.

The master degree program aims to broaden the students' knowledge in different fields as sociology, economics, law, management and modern technology, while the doctoral program emphasizes theoretical studies, research and development on the most advanced and most recent ideas.

As to continual education, the urban planning certificate program, offered at the request of the Ministry of Construction, is to give professional personnel systematic training. Another program offered also at the request of the Ministry of Construction is to renew the knowledge of the leading cadres in the field of urban planning. A series of continual education programs are established including bachelor's, master's and doctoral degree programs as well as those for professionals and leading cadres, thus making up a pyramid-like structure of personnel of different levels.

In retrospect of the last 40 years' urban planning education, we fully realize that urban planning education is closely related to national economic development. The big leap forward in 1958 witnessed the first golden age of urban planning. Instructors and students of the then Urban Planning Section of Tongji University travelled all over Zhejiang and Jiangxi Provinces, trying their best to help the residents there. However, the economic depression in the Sixties doomed urban planning education. With the reform and open door policy, the late Seventies saw a boost in the national economy and urban planning education once again began to face a bright future. In 1990, the "Urban Planning Act" was issued and began to be implemented and urban planning education has since established its standing by law. Now that urban planning is in great demand for socialist construction, there

are many opportunities for the urban planners to contribute their intelligence. Consequently, it is our responsibility to conduct a successful and flourishing urban planning education.

China's academic staff of urban planning programs must be well aware of the age they are in. Not only should they understand that the urban planning program with architecture and architectural engineering as its main component is still in great demand at present, but they should also realize the necessity of integrating the social economic disciplines in the program. Besides, great attention should be paid to the renewal of concepts, the application of modern technology, the integration of design and analysis and the combination of technique and theory.

Note

1. From Vice-Minister of Construction, Tan Qinglian's report entitled "Reinforcing Urban Planning Concept and Raising Planning Design Level", which was given at College of Architecture and Urban Planning of Tongji University in November 1993. The report will appear in *Urban Planning Forum* No. 2, 1994. (*in Chinese*)

13

Contemporary Urban Planning and Planning Education Problems in China

Wenxuan GU

INTRODUCTION

China has experienced a rapid growth of urbanization since the 1980s. There are nearly 30 cities, more than 900 townships and about 10 million new urban population every year. At the end of 1993, there was 333.5 million urban population announced officially in China. China has become one of the countries with the most urban population in the world. It is undoubted now that the urbanization of China will continue developing at a considerably rapid speed in the 1990s. It is estimated that the urban population of Mainland China will have amounted to about 400 million by the end of this century and more than 500 million or even 600 million before the middle of the next century. To meet the demands of the rapid development of urbanization, a large number of qualified planners are urgently needed, in order to serve the cause of the urban planning.

Chinese urban planning includes the working-out of plans and their implementation and management. It has made great progress since the promulgation and implementation of the *City Planning Act of the People's Republic of China* in 1990 and urban planning has since been richer in content and more coherent. An integrated urban planning series is being perfected for regional planning for the cities and towns system, the master planning of cities, including the planning of a variety of specialized fields for the whole city, sub-district planning, detailed control development planning to layout planning, etc.

URBAN PLANNING PROBLEMS IN CHINA

With the implementation of the reform and opening policies, the rapid development of a market economy system, the expansion of the scale of urban construction and the increasing of urban population, a good opportunity of development now lies ahead of urban planning and planning has overcome tremendous challenges as well. I think there would be three conspicuous problems in the practical work of urban planning.

The first is that many cities are facing the 21st century and seeking new space for development and trying to improve their positions in the regional market at home and abroad. There have been a lot of large cities getting on with similar works since Shanghai started developing Pudong to open a new space of more than 100 square kilometres for its own development and to try to resume its position of international business, trade and finance. Tianjin has planned to set up a new urban district of 70-100 square kilometres overlooking the sea around Dagang economic zone; Dalian has planned to develop a new urban district of 100 square kilometres, and to build a northern Hong Kong - New Dalian around Dayaowan economic and technical development zone; Qingdao has developed a new Qingdao across the seagulf around Huangdao economic development zone, also with an area of about 100 square kilometres; Wuhan is expanding towards the east and west along the Yangtze River to build a new industrial development zone and the Yangluo new port district with a very large area based on the balanced development of the three towns across the Yangtze River; Haerbin, located in the south bank of the Songhua River in Heilongjiang province, is also brewing towards the Northern bank of the River to set up a new urban district of about 100 square kilometres, in order to restore its position as an international city in North-east Asia. Also many medium and small-sized cities are seeking a new space of development just as the large cities are. Most of their scales have topped their previous ones.

Seeking the new breakthrough for urban development also shows that cities and towns at all levels are going in for all kinds of development zones in a big way. After purifying and rectifying, there are still more than 500 of all kinds of development zones approved by the State Council, province, autonomous region and municipality governments. This amount is almost equal to the numbers of cities (there were 517 cities in the Mainland by the end of 1992). As a window for importing funds, technology and management, quite a lot of development zones will grow after rectifying.

That would be a practical and realistic evaluation according to the development trends of urbanization and the rapid growth of economy.

But what is reasonable and how to choose what is correct for the expansion of the new sections, new space of cities, and setting the role in the regional market? It is necessary to make a strategic decision and analysis with the aid of regional science. Lately, Singapore has chosen an area about 70 square kilometres at the heartland of Yangtze River Delta between Suzhou city and the Shanghai metropolitan and has planned to build a new city proper that rely on high-tech industry. This choice was to use the regional science (location theory) analysing the conditions of communication and transportation, the conditions of regional humanity and conditions of economy and technology. In brief, urban planning in China needs regional science. Developing and promoting regional science is a very heavy, realistic and urgent task now.

The second is to suit the development of the real estate and the paid utilization of land and wholesale land lease. The detailed control development planning (sometimes also called land wholesale lease planning) has been conducted in various kinds of cities in China, which is similar to urban land zoning in the countries with market economies. With the transformation from the planned economy to a market economy, the detailed control development planning will become one of the most important ways for governments to adjust social fairness and economic development. For carrying out the development control planning, the *Rules of Management of Urban Land Paid Utilization Planning* was signed and issued by the Minister of the Ministry of Construction, P.R. China. Also a document which has compiled the “four graphs - one regulation” of the detailed control development planning of Wenzhou city in Zhejiang province was issued in 1991. Besides this, Guangzhou government has conducted block area planning. Qinghua University in Guilin city, and Shanghai Urban Planning Institute in Hongqiao development zone have carried out this kind of planning. More and more cities have been working out the detailed control development planning since 1991.

According to the experiences from localities, the detailed control development planning for reflecting the synthetical benefits of the urban economy, society and environment should be formed by about 10 indexes. It includes the character of urban utilization, land development limits, building density, building height, plot ratio, the entrance and exit of the roads, land rate, the location of the pipe joints and public utilities, parking lots and parking area. Special cities or sections, such as the scenic city and

the historical relic, need to control the construction style and colour of the buildings as well. The work of detailed control development planning is of a big quantity and is large-scale, which needs a wide range of knowledge, e.g. land economics, engineering, architecture, etc. In addition, detailed control development planning should be combined with urban design.

The third is that it has become quite urgent to strengthen the legal system for urban planning management. At the moment, China has already issued its *City Planning Act* and also *The Drawing-up Measure of City Planning*, *The Management Measure of Construction Project and Allocation Planning*, *The Rules for Managing the Planning of the Paid Utilization of Urban Land*, as well as some national standards, like *The Standard of Urban Land Development*, *Land use Planning and Construction*, *The Standards of Residential Area Planning*, *The Drawing-up Measure of Urban-and-town System Planning*, etc. In the future, a series of notes matching with the Act will also be made and issued, such as *The Notes for the Implementation of the City Planning Act*, *The Standards of Urban Road Planning*, *The Rules of Historic Cultural City Preservation* and the relevant rules of local authorities as well. Under the circumstance of the market economic system, the law and notes act as the standards of activities and the rules of competition. So, it is urgently required to improve the relevant legal system to conduct planning management, reconcile the benefits between departments and realize the macroscopic adjustment and control of urban development. Generally speaking, urban planning work urgently needs a healthy legal system and the science of law.

CONCLUSION

Only by combining with planning practice can urban planning education become vigorous, though it has its own rules and subject system. Urban planning in China has expanded a lot from traditional architecture and engineering sciences since the end of the 1970s. Now, urban planning is a kind of comprehensive work. It participates firstly in economic policy-making through defining the urban character and its development direction, allocating construction projects, making technical economic indexes about urban development planning and adjusting the land-use structure. Secondly, it contributes to the control of the number of urban population and immigration through making planning indexes such as building density, building height and plot ratio. Thirdly, it is important for social management and legal management through the implementation of urban planning. Lastly, it is crucial to the management of the sustainable development of the city

and to environmental policy-making through investigating the feasibility of the construction projects and through locational analysis and urban-and-town system planning. Hence, urban planning needs to encourage the free communication of views and open all avenues for people with talent. It is undoubted that architecture and engineering science are still the basic subjects in urban planning education. However, it would be quite hard to suit the demand of urban planning development without the knowledge of economics (especially land-use economics), regional science, social and population science, environmental science and law science, etc. Based on this view, I think that urban planning education in China should be reformed and improved and a new urban planning education system including both core courses and relevant courses of urban planning will be established step by step.

14

Discussion on Urban Planning Education

Liangyong WU

INTRODUCTION

In 1943, in my third year at the Central University in Chongqing, I attended two separate courses on urban planning at the Architectural and Civil Engineering departments and have benefited from them ever since. Even today, I still recall the lecturers time and again. That was when I was deeply attracted to urban planning, amidst the enthusiastic debate on ‘post-war reconstruction’. Half a century has gone by and I am still soldiering on, exploring the never-ending path in planning and design. My professional development has followed a path which responded to the development needs in China. It stemmed from architectural design to urban design and onto urban planning. In the late 1970s, it further expanded to a wider spectrum of urban studies. In recent years, I have turned back and worked on a ‘General Theory of Architecture’, which has led to my interest in the science of human settlements. My reflections below, are thus attached to my personal case and to the particular circumstances of the development in China. Whilst it might offer some food for thought, it is not my intention to generalise what is said.

“JACK OF ALL TRADES” WITH OWN SPECIALISATION

Collaboration among various professions in urban planning requires planners not only to have a strong professional background in their own specialities, but also prowess to communicate with other related professions. Therefore being specialised is just as essential as being a “jack of all trades”. Speciality

and general knowledge are relative. In China, one's own speciality is often taken to mean what he trained for in his undergraduate degree. Over the years of career development what is learnt at the university/college will have to be supplemented by what is learnt at work, where the divide between specialised and general knowledge is often unclear. Not infrequently one is helped or forced to become a specialist on the account of his general interest in a particular field. Speciality and general knowledge are also complementary: it is hard to imagine that a specialist would deal with planning and design issues without a sound understanding of the socio-economic context in which he operates.

In China, the professional contingent of modern Chinese urban planning emerged from the first Five Year Plan period in the early 1950s. They combined together four major professions: (1) town planners with training in architecture, (2) municipal engineers, (3) urban geographers, who appeared on the scene at a later stage and (4) others.

The experience of the last 40 years in Chinese urban planning has proved that urban planning as a profession must be continuously developed in order to cope with the changing social and economic situations. So is this the case in the various fields of urban studies. However, diversified demands on urban planners have left ample room for specialisation: it is beneficial for each discipline to cultivate its own home ground, for example in architecture, geography, engineering, social sciences (such as urban economics and urban sociology), management, environmental science, law, and so on.

Today we are faced with discipline transformations. Such transformations have resulted in ever-widening knowledge, upon which urban studies and planning are based. This demands jack of all trades with their own specialisation, whether in teaching, research or practice. Specialisation and general knowledge are to be understood in this new context. Specialisation not only implies a solid professional background, but also continuous development in new directions. General knowledge not only means what it is immediately adjacent to their specialisation, but also inter-disciplinary thinking, from which new professional directions may emerge. In this way, 'specialisation' and 'inter-discipline' can complement each other. As what is said in *I Jing*, 'The truth is only one but there are many thoughts about it, the goal is common to all but there are many paths to reach it'. Therefore, the central goal of urban planning education seems to point at the provision of 'specialised generalist'.

CHANGE AND CONSTANCY

Any profession has to respond to the continuing social and economic changes. My own experience is a case in point. I returned to China from the United States at the end of 1950 when the urban planning profession was mobilised to cope with a new socialist planned economy modelled on what was happening in the Soviet Union. Today, China is undergoing a transformation from the planned to a socialist market economy. This again requires urban planners to equip themselves with new knowledge to meet the needs which have derived from a rather unfamiliar set of social and economic factors. Changes constitute the main theme and encourage planners to be open to new things, to learn to cope with changes and foresee the future. However, the fundamental objective of planning seems to have remained constant: that is to say, planning is always to regard, as its central goal, the creation of an adequate working and living environment for people and the safeguarding of the common interest of society. In other words, planners should never give up their social ideal. All these require planners to have high abilities to comprehensively balance the short- and the long-term, partial and general interests.

INTEGRATION OF THREE ELEMENTS

There is no doubt that the central task of planning education is to train professional personnel. But what I would like to emphasise here is the integration of three elements: education, research and practice. First, urban planning involves extensive research. It is crucial for planners to learn from their own past and from other places in order to tackle the problems of the present. Only in this way will creative solutions come. Thus, research ability should be regarded aside of the basic aspects in planning training programmes. Second, urban planning as a discipline is closely tied to practice. Theoretical research in planning should also perform on a practical ground, otherwise they will become rootless or “battles on paper”. No practical answer will come out of empty concepts. From this point of view, we in Tsinghua University have been purposely combining education, research and practice in our planning education programme since I was put in charge of the Town Planning Group at the Department of Architecture, Tsinghua University in the 1950s. The planning education programme combining the three elements was consolidated when the general education reform encouraged integration of teaching and practice. Over many years, hundreds of planners have been trained in this style and they have produced a considerable number of excellent dissertations in tackling practical issues

of various kinds. In addition, we have been involved in many real planning projects in different regions of China.

In recent years, we have been making progress in developing this teaching style in urban planning. According to this combined model of education, research and development (E.R.&D.), lecturers must demonstrate their capabilities in research, not only through the amount of publications but also in creativity and relevance to practical issues. This is to build up a platform upon which the students are exposed to each of the three aspects.

PARTICULARITY AND GENERALITY

Like any other discipline, urban planning is constructed on a set of principles which provide the framework of reference for students of planning. But urban planning is also closely tied to specific geographic locations, be they a country, a region and so on, where there are specific circumstances of politics, economy, and history. Like what is said by Lewis Mumford, “truly city planning must be regional planning”. Also, for each region, planners not only need to know the geographical characteristics, more importantly, they need to understand the cultural history. This is because the unique character of a city has resulted from a historical accumulation of culture in its particular natural setting.

Thus, urban planning education should give great attention to local issues with the understanding of the general planning principles. This local approach to urban planning can in turn contribute to the general theories of planning.

General principles and theories are important to the students of planning, but the understanding of the issues must come from studies of specific cases.

Therefore I always require my Ph.D. students to work on case studies along with theoretical research.

PLANNING CURRICULAE

Curriculum for planning courses are a peculiar matter and a matter for debate. The key seems to be the ideas which lies behind the curricula.

Urban planning courses should enable the students to grasp the basic knowledge, principles and methods which may be adapted in a variety of circumstances later in their professional life. Such principles and methods

may, at first sight, seem a little removed from the specialist knowledge currently in demand; yet in the long term, there is little dispute as to the value of enabling them to know how to learn.

What is often a matter of dispute, however, is what would constitute the so-called basic knowledge, principles and methods. In my view, Chinese students of planning should be given ample opportunity to master the following:

- foreign languages, to allow students to have access to world information and knowledge
- mathematics, to enable students to establish models and analyse issues in a structured way
- computing skills and the ability to make use of new technology in general
- presentation skills including writing and drawing
- a general knowledge of related disciplines, of nature and society and of technology and culture
- an in-depth understanding of the Chinese culture

Then, the issue is how to blend and balance the basic elements, specialised technical information and practice in a way that would stimulate rather than suppress the interest of the students. No general recipe is possible, since the courses are to be designed to suit the needs at very different levels and with different specialisations (such as history, geography, sociology, economics, engineering, management, land-use and real estate development).

Perhaps something could be said about curriculum design in terms of undergraduate and postgraduate programmes. Personally, I believe that undergraduate courses in planning should focus on the basic knowledge, principles and methods. At this stage it is useful to expose the students to a wide range of possibilities, whilst to train them in gathering and analysing information. For students of architectural background, it seems beneficial to give them opportunities to learn about economics and environmental science and vice versa. Students may be encouraged to obtain double first degrees where possible. More specialised courses and training can be arranged in Master's degree courses. In Doctoral degree courses, ideal candidates would be those who have had working experience in planning.

Furthermore, it has to be recognised that course training is but a small part of career development. Planners, especially senior planners, are often placed in a demanding environment. In tackling practical problems, what could be learnt from the course would seem pitifully insufficient. This highlights the significance of training in basic knowledge, principles and methods, which the students may resort to when dealing with new and emerging issues. Also, it underlines the necessity of continuing education, in which the planning schools have a considerable part to play.

The above is, first and foremost, what is required of the teachers themselves. It is fair to say that we are all under continuous education in one way or another. Teachers have the opportunity to teach, which encourages them to know their subject thoroughly and in fact, they are obliged to do so. What is quite special about the teachers of planning, however, is that they need to provide students with a wide range of knowledge with emphasis on a well-defined area. This is particularly the case today, when the knowledge base is expanding at a phenomenal speed.

MORAL OBLIGATIONS OF THE PROFESSION

The nature of urban planning necessitates that the planning professions have their moral obligations in what they do. It is not enough just to train the students technically; the teachers should also set good moral examples in professional practice. To do so, teachers of planning should pay great attention to the following aspects in their training programme.

First, to encourage students to be practitioners with an ideal. On the one hand, the planners should be able to deal with current issues in a sensible and practical way. On the other hand, they should be able to think ahead in the long term and to forecast the future.

Secondly, to train students to go on learning, even after the course. Such impetus is only possible when the students are shown a philosophical outlook. Students should know how to view things from different angles. We should develop students' power to analyse and tackle problems comprehensively.

Thirdly, to foster a sense of devotion to their profession and their localities. To the Chinese planners their standing points are different cities and regions of China.

DEVELOPING A CHINESE APPROACH

Chinese urban planning as well as architecture needs to learn from the West. This is particularly so in today's reform and transformation to a socialist market economy. Chinese planners should have a systematic understanding of Western planning and education. Modern planning in the West has resulted from various circumstances, experiences and schools. Chinese planners have to judge and choose what are useful to their own situations. They should always keep in mind that the purpose of learning from the West is to establish a Chinese education system in planning.

Chinese urban planning, for instance, is often characterised as physical planning, as pointed out by many foreign as well as Chinese scholars. Chinese planners should pay serious attention to this issue. The current development state of Chinese planning in general is not satisfactory. In order to change this, it seems necessary to strengthen research work into issues of socio-economic factors. In particular, this means that there should be research into the socio-economic basis for physical planning, into the environment and environmental protection and into infrastructure development and land-use management. Moreover, issues of plan optimisation and legal safeguards of plan implementation need to be looked at. Only with those measures can physical planning stand on a sound ground and realise their impact in practice.

There is still a long way for Chinese planners to go in order to develop well-established education and academic systems in urban planning. It needs both time and courage.

From the Past to the Future - Transforming Urban Planning Education in China

Qi LIU and Lin LIN

INTRODUCTION

The process of urban development tells us that transformation is the eternal theme of cities. Doubtless, reform and open-door policies offer a change juncture to urban construction, urban planning and education of China. Lewis Mumford, an American urban planning theorist, historian and sociologist, said in his work, *The City in History: Its Origins, Its Transformation, and its Prospects*, "It is deep political and economic transformation that affects urban planning really." The Third Plenary Session of the 14th National Party Congress, held in November 1993, passed "The Decision of the Committee of the Communist Party of China Concerning Some Questions About Establishing the Socialist Market-Economic System" and was going to establish the system initially by the end of this century. It is an initiative to transfer from a planned economic system which had been operating for a long time to a new socialist market economic system, to combine organically the socialist basic system with a market-economy. It is also a strategic transfer that will have a profound significance in the history of the socialist development of China. It will undoubtedly exert great influence on the science of Chinese urban planning.

At the turn of the century, it should be the current theme of the Chinese urban planning circle to probe the urban planning system which is moving towards science, the world and the 21st century.

URBAN PLANNING AND EDUCATION OF CHINA COMING FROM THE TRADITIONAL SYSTEM

Urban Planning Stems From Architecture

Urban planning came in to being and developed progressively from the field of architecture and then separated from the latter, thus becoming an independent subject at last. Vitruvius, who lived in old Rome era, has advanced many penetrating ideas on the choice of city site, city shape and the layout of the city etc. in his *De Architectura Libri Decem*. Many thoughts and theories of planning have stemmed from the architects' creation; even "Athens Charter" and "Machu Picchu Charter" are a regeneration of architectural thoughts in urban planning. As a new subject emerged in the architecture system, urban planning must still derive nourishment from the age-old tradition of architecture.

Chinese urban planning education also followed this path. The urban planning speciality established in the departments in architecture of architectural colleges and then developed into a separate department in some colleges has powerful strength. It is not correct to say "independence" because it is just nominally independent and is still intrinsically architecture. To be exact, three fourths of its courses belong to architecture, including course program, mode of thinking and teachers. It naturally hasn't cast off the convention of architecture.

But there are differences in the research object and content between urban planning and architecture and this is the reason why urban planning can be separated from architecture. So, the theoretical and practical development of urban planning will be dependent on casting off the way of thinking of architecture. It must transfer from the object of the "static architectural goal" to that of the "dynamic urban planning system", from the "convergence and deepening model of image thinking" to "open and developing process of logical thinking", from "technical engineering application" to "comprehensive analytic inference".

It is gratifying that in the planning institutes or the departments (or speciality) of urban planning of colleges, the planners or new planners from the architectural circles are now opening up their field of vision, pulling themselves out from architectural depth and detail, going forward to a vast field of the city. More and more, architect-planners have put social and economic factors etc. of the city into use in urban planning practice and have gained satisfactory achievement. This is an encouraging situation.

Urban Planning, A New Force Suddenly Come to Geography

Following urban development and the deepening of the urban planning subject, architect-planners are puzzled by the many urban phenomena which are hard to explain. Faced with complex problems such as urbanization, urban agglomeration and regional development etc., geographers have stepped forward without the least hesitation and have begun all-round study on urban planning. Many branches of geography, e.g. human geography, economic geography, urban geography etc. are concerned with the distribution, regional combination and the spatial structure of human activity and its physical achievement from various angles. There contains much thinking and principle of urban planning in it.

To suit the development and closely combine teaching with society, departments of geography or economic geography specialities of comprehensive universities have begun to appear as new faces as “city and region”. They are perfectly justified to begin theory study and the practical probing of urban planning. They constantly train new generations of urban planning talent and have become the main force of Chinese urban planning.

It should be pointed out that even the names of many of these departments or specialities have changed and some were changed in a straightforward way to “urban planning (department or speciality)”, which is much younger than architectural planning department or speciality. The things it inherited from geography are many more than those the planning (stemmed from architecture) inherited from architecture; maybe it has gotten four fifths.

Recently, planners or prospective planners from geography circles have been working hard to cast off the convention of natural science, to march towards the direction of human science and building engineering, to stride forward from macro-field to micro-field. More and more geographic planners will apply the thinking, method and technique of building engineering to the practice of urban planning, strengthen the operatability of planning results and have gotten the same gratifying achievement.

In a word, the urban planning subjects from architecture and geography are the two main schools of Chinese planning theory and practice at present. They have made significant contributions to the development of the science of Chinese urban planning. However, whether “architectural planning” or “geographic planning”, each has its one-sidedness. They are only the new buds on an old tree, but not the new plants growing from the root. Urban

planning should really become an independent subject in this transforming era.

Other Subjects Entering into Urban Planning

The open door policy and the progress of many subjects have promoted the prosperity of the science circle. Other subjects, such as economics, sociology, history, law and management have begun entering into the field of urban planning, substantiated the base and widened the thinking for the development of urban planning theory and method. The departments of economics, sociology, management of some universities have also begun their attempts of urban planning education. But these subjects alone can't bring to light the essence of urban planning.

The complexity of a city isn't second to that of a country. Urban operation almost contains all levels of social operation. Urban planning is a comprehensive subject which deals with a wide range of philosophy, architecture, sociology, geography, economics, the science of traffic, ecology, environmental science, the science of land, geology, history, management, system science, engineering, computer science, aesthetics, law, political science, etc. The development of city and society tells us that urban planning education can't be fulfilled by a certain subject alone. Also, the system of urban planning education must cast off the traditional convention and be really independent in a pluralistic way.

CHINESE URBAN PLANNING AND ITS EDUCATION ARE FACING A THOROUGH TRANSFORMATION

The economic revolution, which engulfed all trades and professions of our country, has broken the long-term "tranquil" situation of urban construction, urban planning and the education system. A series of urban change and conceptual renewal have followed this revolution, promoting greatly the perfection and standard raising of the urban planning subject. Economic factors, as the main catalyst of transformation, were ignored in the past. But such influence, which takes economic factors as the main theme, is not the whole of future urban planning. We must avoid going from one extreme to another at the same time as absorbing them. The science of Chinese urban planning can really only develop in this time of great transformation. We must have a clear choice in order to build up the view of Chinese urban planning.

China is a complicated, special and great nation. It doesn't resemble the other countries in the world. Just as the diversification and compatibility

of the Chinese economic system itself, which permits various economic components existing at same time, the development direction of Chinese urban planning and education should be pluralistic and compatible. We call it the “new way “ which can be shown in three aspects.

Coexistence of Physical Planning and Non-Physical Planning

There is an imbalance between the rapid urban development of coastal areas and the slow urban development of inland areas. Also, the development of Chinese cities has not only its historical continuity, but also links with international cities. So, on the one hand, we think the development of Chinese urban planning and education shouldn't abandon the study on the theory and practice of physical planning. On the other hand, it should overstep physical planning and use the experience of new planning thought and techniques of the West to avoid the limitation of physical planning, make the types of Western planning in two different development stages coexist and combine these organically in the practice of Chinese urban planning. The education program we advance in the following embodies this thought fully. Maybe this thinking can be used for reference by the urban construction and planning practice of other developing countries in the world. “Only Chinese, then be the world's”.

Insisting on the Interaction and Infiltration of Various Subjects

In fact, we have discussed the synthetical development of various subjects in urban research for a long time. In view of the different Western urban theories, we can see that there are different schools and many more different definitions of the “city”. That's a certainty, because a city itself is a complex large system and it almost includes all aspects of human life. In view of the evolution of urban planning, we can see a series of stages that it has undergone: the early stage when architecture, horticulture and engineering were the main subjects; the middle stage when geography, economics and law were the main subjects; and the latest stage when management, psychology and ecology are the main subjects. There will be more and more other subjects entering into urban planning in the future. In view of the development tendency of science, a subject divided into details is unable to explain the concrete, synthetical and complex real world very well by itself. The cooperation of several subjects and the appearance of “frontier subjects” have come into being. Science is going forward like a spiral which ascends with a way of “combination followed by division, and then combination”. Even the organization and administration of education is also changed frequently. In order to promote the adjustment and development

among different subjects, departments have changed into colleges and then colleges into other new departments. In brief, the interaction and infiltration of various subjects has become the principal tendency in urban planning. This tendency will accelerate the development of the theory, content and methods of urban planning.

Insisting on the Principle of “Efficiency First, Fairness Also”

There are two different kinds of planning theories: according to a market economy and according to a planned economy. Thus, the valuation of urban planning also has two kinds of rules: “efficiency” and “fairness”. Most people agree that under the market economy there is no problem of “efficiency” and the difficulty is in “fairness”, while the contrary is true under the planned economy, so we should think more of “efficiency” in urban planning and construction. About this “efficiency” principle, we have already stipulated clearly in the document “The Decision of the Committee of the Communist Party of China Concerning Some Questions About Establishing Socialist Market Economic System”. Since the purpose of urban planning is to build a comfortable living environment, we suggest that we insist on this principle.

THE DEVELOPMENT PATH OF THE CHINESE URBAN PLANNING EDUCATION

Urban planning has become an independent synthetical science nowadays. However, we still have few specialized city construction colleges. Among the few, they all have the same tendency of speciality: architecture. At the same as the development of any science, with the improvement of living standards, residential space has been separated into several independent rooms such as bedrooms, study rooms, a living-room, an infant room, a dining room, an amusement room, a store room etc from a mixed living-room, which undertakes several functions such as resting, studying, talking, eating and drinking all together. This is the revolution of residential space. In view of the old residential space, on the surface, multi-functional rooms (such as study-cum-bedroom) have been separated into individual function rooms, but as regards to modern building it will be provided with many more functions and more profound levels. In our educational system, we have already had many specialized colleges, such as a college of traditional Chinese medicine, a college of machinery, a college of textile, a college of education, a college of merchandise, etc. Obviously these colleges are not for an individual subject, and they will merge interrelated subjects even more widely and deeply. In view of urban planning and planning education,

establishing an integrated urban planning college will have great practical significance. Designing and constructing a building needs various specialized personnel to cooperate, including the personnel specialized in architecture, building structure, decoration, water supply, drainage, electricity supply, etc. It is the same truth. The integrated urban planning college is not only for architecture but also for all fields connected with the science of urban planning. Undoubtedly, specialized urban planning departments should still play an important role in an urban planning college (or university). That is because this kind of “synthesis” is in the same sense of “reform or reconstruction”, but not “abandonment”. Originating in architecture or in geography, the main branch in the college (university) should be the planning department, even though it does not play the unique role any more. An urban planning college (university) includes three parts: urban planning, urban construction and urban management. The core of the courses is urban planning, and each student should learn physical planning and regional planning courses (Table 15.1).

Establishment of An Urban Planning Education Plan Composed of Different Levels and Different Stages

In terms of urban planning itself, it is composed of urban planning theories, practice and management. Urban planning theories include principles, commentary and historical research. Urban planning practice is the main part of urban education. It can be divided into three levels. At the first level it consists of physical planning (hard urban planning) and non-physical planning (soft urban planning). At the second level, physical planning consists of urban planning design, urban landscape and environmental design and urban engineering techniques; while non-physical planning consists of policy regulation and management, socio-economic planning, and ecological environment planning. At the third level, urban planning design consists of urban and regional planning, zonal planning, residential and community planning and detail planning (for control or for construction); urban landscape and environment design consists of urban design, urban garden and green space planning and the planning of antiques protection; urban engineering and techniques consists of urban transport engineering, urban roads and bridges engineering, urban water supply and drainage works and urban power and telecommunications; policy regulations consist of urban policy study and urban laws and regulations study; socio-economic planning consists of planning of the urban (regional) economy and resources, urban political study, urban population planning, urban society study and urban culture study; and ecological environment planning consists of environmental

Table 15.1 Departments and Colleges that an Urban Planning University Includes

Urban Planning University	College of Urban Environment	Urban Ecology Department
		Environmental Engineering Department
		Geological Engineering Department
	College of Urban Design	Urban Design Department
		Urban Horticulture Department
		Urban Aesthetics Department
	College of Urban Planning	Urban Architecture Department
		Regional Planning Department
		Urban Planning Department
		Urban Road and Traffic Department
Urban Engineering Department		
College of Urban Sociology	Urban Geography Department	
	Urban Sociology Department	
	Urban History Department	
College of Urban Economy and Management	Urban Laws and Regulations Department	
	Urban Economy Department	
	Urban Management Department	
		Real Estate Department

protection planning and urban ecology system planning. Urban planning management includes the rules, strategies and methods of management of all of the above levels carried out in the whole planning field (Table 15.2).

The purpose of the subjects and specialities of urban planning outlined above is to give a clear path for urban planning education. It is not comprehensive however, if we take it as a framework of our urban planning system because “city is not a tree” (Alexander), or whether it is a “semi-lattice structure” (Zhao, 1992). It is a common view in the planning field that urban planning is an integrated science with many subjects interacting with and infiltrating each other.

In order to give our urban planning reserve army - planners in the future - clear study directions and overall planning knowledge, the course of urban planning and regional planning should play the most important role in our educational schedule. These two are not only subjects by themselves, but also the basis for all the other subjects (compulsory courses). Therefore, we suggest that the new educational schedule of urban planning be divided into three stages, which is called a 3(2)-3(2)-3 two-way elimination-style educational plan.

Basic Professional Education

This educational system covers three (or two) years. The educational purpose is to train junior planning personnel who will learn the basic knowledge, theory and method of urban planning.

In the first year, students should pass all the basic courses including the common public courses that all universities have and physical planning skill courses (i.e. drawing, photography, statistics, computer, etc.).

In the second year, students should study basic courses of urban planning and regional planning and a core course about a specialized subject. After completing the basic professional education, through a two-way selection, some of the students can go into the stage of professional education. And some will do their one-year practice in some departments concerned. After this, those qualified ones may apply for graduation and they are to be issued professional diplomas. Then they can enter the profession as junior planners in the urban planning departments.

Professional Education

The students who have finished their basic professional education stage may enter this professional education stage. The length of schooling is

three (two) years. And the purpose is to train the students to be planners with professional levels in urban planning.

The first academic year is the stage of accumulating the knowledge from many subjects. The students will major in the core course of their training specialities and go on studying the course about urban planning and regional planning. Besides urban planning and regional planning, the training specialities also include city engineering, city environment and landscape design, policies and regulations, urban socio-economic planning, urban ecological environment planning, urban philosophy, urban management, etc (Table 15.2).

The second academic year is the comprehensive stage of theory - practice - theory. The first term is used for the comprehensive practice in urban planning, and the next term is for the conclusion of their speciality theories (choosing any speciality in the college in the form of two-way selection), that is writing the graduation thesis.

After the professional education stage, some excellent students may go on to have the advanced specialized education. The other students will practise in the planning departments for a year and then the qualified ones may receive their diplomas and Bachelor's degrees and after graduation, they can enter the profession as planners in the urban planning departments.

Postgraduate Education

Also called the postgraduate education stage. The length of schooling is three years studying the advanced course of every speciality. After their education, students may receive a Master's degree and can become advanced planners or urban policy-makers in the urban planning departments or other concerned departments (Table 15.3).

The three stages of urban planning education which have been listed can also be done like this model: three (two) years of specialized urban planning education to train urban junior planners; five (four) years of undergraduate urban planning education to train urban planners (Bachelor); and three years of postgraduate urban planning education to train advanced planners (Master).

Establish An Open Style for Teaching Urban Planning

The instruction pattern of urban planning is the organization form of urban planning education. In order to make the progress of urban planning education most superior, it's not enough to only think about the interaction

Table 15.2 The Specialities of Urban Planning

	Summary of the Principles of Urban Planning	Urban Planning Urban Planning Principles Study of Urban Structure
Theory	Commentary of Urban Planning History of Urban Planning	
		Urban and Regional Planning Design of Urban Planning Zonal Planning Residential and Community Planning Detail Planning
	Physical Planning (Hard Urban Planning)	Design of Urban Environment and Landscape Urban Design Urban Gardens and Green Space Planning of Antiques Protection Urban Engineering and Techniques Urban Transport Engineering Urban Roads and Bridges Engineering Urban Water Supply & Drainage Works Urban Power and Telecommunications
Practice	Research of Policies and Regulations	Research of Urban Policies Research of Urban Regulations The Economy & Resource Exploitation
	Non-Physical Planning (Soft Urban Planning)	Socio-economic Planning Research of Urban Politics Research of Urban Society Research of Urban Population Research of Urban Culture
		Ecological Environment Planning Environmental Protection Planning Ecological System Planning
Management	Management Policy Management Methods	

Table 15.3 Stages of Urban Planning Education

Stage	Target	Graduation	Degree	Length	Course Contents	
<i>Basic Professional Education</i>	<i>Junior Planner</i>	<i>Graduate of Tertiary Institutions</i>		3 (2)	<i>First Year</i>	Basic Courses Physical Planning Skill Courses
					<i>Second Year</i>	Basic Professional Urban Planning Courses Basic Professional Regional Planning Courses
					<i>Third Year</i>	Social Practice (Practice of Various Planning)
Professional Education	Planner	Degree Graduate	B.Sc.	3(2)	(First Year)	Core Courses of Training Specialities Continuing Courses of Basic Specialities
					(Second Year)	Professional Practice (A Whole Planning Process) Graduation Theses
					(Third Year)	Social Practice (Practice of Various Planning)
Advanced Professional Education	Advanced Planner	Post-graduate	M.Sc.	3	[First Year]	Postgraduates and Professional Core Courses
					[Second Year]	Planning Practice (Part-time Planners) and Elective Courses
					[Third Year]	Degree Thesis

of many subjects, or the best option of the teaching content and plan. Something should also be fully considered: the best cooperation of all fields of urban planning science in the large social system, and the actual limitations of the present urban planning educational departments. Therefore, the new instruction pattern of urban planning should be open.

One Year Practice for Specialized and Undergraduate Students

In the higher and professional education of the urban planning universities (three-year system and five-year system), the third or fifth year is for practice, that is, students take part in the formal, actual planning work in the planning departments. This can train them under special circumstance, improve their abilities of dealing with concrete planning problems and fully prepare them for the practical work after their graduation.

Lectures Given by Senior Planners

In the planning education on campus, we'll invite some advanced planners who are in the forefront of planning work to give some lessons in the department. And from this, by combining the empirical education and theoretical education together, we will impel the students to face the society and think over urban problems actively.

Strengthen the Interchange with Counterparts

As for the present colleges, departments (specialities) in urban planning, this pattern may be established in order to change the situation of the single subject system: sending visiting scholars and exchanging students to do alternative training. This pattern will bring advantages to the evolution of urban planning education and may be regarded as a wise option.

Establishment of a Modern System of Urban Planning Education

Urban planning needs care and support from the whole society and shouldn't only remain at the oral level. We must act immediately to incarnate that man is the main body of urban planning and to turn ideals into realities. In view of this, we suggest:

Widening the Coverage of Urban Planning Education

Basic Education - Put the basic knowledge of urban planning to the level of the middle schools' basic education and make students have an elementary grasp of urban planning when they are in their middle school stage. At present there is nothing.

Public Education - Penetrate the concerned knowledge of urban planning into the residents of cities. Make every citizen learn about urban planning and construction, impel them to take part in the work and strengthen their sense of this.

Further education - Instruct new theories, policies, regulations etc. of urban planning to people working in urban planning. Constantly substantiate and improve the planners' ability to deal with the planning contingencies. Overcome the numb and standstill situations which are the result of repeated planning. Avoid the frigid and careless manner of theories.

High-level education - In order to improve the level of the city leaders and policy-makers managing a city and to improve the investors' overall sense of a city, it shouldn't be ignored to do the necessary policy-making education for them. In the past, there have been some attempts and it should be developed and deepened continuously in the future.

Development of Urban Planning Pedagogy

The construction of subject pedagogy is still a weak link in our country. In April 1987, with the solicitude and support from the responsible department of the National Education Commission, the conference on the teaching methods in colleges and universities was held in Shenzhen University, the first one since the founding of our country. In the conference, the problem of establishing the subject pedagogy was put forward and discussed. To further strengthen the research of urban planning towards greater deepness and broadness and to impel the reform and opening of the urban planning education cause, the establishment and research of urban planning pedagogy will have broad prospects.

In brief, the focus of the reform of urban planning education should be put on the reform of the main course education. The core of our training plan should also focus on strengthening the basic knowledge of the professional talents in urban planning, enriching the future planners' academic background and improving their personal quality.

Meanwhile, we should help our future planners to establish the correct idea of value and a sense of responsibility. In the United States, the "professional code of conduct of urban planners" has been laid down in their planning associations and its subordinate commissions. This is worth being made use of. The public should be the basic value of any planners. We believe that with the effort of the planners which goes beyond this century, Chinese urban planning and its education are surely capable of

and is now in the process of, coming out of tradition and striding forward to the future.

REFERENCES

- The Architecture and Urban institute of Qinghua University (1992), *Theory, Method and Practice of Urban Planning*, Earthquake Publishing House. (in Chinese)
- Chinese Urban Science Institute (1986), *Research of the Science of Chinese Cities*, Guizhou People's Publishing House. (in Chinese)
- JIN, Jingyuan (1993), "Human Being - the Central Subject of Urban Planning", *City Planning Review*, Issue 3, 1993. (in Chinese)
- SUN, Shiwen, "The Tradition and Development of the Subject of Modern Urban Planning", *Architect*, Issue 48. (in Chinese)
- ZHANG, Tingwei (1992), "Discuss the Principle's Principle - Briefly Discuss the Basic Principle of Urban Planning", *Urban Planning Forum*, Issue 5, 1992. (in Chinese)
- ZHANG, Tingwei (1993), "The Duty of Planning and Planners under the Market economy", *City Planning Review*, Issue 3, 1993. (in Chinese)
- ZHANG, Xingquan (1992), "Beyond Physical Planning", *Urban Planning Forum*, Issue 6, 1992. (in Chinese)
- ZHAO, Dazhuang (1992), "Talking from the System of Chinese Urban Planning", *Urban Planning Forum*, Issue 3, 1992. (in Chinese)
- ZHOU, Jianjun (1993), "Go to a New Age - Chinese Urban Planning under Changes", *City Planning Review*, Issue 4, 1993. (in Chinese)
- ZHU, Yajun (1992), *Geography Pedagogy*, Shanghai Education Publishing House. (in Chinese)

16

Thoughts on Urban Planning Education Since the Beginning of the Reform and Opening to the World

Guangyu HUANG and Yaozhi HUANG

THE DEVELOPMENT OF THE SUBJECT AND PROFESSIONAL EDUCATION IN URBAN PLANNING SINCE THE BEGINNING OF THE REFORM AND OPENING TO THE WORLD

The development of the subject and professional education in urban planning is closely related to the development of our national economy and urban modernization. Since the beginning of the reform and opening to the world, tremendous achievements have been made in our urban construction. In the late 1970s, in an effort to bring the disorderly situation of the Cultural Revolution onto the right track, the urban planning, designing and administrative organizations were restored within a short time and urban planning work was carried out on a large scale. The rapid restoration and development of urban planning professional education helped to send a large number of qualified experts to the departments of urban planning education research, designing and management. With the deepening of reform, the urban planning patterns led by the planned economy in the past could not meet the needs of reform and opening to the world and urban planning has stepped into a stage of introspection and exploration. Shortly after, the tide of further reform came, but the introspection and exploration had not come into their completion, which might otherwise have obtained a result from the research and feed it back to professional education. With faster urbanization, urban ecology, environment, housing and transportation were faced with new challenges. At the same time, the paid use of the

urban land, the springing-up of the real estate sector, the construction of coastal open cities and special economic zones posed many new and unforeseen problems for urban planning.

All the facts mentioned above require that city planners should be realistic, renew their ideas, have a wider view, continue to study new things and broaden their range of knowledge. While tackling so many new problems, city planners dared to borrow the advanced theories and methods from other countries, explore and seek for theories, methods and techniques suitable to China's conditions; their academic ideas have thus flourished unprecedentedly flourishing. In the early 1990s, the Law of Urban Planning was issued and carried out, which indicates that urban planning in our country has come into a new stage of structural completion and legal system perfection.

In the meantime, many tertiary institutions have started to offer the profession of urban planning and the departments of geography of a few colleges and institutes of science did so too. As a result, this branch of learning has been strengthened and has improved progressively; teaching scientific research and social practice are combined closely and the teaching contents and methods get constant renewal. Besides, some departments offering the profession have developed into colleges of urban construction and colleges of architecture and urban planning. A few architectural departments have been divided into two departments, one of which being the department of urban planning or urban construction or the college of urban construction and environmental protection. All those indicate that urban planning in our country has become a relatively independent branch of learning and the urban planning professional education has had striking development.

EDUCATION AND SOCIAL POSITION OF THE PROFESSION

Generally speaking, the professional education in urban planning lags behind the vigorous development of our national economy. The subject of urban planning and professional education cannot meet the need of the development of our national economy and urban modernization. Both the educational plan and the teaching contents and methods leave much to be desired.

In the final analysis, the further development of our national economy and urban modernization depend on qualified personnel training, which itself largely depends on education. The reasons why the urban planning professional education is behind the times are many. First, the present

condition of education has much room for improvement. Second, the social status of the urban planning professional education remains to be heightened. There might be a hidden danger in such a state of affairs.

The renewal of values and the changes of value orientation aggravate the backwardness of education from within. In addition with the lack of educational funds growing more and more serious, teachers leave colleges and universities in large numbers whereas the devoted and experienced teaching staff is overloaded with teaching tasks. Thus, the exploration and research on teaching reform has no means to go far.

The reason for the new value orientation is that architectural design and urban planning differ much in economic benefits, which weakens the personnel of the latter. Take the assignments of graduates majoring in urban planning from the Chongqing Jianzhu University (former name: Chongqing Institute of Architecture and Engineering) over the past years. About 70% of them went to the administrative organizations of planning and design in big and medium-sized cities, 10% of them to the organizations of architectural design and about 20% of them, graduate student applicants included, to colleges and universities. But alas, in time, 20% of the assigned graduates managed to change the profession to architectural design at their new posts. Due to the two-way selection in job assignments popular in recent years, more graduates have left urban planning and crossed over to architectural design and the students at school prefer architecture to urban planning.

Recent years have seen the prosperity of architectural markets and the fast development of capital construction. So it is no wonder that the supply of architects falls short of market demand. But as far as urban planning is concerned, there is also an urgent need for urban planners.

Take a look at the social status of urban planning and you will see it is not shocking to say "Guard against the new theory of urban planning's uselessness". Objectively speaking, the social status and function of urban planning in our urban construction have been understood and realized by leaders at different levels during recent years. Especially since the publication of the Law of Urban Planning, the work of urban planning has been paid more attention to than ever before. But, as a whole, the work has not yet got proper social recognition and it is not entirely free from the unhealthy state of "handing in an answer sheet to the mayor". The policy of urban development in quite a few places ignores the requirements of the objective reality and planning management. More often than not, one-

sided emphasis on the economic development puts aside the best comprehensive benefits.

On the other hand, urban planning itself should strive to be scientifically sound, reasonable, serious and adaptable to improve its quality and raise its efficiency so as to guide the construction and management. All the strict requirements, therefore, demand appropriate recognition of the status and importance of urban planning, enhancement of the subject, further teaching reform of the profession and continuous improvement of the professional education system, the subject system and the teaching quality.

A PROMISING FRAMEWORK OF THE EDUCATION SYSTEM FOR THE PROFESSION

Since the beginning of the reform and opening to the world, the basic framework of the education system for the urban planning profession has taken shape in our country. In the framework there exists three major patterns, each of which has its own characteristics with its own facet emphasized and has trained great numbers of students to be urban planners.

The first pattern is based on architecture. By depending on the teaching staff majoring in architecture, it trains students to be urban planners on the basis of architectural speciality with a focus on urban planning. Such experts are supposed to be able to make full use of urban lands and create the urban space environment, having a profound knowledge of the procedures of architectural design, urban design and urban planning. Architecture is the centre of training. According to the teaching plan, the total class hours ratio of architectural design and its basic skills training to urban planning skills training is about 2:2 (for four-year course) or 3:2 (for five-year course). During the first two (or three) years, the basic training for urban planning is the same as that for architecture.

The second pattern settles on the basis of geography. With the teaching staff majoring in geography, it offers the urban planning speciality, the characteristics of which are reflected in the contents and practice of the courses based on economic geography, with an emphasis on the study of regional coordination between urban development and city-town system development and on the study of overall coordinative development of the structure of urban inner functions. In this way, it plays a unique role in planning and planning theory, research of urban overall development and layout of the city-town systems. Therefore, it lays a more solid foundation for urban planning in theory and the economy as well. Such experts are

characteristic of a keen sense of macro-control and coordinative development.

The last pattern goes in between the first two. It has been separated from the architectural speciality and developed into a relatively independent speciality. In response to the complicated urban problems, it stresses cultivating the student's ability to coordinate and solve problems in a comprehensive way. Its curriculum involves the layout and planning of urban key physical elements such as building, transportation, green space, engineering network of pipes, etc. Besides, other courses offered are urban economics, urban laws and regulations, urban sociology, urban ecology, regional planning, etc. Such experts are supposed to have a broad and extensive range of knowledge. But the pattern's emphasis, or standpoint, remains to deal with physical planning in urban development, that is, from overall urban planning to practical urban design. It is precisely because of the strict requirements that the four-year course education is obviously a bit on the short side. With reference to our present market needs for, and the flexible adaptability of, urban planners, this pattern is to remain a major one in future education.

The three patterns of urban planning education each have their respective features and advantages in teaching staff, teaching plans and curriculae. Thus, they have formed a suitable comprehensive education framework for the profession under the Chinese conditions, each complementing the other and have laid a sound foundation of further reform in the education for the profession.

LOOKING INTO THE FUTURE

Our planned economy is being transformed into the market economy, which is a real challenge to professional education. Now, it is imperative to introduce competition into the education reform for our profession and higher education is bound to turn to face the market economy, where both the professional personnel and their knowledge and skills have to satisfy the needs of the society. The educational plan, aim and curriculum must adapt themselves to the needs of the changing market. In addition to those, the trained experts must be equipped with a wide knowledge of their profession. Since the existing two-way selection in job assignments suggests the trend of future market needs, it is probable for students to change gradually from graduation assignments to seeking for jobs relying on their own abilities and skills. As far as the actual needs of our urban modernization are concerned, there exists a good many problems of physical and environmental

construction. Physical planning and construction orientation such as urban land utilization, infrastructure, housing and environmental construction are far from satisfactory. Therefore, higher education in the field of training future urban planners should concentrate its close attention on the cultivation of their ability to cope with practical problems.

Along with a solid foundation and broad knowledge, basic training in professional engineering and techniques should also be strengthened in order to improve urban planners' essential quality. For this purpose, the following should be accomplished initially:

- 1) To perfect the existing teaching plan. In accordance with their respective advantages and characteristics, the colleges and universities can develop and perfect the features of the speciality offered.
- 2) In the light of the characteristics of the urban planning speciality, to allocate suitable teaching staff, amend and perfect the existing curriculum and promote the independent perfection and development of the planning profession.
- 3) To strengthen the connections of teaching and practice with the development of the speciality. To strive to transform the present teaching and research section into a system where teaching, research and production practice are closely combined.
- 4) We suggest that at the present transitional stage, colleges and universities should enhance mutual information exchanges and, if circumstances permit, formulate a unified teaching plan as a guiding paper. Such a plan will set out the teaching aims and requirements of features of the respective urban planning speciality patterns in order to help carry out the credit system and get ready for further reform to be in line with the market economy.

Change Our Perception and Accept New Challenges - Urban Planning Education at the Department of Geography, Peking University

Yixing ZHOU

RETROSPECT

Before the Cultural Revolution, there were three specializations within the Department, namely Physical Geography, Economic Geography and Geomorphology Quaternary Geology. These specializations were organized in accordance with the former USSR model of basic disciplines, which emphasized the basic facet of education at the expense of the application facet. This emphasis had deprived our graduates of relatively stable and suitable jobs, except those in teaching and research institutions. The majority of the graduates even changed their professions gradually after their first job assignments. This negligence of application had in turn weakened our foundation.

New developments began in the late 1970s when we set out to find new ways of educating our students, with an emphasis on application. The specialization of Physical Geography began to emphasize environmental protection, Geomorphology to venture into remote sensing and Economic Geography to take up urban planning. All these specializations began to educate students with application in mind. These new directions corresponded not only to the developments of different branches in geography, but also to the emergence of the environmental sciences and the demand for education arising from the development of space technology and the upsurge in national urban and rural construction. In sum, our choices at that time were timely and accurate.

Seventeen years had elapsed since the specialization of urban planning was first set up in the Geography Department in 1976. Generally, it admits 20-30 four-year undergraduate students, 7-9 post-graduates for the Master Degree and 3-4 Ph. D. students every year. There are 18 faculty members, including 8 professors (4 of them are supervisors of Ph.D. students) and 5 associate professors. Our planning practices center around comprehensive city planning, urban system planning at the regional level and tourism planning. Planning projects completed in the past 17 years include: comprehensive city planning for 15 cities (Chengde and Renqiu in Hebei, Zibo, Linqing, Liaocheng, Taian, Jining in Shandong, Wuhu and Chaoahu in Anhui, Jiaxing in Zhejiang, Ganzhou in Jiangxi, Baise in Guangxi, Tongshi in Hainan, Gushan Town in Jiangsu, Longmen Town in Guangdong); urban system planning in nine areas (Jining and Taian in Shandong, Wenzhou in Zhejiang, Zhangzhou in Fujian and Yulin, Wuzhou, Nanning, Guilin, Youjiang Valley in Guangxi) and tourism planning for four national-class scenic areas (Taishan in Shandong, Nanxijiang River of Yougjia in Zhejiang, Huashan Mount in Guangxi and, Wangwushan Mount in Henan). Besides these, we have participated jointly in numerous projects in country and regional planning. For all those independently completed projects, planning approvals have been granted and their plans implemented by the local governments. We had also resolved some important distribution problems such as the supervision station of Wuhu railway line and the godown of Jiaxing railway line. Many of our projects have gained prizes from the Ministry of Construction and relevant provinces and schools. At the same time, we trained a large number of qualified planners, some of whom have already held leading positions in city planning departments.

While displaying our achievements, we can't help feeling grateful to the leaders and experts of the State Construction Commission, whose support and encouragement had made possible the participation of the geography departments of comprehensive universities in city planning.

City planners trained by the Department are equipped with relatively broad vision, in-depth analytical ability in macro-regional analysis and location analysis, sound foundation in urban system and a strong ability in mathematics and computer science. Concomitantly they are weak in their architectural base and their ability in physical planning is even inferior to their counterparts from technological institutes. During her period of industrialization, China needs more "hard" planning (physical planning) than "soft" planning. As a result, the former receives more attention than the latter. After the golden period of the early 1980s, the specialization

has encountered numerous difficulties in job allocation for our graduates and in doing planning consultancy. These difficulties are basically due to our transformation into a market economy.

PERCEPTION

The transition of our country from a planned system to a market system is a challenge for everyone. This challenge brings dynamism as well as pressure and difficulties and opportunities. What matters under this circumstance is whether our perception has changed accordingly.

On this occasion, university education should, as its prime objective, serve the demands of the job market and enhance the students' competence, rather than merely attaining the targets set in the state plan of graduate allocation. Adaptation to the demands of the market should be active and not passive. Passive adaptation will mean distant away from the base of our specialities; we shall be led by the fluctuation of the market. Active adaptation, in contrast, should be able to consider both recent demands and the future development trend of the nation, to create new things, to define our speciality's direction and education's objectives and to train students who are expert in one field and good at many others and have strong adaptive ability.

It is well known that Peking University is a very famous comprehensive university, with strong traditional superiority in the teaching and research of basic disciplines such as mathematics, physics, chemistry, astronomy, geography, and biology. Of course, one should include in this list all the specializations within the Department. Although we should not do without this superiority, the situation of geography as a basic discipline is, as a world trend, not optimistic. To resolve the problems of the source of students and their employment after graduation, we should increase the portion of practical application in our programme. Yet we still insist on the non-separation between basic knowledge and practical application by concurrently paying attention to both of them. We believe that theory and practice are not contradictory and that they are mutually helpful. There are two ways of raising the applicability of our programme. One is to develop our city planning programme along the line of technological universities by making it more specialized, as "harder". This will cause the loss in the characteristics of city planning programmes organized by the geography departments of comprehensive universities. This is something that our Department, given our specialty's foundation, cannot cope with. Nor will it satisfy the original intention of forming a rational city planning

personnel structure through the establishment of these programmes. The other way is to, on the basis of what we have, combine “soft” with “hard”, widen the field of application and adapt to the demands of the market. We have chosen the latter way in our practice. It is our conviction that planners trained along the “linear” vertical model will show its weakness with the development of science and technology. The development and planning of cities will increasingly rely on the comprehensive research of the surface of the earth. The way to maintain the continuous development of the economy, society and environment and to resolve all kinds of social and economic contradictions that gradually surface in cities will be the major task of city planning. The development of city planning in Western countries has proved this trend. Accordingly the city planning programme in our geography department still has its superiority, which will become increasingly marked and lead to a promising prospect, especially with the development of reforms and opening and the rapid growth of our economy.

COUNTERMEASURES

Under the guiding thoughts of changing our perception, accepting challenges, strengthening our base and widening application, we have adopted the following measures:

Open Up New Fields for City Planning

The task of the city planning programme in the Department is mainly concerned with comprehensive city planning, with particular attention paid to regional planning and an understanding of detailed planning. After the implementation of a qualification examination system in the planning field, the environment in which we practice comprehensive city planning has changed. We have timely introduced urban system planning at the regional level since 1985. This new emphasis which links regional planning with comprehensive city planning has strong regional, comprehensive and strategic characteristics. It also timely meets the demand of municipal governments to guide the development of cities at the regional level after the implementation of administrative reforms of having the cities lead the counties. The function and significance of urban system planning has now been fully recognized by our city planning law.

By the end of the 1990s, a market in urban land has been gradually established. In response, we have timely engaged ourselves in the research and practice of gradation of urban land. This effort has provided the basis for specifying land prices. In 1993, with the approval of the State Education

Commission, we introduced a new specialization called “Development and Management of Real Estate”, the first of its kind in geography departments of this country’s comprehensive universities. Obviously, economic assessment of urban land and development of real estate are integral parts of city planning under the market economy. As a result, this effort has also enriched the content of our city planning.

It is apparent that urban system planning at the regional level and the gradation of urban land are closely affiliated to our bases in economic geography and urban geography. This has not distanced ourselves from city planning; instead, it has broadened the sphere of city planning.

Concurrently Use Two Names to Denote the Specialization

In order to reflect the characteristics of combining basic knowledge and practical application, both the department and the specialization have used two names concurrently, i.e. Department of Geography/Department of Urban and Environmental Sciences, and Economic Geography /City and Regional Planning. The first names in both cases will be used to emphasize our base and for abroad and academic exchange, whereas the second names are mainly to emphasize application and for society and student admission. In other words, we have emphasized different aspects in various cases. The reasons for this are as follows. First, as stated above, we do not advocate the separation of basic knowledge from its application counterpart in educating students in the Department, because complete separation will lose our superiority in strong scientific foundation. To emphasize both basic knowledge and application will not affect the natural choice of specialization by undergraduates in their upper-years and by post-graduate students. Secondly, as far as undergraduate students are concerned, the number finally engaged in basic research is quite few. With the majority of students taking up general and some particular applied careers, double-naming will facilitate the society, especially the applicants and their parents to understand our science department. This has the effect of enlarging the source of students. Thirdly, the application field of geography, which is very broad, can be regarded as the development point of putting fundamental theories in practice. As application changes, new development points may emerge whereas some may disappear at times when social demand for educating particular skills is reduced. Double -naming has therefore taken into consideration both the stability in basic research and flexibility in applied research.

More Open Teaching Schedule

The core educational objective for the Department's undergraduate programme in the past was to train advanced specialized personnel for both higher education and scientific research institutions. This objective can't suit today's new situation. The present educational objective has put an emphasis on students who should have basic knowledge of comprehensive theories in geography, are familiar with at least one application direction, are able to resolve real problems by using new techniques and new methods, who have a good knowledge of a foreign language, who understand the frontier issues of the subject and have strong abilities in survey, research and writing. Its essence can be denoted as combining "comprehensive theories with at least one application direction". Our first-year students will study all the core courses for both the university and the department. In the second year, 40% of these students will be admitted to the urban stream with two specializations: one in city and regional planning and the other in the development and management of real estate. The basic courses for these two specialization, are more or less the same. What difference there is between the two is that each has a set of seven different courses. Students can choose courses freely in one specialization, and students of high calibre can be permitted to do both specializations. By the time of graduation, the students will be awarded a bachelor's degree in one or two specializations. Students majoring in other departments or specializations can apply to study either city planning or real estate, while we also encourage our students to study courses in some other departments (mainly law, computers and the environment).

This kind of comparatively open teaching schedule will reduce specialization, enlarge students' knowledge and foster their adaptability to market competition. City planning students trained along this line of thought, with comprehensive theories and knowledge in urban and environmental sciences as their bases, will be able to comprehend city and regional planning, as well as have a fundamental knowledge in real estate development. These are necessary knowledge requirements for Chinese city planners under the market economy.

Insist on Social Practice

Besides the field work for the junior students, the urban planning programme requires senior students to participate in one planning internship. The latter means appropriately 45 days of labour to complete a planning project under the supervision of teachers. Marks will be given to the students according

to their working performance and will be recorded as credits for required courses. This practice has not been interrupted for 17 years. There are many advantages in doing this. First, we have stimulated their ability to practise, as an essential preparation for their future career in city planning. Second, this practice has equipped our faculty members and post-graduates with the ability to resolve practical problems. Third, by gathering more information through practice, we are able to identify some research or degree topics. This in turn can result in theories. Fourth, it enlarges our influence and publicity in the society. Finally, it raises our incomes, improving the economic situation of teachers and students. In 1992, our city planning specialization was praised as “the advanced group of social practice in Beijing”. In 1993, Beida City Planning and Design Centre, with planners from this specialization as the core, was approved as an A-class planning and design unit by the State Ministry of Construction.

Although we have our characteristics in comparison with similar specializations from other higher education institutions, we still have a long way to go. It is hoped that the Department will continue to receive support from relevant supervising and professional officers of city planning and design. We also welcome cooperation, exchange and advice from other higher-education and research institutes both locally and abroad.

18

Urban Development and Urban Planning Education

Gonghao CUI

RECENT DEVELOPMENT OF THE CHINESE CITIES

Since the 1990s, Chinese economic development has entered a new high speed period. Accordingly, urban development in China has also come into a stage of new growth and transformation. There has been a breakthrough in quantities and scales of cities. During the 1980s, the number of Chinese cities increased by 24.4 per year on average, more than 10 times as much as the past 30 years' average level. The first two years of the 1990s have seen 50 new cities born, especially in 1992 which bore 38 new cities. It has been reported that, as planned, until 1995, the number of cities would have reached 550. But it has been changed to about 600, with an average 26.6 per year. The scales of cities have also been obviously enlarged. Taking large cities for example, in 1952, there were only 19 big cities with a population of over 500,000. But in 1980, there were 45, an increase of 26 during 28 years, 0.9 per year. In 1990, the number reached 59, an increase of 1.4 per year. There were 62 large cities in 1992. Particularly, the growth rate of extra-large cities is rapid. There were only 9 extra-large cities with a population of more than 1 million in 1952, but there were 15 in 1980, 31 in 1990 and 32 in 1992 with an average population of 2.04 million.

Urban planning is a complex system of engineering. Therefore, it is impossible for one or two majors to accomplish the whole planning process and to train all-round intellects. Every subject can only put its emphasis on some fields. Urban planners are high level ones. In the West, they are often trained at the master stage. However, in China, where a great number

of cities and towns need to be planned, it is short of planners. So we should train different level intellects on multi-subjects in multi-ways and direct and draw up plans on the basis of modern urban planning theories and methods.

The changes of cities are more importantly reflected in its functions, development forces and development mechanisms, etc. With the rapid rise of finance, business and information, etc, urban areas are turning their major function from production to administrative management and as service centers, which can embody their essence better. Under the world economic pattern the view of urban development should aim not only at the regional market and the national market but also at the world market, which extends an urban center's area of influence and degree of opening greatly. In a market system, the urban operational mechanism is not only stipulated as a planning or an administrative action, but also dependent on the investors' and exploiters' (including home and abroad, state-owned and private) assessment about the urban investment environment, prospects of development and their investment profits. With the expansion of the influence area of large cities and the widespread emergence of small towns, the urban-rural transition becomes quicker and the urban-rural interaction becomes more intensive. Cities have entered a group-development stage from a single development one and are expanding into urban regions from the past single cities. The urban and rural areas are gradually moving towards integrated, moving away their past separation.

Urban planning is the basis of urban construction and management and the blueprint of its construction. Therefore, it is necessary for it to adjust itself to new changes and new tendencies.

CONTENT OF URBAN PLANNING

Urban Planning is A Kind of Study Or A General Conceptual and Spatial Organization About the Future Urban Development Based on Studies

An urban area is a product of a society at a certain stage, whether it is in the east or in the west, in China or abroad. Meanwhile, owing to the differences in society, economy, history, environment and regional background, urban areas have their own tracks and prospects of development.

If urban planning really needs to reflect the cities' characteristics, effectively guide their construction, actively adjust itself to urban changes, it must not only analyse the past but also predict the future.

It should be based on the acknowledgement of the objective rules of urban development and get in touch with the cities' pulse through the large regional background and in this way, make the "frozen music" melt in the exciting, merry and lighthearted city symphony. So, urban planning should study the rules of urban development, learn its development basis - i.e. economic rules, and understand the process and development stages of the whole society. Only in this way can it obtain the firm theoretical back-up and strengthen its scientific basis. At present, this kind of study is becoming more and more necessary, when cities increasingly develop to multi-unit societies, economic complexes and a large complicated system.

Urban Planning is A Task, A Kind of Work Or An Arrangement About the Distribution and Combination of Various Physical Elements, Which Reflect the City Functions in the Urban Space

Hence, so far as the real guidance role of planning to urban construction and management is concerned, the main theme of it is a kind of technical course under the guidance of planning theory and the re-creation of urban morphology under the combination of architecture and engineering.

Urban planning is a piece of technically-strong practice and the planner must have rich creativity and very strong technical abilities. At present, with the economic development and the changes of people's demand, cities' physical elements are becoming more and more complicated, diversified and changeable, which raises the difficulty of planning techniques. At the same time, the science and technology advance causes the elements to mix gradually together, which were originally separated from each other. It simplifies the process of spacial combination to some extent. The general adoption of computer technology, however, means that some parts of the planning process must be carried out by computers, which not only gets rid of the heavy conventional technical labour, but also further strengthens the planning technicality.

Urban Planning is A Sort of Management

On the one hand, planning lies at a high macro-level in the whole management system; on the other hand it also guides the detailed micro-management.

The combination of the two kinds of activities relies on learning and mastering various urban laws. *Urban Planning Laws* provide the

fundamental base for urban planning. And the planning activity must comply with it. Meanwhile, there are still a lot of specific laws in urban construction and management. The planning work ought to learn all kinds of regulations, their basic contents, major points, and the application range, so as to coordinate with them. Laws and regulations are the reflection of policies. Therefore, urban planning must still comprehend the development policies thoroughly and the background of them, in order to carry out the relevant policies correctly.

To some extent, urban planning is a kind of high-level work and a comprehensive subject which combines theory and application, social and technological sciences.

URBAN PLANNING EDUCATION WITH CHINESE CHARACTERISTICS

The aim of education is to generate intellects, develop subjects and serve the construction. As a widely-used comprehensive subject and a task based on theories, the training of planners should comply with the characteristics of the objects it serve - i.e. urban development.

Since the mid-1970's, an obvious change in the Chinese urban planning work is that the geography major in Zhongshan University, Nanjing University and Beijing University, etc, especially the Economic Geography major has entered into the stream of urban planning. And the major essence of its regional theory and macro and economic analysis plays an extraordinary part in urban general-planning especially in the integration of the theoretical research of cities and urban system and the practice of urban planning, which raises the scientific quality of planning. Hence, two ways of training for the planners have come into being in Chinese education: one based on architecture, the other on geography. In order to develop the characteristics of the two majors effectively and complete the planning task formally, the State General Bureau of Urban Construction (Ministry of Construction now) have clearly stipulated their respective aims in education: urban general planning should be the center of all majors. Those in engineering colleges can focus on detailed planning while those of the comprehensive universities may emphasize regional planning. Therefore, a kind of planning system which was connected with the urban general planning has formed. After a decade's practice, it has proved to be effective and practical.

It should be said that the existing ways of training the planners are in accordance with the general tendency of the international education of urban planning. In western countries, cities have been the major parts of the society, the main places of residence and activities and also the objects of common study by various subjects. Therefore, planners are trained not only by engineering and science institutions, but also by social sciences. To some extent, the latter occupies the main part.

In the past ten years, the urban planning major in Nanjing University has been developing step by step. Since the Cadre Planner Training Class was sponsored to open in 1975 and the first undergraduate students were enrolled in 1977, there have been four series of various training classes and 13 terms of undergraduates, amounting to about 400 persons excluding 150 in training classes. And a series of intellect training have formed: Undergraduate - Master- Doctor- Post-Doctor.

According to the needs of national construction and subject development, we still emphasize the training of urban planners as well as of regional planners. And the systematic analysis of cities and regions is our characteristics. In recent years, we have been engaged in the assessment of urban land and the research and practice of real estates' development. Our teaching system consists of the following courses:

- Geography (Fundamental Geography, Distribution of Geography Branches and Environmental Science).
- Architecture.
- Mathematics and Computer Application.
- Economics (Western Economics, Development Economics, Urban Economics, Real Estates Economics, etc).
- Drawing and Charting Technique (Basic Drawing, Cartography, Computer Mapping, Remote Sensing Analysis and Feasibility Study of Construction Projects).
- Regional Planning, General Planning and Detailed Planning (Planning Theory and Thought, Planning of Urban Roads and Traffic, Water Supply and Drainage System, Gardens Afforestation and Scenic-district Planning, the General Planning of Land-Use, Planning Expression Technique, etc).

- Modern Technique Theory (Computer Application in Urban Planning, Geography Information System, Urban Information System and Systematic Analysis of Cities and Regions, etc.).
- Other Advanced Courses- Special Subject Lectures and Seminars (Urban Planning Management, Urban Rules and Policies, the Research of Foreign Cities and of Cities and Regions).

One of the characteristics of urban planner training in Nanjing University is combining theory and practice, emphasizing the abilities of research, analysis, generalization, computation and mapping. During the four years of study, the students not only learn the theories but also participate in practical works concerning planning and design, study about geography and urban places and write planning reports and theses. Generally speaking, students may be engaged not only in regional and general planning of cities and towns (including medium-sized cities, small cities and counties), urban system planning and detailed planning in some areas, but also in the works of land assessment, real estate development and urban development strategy, etc.

Urban planning is a rather complicated and systematic project: for cities are so comprehensive and dynamic social and economic entities.

It is impossible for one or two majors to finish the whole planning work and none of the specialized fields can cultivate all-round planning intellects. The first reason is that planning intellects in every subject can only focus on this or that field, which reflects the subjects' characteristics. The second is that planning intellects should be high-level ones. So none of the students after their graduation can be completely qualified for planning work. In some Western countries and districts, many planners are trained in the Master class after they obtain their own bachelor's degrees and the units, which train planners, must reach a certain kind of qualification. For example, the Centre of Urban Planning and Environmental Management in Hong Kong University is the only unit qualified to train urban planning intellects, which was approved by the British Royal Town Planning Institute and the Hong Kong Government. Also urban planners should be as qualified as accountants and architects.

However, China is a country with hundreds of cities and thousands of designated towns. The economic construction and development requires urban planning of all levels urgently, while there are a shortage of urban planning intellects. So planner training in China can't completely meet the Western high-level demand. But the different levels of planners should be

trained by means of multi-subjects and multi-ways, so as to undertake the various kinds of planning work (from cities to designated towns).

At the same time, China is opening to the outside world and undergoing its modernization. Even though the gap between the present standards in Chinese cities and those in modern cities is still very wide, as a prediction and a scientific idea, urban planning requires preconsciousness. And according to the Chinese conditions, it needs to guide and draw up plans by means of the theoretical methods of modern urban planning.

Only under such a background can urban planning education in China found its own teaching system.

Now as China is reforming, transforming and developing, its urban planning education is also experiencing such changes and adjustment. It is believed that in order to promote the development of planning, an urban planning education system with Chinese characteristics will emerge without many problems through the mutual understanding, support, harmony and efforts among the many subjects.

19

The Future of Urban Planning Education in China - A View from the West

Brahm WIESMAN

INTRODUCTION

In this paper the terms Western urban planning and Western urban planning education are used to generalise the experience of the Western market economies which is in fact quite diverse, with many distinct national characteristics. What is therefore presented is the author's generalisation which is coloured by his North American and in particular his Canadian experience. If this paper was written by a scholar from the Netherlands or Britain a somewhat different generalisation would be presented.

Most urban planning education in the West is located in the universities. In principle the universities are autonomous institutions that make their own decisions on all academic matters, without government interference. In practice, university programs that prepare students for professions that require a license in order to practice, such as medicine, architecture, engineering or law, follow the requirements of the professional association responsible for licensing individuals, and accrediting (i.e. approving) university programs. These requirements usually specify certain minimum standards and in most cases do not go into great detail. This means that even accredited programs have considerable academic freedom.

Whether to have accreditation for urban planning programs¹, which leads to at least some academic standardisation, or to allow each university to make its own decision on what to teach, has been the subject of considerable debate in the West. In Britain for example accreditation is of

very long standing and has been closely related to what was expected of planners who were employed by the government to administer the Town Planning Act. These requirements have, however, been criticised as too restrictive and at one stage some of the best universities in Britain introduced alternative, more creative programs, that challenged the official view of what should be included in urban planning education.

In the United States and Canada accreditation was only recently implemented. The main objective is to assure that no programs fall below certain minimum standards, without specifying the curriculum or courses in detail. For example, an accredited planning program must have a certain minimum number of full-time qualified instructors and teach a certain minimum number of specified subjects.

The resulting freedom for planning programs to experiment with different models of planning education explains why there has been so much debate in the West on what is the best alternative for planning education. This debate was most intense during the 1950s and 1960s when there was a rapid increase in the number of urban planning students and university programs. Since then, as more programs have become well established, there has been less experimentation, increasing stability and convergence on one model which incorporates considerable diversity. However, as explained later, this stability disguises important contradictions that could at any time result in yet another period of intense debate.

Lastly, in referring to Western experience it should be noted that this paper is restricted to urban planning, whereas some Western planning programs also include a specialisation in regional planning and environmental management. This is a very large subject on which there is even more debate and it is therefore impossible to cover it in this paper.

COMMON GOALS - DIFFERENT EXPERIENCE

China has experienced profound changes and continuous transformation since 1949. Nowhere is this transformation now more visible than in the rapid physical development of the coastal cities. As economic development proceeds China will become an increasingly urban society, with all of the challenges of creating livable cities and the strains on the natural environment and energy supply experienced worldwide. It is therefore urgent to consider the implications of this urban transformation for planning practice and the education of planners.

Few in the West are able to fully comprehend the meaning of the profound changes that have occurred in Chinese society. It is even more difficult to understand the experience of Chinese scholars who have lived through these tumultuous years and are now responsible for providing leadership in urban planning education. Western scholars must therefore exercise great humility in their dialogue with Chinese colleagues.

I assume that what binds planning scholars is:

- the search for a better urban environment - what it means as well as how it can be achieved, and
- a commitment to the education and training of the next generation of scholars who will continue this search.

What separates us is a vastly different experience, as well as language differences, that have a cultural significance which impedes easy translation.

THE IMPACT OF REFORM ON URBAN DEVELOPMENT AND URBAN PLANNING PRACTICE IN CHINA

As China moves away from a closed command economy and introduces elements of an open market economy, it is inevitable that there will be changes in the process and the form of urban development.

Some of the changes in urban development recently observed in China are:

- The process is becoming more fragmented, with many more investors and decision-makers.

Urban development will therefore become more difficult to predict and to control.

- Market forces (i.e. investments for profit) are replacing administrative decisions on the form and location of urban development. If these market forces have the same impact as in the West they will change the structure of Chinese cities. These changes will have both positive and negative consequences.

Planners will therefore be challenged to understand how these market forces may change the urban structure, to identify the positive and negative effects and to find the correct balance between the short-term objectives of the investors and the long-term objectives of the community.

- Many superficial, imported foreign building designs which have no deep meaning, are not rooted in Chinese culture and that disregard the human use of urban space are becoming fashionable at a time when they are being discredited in the West.

Planners will therefore be challenged to find appropriate forms of architecture and urban design that are both modern and Chinese.

If these observations are correct, it is inevitable that the changes in urban development will create the need for parallel changes in the practice of urban planning.

Some of the changes that may occur in the practice of urban planning in China are:

- Urban planning will be increasingly concerned with the impacts of economic and social development, demographic change and the conservation of the natural environment, so that the preparation of physical plans will become one part of a much richer planning process that has many components.

This will require planners with a broader range of knowledge and skills who will perform more diverse roles in a more complex planning process.

- Urban planning will be increasingly concerned with how to coordinate the activities of both the state and the market sectors and with resolving conflicts between the interest of developers and the community.

This will require advances in urban management.

- Urban planning will be increasingly concerned with the best allocation of scarce resources for infrastructure and other urban development projects.

This will require advances in the systematic analysis of alternatives and the timing of projects, as well as methods of project finance and capital budgeting.

- Urban planning will be increasingly concerned with both prediction (forecasting) and prescription (design).

This will require advances in understanding the social and economic impact of market forces on housing and urban development and methods of predicting future urban requirements.

- Urban planning will be increasingly concerned with creating a legal system to regulate development that is carried out by many different public and private sector investors who have their own short term objectives.

This will require advances in both urban land law and urban planning law.

China has an historic opportunity to innovate in this regard by learning from the deficiencies of the Western systems of urban land law, related urban land taxation law and urban planning law.

- Planning will be increasingly concerned with an improved analytical as well as an aesthetic basis for urban design, that will lead to designs that have a deeper meaning and are more respectful of China's culture and identity, or in other words architecture and urban design that is both modern and Chinese.

This will require new forms of training for both architects and urban designers.

If these predicted changes in urban development and planning are correct, then Chinese scholars have a major task to search for the correct model of planning education to train the professionals who will provide leadership in the struggle to satisfy the new requirements.

THE SEARCH FOR AN APPROPRIATE MODEL FOR CHINESE URBAN PLANNING EDUCATION

Because modern Western urban planning has been situated in a market economy, and urban planning education has a well respected position in the most prestigious Western universities, there will be a strong temptation for China to look to the West for an appropriate model of urban planning education, as it introduces its own form of market economy.

While there is much that Chinese scholars can learn from Western experience, the uncritical copying of Western models of urban planning or planning education, could be a serious error for several reasons. The first reason discussed below is the different historical circumstances that have shaped the evolution of urban planning in the West. The second is a long

list of contradictions in Western urban planning and planning education that raise many interesting questions that Chinese scholars should address. The West has found its own uneasy balance in order to live with these contradictions and China will have to do the same based on its circumstances.

THE HISTORICAL BASIS FOR WESTERN URBAN PLANNING

The practice of Western urban planning has developed in response to particular historical circumstances that have shaped its evolution. Although there is a broad similarity in these circumstances across the West, there are also important national differences that are reflected in differences in urban planning in each Western country. These circumstances, which are different than those in China and have had a profound impact on the evolution of Western urban planning, include:

- the political economy and political ideology
- the form of government and political system
- the form of taxation and government finance
- the legal system
- the system of land rights and property taxation

In addition to these tangible differences there has also been a changing sociology of knowledge that has informed planning practice. These changes have, for example, involved deep philosophical debates on how much planning knowledge is objective and scientifically verifiable and how much is socially constructed reflecting the values and experience of the planners

For all the above reasons urban planning in the West can not be viewed as the value free exercise of essentially technical knowledge and skills. Although technical knowledge and skills are important, the more significant impact of urban planning in the West has been its social practice. This practice has been deeply related to social movements shifting sometimes towards the interests of the poor and disadvantaged and at other times towards the wealthy and the powerful. Examples of this dichotomy are, on the one hand, the struggle to obtain more investment in housing for the poor and on the other hand, the struggle to exclude housing for the poor from wealthy residential areas.

These historical circumstances, that have shaped urban planning in the West, suggest that transplanting the British, German or the USA model

of urban planning to the different historical circumstances in China may be dysfunctional. It could result in importing foreign problems rather than desirable solutions for the conditions in China

CONTRADICTIONS IN WESTERN URBAN PLANNING

Western urban planning presents many contradictions that are difficult to resolve. These contradictions create tensions and continuous struggle to find the correct balance. We have had both notable success as well as major failures in our attempt to resolve these contradictions:

- Western urban planning is part of the technocratic - bureaucratic state apparatus, but ordinary people who are effected by planing decisions have increasingly demanded that they be consulted and allowed to participate in the planning process. In general, municipal politicians have acceded to these demands, which has meant decreasing the power of the bureaucracy, as well as placing new burdens on government officials to discover the best way to structure an effective public participation process.

Many different models for structuring public participation have been tried. The USA Department of Transportation has, for example, listed about 40 methods that could be used for urban highway planning, including public meetings to inform the public, public information bulletins, workshops to get peoples reaction to different alternatives, inviting neighbourhood representatives to participate in official planning committees, etc.

- Western urban planning has been driven by market forces which places a much greater value on short term financial gains than the long term social and environmental consequences of urban development.

Another way of stating this contradiction is that on the one hand, a major objective of Western urban planning has been to facilitate capital accumulation, while on the other hand it has struggled to provide equitable access to housing, jobs and a safe environment for all social classes, as well as conservation of the natural and built environment.

Western urban planning is therefore in a continuous struggle to balance the demands of private land ownership with what planners may view as the long term public interest.

- Western urban planning is also in a continuous struggle to balance the demand for urban development, with the need to conserve natural resources (e.g. agricultural land, estuaries, flood plains, environmentally sensitive areas etc.) and to create more sustainable cities with less energy demand.

This contradiction has led to many proposals on how growth can be accommodated with less adverse environmental consequences. For example, by the design of more energy efficient buildings, by charging automobile owners for more of their real costs to society, by recycling rather than disposing of solid waste and by preventing urban development on good soils or biologically important estuaries .

Western urban planning education includes an understanding of these contradictions in order to train planners who can provide leadership in the search for a better resolution of these inherent conflicts. This has led some Western scholars to suggest that the process of conflict resolution is as much a part of planning as plan preparation.

CONTRADICTIONS IN WESTERN URBAN PLANNING EDUCATION

An examination of urban planning education in the West at, for example, Dortmund, MIT or UBC, shows a tendency towards convergence on a similar model but this disguises considerable diversity and many serious contradictions. These contradictions raise still more interesting questions that Chinese scholars may wish to formulate from their own perspective as they reflect on the transformation of planning education in China.

Some of the important contradictions are:

- *The contradiction between education for urban design and education for urban management.*

In the first case the emphasis is on how to design physical plans.

In the second the emphasis is on how to structure a systematic planning process, how to prepare strategic plans covering the social, economic and environmental aspects of urban development, how to implement planning strategies through public administration, how to prepare investment and financial plans for infrastructure and other urban development and how to devise a legal system to control urban development and design.

- *The contradiction within urban design between abstract aesthetic principles and a systematic empirically-based and tested functional approach to design.*

In the first case the emphasis is on changing aesthetics from beaux-arts, to modern, to post modern, to contextual, to deconstruction and so on.

In the second the emphasis is on functional requirements, evidence derived from empirical research and analysis, quantitative programming, the systematic testing of alternatives including social, financial and environmental considerations as well as the meaning and feelings stimulated by design.

- *The contradiction between a pragmatic approach to planning decisions based on limited information and the approach that tries to include all social, economic, financial and environmental variables through some form of systems analysis.*

In the first case the emphasis is on experience, judgement, intuition and wisdom.

In the second the emphasis is on empirical research, the analysis of social economic and environmental impacts, quantitative measurements and the construction of mathematical models to represent parts of the urban system.

Debate on these contradictions was most intense during the 1950s and 1960s when there was a substantial increase in both the number of universities offering planning programs and the number of students studying urban planning. In spite of some success in resolving these contradictions - they persist. In order to understand how planning education in the West has lived with these contradictions it is necessary to explore yet another question:

Should the urban planner be a generalist, a generalist with a specialty or a specialist?

THE GENERALIST URBAN PLANNER

The argument for the generalist urban planner is that society requires professionals who are trained to take a synoptic view of urban development:

- Who have a general understanding of all of the components of urban development: design, social, economic, environmental and financial aspects
- Who can grasp the complex interconnections between these components
- Who can think strategically about the future and the public policy issues in urbanisation that need to be addressed
- Who can identify and understand the contribution that a large number of specialists can make to the urban planning process (i.e. be an expert on experts)
- Who can work successfully as a member of a team of specialists and who can take some responsibility for balancing their contributions
- Who understands how organisational decisions are made and who can contribute to a more systematic and effective urban planning process
- Who understands the nature of knowledge and how knowledge is used in practice

THE CORE CURRICULUM FOR THE GENERALIST PLANNER

While the controversy proceeded on whether the urban planner should be a generalist, there was also a controversy on what should be at the core of the curriculum to train such a planner. At an early stage of the debate the Dean at Harvard University said that it would take 92 years for a student to cover all the required knowledge. As this is clearly impossible other ideas were adopted to make the concept of the generalist planner workable. Two of the most important were:

- The generalist planner should be trained for two years at the graduate level after completing a rigorous undergraduate degree in order to bring more maturity to the learning process.
- After two years of graduate study the generalist planner is only prepared for entry level work and the beginning of a life-long process of acquiring new knowledge, skills and experience. The University

training should therefore be viewed as a preparation to learn how to learn.

At first, planning programs turned to the traditional academic disciplines and in particular the social sciences for courses to satisfy the requirements of the core but this is no longer considered satisfactory. The core now includes knowledge and skills that are eclectic, or in other words that are drawn from many different sources: philosophy, social sciences, environmental sciences, public administration and a growing urban planning literature, but the courses that have been developed are *urban planning courses* that address planning issues from a planning perspective. They are not traditional academic courses that are patched together to form a planning program.

The argument in this regard is that planning should be:

- *pragmatic* - requires timely decisions based on what is feasible, using the best information that is available
- *synoptic* - looks at all sides of a problem, from all sides
- *action-oriented* - concerned with implementation
- *normative* - concerned with what societies goals should be
- *future-oriented* - concerned with inventing the future
- *self-reflective* - concerned with the nature of knowledge and how it is used in professional practice

By comparison, the academic disciplines in the West generally have the opposite characteristics. Although some academics may be interested in public policy most are:

- *theoretical* - concerned with abstract theory
- *reductionist* - divides knowledge into small components
- *academic-oriented* - interested in study and not action
- *positivist* - studies what is
- *past-oriented* - builds theory based on what have occurred
- *objective* - assumes knowledge is value free

THE CONSENSUS

Gradually a broad consensus has evolved in the West which has nevertheless allowed for considerable diversity between planning programs. This consensus includes:

- The concept of the *generalist urban planner* who is not a specialist in urban design
- The design of a core curriculum of *planning courses* that are new to the University, and not simply borrowed from other academic disciplines
- The concept of *specialisations* within the urban planning curriculum so that not all planning students follow the same program of studies

While this consensus has allowed Western planning programs to make a precarious adjustment to many of the contradictions that have been described here, it did little to resolve those concerned with urban design. This failure will be discussed later in this paper.

SPECIALISATIONS WITHIN URBAN PLANNING

In addition to the need for a strong cadre of generalist planners as indicated above, there is also a consensus on the need for many different specialists. The argument for specialisation in planning is similar to that in other mature professions, such as medicine or engineering, where there is now more knowledge and skills than any one generalist can acquire.

Although there is a consensus on the need for training specialists there is no consensus on what these specialisations should be. Nor is there a consensus on which specialists should be trained in Planning Departments, in other University Departments, or by learning after graduation, either on the job, or through programs of continuing professional education.

Some of the specialisations that are offered by Planning Departments include urban transportation, housing policy, quantitative analysis, historic preservation, environmental management, land-use regulation, the economics of property development, community development and public participation, physical planning and urban design.

THE FAILURE IN URBAN DESIGN

The specialisation in urban design has posed the greatest difficulty. Almost none of the Planning Departments offer a program of sufficient depth and duration to properly train urban designers and the contradictions in this regard, that are listed earlier, have remained unresolved. Several explanations are possible.

One explanation is that in developing the concept of the generalist planner, Planning Departments severed their connections with the Schools of Architecture to establish independent programs. At the same time, Schools of Architecture have not concentrated on urban design, because architecture is a licensed profession and the curriculum of the Schools has been oriented to the accreditation requirements, that are concerned with how to design buildings.

This architectural training has proved to be an insufficient preparation for urban design which requires a deep understanding of issues in physical planning such as land-use, transportation, the natural environment and planning law.

Another explanation is that it is only recently that the defining characteristics of urban design have been articulated and distinguished from architecture. These include:

- *time* - urban designs are never complete because the city is constantly changing
- *control* - urban designs are carried out by many developers so that no one has complete control
- *movement* - urban design is concerned with how people move through the city as pedestrians, cyclists, or in cars and how these movement systems relate to the location of activities
- *place* - urban design is concerned with the meaning of place, which has both cultural and psychological dimensions
- *outside space* - urban design is concerned with the design of interconnected spaces outside of buildings, their relation to indoor space and how people perceive and use these spaces
- *history* - urban design is concerned with preserving continuity with the past

- *implementation* - urban design is concerned with implementation through a creative legal system to control development

CONCLUSION

The transformation of planning education in the West from architecture to urban management has been a long and at times, stormy journey that is still incomplete. The major gains have been to make planning education:

- more comprehensive in scope
- more analytical and quantitative in method
- more directly concerned with implementation and the decision-making process
- more concerned with the nature of knowledge and how it is used in practice
- more diverse by incorporating the concept of the generalist, the generalist with a specialty and the specialist.

Another way of understanding Western experience is to suggest that planning has gradually enlarged its focus from PHYSICAL PLANS (*i.e. urban construction*), to PLANNING (*i.e. how to identify problems and mobilise resources for their solution*) and the PLANNED (*i.e. the people and biophysical environments that are impacted by planning*).

However, no matter how these changes are viewed they have been at the cost of allowing education for urban design to drift. The big challenge in the West is to advance the discipline of urban design and integrate urban design into the education of the generalist planner.

A critical question for Chinese scholars is whether, in spite of the contradictions discussed in this paper, there are now a sufficient number of generic skills required of urban planners worldwide, that Chinese planning education should move towards the international convergence on the concept of the generalist planner, supported by specialisations within planning, which will make planning education much more diverse.

This is a difficult question that only Chinese scholars can answer. One thing is however certain - there is now a vast difference between planning education in China and planning education in the West. Any major transformation in China, regardless of its direction, will probably be a long, slow process.

Chinese scholars have an historic opportunity to undertake *a plan for urban planning*. This is also a major challenge because of the conditions of uncertainty. However, such opportunities seldom arise under any others conditions.

Notes

1. Western Universities use different names to identify the different administrative status of urban planning programs. They may be identified as a Faculty, a School, a Department or a Program. For the purpose of this paper, the difference is unimportant and the term program is used to refer to the activity of teaching and research, and Department to refer to a specific administrative unit within the University.

The Relationship between Urban Planning and Environmental Management - Implications for Planning Education

Peter HILLS

INTRODUCTION

The Centre of Urban Planning and Environmental Management at the University of Hong Kong is a rather unusual academic unit in that it combines the teaching of urban planning as a professional discipline with the teaching of various aspects of environmental management. We also teach courses in housing management and provide research training for doctoral students. Our major teaching activities, however, relate to urban planning and environmental management and this, I believe, places us in a very good position to discuss the relationship between planning and the environment, and the ways in which planning education can deal more effectively with environmental problems.

When we met at the first conference on planning education here in Guangzhou more than 10 years ago I seem to remember that we spent very little time discussing environmental issues and their relationship with urban planning. The situation now is very different. We have all become very aware of the seriousness of the environmental problems that confront us and the need to take action at various levels, including the way in which we plan and manage urban development. Today, we talk about the need for sustainable development, although I am not always sure that there is agreement on what the term means and how we should go about achieving this objective. Nonetheless, there does seem to be agreement internationally that we cannot go on exploiting environmental resources in the same way and that action is required before it becomes too late to repair the damage that has already been done.

URBAN PLANNING AND ENVIRONMENTAL MANAGEMENT

Some Definitions

Let me start by offering a few observations on the nature of urban planning and environmental management.

Urban planning is typically defined in terms of a process which is concerned with the management and control of land uses to achieve a variety of objectives. These objectives usually include promoting orderly and appropriate development, improving the quality of life of residents and, in some cases, the maximizing of land values. Urban planning works basically through the mediation of development rights, seeking to reconcile private and public interests in accordance with some defined policy objectives.

Environmental management is less easy to define since its scope is so potentially broad. Furthermore it is a relatively new field and is by no means confined to the urban realm. In some ways it is easier to say what environmental management is **not**: for example, it is not simply pollution control nor is it simply the protection or conservation of plant and animal species or particular habitats. The interpretation of environmental management that I would propose is that it is concerned with the management of the biological and geophysical systems that together represent the natural capital stock upon which human activities depend, and with the impacts resulting from the interactions that take place as this natural capital is converted into man-made capital. Although environmental management shares a common interest with urban planning in its concern with private interest aspects of environmental issues as well as a basic concern with externality effects, environmental management is generally more concerned with public goods (air, water) and how these can and should be managed. It is important to emphasize at this point that the environment is a focal point for societal trade-offs and in this context land-use-related issues are just one set of concerns among many.

Similarities and Differences

Similarities

Let me now turn to some of the similarities and differences between urban planning and environmental management.

In terms of similarities, both are interdisciplinary subject areas, although clearly their disciplinary linkages are rather different. Urban planning has usually been more closely linked with engineering, architecture,

surveying, law and, more recently, social sciences, while environmental management's linkages tend to be stronger with the natural sciences, engineering, law, medicine and social sciences (particularly economics).

Both are areas of government intervention through legal frameworks (i.e., laws and regulations) of varying sophistication and complexity. Urban planning legislation tends to be more tightly defined and consolidated, that is to say, there is usually one major piece of planning legislation e.g., the Town Planning Ordinance in Hong Kong. In the case of environmental management, legislation, especially in developing countries, tends to be more recent and typically is of two types: firstly, some form of national environmental law and secondly, laws relating to the control of specific forms of pollution.

Both urban planning and environmental management are inherently political and distributional in nature as they involve the allocation of resources and opportunities. Both deal with conflict resolution between the interests of different groups with differential access to political and economic power. Both are characterized by inner tensions between those who see them as essentially technical exercises and those who recognize that they involve value judgements and are politicized.

Differences

One important difference between the two areas concerns the extent to which they have become professionalized. By this I mean the role that professional bodies or institutes play in the development of the field itself and in the regulation of educational programmes.

Urban planning has long been a professional field in which national planning institutes play a prominent role in regulating entry to the profession itself and in determining professional standards and educational requirements. Environmental management involves many professionals as well, perhaps an even greater diversity, but it typically lacks the direct institutional counterparts found in the field of urban planning. One important implication of this is that educational initiatives in the environmental field tend to enjoy greater levels of flexibility in terms of course structure and design because they do not need to meet quite specific requirements of professional institutes.

Urban planning and environmental management also tend to approach their respective tasks from rather different intellectual traditions. Although physical planning concerns remain an integral and important component of

urban planning, planners have, since the late 1960s, been strongly influenced by theories and concepts drawn from the social sciences although there remains considerable debate within the field as to the extent to which these have and should be allowed to take hold and these debates certainly extend into the educational field. Environmental management, on the other hand, has drawn on the social sciences only more recently. One major area of development has been environmental economics but the social sciences have taken hold in other ways: in the analysis of environmental policy making and the application of concepts of political economy in the analysis of environmental issues.

Uncertainties exist in both areas but those in the field of environmental management tend to be more complex because of the nature of the systems being managed and because of the existence of complex synergistic effects.

Urban planning still tends to pursue optimization as a goal, particularly through the use of various urban models. In the case of environmental management, while there may be a recognition of what would constitute an optimal outcome, it is not always clear when this has been achieved. Environmental objectives often referred to as moving targets. Furthermore, the environment often framed as a constraint rather than as an objective function to be optimized. Optimization in the exploitation of the natural capital stock frequently goes against the basic principles of sound (sustainable) environmental management.

The timescales of urban planning and environmental management also tend to differ. Urban planning, management and control activities often extend over planning horizons of 5-10 years. In the case of environmental management, there is increasing emphasis on long term issues, e.g., global climate change. These issues present very complex problems for policy makers because of the time stream of potential costs and benefits.

In terms of the spatial or geographical scale of activity, urban planning typically deals with cities and city regions within some kind of reasonably consistent national legislation, sometimes state/province, that is implemented and enforced locally. However, there is often not a consistent national urban development or regional development strategy. Environmental management concerns extend over a variety of geographical scales from the highly localized to the global. The internationalization of environmental issues has become a prominent feature of the past decade. We tend not to discuss urban planning issues in quite the same way at the international

level, primarily because problems experienced at the national level and solutions are typically sought at that level.

Regulatory mechanisms for urban planning often involve some form of approvals systems for individual developments within the context of a more wide ranging plan. Environmental management also makes increasing use of approval/permitting type systems for control of particular kinds of pollution (related to environmental quality objectives and standards) but instruments of policy that are used have become increasingly diverse over the past decade. This is especially so in the case of economic instruments.

Urban planning aims to be anticipatory through the creation of plans that can then be used to determine subsequent planning applications. This is particularly so in developed countries but probably less so in developing countries characterized by rapid urbanization. Environmental management has tended to be rather reactive, though it can and should be anticipatory, frequently responding to particular issues that threaten public health or particular natural systems.

Both urban planning and environmental management are inherently political but the environment as an issue has become much more politicized than urban planning over the past 15 years, most notably through Green Politics. Many “planning” issues are basically environmental issues and they often become politicized in the planning context because of the nature of the regulatory and institutional structures involved, e.g. public inquiries. Clearly, many planning concerns are politicized precisely because they involve the redistribution of environmental goods or are perceived as being likely to result in the perpetuation of a maldistribution of such goods.

Green politics has not confined itself to contesting environmental issues in the political arena. It has become closely associated with the development of a set of lifestyle principles with a variety of implications, e.g. green consumerism. In developed countries it has also become linked with other social movements and concerns, e.g., animal rights movement, feminist movement. Linked to this latter point is the role of non-governmental organizations or NGOs as they are commonly known. These have become very influential in the environmental field, but remain much less so in urban planning.

Environmental perspectives have increasingly stressed the need to recognize the critical linkages existing between the sustainability of the natural capital stock, the way that human societies develop (and indeed what constitutes development) and the long term implications of the demands

that societies make on this natural capital stock. Urban planning seems to have made only a limited contribution to such debates and to a considerable degree has failed to capitalise on the opportunities offered by the resurgence in environmentalist thinking during the 1980s. Given urban planning's long established and concern with environmental quality issues, it is perhaps a little surprising that it has failed to take the lead in debates on such issues.

MODELS OF THE RELATIONSHIP BETWEEN URBAN PLANNING AND ENVIRONMENT MANAGEMENT

If we are to effectively link urban planning and environmental management concerns then we must resolve the nature of the relationship between the two areas.

I would like to propose three basic models through which to explore this relationship. These models can be generally categorized as follows:

- (a) the competitive model;
- (b) the complementary model;
- (c) the sustainable development model.

Competition

Although there may be tensions between the objectives of urban planning and those of environmental management, it is difficult to argue that the two fields are in competition intellectually. Furthermore, there no grounds for assuming that one or the other should prevail in terms of their intellectual integrity. They are not mutually exclusive. Nor need they be in competition in terms of their respective contributions in the policy making arena.

Complementarity

This is the orthodox perspective and a perfectly legitimate one, especially where environmental management is defined more narrowly in terms of pollution control. Thus, urban planning's responsibility is land use planning, while environmental management's is the control of specific types of pollution e.g. water, air, noise, waste.

These activities are undertaken by two different types of professionals in government departments which may more or less be closely linked in terms of organizational structure. Both groups work within the general framework provided by the relevant legislation and towards the achievement of the policy objectives specified for them. Such operational linkages as

exist between the two are strongly influenced by the prevailing institutional structures and consultative systems that have evolved and the nature of the development projects that come forward. It is probably true to say that interactions are likely to be more intense in the context of large-scale complex projects where the technical and scientific specialisms of environmental managers are required in the context of EIAs: this at present is perhaps the main mechanism that provides an operational linkage for urban planning and environmental management.

This orthodox view of the complementarity of the two fields is one that doubtless would go unchallenged by many practitioners and teachers. It represents the *status quo* for which many have a strong preference and because of this it does not threaten established professional interests or the boundaries of professional activity and it does not lead to any searching questions about why people do what they do and the manner in which they do it.

I would argue that the desire to maintain this pattern of relationship is stronger in urban planning than in environmental management, providing that certain conditions are met. There are several reasons for this. Urban planning is a more firmly established field, it possesses greater professional coherence and its remit is more readily defined.

The conditions that I mentioned do I think relate to planning's continued assertion of its own interest in environmental issues. However, complementarity is not the same as integration and I believe that we need a framework within which to effectively link the two fields. This framework may be provided by the concept of sustainable development, which is the third model I would like to refer to.

Sustainable Development

This concept has attracted considerable attention since the late 1980s, especially since the publication of the Brundtland Commission Report *Our Common Future* in 1987 and the Earth Summit in Rio in 1992, and it is a concept central to debates on the relationship between environment and development.

There are numerous definitions of sustainable development and within this diversity of definitions inconsistencies almost inevitably appear. This has led some to suggest that the metaphor of sustainability may become so abused as to become meaningless. Certainly, there are problems with the

concept, especially in terms of translating it into concrete, practical and realistic development strategies.

One definition that is frequently quoted is one drawn from the Brundtland Commission Report which defines sustainable development as:

.....development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

Notwithstanding the differences between the various definitions that have been proposed, certain features do tend to recur:

- 1) long term perspective;
- 2) most reflect certain ethical principles regarding intragenerational and intergenerational fairness or justice; and,
- 3) going back to a point I made earlier, most sustainability definitions frame the environment as a constraint rather than an objective function to be optimized and this has important implications for sustainability as a goal for policy makers.

There is much that might be said about the evolution of the concept of sustainable development but I would emphasize the following points. The sustainable development debate as promoted by Brundtland goes well beyond the purely environmental. It sets components of that debate in the economic and political context of international development. In fact it starts from the premise that development and environment are inseparable and are inextricably linked to factors underlying world poverty and international inequality. Brundtland also stresses two other key factors: meeting basic needs and therefore the primacy of development action for the poor, and the view that environmental limits are not set as such by the environment itself but by technology and social organization and this leads us beyond concepts of physical sustainability to the socio-economic context of development. Sustainable development in the context of Brundtland is defined by the achievement of certain social and economic objectives and not by some notional measurement of the health of the environment.

Brundtland starts with people and then discusses what kinds of environmental policies are required to achieve certain socio-economic goals. Within this perspective sustainable development must be global in scope and internationalist in formulation which also requires: the sustainability of the ecosystems on which the global economy depends must be guaranteed, and equitable exchange between nations. Sustainable development is

therefore very much concerned with the nature and quality of development and the distribution of its benefits and disbenefits of development and it naturally challenges much of the prevailing economic and political orthodoxy.

IMPLICATIONS FOR PLANNING EDUCATION

Sustainable development may offer us a framework within which to link conventional planning concerns with major environmental issues but we will have to give careful consideration to the way in which the curriculum of planning programmes is structured if we are to achieve effective integration of the two areas.

The planning curriculum in most academic institutions clearly reflects the traditional disciplinary origins of the subject although there can, for example, be significant differences between those programmes that emphasize the design side of planning and those that focus more on the policy-related aspects of urban planning. Planning programmes typically deal with subject areas such as urban theory, planning theory, methodology, law and practice and a range of thematic areas - housing, transport etc.. Environmental issues are often covered in some detail in various parts of the programme but it is very common for these issues to be handled in a fragmented and partial manner. That is to say, they are not dealt with in an integrated manner within a consistent conceptual framework. Few urban planning departments have specialist environmental teachers and it is certainly uncommon for such departments to have ecologists or any physical scientists on the teaching staff. Consequently, environmental issues are usually taught by a number of individuals who selectively cover topics that they feel are relevant to their own specialist areas. This is unsatisfactory for a number of reasons but mainly because the material that is taught may be inconsistent and contradictory and because the real contribution that urban planning can make to environmental management is never fully explained.

In view of the importance of the environment in many areas of government policy, it can be argued that a basic introduction to the nature of the environment and the way in which it is affected by development processes should be a central element of any contemporary planning programme aimed at training professional planners. To move directly to the teaching of such topics as Environmental Impact Assessment, though useful in many ways, does not really provide students with an effective understanding of the many complex issues involved. Similarly, planning

students should be made aware of the economic context of environmental problems, just as they should be made more aware of the economic context of land development issues. The teaching of the economics of planning is probably one of the major areas of weakness in many planning programmes, even in well-established courses in North America and Europe and elsewhere. However, few planning schools possess this kind of expertise to handle environmental issues and it is probably only when planning and environmental management programmes are taught side by side, as in our centre in Hong Kong, that we can offer planning students the opportunity to study environmental economics in any detailed way.

Providing new and additional courses, though an essential development in this area, is, however, only part of the response that planning schools will have to make if they are to respond effectively to environmental issues. More fundamentally, the form and structure of the planning curriculum will have to evolve in the years ahead in a way that provides an appropriate focus. This is where the concept of sustainable development is of great importance. If properly used, this concept can provide the integrating mechanism that we shall need in the future. To do so, however, we shall not only need to deal with aspects of ecology and economics but we shall also have to devote more attention to the nature and meaning of the development process and the role that urban planners can play in that process. In many planning programmes there is actually little discussion of the broader meaning of development or the contribution of urban planning to the achievement of national, regional or local development objectives. These are typically felt to be matters of national economic planning. However, if we accept the sustainable development model then it becomes clear that these different areas cannot be treated separately because they are, in fact, closely linked. Decisions in one area will inevitably affect decisions elsewhere.

There are, of course, great difficulties to be overcome in introducing a model like sustainable development into the core of urban planning education. One of the most significant problems is the perspective of the planning profession itself and the way in which it defines its own responsibilities and priorities. A second problem is the role that government expects urban planners to play. A third is the nature of urban planning legislation and its relationship with environmental legislation. Finally, there are institutional difficulties, particularly those involving the relationship between urban planning and environmental management. These difficulties cannot be overcome easily or quickly but as planning education evolves to

adapt to the changing context for urban planning itself new ideas will filter progressively into the profession and into the relevant government agencies. Urban planning does have a major role to play in the maintenance and improvement of environmental quality. Our task is to provide our students with the most appropriate training to enable them to deal with the challenges they will face in reconciling development pressures with the need to manage the environment in a responsible manner.

Urban Planning Education in China - A Statistical Study

Min ZHAO and Sheng ZHONG

INTRODUCTION

Within the last decade, China has been one of the fastest growing countries in the world. The social and economic reforms which are being carried out nationwide have produced profound impacts on planning education as well as on planning practice.

The fast growing economy is propelling the process of urbanization. Towns and cities are emerging not only in greater number but also on a larger scale than they used to be. Urban construction is ongoing at an unprecedented rate and therefore the deficiency of urban planning has also become one of the main focus of attention of the society. Meanwhile, owing to the changes in the social and economic context, especially to the transformation from the administrative-command economy to a market-based economy, urban planning is confronted with challenges of its ideas, functions, contents, objects and methods. Consequently, the quality of competent planners has become another main concern.

For a long time, planning education in China had lagged behind. This was reflected in the small number of academic institutions and their similar teaching patterns. In recent years, with market force playing a more and more important role in the country, the number of planning schools has increased and the patterns they follow have diversified. Further growth of planning education can be anticipated.

To coordinate with the socialist market economy, formal academic criteria for the professional education of urban planners needs to be established. It calls for the examination of China's planning education.

STUDY APPROACH

In order to get an outline of the status quo of China's planning education and to measure the gap between planning education provision and social demand, two surveys were conducted. A separate questionnaire was developed for each of the two surveys. In the first survey, 24 questionnaires (out of the estimated 28) from academic institutions were received. The questionnaire deals with the institution, courses, students and resources of each programme. The second survey focuses on employers' personal views of planners' adequate expertise, their judgement on the current state of planning education and suggestions they may have for improvement. 35 questionnaires were received in this survey.

SAMPLE CHARACTERISTICS

Before drawing any conclusion, it is useful to examine briefly the characteristics of the two surveys.

Planning School Sample

The planning programmes included in the sample represent most of the geographic regions of China and they vary in size and orientation, so the data collected are typical and reliable.

Institution

According to the subject classification system used in China, all planning programmes can be divided into two broad categories: those in institutions primarily concerned with architecture and civil engineering referred to as engineering programmes (EPs) and those in institutions primarily concerned with physical and economic geography referred to as social science programmes (SSPs). The ratio of EPs to SSPs is about 4:1.

There are some differences on educational levels between EPs and SSPs (Table 21.1). Relatively speaking, SSPs put more emphasis on graduate education than EPs. 80% and 60% SSPs can provide master's and doctor's degrees while only 47.3% and 26.3% in EPs' case.

Table 21.1 Degrees offered

Programme	Total	Bachelor	Masters	Ph D.
Engineering	24	24	11	6
Social Science	4	4	3	2

The duration of undergraduate programmes differs between EPs and SSPs. About 53% EPs last 5 years (most derive from architecture) with the rest, 4 years. All SSPs require 4 years of study (Table 21.2).

Table 21.2 Duration of Programme

Programme	4 Years	5 Years
Engineering	13	11
Social Science	All	0

The first urban planning programme in China was launched in 1952. After that, planning education has gone a tortuous way (Table 21.3).

Table 21.3 Date of Origin

Date	Number of Programmes
1950-1960	2
1960-1970	0
1970-1980	5
After 1980	21

The 1960s was almost a standstill period for planning education. It was not until the late '70s that planning education resumed its development and rapid growth has been witnessed ever since.

As regards to their origin, 70% of EPs are based on architecture, with the rest branching out from civil engineering, surveying and mapping or environmental sciences. All SSPs come from geography sciences.

Of the 24 programmes, 1/3 are administered by the State Education Commission, 1/3 by the provincial Education or Construction Department and the other 1/3 by the central Construction Administration or other central administration. The ratio of central to local administration is 2:1.

Educational Provision

Teacher-to-student ratio is one of the indices of each programme's potential in education. In EPs, the figure varies dramatically from 1:2 to 1:18 with an average of 1:6.9. In SSPs, it ranges from 1:4 to 1:7 with an average of 1:5.6, showing a relatively even distribution.

Curriculum provision is generally regarded as the hinge of education. To a large extent, it determines students' knowledge and skill structure. Most programmes offer three types of courses: required, limited elective and elective with a typical ratio of 8:2:1, which reflects students' limited freedom in choosing courses. In terms of nature, courses fall into two broad categories: knowledge (theory) and skills (practice).

Knowledge curriculums include three parts. First, *Public Basic Courses* like foreign language, advanced mathematics, computer sciences etc, usually are standard courses in the university-wide or college-wide curriculum. They account for 20-25% of the total teaching hours. Second, *Fundamental Professional Courses* usually are shared with other specialties (majors) in the same department. This part reflects each programme's original specialized field. For instance, programmes that originated from architecture have design theory and building technology etc. While those stemming from geography have physical, human and economic geography etc. Fundamental Professional Courses usually account for 40-45% of the total teaching hours. Third, *Professional Planning Courses* constitute the most important content of planning education but account for only 20-30% of the total teaching hours (Table 21.4).

Table 21.5 shows the overall curriculum provision in all planning programmes. For the required courses (column 1), the most widely taught courses are urban comprehensive planning (85.7%), planning principles

Table 21.4 Content of Knowledge (Theory) Courses

	Courses	% of courses
1.	Public Basic Courses : politics, foreign language, computers, mathematics	20-25%
2.	Fundamental Professional Courses : <i>Architecture</i> : design theory and building technology OR <i>Geography</i> : physical, human and economic geography	40-45%
3.	Professional Planning Courses : planning principles, master plan, regional planning, detail planning, urban infrastructure	20-30%
4.	Other Recently Introduced Courses : urban law and management, urban land and housing system, urban sociology, urban development and economy, urban environment and preservation, computer science	small %

(78.6%) and regional planning (71.4%) while courses concerning city law, management, land-use and housing, with urban sociology and urban economics at the bottom of the list. It is interesting to see that what are small in number in column 1 have relatively higher figures in column 2 & 3 as elective courses. This is the sign of increasing attention to these subjects. Column 4 is the sum of column 1, 2 and 3, and column 4 stands for the weighted sum, assuming weighted value 1, 0.8 and 0.5 to column 1, 2 and 3 respectively. From column 5, we can see clearly that knowledge concerning comprehensive planning, infrastructure, planning principles, regional planning and environment is posed at an important position while knowledge about land-use and housing, urban sociology, city law and management is relatively neglected.

Table 21.6 and Table 21.7 form a comparison between SSP and EP curriculums. Planning principles and comprehensive planning play almost equally important roles in both curriculums, but EPs put much more emphasis on detailed planning, city history and culture, infrastructure and landscape, while SSPs draw much more attention on regional planning, urban economics, land-use and housing, city management and city law. It's not difficult to conclude that EPs stress on physical aspects of planning

Table 21.5 Undergraduate Urban Planning Courses

Type	Required	Limited Electives	Electives	Sum	Weighted Sum
Planning Principles	78.6%			78.6%	0.79
Regional Planning	71.4%	7.1%		68.5%	0.77
Comprehensive Planning	85.7%			85.7%	0.75
Detail Planning	64.3%	14.3%		78.5%	0.76
Urban Economics	21.4%	21.4%	35.7%	78.5%	0.56
Environment	57.1%	7.1%	28.6%	92.8%	0.77
City History and Culture	50.0%		14.3%	64.3%	0.57
Transportation	57.1%	7.1%	7.1%	71.4%	0.66
Infrastructure	64.3%	21.4%		85.7%	0.81
Computers	42.9%		28.6%	71.4%	0.57
Land use and Housing	7.1%	7.1%	28.6%	42.9%	0.27
Landscape	50.0%	7.1%	14.3%	71.4%	0.63
City law	7.1%	21.4%		28.5%	0.24
City Management	7.1%	21.4%	14.3%	42.8%	0.31
Urban Sociology	7.1%	7.1%	28.6%	42.8%	0.27
Professional Foreign Language	35.7%	7.1%	7.1%	50.0%	0.43

- Notes:
1. All figures are based on planning school sample.
 2. Each percentage figure represents the proportion of programmes that have a certain course (or similar course) to all programmes that the survey covered.

Table 21.6 Undergraduate Urban Planning Courses in Social Science Programme

Course	Required	Limited Electives	Electives	Sum	Weighted Sum
Planning Principles	75%			75%	0.75
Regional Planning	100%			100%	1.00
Comprehensive Planning	75%			75%	0.75
Detail Planning	25%	59%		75%	0.65
Urban Economics	75%		25%	100%	0.88
Environment	50%		50%	100%	0.75
City History and Culture			25%	25%	0.13
Transportation	75%		25%	100%	0.88
Infrastructure		50%	25%	75%	0.53
Computers	25%	25%	25%	75%	0.58
Land Use and Housing	75%		25%	100%	0.88
Landscape	25%		25%	50%	0.38
City Law	50%		25%	75%	0.63
City Management	50%	25%	25%	100%	0.83
Urban Sociology		25%	25%	50%	0.33
Professional Foreign Language	25%	25%	25%	75%	0.58
Geography	100%			100%	1.00
Architecture	50%	50%		100%	0.90

- Notes:
1. All figures are based on planning school sample.
 2. Each percentage figure represents the proportion of programmes that have a certain course (or similar course) to all programmes that the survey covered.

Table 21.7 Undergraduate Urban Planning Courses in Engineering Programme

Course	Required	Limited Electives	Electives	Sum	Weighted Sum
Planning Principles	90%			90%	0.90
Regional Planning	60%	10%		70%	0.68
Comprehensive Planning	90%			90%	0.90
Detail Planning	100%			100%	1.00
Urban Economics		30%	40%	70%	0.44
Environment	60%	10%	20%	90%	0.78
City History and Culture	70%		20%	90%	0.80
Transportation	60%	10%		70%	0.68
Infrastructure	90%			90%	0.90
Computers	40%		20%	60%	0.50
Land Use and Housing	10%	10%	20%	40%	0.28
Landscape	70%		10%	80%	0.75
City Law		20%		20%	0.16
City Management		20%		20%	0.16
Urban Sociology	10%	20%	10%	40%	0.31
Professional Foreign Language	40%			40%	0.40
Geography			10%	10%	0.05
Architecture	100%			100%	1.00

Notes: 1. All figures are based on planning school sample.
 2. Each percentage figure represents the proportion of programmes that have a certain course (or similar course) to all programmes that the survey covered.

Table 21.8 Programme Emphasis by Institutional Type

Type	Programmes Emphasis
Engineering	Detail planning, urban history and culture, urban infrastructure, landscape design, physical planning and civil engineering
Social science	Regional planning, urban economy, land and housing, urban management and law macro research on society and economy

while SSPs are inclined on social and economic aspects. (Table 21.8) In addition, although there is a sharp distinction between the engineering and social science programmes, there has recently been an effort to reduce the differences by including some physical planning courses in the social science programmes and some geography courses in the engineering programmes, with the former more active, much attributable to the nature of the present planning practice.

Skill courses are another important aspect of planning education. Owing to the practical feature of urban planning, both SSP and EP curriculums put high emphasis on professional practice which usually accounts for 1/10 to 1/6 of the total credits that each student must get before graduation. These are concentrated at a particular time in the curriculum.

For EP courses, skill components are mainly aesthetics design skills and graphical communication; meanwhile, data collection, quantitative and qualitative analysis, written and oral communication are the corresponding main skills for SSP curriculums.

Students

Roughly 800 to 900 undergraduates, 150 to 180 master students and 30 to 40 Ph.D. students majoring in urban planning get registered each year in China. About 80% of the admissions are to EPs and 20% to SSPs (Table 21.9).

Graduate student research in EPs is concerned with residential site planning, housing design and planning theory. In SSPs, the research is concerned with regional planning, land and housing systems, urban economy

Table 21.9 Annual Students Admissions

Level	Number of Students Admitted
Undergraduate	800-900
Master	150-180
Doctoral	30-40

and urban development. In neither case do urban infrastructure and landscape receive enough attention.

Upon graduation most students find employment in work units concerned with urban planning and management. In recent years, increasing numbers of EP graduates have been employed in architectural design, while SSP graduates throng to real estate development companies. Few are engaged in teaching and research.

Academic Activities

About 55% of the programmes conduct some research aiming most to solve practical problems. About 55% of the programmes have some international academic contacts.

Overall Evaluation Of China's Planning Education

The most concise opinions are as follows:

- There is a large discrepancy between urban planning education in China and international practice.
- There is a large gap between the supply and the demand for urban planners.
- There is a large variation in the quality of the programmes and their facilities.
- About half of the programmes believe they are well placed to advance planning education.
- About half of the programmes intend to expand enrolment and research activities.

- In general, all of the programmes are aware of their shortcomings and are confident of the future.

Practitioner Sample

The received questionnaires cover most of China's provinces, autonomous regions and big cities. The result shows the opinions of practitioners from planning design or research institutes and planning management departments. The distribution of the work units approximately parallels that of the planning graduates' employment.

Demand For Planners

From the sample, 60% of the respondents feel that the present planning education cannot meet the need of their work unit's demand for planning graduates, especially the respondents from local planning work units (Table 21.10).

Table 21.10 Satisfaction with the Number of Planners Available

Satisfaction	% of Work Units
Satisfied	40.0%
Not satisfied	46.7%
Highly unsatisfied	13.3%

The work units' need for planning graduates is mostly filled by key universities and Ministry of Construction Institutes. Students from local schools and other professional schools or part-time schools are very few in the work units that the survey covered (Table 21.11).

Table 21.11 Source of Planners

Source	% of Work Units
Key universities	34.1%
Ministry of Construction institutes	40.9%

On future recruitment, most work units hope to maintain or increase the present level. Only some of the largest departments feel a surplus of planning graduates (Table 21.12).

Table 21.12 Future Recruitment

Level of recruitment	% of Work Units
Maintain present level of recruitment	60.7%
Increase present level of recruitment	25.1%
Reduce present level of recruitment (the largest department)	14.2%

In terms of educational level, 79.3% of the work units demand for bachelors and 68.7% for masters. Only 6.9% and 10.3% need quasi-bachelors and doctors respectively (Table 21.13).

Table 21.13 Desired Education Level

Education	% of Work Units
Quasi-bachelor degree	6.9%
Undergraduate degree	79.3%
Masters degree	68.7%
Doctoral degree	10.3%

72.4% work units welcome EP students while only 8.7% are in need of SSP students. But the strong orientation to physical design is balanced by an anticipated increase in the need for planners with social science knowledge particularly in the coastal cities (Table 21.14).

Opinions on Current State of Planning Education

The work units respondents expressed the following opinions:

- There is a gap between the Chinese planning education and international standards.

Table 21.14 Desired Knowledge

Knowledge	% of Work Units
Physical planning and environmental design	72.4%
Civil engineering	55.2%
Geography and economics	8.7%

- There is a gap between the supply and demand for planners.
- The graduates from the key national institutions are better prepared.
- There is general satisfaction with the capability of graduates over the last 10 years, in particular, their engineering knowledge and drawing skills.
- There is dissatisfaction with the graduates' skills in socioeconomic analysis and research, written and oral communication, computer applications and creative problem solving.

Suggestions for Future Planning Education

The work unit respondents made the following suggestions:

- National standards for planning education are needed.
- The China Planning Association should provide guidelines for planning education.
- There should be a core of basic requirements as well as an opportunity for each programme to develop its own characteristics.
- Subjects that need to be strengthened include: computer skills, land economics, urban economics, engineering infrastructure and professional ethics.

ANALYSIS AND DISCUSSION

Results got from the two surveys do reveal some encouraging aspects in the current state of China's planning education, but problems seem more evident.

The Supply of Planners and the Quality of Their Education

There is a deficiency in supply of planners as well as the quality of their education. Following China's reform and open-up policy, the rapid growth of cities demanded more planners to match this process and the limited planning programmes became overloaded. In order to cope with the situation, the State extended the power of establishing and managing new schools and entitled it to several central administration and some local government departments. As a consequence, numerous regional institutes emerged. There being neither specified standards nor unanimous management; however, many of them do not meet satisfactory quality level.

Education for Integrated Urban Planning Or Narrow Technical Tasks

Prior to the mid 1970s, all planning programmes were based on architectural education. Since then, efforts have been made to extend the scope of planning education, but with rather limited improvement. Up to now, there are still no such planning programmes as to take economics, sociology, management sciences or law other than the traditional architecture, engineering or geography as its basic planning education.

The engineering programmes have too high a ratio of required courses in architecture and engineering and much of the physical design is at the scale of individual buildings rather than urban planning. At the same time, the social science programmes are also deficient as they are primarily concerned with geography rather than urban planning. These to some extent lead to the decrease of students' interest and enthusiasm in planning study. It sometimes goes so far that some urban planning graduates become unequal to the planning tasks that confront them and have to find employment in other fields. This is a sharp contrast to the shortage of planners in the society.

The Neglected Needs of Small and Medium Size Towns

The most serious lack of planners is in small and medium size towns under 500,000 population, yet what actually happens is that each year most urban planning graduates from key institutions went to large cities or coastal areas for economic reasons while those graduating from local institutions are inadequately trained. There is a dilemma facing small and medium size towns: on the one hand, the quickened steps of urbanization propel them to go forward and on the other hand, limited local planning schools are unable to provide them with sufficient qualified planners to help them.

The Need for More Highly Trained Planners

The work units state that 70% of their professional staff should have a master's degree but only half of the planning programmes offer an advanced degree. However, where master's degrees are offered they are oriented toward course work and thesis research rather than professional practice.

Few students are admitted to advanced planning degrees from other undergraduate disciplines which narrows the educational possibilities.

Education and the Requirements of Professional Practice

There are gaps between what is covered in planning education and the knowledge and skills that are required for professional practice. Examples are the lack of courses on sociology, economics, real estate and management. Many planners perform administrative functions that challenge their knowledge of urban management and the socioeconomic aspects of urban development. There the subjects and related faculty resources needs to be strengthened.

Physical planning and design still remain the dominant concern of planning practice and should be retained and strengthened in the engineering programmes. These programmes should also train planners for roles in socioeconomic analysis and improve the students' skills in written and oral communication and computer applications. Otherwise the gap between planning education and the requirements of professional practice will widen.

The lack of research capability and the limited creativity of work units is attributable to the shortcomings in planning education. Students are usually overburdened by too many hours of course work which has become outdated or has proven to be unimportant in real practice. And most courses simply transfer knowledge like "feeding ducks", which creates a dead environment for learning that discourages students' curiosity and critical thinking. Furthermore, considering China's rapid growth and large-scale construction, planning process tends to be operated within a short time span. So it seems impossible for planning students to do down-to-the-earth research and to develop creative thinking in their jobs after graduation.

The movement towards a market economy places many new demands on planners. They must, for example, understand concepts of value as well as concepts of professional ethics to safeguard the public interest in the face of special interests.

In the planned economy there is a hierarchical continuity of decision-making that excludes the need for value judgements. The situation changes under conditions of a market economy and should be reflected in the education of planners and their adoption of professional ethics to safeguard the common good.

SUGGESTIONS FOR FURTHER CONSIDERATION

The analysis of the questionnaire surveys suggests that the reform of urban planning education in China should start with an analysis of the supply and need for planners and should lead to the adoption of standards for planning education and professional registration.

Western concepts for the accreditation of planning education and the registration of planners should be considered. However, there are major differences in the social needs and planning practices in China. Standards for accreditation and registration in China should therefore reflect a deep understanding of Chinese circumstances and not just copying the Western standards blindly.

The objective of the professional registration of planners in China should be to expand the science of planning and to encourage people who have qualifications in related fields to obtain registration after passing an examination, so some optional subjects in the registration examination should be taken into consideration.

The objective of the accreditation of planning education programmes in China should be to raise standards and prevent the initiation of programmes with inadequate faculty and facilities which results in poor education and a waste of resources. Accreditation standards should determine the overall scope of planning education including curriculums and faculty requirements. Re-accreditation should be required at regular intervals to make sure that old programmes do not just stand where they are, but make consecutive progress. The accreditation programme should allow for the elevation of the whole planning education.

Accreditation will ensure that all programmes satisfy minimum professional standards and that students who complete these programmes are qualified for professional practice. Different planning programmes may bear large differences in their academic standards and emphases. Accreditation will help educational administrators maintain high quality and encourage competition to create distinctive programmes.

REFERENCES

- XU, Xueqiang, Anthony Gar-On YEH and Xiaopei YAN (1994), *China's Economic Reform and Chinese Cities: Development, Planning, and Planning Education*, Section 3 and Appendix, Beijing: Science Press. (in Chinese)
- YANG, Xiaowei and Weihua LIU, *Theory and Approach of Educational Research*, Hubei Education Press. (in Chinese)
- QU, Zesheng, *Analysis and Comparison of Higher Education Between China and Japan*, Tongji University Press. (in Chinese)
- WU, Chang-Tong (1993), *Planning for A Better Environment in Asia: Implications for Planning Education*, Paper Presented at the Second Congress of Asian Planning School Association, 25-27 August, Hong Kong.
- RTPI (1991), *Guidance Note on Initial Professional Education Programmes in Planning: Content and Performance Criteria*, Approved by the Council of the Royal Town Planning Institute on 3 July 1991.

List of Urban Planning Schools in China

*Supplied by Min Zhao, Department of Urban Planning,
Tongji University, as of October 1995*

Architecture

- | | |
|--|---|
| Department of Architecture
Harbin Architecture University
66, West Dazhi Street
Nangang District
Harbin 150006
<i>(Urban Planning Specialization)</i> | 哈爾濱 150006
南崗區西大直街66號
哈爾濱建築大學
建築系
<i>(城市規劃專業)</i> |
| Department of Architecture
Hunan University
Yulu Shan
Changsha 410082
<i>(Urban Planning Specialization)</i> | 長沙 410082
岳麓山
湖南大學
建築系
<i>(城市規劃專業)</i> |
| Department of Architecture
Shandong Architecture and
Engineering Institute
47, Heping Road
Jinan 250014
<i>(Urban Planning Specialization)</i> | 濟南 250014
和平路47號
山東建築工程學院
建築系
<i>(城市規劃專業)</i> |
| Department of Architecture
Shenyang Architecture and
Engineering Institute
19, Wenyi Road
Shenhe District
Shenyang 110015
<i>(Urban Planning Specialization)</i> | 沈陽 110015
沈河區文藝路19號
沈陽建築工程學院
建築系
<i>(城市規劃專業)</i> |
| Department of Architecture
Southeast University
2, Sipailou
Nanjing 210096
<i>(Urban Planning and Design
Specialization)</i> | 南京 210096
四牌樓2號
東南大學
建築系
<i>(城市規劃與設計專業)</i> |

Department of Architecture
Suzhou City Construction and
Environmental Conservation Institute
Xifeng Yuan
Hanshan Temple
Suzhou 215008
(Urban Planning Specialization)

蘇州215008
寒山寺西楓園
蘇州城建環保學院
建築系
(城市規劃專業)

Department of Architecture
Tianjin University
92, Weijin Road
Nankai District
Tianjin 300072
(Urban Planning Specialization)

天津300072
南開區衛津路92號
天津大學
建築系
(城市規劃專業)

Department of Architecture
Xian Architecture and Technology
University
13, Yanta Road
Xian 710055
(Urban Planning Specialization)

西安710055
雁塔路13號
西安建築科技大學
建築系
(城市規劃專業)

Engineering

College of Resource Science and Civil
Engineering
Central Southern Industrial University
Yulu Shan
Changsha 410012
(Urban Planning Specialization)

長沙410012
岳麓山
中南工業大學
資源科學與建築工程學院
(城市規劃專業)

Department of Civil Engineering
Ningxia Polytechnic Institute
Weisi Road
New district
Yingchuan 750021
(Town Construction Specialization)

銀川750021
新市區緯四路
寧夏工學院
土木工程系
(城鎮建設專業)

College of City Construction
Wuhan Science and Technology
University of Surveying and Mapping
39, Luoyu Road
Wuchang
Wuhan 430070
(Urban Planning Specialization)

武漢430070
武昌珞瑜路39號
武漢測繪科技大學
城市建設學院
(城市規劃專業)

Department of Architecture and Civil
Engineering
College of Engineering
Yangzhou University
Yangzhou 225009
(*City Construction Specialization*)

江蘇揚州市225009
揚州大學工學院
建築與土木工程系
(*城市建設專業*)

College of Engineering and
Technology
Zhejiang Agricultural University
Huajia Chi
Hangzhou 310029
(*Town Construction Specialization*)

杭州310029
華家池
浙江農業大學
工程技術學院
(*城鎮建設專業*)

Geography

Department of Geography
Fujian Normal University
Shangshan Road
Changshan District
Fuzhou 350007
(*Urban and Regional Planning and
Development Specialization*)

福州350007
倉山區上三路
福建師範大學
地理系
(*城鄉區域規劃與區域開發專業*)

Department of Regional and Urban
Science
Hangzhou University
34 ,Tianmu Road
Hangzhou 310028
(*Urban Planning Specialization*)

杭州310028
天目路34號
杭州大學
區域與城市科學系
(*城市規劃專業*)

Department of Geoscience and
Oceanography
Nanjing University
22, Hankou Road
Nanjing 210093
(*Economic Geography and Urban
and Regional Planning Specialization*)

南京210093
漢口路22號
南京大學
大地海洋科學系
(*經濟地理學與城鄉區域規劃專業*)

Urban Planning Schools in China

Department of Urban and
Environmental Science
Peking University
Beijing 100871
*(Urban and Regional Planning
Specialization)*

北京100871
北京大學
城市與環境學系
(城市與區域規劃專業)

Department of Urban and
Environmental Science
Southwest Normal University
Beipei
Chongqing 630715
*(Economic Geography and Urban
and Regional Planning Specialization)*

重慶630715
北碚
西南師範大學
城鎮與環境科學系
(經濟地理學與城鄉區域規劃專業)

Department of Urban and Resource
Planning
Zhongshan University
135, Xingang Road West
Guangzhou 510275
*(Economic Geography and Urban
and Regional Planning Specialization)*

廣州510275
新港西路135號
中山大學
城市與資源規劃系
(經濟地理學與城鄉區域規劃專業)

Planning

College of Architecture and Urban
Planning
Chongqing Architecture University
83, North Street
Shaping Ba
Chongqing 630045
*(Urban Traffic Planning and
Urban Design Specialization)*

重慶630045
沙坪壩北街83號
重慶建築大學
建築城規學院
(城市交通規劃與設計專業)

Department of Planning and
Architecture
Hunan City Construction College
4, Chaoyang Road
Yiyang
Hunan 413000
*(Town and Rural Planning
Specialization)*

湖南益陽市413000
朝陽路4號
湖南城建高等專科學校
規劃建築系
(城鄉規劃專業)

Urban Planning Schools in China

Department of Urban Planning
College of Architecture and Urban
Planning
Tongji University
1239, Siping Road
Shanghai 200092
(Urban Planning Specialization)

上海200092
四平路1239號
同濟大學
城市規劃系
(城市規劃專業)

Department of Urban Planning
College of Architecture
Tsinghua University
Beijing 100084
*(Urban Planning and Design
Programme)*

北京100084
清華大學
建築學院
規劃系
(城市規劃與設計專業)

Department of Planning and
Architecture
Wuhan City Construction Institute
39, Wuhuang Road
Wuchang
Wuhan 430074
(Urban Planning Specialization)

武漢430074
武昌武黃路39號
武漢城市建設學院
規劃與建築系
(城市規劃專業)

X11173479

