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Contents

Introduction

Hou Renzhi is a renowned scholar in historical geography who has a thorough knowledge of Chinese and Western cultures. He is broad-minded, quick-witted, and diligent, and has won many fruitful achievements. *Symposium on Chinese Historical Geography* selects 12 masterpieces of Dr. Hou's, which serves as a window into Hou's academic experience and his main thoughts and achievements in historical geography.

The essays can be divided into five categories: (1) Speeches and theses about higher education, including "In Memory of Professor P.M. Roxby" (1947), "I Come from Yenching University" (1996) and "Address at the Commencement of Liverpool University" (1999); (2) Speeches and theses on the study of historical geography, such as "Beijing: Its Characteristics of Historical Development and Transformation" (1980), "The Transformation of the Old City of Beijing, China—A Concrete Manifestation of New China's Cultural Reconstruction" (1986), "From Beijing to Washington—A Contemplation on the Concept of Municipal Planning" (1987) and "Views on Three Milestones in the Construction of Beijing City" (1994); (3) The speech regarding desert historical geography research, that is, "Ancient City Ruins in the Deserts of the Inner Mongolia Autonomous Region of China" (1985); (4) The study of exchange between China and the West, namely, "Oversea Communications Between China and East Africa Before the So-called Discovery of the New Sea-route" (1964); (5) Protection of cultural heritage and review of ancient classics like "A Modern Interpretation of Ancient Chinese Geographical Literature" (1980) and "The Ancient Great Wall in a New Era" (1987). Though varying in their topics and contents, these essays are mostly speeches by the author when he was invited to give lectures at universities abroad, attended international academic conferences or conducted comparative researches on Chinese and foreign cultures. It is obvious that the basic selection principle of this book is a focus on international communication and global vision.

Among the 12 essays, the earliest one was published in 1947, the latest in 1999. The whole time span covers 53 years, extending from the youth of Dr. Hou to his old age. By reading these essays, we may get a whole picture of Dr. Hou's academic growth. In the essay "I Come from Yenching University," he gives a detailed review

of his early education. In the year of 1932, he entered the History Department of Yenching University, where he obtained a Bachelor degree and a Master degree. Influenced by noted professors like Gu Jiegang, William Hung and Deng Zhicheng and the motto of the university "Freedom Through Truth for Service," he gradually fostered the thought of patriotism, humanistic pragmatism and working for the well being of people. At the same time his academic interest was gradually transferred from history to geography. Professor William Hung sensed his change and told him, "It is better to select a teacher than to select a school." Then he recommended Hou to pursue his doctor degree in historical geography under the instruction of Professor Percy Maude Roxby at Liverpool University. Unfortunately, the outbreak of the WWII postponed this plan to 1946.

The year 1946 can be called a turning point in Hou Renzhi's academic career. This year he traveled across the ocean to study in UK, while Professor Roxby, the former head of the geography department, had retired and left for China, and then died there before long. Hou missed the opportunity to learn from Professor Luo. Later, the new dean of the geography department Clifford Darby became his mentor. Dr. Hou recalled this experience in "In Memory of Professor P.M. Roxby." Professor Darby is not only the most influential scholar in historical geography in Britain from the 1930s to the 1970s, but also the most important founder and pioneering researcher of modern British historical geography. Under the instruction of Professor Darby, Hou Renzhi finished his Ph.D. thesis titled "An Historical Geography of Peiping." It is the first monograph on urban historical geography in China, and is considered as a milestone both in Hou's personal academic development and in the history of Chinese historical geography.

Hou Renzhi finished his study and went back to China in 1949. He first worked as a full-time teacher at Yenching University and taught part-time at Tsinghua University. After the nation-wide reorganization and integration of academic programs of colleges and universities in 1952, he became a Professor in Peking University and was appointed as Dean of the geography department. In the following three decades, like many other intellectuals in China at that time, Hou suffered from hard labor and severe persecution in political campaigns, especially during the Cultural Revolution, but he never gave up research and academic learning. After the Cultural Revolution, Dr. Hou became more devoted to the research and practical activities in historical geography, actively promoted the international academic communication, and hence had made great contributions to the development of historical geography in China.

Hou's empirical research mainly focuses on two aspects, namely, urban historical geography and desert historical geography. The selected essays, "Beijing: Its Characteristics of Historical Development and Transformation," "The Transformation of the Old City of Beijing, China—A Concrete Manifestation of New China's Cultural Reconstruction," "From Beijing to Washington—A Contemplation on the Concept of Municipal Planning," and "Views on Three Milestones in the Construction of Beijing City" belong to the former category. In this field, Dr. Hou has formed his unique way of research that he starts with the geographical environment of the city, explores reasons for its rise and development by analyzing the choice of the site and its position in the communication network, and unveils the planning and developing

process of the city based on the distribution of the watercourse in its vicinity. His urban study is connected with the social reality in China and keeps up with the cutting-edge development abroad. In the 1980s, his comparative study between Beijing and Washington in city planning finished during his visit in Cornell University is the model of comparative study between Chinese and Western cities, and also the only research in this field conducted by a Chinese scholar.

In the mid- to late 1950s, Dr. Hou began to pay attention to environment changes that occurred in the arid area of China's northwest region. Through the field visits to the Ulanbuhe Desert, the sandy land in Hedong, Ningxia, and the Mowusu Desert, he disclosed the impact of human activities on the local ecosystem through systematic researches and analyses of the ancient city sites in the desert. His research won broad attention in the academia home and abroad, and marked the beginning of a new study field in historical geography. His essay, "Ancient City Ruins in the Deserts of the Inner Mongolia Autonomous Region of China," which can be regarded as a master work, is also the earliest English essay published by a Chinese scholar in this field.

Dr. Hou has very extensive research interest besides urban historical geography and desert historical geography. His insightful views can be found in the comparative study between Western and Chinese navigation, research and protection of cultural heritage, and his study of *Commentary on the Water Classic* and *Travel Notes of Xu Xiake*. As one of the earliest advocator and practitioner of the investigation of *Commentary on the Water Classic* with the method of modern geography, he played a vital role in promoting the study of this book. In "Oversea Communications Between China and East Africa Before the So-called Discovery of the New Searoute" (1964), "A Modern Interpretation of Ancient Chinese Geographical Literature" (1980) and "The Ancient Great Wall in a New Era" (1987), readers can readily find the importance of his researches.

Dr. Hou's academic achievements have already won worldwide recognition. He received an honorary doctor degree of science from Liverpool University in 1984 and was awarded Scientific and Technological Achievements Award by Ho Leung Ho Lee Foundation in October 1999. Then, he was granted by the National Geographical Society of USA the George Davidson Medal in November 1999 and the Research and Exploration Chairman's Award in October 2001, respectively. So far he is the only Chinese historical geographer who has won so many honors and awards.

Dr. Hou loves life and is passionate about sports, research and teaching. His essays are easy to understand but eloquent, his speeches vivid and inspiring. When I re-read these essays and speeches now, his face and laughter re-emerge in my mind, as if I were with him, listening to his interesting stories.

New Building of Geography Deng Hui
Peking University, Beijing, China
Aug 28, 2014

Chapter 1
Beijing: Its Characteristics of Historical Development and Transformation

1.1 Introductory Remarks

Mr. President of British Columbia University,

First or all, allow me to express my deep gratitude to you, and to Mr. Chairman and to all members of the Committee of the Cecil H. and Ida Green Visiting Professorships. Thanks to all of you. It's my great honor to visit your beautiful country. And I feel especially happy to be here, for Canada is the fatherland of the great internationalist, Dr. Norman Bethune, of whom we Chinese people will always deeply cherish the memory. Just 40 years ago, Dr. Norman Bethune gave his whole life to the cause of the liberation of the Chinese people. He made himself an important bridge linking China and Canada, which has become the symbol of the everlasting friendship between our two peoples. The cause to which he had dedicated his own life has turned out to be victorious in China; and the ideal for which he had worked hard has come to be brought to fruition on the land where he had fought bravely. A new China is forging ahead on a new long march towards her modernization, in spite of all the interferences and obstacles from both inside and outside. To attain our goal, we must learn from the West with modesty all their advanced things. Of course, in this respect, there is quite a lot for us to learn from your country. On the other hand, we must also conserve all the valuable and useful items of the

When published in the *Historical Geography*, vol. 2, a short note was added by the author at the beginning of the essay, saying, "In the spring of 1980, the writer was invited by the University of British Columbia to give short-term lectures and three public speeches in Canada. Now the two original Chinese speeches regarding the historical geography of Beijing have been edited and integrated into one with a new title. If there are any omissions or errors, the readers are free to give suggestions." This article above is transcribed from the author's original speech manuscripts.—Editor's note.

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cultural legacy left to us by our own ancestors. Thus in the course of forming our new socialist culture, learning from our own past has been found even more significant and complicated.

On this issue, I want to give a simple but concrete example. That is how we are to build up our people's capital in the new socialist era on the basis of the ancient city of Beijing.

Today I am going to deal with my first topic: "The City of Beijing—A Historical Perspective".

Next time I'll come to my second topic: "The New Metropolitan Planning of the City of Beijing".

1.2 The City of Beijing—A Historical Perspective

The city of Beijing has been the capital of the People's Republic of China for only 30 years. But her history can be traced back to remote antiquity.

1.2.1 Part One: The Pioneers Who Opened Up Beijing Area

As early as half a million years ago, in the place now called Zhou-koudian District, which is located in the southwestern suburbs of Beijing, there lived Chinese ape-men, who are now well-known as "Beijing Man".

In the caves inhabited by Beijing Man were excavated fossils of the skulls and bones of primitive ape-men. Simple tools used by the primitive ape-men and animal fossils were also found out there. These discoveries have provided very important scientific basis for the study of the origin and evolution of mankind. They are not only gems of China's ancient cultural legacy, but also rarities in the treasure-house of the world's culture.

Among these discoveries there are traces of fire used by Beijing Man. In that vast and wild world, Beijing Man succeeded in starting a fire and burning it into raging flames, and learned how to keep fire, thus proclaiming the coming of the age when man would be free from darkness and begin his early cultivation.

Beijing Man made its appearance at the initial stage of primitive society and lived a gregarious life then. With the simplest tools made of sticks and stone, they engaged themselves in fruit-gathering and hunting, so as to keep themselves alive and breed and bring up their offspring. For this purpose, they had to carry on arduous and tenacious struggles against nature.

Hundreds of thousands of years passed and primitive society evolved into its last stage. About 4,000 years ago, it happened that a few tiny dwelling places began to emerge on the plain near the present-day city of Beijing. This is one of the places where those practicing farming and hunting first settled down. They no longer

moved round in search for fruit and wild animals as food. Having settled down there, they started to farm and raise livestock as their chief means of life. These earliest settlers were pioneers who opened up the Beijing Area.

With the rise of productivity, the quantitative increase of surplus products, and the division of labour, there appeared private ownership and a few exploiters who lived on other people's labour. Then primitive society began to disintegrate. At the same time slave society which was the first society with class oppression in human history gradually came into being.

The appearance of the earliest cities marked the formation of slave society.

1.2.2 Part Two: Beijing's Primitive Settlement—Ji & the Geographical Features of the City of Ji

Over 3,000 years ago, when China was still in her early days of slave society, Beijing's primitive settlement came into existence. At that time, China was basically dominated by the emperors of Shang Dynasty.

In that period, written symbols were invented to keep a record of events. The territory under the rule of Shang Dynasty covered the area which is now the central part of the North China Plain. The great plain was made up of the alluvial soil left mainly by the Yellow River and some other smaller rivers. So it is also called the Yellow River Alluvial Plain. The central part of the great plain has generally been called "Zhongyuan" (which means "The Central Plains") in history. The Shang rulers founded their capital on the Central Plains, and the primitive settlement in Beijing was located far in a remote place to its north. But the Shang culture which was chiefly characterized by fine bronze wares and was broadly disseminated also found its way to this far-away place.

At the beginning of the eleventh century B.C., the rulers of Zhou Dynasty which first started in the highland areas of the middle reaches of the Yellow River and later expanded towards the east, eventually conquered Shang Dynasty on the great plain. As a result, a more developed country with slave-owning system was established. Beijing's primitive settlement was then becoming larger and larger at a high speed, which was to turn into a famous principality called "Ji". And "Ji" is the earliest name of Beijing found in historical records.

Records of the Grand Historian says that Zhouwuwang, the founder of Zhou Dynasty, for the first time enfeoffed the duke Zhaogong with the "Ji" area, and this realm was known as "Yan Princedom". Soon the realm Yan became one of the most important states in the north under the rule of Zhou Dynasty. This state continued for more than 800 years.

Here arises a question we must pay special attention to, that is, how the site of the city of Ji was selected. Or, let's put it in more exact words: what geographical features enabled the primitive settlement of Beijing to expand rapidly and remain prosperous for such a long time without declining.

This is a very interesting question, which has long attracted the attention of both Chinese and foreign geographers. There was scholarly guessing as to the reasons why this spot was chosen and all these can be ignored because we are now fortunate enough to have access to new source material unearthed recently.

Here I cannot but refer to a world-famous scholar who is well-known to the older generation of Canadian geographers. He is none other than Professor Griffith Taylor, who was engaged in teaching at Toronto University for some time.

Before he came to Canada, Professor Taylor had taught at Chicago University for a period of time. And he was elected President of the Association of American Geographers in 1941. In his presidential address delivered to the Association of American Geographers, Professor Taylor talked about the selection of the earlier site of the city of Beijing, on the basis of the result of his personal on-the-spot investigations and research in Beijing. The main content of his presidential address made to the Association of American Geographers was included into a book written by him, which was entitled *Urban Geography*, one of his books dealing with the study of site, evolution, pattern and classification in villages, towns and cities. He devoted several pages to the discussion of the geography of Beijing and paid special attention to the study of the origin and evolution of the city.

On page 26 of the book (2nd ed., 5th imp., 1968), he says,

> Pekin offers a fair example of a large city which has developed under temperate conditions in a gigantic plain… It is difficult to point to any environmental factor which has led to Pekin's dominance over most of the towns in the deltaic deposits of the Huang-ho…. One would have expected the chief northern city to have developed either in the centre of the plain, or near the main river, or possibly at a good harbour on the coast. Pekin fulfils none of these conditions.

In the following two pages, he raised his point of view:

> It seems clear that a considerable 'human' element is involved in the choice of the site of Pekin. In early days necromancers ascribed to the site a peculiarly fortunate character…. The magical and political factors (briefly referred to earlier) led to the city's birth perhaps as far back as 723 B.C. At this time 'Chi' was the capital of Yen Kingdom according to the *Encyclopaedia Sinica*. Given this start, no other city seems to have arisen to compete with it. (pp. 27, 28)

Finally, he came to the conclusion:

> It must be admitted that the choice of the site of Pekin is not due to any marked environmental factors… We may perhaps grant that Pekin—situated in a vast region of uniform environment—is a good example to suggest that the possibility theory does, under such conditions, explain the facts of geographical distribution. (p. 29)

Forty years have since passed. Over this period, especially since the founding of the People's Republic of China, there have frequently been new archaeological finds and new results in scientific research, which are of great help to the study of the original site of the city of Beijing. It is a pity that Professor Taylor, a scholar so enthusiastic about the study of the geography of the city of Beijing had passed away before he could personally read these new materials. It would be unfair if we should make a criticism of some of Professor Taylor's theses by basing ourselves on the

newly-discovered materials. What we need to do is to make full use of all the new concerning materials we have so far grasped, and to make further investigations on the origin of the city of Ji and its characteristics.

For this purpose, it is necessary to make some essential explanations about the location of the city of Ji and its geographical features.

Firstly, the grounds of argument found in the special writings about the exact location of the site of Ji City, written either in Chinese or in the other languages, were mostly insufficient and even unreliable. On the basis of the new materials hitherto grasped, the original site of Ji City can be located in the southwestern corner of the present-day Beijing city proper, that is, in the vicinity of the present-day Kwang'an Gate (The Gate of Extensive Peace).

Secondly, this original site is also situated in the southwestern corner of a vast stretch of flat land, which is called the Beijing Plain. To the west, north and northeast of the plain, where there are continuous encircling mountains, which remind people of a bay. Seeing this topographical feature, people also name this plain "Beijing Bay". This plain was principally washed by two rivers, the Yongding River on the west, the Chaobai River on the east, which had cut through the hills and found their ways into the bay. Like the Yellow River, these two rivers are well-known for their carrying large quantities of silt. The sand and mud carried along by the two rivers gradually silted up the ancient bay and turned it into flat land, which extended southward, linking itself with the alluvial plain formed by the Yellow River.

Thirdly, talking about the conditions for communications, we must take note of the relationship between the Beijing Plain and the great North China Plain. Over the last 3,000 years, great changes have taken place geographically in this area. If we fail to see this, we won't be able to really understand the reason why the ancient city of Ji should have developed here.

Now, from the viewpoint of the geographical conditions, it is very easy to go from the North China Plain northward to the Beijing Plain, and vice versa. But at the time when the city of Ji first rose over 3,000 years ago, it was difficult for access. At that time, to the south and southeast of Ji City, there were lakes, ponds, swamps and marshes spreading all over, which isolated the city from the south. It was only thanks to the careful cultivation of the hard-working peasants from generation to generation that vast reaches of wet low land in this area were turned into fertile cultivated fields. This is one of the greatest geographical changes the last 3,000 years have ever witnessed here. It is a pity that I have no time to elaborate on that point in this talk.

Over 3,000 years ago, there was only one way leading from the North China Plain to the Beijing Plain. One had to walk northward along a path to the west of the North China Plain and to the east of the Taihang Mountains. The path was gradually trodden along a narrow belt between the plains and the mountains. The Taihang Mountains mark the east edge of the Shanxi Loess Plateau, from which numerous rivers run eastward, and cutting through the Taihang Mountains, surge over into the North China Plain, where they converge into several bigger rivers and flow into the sea. The rivers which ran through the mountains into the plains formed many

alluvial fans, big or small, and then provided many good points of crossing for the long path on the east side of the Taihang Mountains. One could then walk northward along this long road, get over one crossing site after another, and finally come to the most difficult point for crossing which was situated on a large river. This is the exact place of the ancient ferry-place on the Yongding River. Crossing the river at this point, one would set foot into the Beijing Plain. So this point of crossing was actually the gateway to the Beijing Plain. When he reached the north end of the plain, one would encounter a range of mountains lying to the north and northeast of the plain, which hindered him from going further northward into the mountainous regions (Fig. 1.1).

As a Chinese old saying goes, "there is always a way for people in great straits." In the mountains situated to both the northwest and the northeast of the Beijing Plain there were two passes. The one located to the northwest is called Nankou Pass (South Mouth Pass). If one entered the mountains by way of the Nankou Pass and went through a long valley, he would come to a place called the Badaling Hill, a part of the Great Wall which is near to Beijing and now frequently visited by tourists. If one got over the gently sloping Badaling Hill and went further northwestward, he would pass through a vast basin area among the mountains and finally get to the Inner Mongolian Plateau.

The entrance to the northeastern mountains is called Gubeikou Pass. Starting from Gubeikou Pass and going northeastward in the mountains, one would cross a chain of hills in undulation and finally reach the Northeast China Plain.

Besides, there is another way leading to Northeast China. If one started from the Beijing Plain and went onward in an eastern direction along the southern edge of the Yan Mountains, he would come to the juncture of the mountain and the sea, which is now well-known as Shanhaiguan Pass (Mountain-Sea Pass). Getting out of Shanhaiguan Pass and walking northeastward along the coastal corridor, one could come to the plain located in the lower reaches of the Liao River.

From the above-mentioned facts, we can see that when one got across the ancient ferry on the Yongding River in the old times, he could take three different ways onward. Then here arises a very interesting question: Where was the actual juncture of this ancient road?

Under normal circumstances, the juncture of this road should be at this crossing site itself. As a ferry-place, the point of crossing was in effect a hub of communications. With the development of social economy and the ever-increasing exchange of commodities, such kind of the crossing site would provide favourable conditions for the growth and expansion of cities. This is not rare in the history concerning the development of cities in the world. One of the typical examples is the growth of the city of London which was built on the basis of an ancient crossing place on the Thames. If such an inference was reasonable, then the ancient city of Beijing should have first risen on the basis of the ancient ferry-place on the Yongding River. But it was not the case. The ancient city of Beijing did not first start there. Instead of a city, a big stone bridge made its appearance there in 1192. In some Western historical documents, this big stone bridge was called "Marco Polo Bridge", for Marco Polo, the famous traveller from Venice was the first well-known guest from the West who

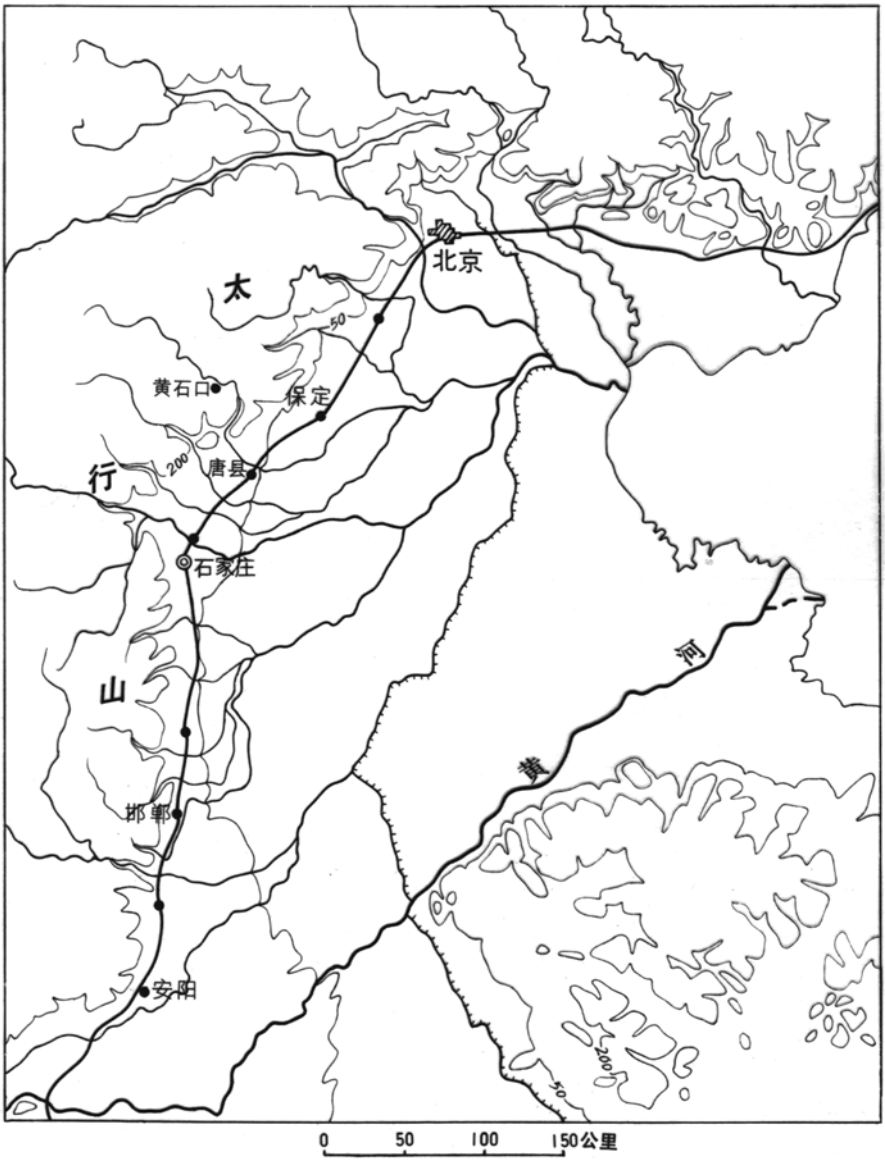

Fig. 1.1 East side of Taihang Mountains
太行山 Taihang Mountains, 黄河 Yellow River, 北京 Beijing

had ever crossed the bridge. This 11-arched bridge is 266.5 m in length. This bridge is noted for its magnificent structure, graceful ornament and delicate carving. Marco Polo made detailed descriptions of it in his famous travelling notes. As a result, it became known to the West.

In Chinese, this big stone bridge is called “Lugou Bridge”, which was after the original name of the Yongding River. Now the name of the river itself has long been changed, but the bridge across the river as well as its old name has always remained unchanged, and well-preserved.

Here I’d like to mention one thing in passing. It is at “Lugou Bridge” that the Japanese imperialists launched their aggressive war against the Chinese people on July 7, 1937. That is the famous “Lugou Bridge Incident”.

The ancient ferry-place on the Yongding River, running under the present “Lugou Bridge”, provided favourable conditions for the development of a city. However, it had its disadvantages to the growth of a city at this very point as well. That was the threatening floods of the Yongding River. This is the reason why people altered the name of the river into “Yongding”, whose literal meaning is “Tranquility Forever”, showing the hope that the river would always remain tranquil and never overflow its banks.

The Yongding River, as a big river, had an unsteady rate of flow. In the rainy season, the Yongding River rose higher and higher, swelled by the water running from the mountainous areas which were to the northwest of the Beijing Plain. Such ancient ferry-place as the crossing site where the present Lugou Bridge is situated stood in the way of the seething and rolling waters. The floods formed a constant menace and an incessant danger to the crossing point in the old times. The ancient people decided that they shouldn’t build their city in such a place. They should have their city built up in a place which was close to the crossing site and free from the threat of floods. The place they found was the site of the original settlement which later turned into the city of Ji. As it was located at a hub of communications linking the north and the south, this place had more favourable conditions than its neighbouring settlements. That is why it could develop into a city at a greater speed.

Besides, the original settlement of Ji also had its own local and regional favourable conditions which enabled it to grow up smoothly in its early stage. For instance, it was positioned on a ridge of the alluvial fan formed by the ancient Yongding River. Moreover, it was situated to the east of a belt of overflowing phreatic water near the alluvial fan. In this area, there were rich sources of water underground. To the west of the city of Ji there was a lake formed by the overflowing phreatic water. It was called the West Lake in the past and is now called the Lotus Pond. The lake led to a stream which ran through the southwest part of Ji City. The small river provided a good source of surface water for the early development of the city of Ji.

From the analysis made above, we can see that the rise of Ji City depended not only on the decisive factors for the social and economic development, but also on the favourable geographical conditions of its own. As these geographical conditions existed objectively, their analysis is possible. If we ignored these geographical conditions, we would find it difficult to explain why the original settlement of Ji should have risen up in this very place (Fig. 1.2).

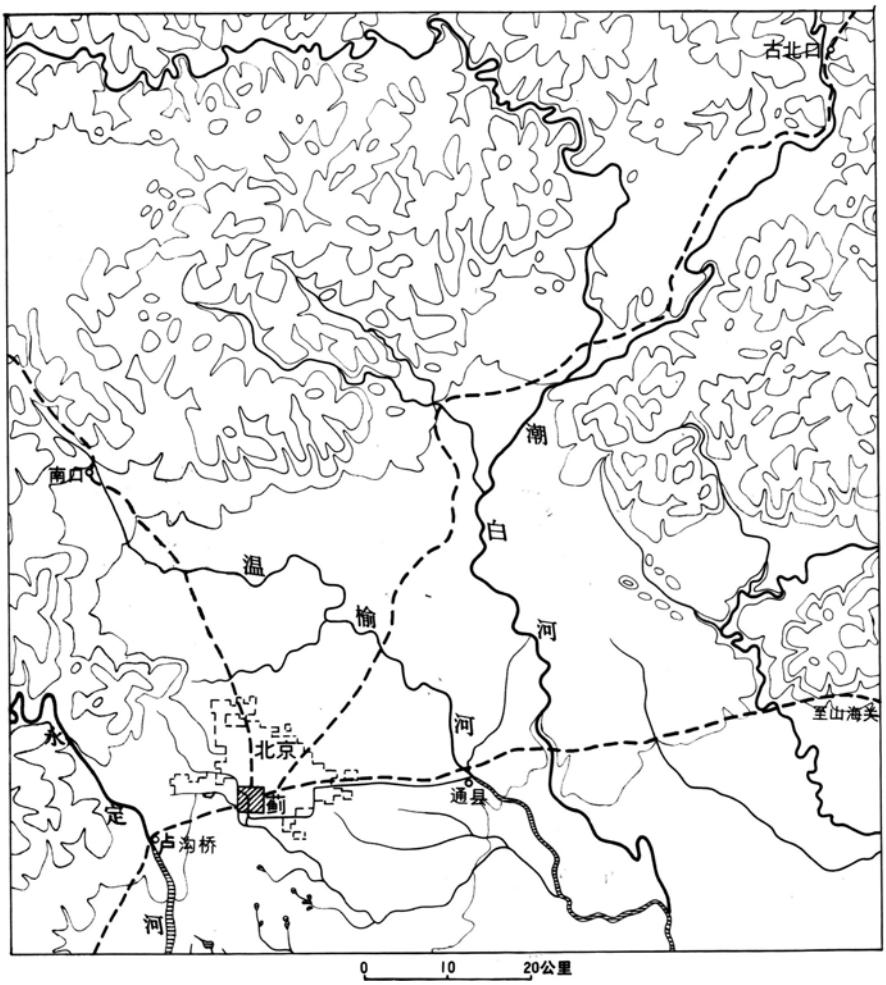

Fig. 1.2 Ancient ways on the Beijing Plain
潮白河 Chaobai River, 温榆河 Wenyu River, 永定河 Yongding River, 卢沟桥 Lugou Bridge, 南口 Nankou Pass (South Mouth Pass), 古北口 Gubeikou Pass, 至山海关 To Shanhaiguan Pass (Mountain-Sea Pass), 蓟 Ji City, 通县 Tongxian, 北京 Beijing

1.2.3 Part Three: The Moving Away of the Original Site of the City and the Construction of Dadu City in Yuan Dynasty

In this part, I'll talk about the historical development of the city at its later stages.

During the long years before the third century B.C. a small enfeoffed princedom called Yan had the city of Ji as its political centre. Around the later part of the third century B.C. the State of Yan and all the other states which had been enfeoffed by Zhou Dynasty were conquered successively by the newly-rising Qin. At this time

China evolved into the early stage of feudal society. The first emperor of Qin Dynasty Qinshihuang founded the first centralized and unified feudal empire with many nationalities living together in China's history.

Feudal society in China, starting from Qin Dynasty, lasted over 2,100 years in which one dynasty was replaced by another. It was not until 1911 that the last feudal dynasty—Qing Dynasty—was overthrown. Over these long years, China became split up politically from time to time. That is to say, two or more independent empires co-existed on this territory for some time and vied with one another. But for most of the time in this long period, China was in a state of unification, which promoted the economic and cultural development of the country.

The political centre of the whole country altered several times in the long history. Two out of the cities which acted as capitals were much more important. Chang'an which is known as Xi'an now, used to be the major political centre of the country in the earlier period of feudal society. Only much later did Beijing become the major political centre of the whole country.

Though Chang'an served as the major political centre of the country, Beijing also played an important political role for it occupied a key position to link the Central Plains and the remote regions of the Northeast China. During this period, the dynasties which ruled the Central Plains were mostly established by members of the Han Nationality. As they took agriculture as their chief means of production, they came to a rather advanced stage in social economy and culture. In the meantime, the outlying areas of Northeast China were distributed with several national minorities who were still leading a nomadic life. They were under-developed in production, as they were in a developing stage of slave society. So within China there existed simultaneously two social structures which were in different stages of development and thus often in opposition to each other. Such contradictions could by no means be solved under the old social system. The valiant horsemen of the nomadic tribes, led by their militant and bellicose chieftains, often rode southward over to the Central Plains, forming a threat to the inhabitants who engaged in farming in these areas. Their intrusion threatened to overthrow the rulers of the areas of the Central Plains. Consequently, the rulers of the Central Plains, when powerful, would often send expeditionary forces against the nomadic tribes inhabiting the remote areas in the North. But they would more often act on the defensive rather than take the offensive. Hundreds of thousands of labourers were driven into the mountains in North China and were forced to build a long-distance bulwark in the mountainous areas for the sake of defence. This is the famous Great Wall. In fact the Great Wall is a witness to one of the most important national contradictions that ever existed in history. And this colossal and magnificent Great Wall built by the ancient labouring people with their own hands has turned into a well-known interesting place which is frequently visited by numerous Chinese and foreign tourists with astonishment, admiration and joyfulness.

From the third century B.C. to the ninth century A.D., the rulers of different dynasties from the Central Plains, when they were powerful, would take the city of Ji as their springboard on their punitive expeditions against the nomadic tribes in the North and Northeast. But when the imperial empires in the Central Plains were on the decline or in a state of disintegration, the nomadic tribes from the North and

Northeast would seize the chance to go all the way downward and ride roughshod over the Central Plains, robbing the people there of their property and even capturing many of them as slaves. In such cases, the rulers of the Central Plains would turn the city of Ji into a defence place of strategic importance. But once the chieftains of the nomadic tribes from the north succeeded in capturing the city of Ji, they would certainly, in their turn, make it a base for advancing onward to the south.

Of course, for most part of this millennium, people lived in peace without any wars. In the time of peace and settlement, the city of Ji acted as an important trade centre to link the north and the south, and also played an active part in promoting the cultural exchange between the Central Plains and the remote areas in the North and Northeast part of China.

From the tenth century A.D. on, the national minorities living in Northeast China began to rise up one after another and got stronger and stronger. Soon the leaders of the Qidan Nationality (the Khitans) commanded their troops on a southward expedition and occupied the city of Ji. They changed the name of the city into Nanjing (South Capital) or Yanjing and proclaimed it their "accompanying capital" (the second important political centre) and also took it as a military base for their further southward advancement. This took place in a period called Liao Dynasty (916–1125) in China's history. At the beginning of the twelfth century, another national minority living in the Northeast—the Nuzhen Nationality—sprang up. Before long, they defeated the Qidan rulers and conquered the city of Nanjing of Liao Dynasty. Then the Nuzhen rulers officially moved their capital to the city of Nanjing and changed its name into Zhongdu (Central Capital). This historical period was called Jin Dynasty (1115–1234).

The city of Zhongdu of Jin Dynasty was the last and the biggest city which had ever been built on the original site of the city of Ji (Fig. 1.3). The palatial buildings in the city were luxurious and magnificent. But this new city had a history of less than 100 years only. Meanwhile, the Mongolian Nationality, a national minority living on the northern plateau, got stronger and stronger, with an outstanding brave man called Genghis Khan as their leader. In 1215, a large group of cavalrymen under Genghis Khan broke through the natural barrier at Nankou Pass and rode all the way to the city of Zhongdu. After fierce battle with the garrison troops of Jin Dynasty, they forced their way into the city. The town was thrown into confusion and the huge and splendid palaces were burned down to the ground.

In 1260, Genghis Khan's grandson called Kublai Khan who was the founder of Yuan Dynasty in China's history, came to the city of Zhongdu and chose to make it the capital of his dynasty. After careful considering, the emperor took the advice of a Han scholar named Liu Bing-zhong and decided not to build his imperial palace here. As a learned man with rich knowledge of and practical experience in city construction and with a mastery of many other branches of science and technology, Liu Bing-zhong suggested that a new city should be built on a new place selected in the northeastern suburbs of the original site of the city of Zhongdu. Another brilliant scientist called Guo Shou-jing also took an active part in the planning and building of the new city. When Guo Shou-jing was young, he used to be a student of Liu Bing-zhong. As a scientist, Guo Shou-jing was not only good at astronomy and the science

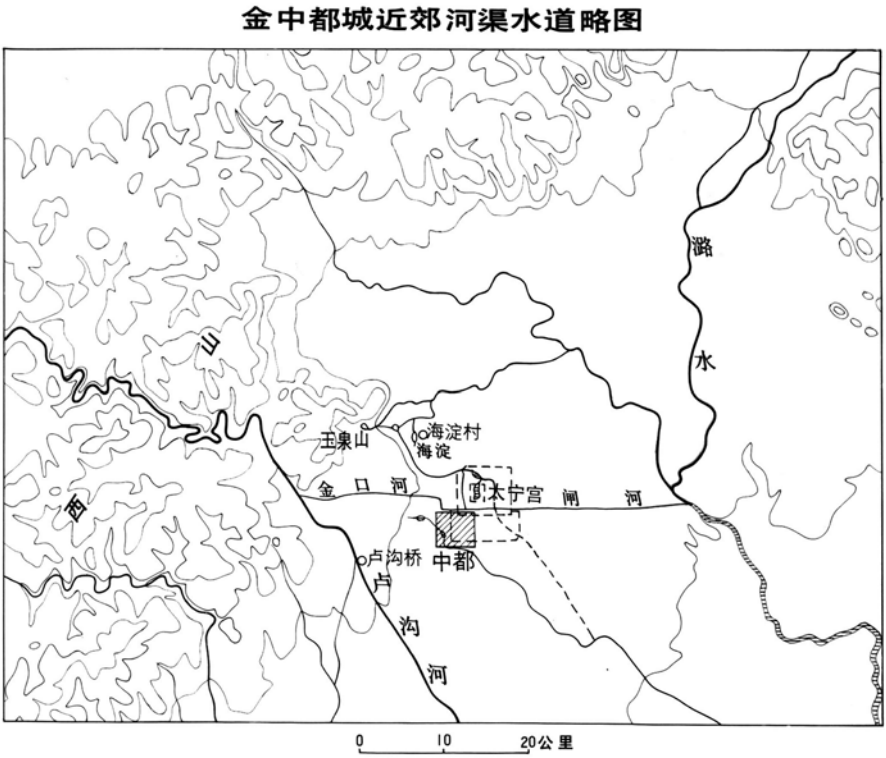

Fig. 1.3 Watercourses in the adjacent areas of Zhongdu City of Jin Dynasty
中都 Zhongdu City, 西山 West Mountains, 潞水 Lu River, 玉泉山 Yu-quan (Pearl Spring) Hill, 金口河 Jinkou Canal, 闸河 Sluice Canal, 卢沟河 Lugou River, 卢沟桥 Lugou Bridge, 海淀 Haidian, 太宁宫 Tai-ning Palace

of calendar, but also specialized in surveying and water conservancy. Guo Shou-jing and his teacher Liu Bing-zhong cooperated very well with each other and formed a core of leadership in the city construction. They also invited many skilled masons whose ancestors had engaged in masonry for generations from the Taihang Mountains to participate in the construction of the new city. Among these stonemasons, there were two noted folk artisans of stonework by the names of Yang Qiong and Yang Hao. Besides, assisting in the building of the city were some foreign craftsmen who were from Middle Asia. The construction of the new city started in 1267. The new city was named Dadu (Grand Capital), out of which the present city of Beijing grew.

Here I'd like to raise the following two questions, whose answers may help us to have a better understanding of the development of the present city of Beijing.

1. What made them decide to give up the old town of Zhongdu and build the new city of Dadu instead?
2. How was the site of the new city of Dadu selected? How was the planning of the new city made?

Let us discuss the first question now.

Obviously, the reason why they gave up the old town was that the original palaces had been burned down to the ground. They would rather build a new city with new palaces than to rebuild them on the ruins of the old town. But there was an even more important factor which made them build a new city in a new place. That was the need of new water sources.

When the city of Ji was in its early stage of development, its need for the sources of surface water was limited, as its site and population were not big. The West Lake located near the city and the small river running by the city could quite satisfy the city's demand for water. But great changes took place after Jin Dynasty founded its capital in this place. To keep up China's ancient tradition, the emperors would have imperial gardens built in connection with the building of the imperial palaces in their feudal capitals. An important factor of building imperial gardens was that they must be embellished with streams, lakes, hills and mounds. If there weren't any natural hills or waters, then artificial lakes would be made by digging into the ground and artificial hills would be piled up with the earth dug out from the lakes. So the lakes and ponds in the imperial gardens were given a fixed name: "the Heavenly Water Pond", which meant that the water of the imperial lakes came directly from the Heaven and that this elemental force was the origin of life. To build imperial gardens, large quantities of water were needed. Thus larger and richer sources of surface water were required. Besides, for the construction of canals leading to the capital sources with plenty of surface water were also needed. The man-made rivers were important channels by which grain collected from the peasants and other articles of daily necessity provided for the royal families, the central governmental institutions and the garrison troops were transported to the capital.

When the rulers of Jin Dynasty expanded their capital of Zhongdu, they enclosed the river running into the lower part of the West Lake within the city. And they also built their imperial gardens in the west of the imperial palaces. The West Lake as a water source could supply enough water to fill in the imperial lakes. However, it was far from being able to provide the canals with sufficient water. The rulers of Jin Dynasty did open up a canal linking the city of Zhongdu eastward to a river called the Chaobai River. Their original plan was to direct water from the Yongding River located to the west of the city. Dams and dykes were built to keep back water. Ditches were dug up to direct the controlled water running to the east. But because of the unsteady flow rate of the Yongding River and the limitation of the low-level technology then, they didn't achieve their desired results with these projects. All the attempts they had made to direct water into the canal all turned out to be unsuccessful. This was the most important reason why the Yuan rulers decided to give up the old town and build a new one.

Now let's come to the second question about the selection of the site of the new city and its planning.

Here I'd like to mention something interesting in the past. When Khublai first came to Zhongdu in 1260, he had no place to live in, as the palatial residence had been burned down to the ground. He had to live in a place not far from the ruined city. This fact was definitely recorded then. (Later the fact was recorded again in the

"Biography of Khublai" contained in *The History of Yuan Dynasty*.) But the exact place where he lived was intentionally ignored for the sake of his security. Now over 700 years have since passed. Over this period, people had no idea where Khublai lived when he first came to Zhongdu. Now having made careful investigations, we discovered that he lived in a summer palace originally built for the emperors of Jin Dynasty and their royal families, which was built on an expanse of waters on the northeastern outskirt of the capital. This palatial residence during the Jin Dynasty was called Taining Palace (Big Tranquility Palace) whose main building stood on an island in the middle of the lake. The building was named the Lunar Hall, which referred to the mythical palace on the moon. This name also suggested the scenery here which was as beautiful as on a fairy land. Fortunately, this temporary palatial residence outside the capital remained untouched when the Mongolian horsemen forced into the city of Zhongdu and set fire to the imperial palace inside the city in 1215. The construction of the city of Dadu started in 1267. According to the city planning, the lake around Taining Palace was taken as the centre of the plane designing. This lake was given the name of "the Heavenly Water Pond".

From the planning of Dadu City, we can see clearly that on the east bank of the Heavenly Water Pond was built the emperor's palace while on its west bank stood two groups of palatial buildings facing each other, which were respectively inhabited by the empress dowager and the crown prince. A small round island situated in the middle of the lake served as the link of the three palaces. A wooden bridge was put up to connect the east end of the island and the east bank of the lake, while another wooden bridge was built to link the west end of the island with the west bank of the lake. To the north of the small island, a stone bridge was built to span the water between the small island and the big island on which stood the main building of the old temporary palatial residence—the Lunar Hall. This big island was called "Jade Flower Island", which was suggestive of a place where there were richly decorated jade palaces and beautiful flowers in blossom. The buildings around the lake were well-distributed, around which was put up a square bulwark encircling these imperial palaces. The bulwark actually formed the imperial city wall.

To the north of the imperial city, there was a larger lake then called Jishuitan (the Water Storing Pond), which had previously interlinked with the Heavenly Water Pond in the imperial city. The construction of the imperial city cut the two lakes apart. A new canal was dug up to supply water for the Heavenly Water Pond. This canal was named the Golden Water River in keeping with the ancient tradition.

The water of the Water Storing Pond was originally from a natural river called the Gaoliang River. Its former course on the lower reaches supplying water for the Water Storing Pond was perhaps filled up or turned into an underground river, in the construction of the city of Dadu. So a new canal was opened up, which ran along the east wall of the imperial city and flew out of the city of Dadu. This new canal was the last part of the Grand Canal, through which the ships and boats carrying grain collected from South China sailed into the city of Dadu and anchored in the Water Storing Pond. The ships and boats also transported goods from the south. So the place on the northeastern bank of the Water Storing Pond and its nearby streets became the most busy market-place in the city of Dadu.

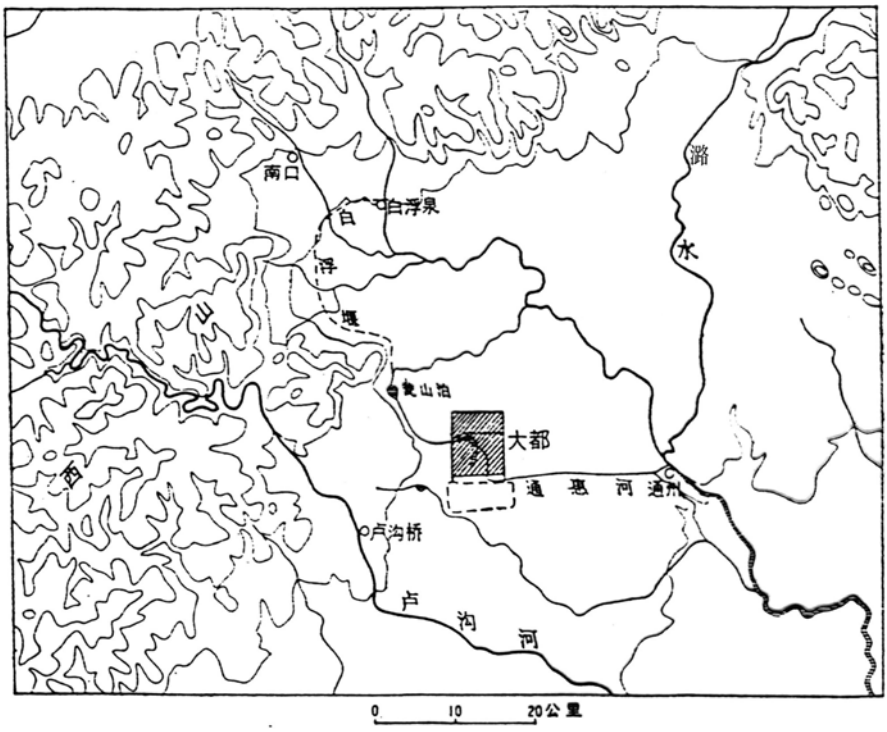

Fig. 1.4 Watercourses in the adjacent areas of Khanbaliq of Yuan Dynasty
大都 Dadu City, 西山 West Mountains, 潞水 Lu River, 卢沟河 Lugou River, 卢沟桥 Lugou Bridge, 通惠河 Tonghui Canal, 通州 Tongzhou, 南口 Nankou Pass (South Mouth Pass)

Now we can see that superficially, the summer palace of Jin Dynasty led to the construction of the city of Dadu in this area. But in fact, the new source of water from the Gaoliang River formed the decisive factor of the selection of city site in this very place (Fig. 1.4).

Here is a thing we must pay special attention to, that is, the determination of the central axis of the city which was of the first importance in the plane designing of the city of Dadu. This central axis went along the east bank of the Water Storing Pond. And the centre of the emperor's palace was fixed on the central axis of the whole city and it occupied the most important position. The apex of the central axis was at the northeastern bank of the lake Water Storing Pond. This point was taken as the geometric centre of the plane designing of the whole city. Here at this very point was erected a designating building which was called "the Central Pavilion". On the right side of the pavilion was set up a stone tablet on which were inscribed four Chinese characters, meaning "the Central Platform". This shows that when the planning and designing of the whole of the new city were made, a precise plane survey was also made.

To the west of the Central Platform was put up the "Drum Tower". And to the north of "Drum Tower" was built "Bell Tower". The drum and the bell were instruments to give the standard time in old days. So the two towers became centres telling the time for the whole city. The fact was also clearly recorded in *Marco Polo's Travelling Notes*.

Once the geometric centre of the whole city was determined, the position of the outer walls of the city was also decided. The construction of the city was basically carried out according to the original planning. Only the east wall slightly drew in for the purpose of avoiding some topographical disadvantages.

The east, west and south walls of the city had three gates each. Its north wall had only two gates. Inside each gate there was a straight main road. These roads in the city formed a criss-cross network of communications which resembled a chessboard. The middle gate of the south wall was fixed on the central axis of the whole city. The gate was on the central trunk line, which led northward to the imperial city. Inside the emperor's palace, only the main halls which were symbolic of the imperial power, were arranged on the central axis, while those less important buildings were symmetrically arranged on either side of the central axis.

Outside the imperial city were arranged many horizontal streets and lanes parallel with each other in between meeting these vertical main roads at right angles. These districts were chiefly living quarters of the local inhabitants. These areas were dotted with many central and local government offices and institutions, temples, warehouses and other public buildings. Only two groups of important buildings were laid out in a planned way. The first group of edifices was positioned inside the south gate of the east wall of the city. This group of edifices was called the Imperial Ancestral Temple, a place where the emperors offered sacrifices to their ancestors. The other group of buildings was situated inside the south gate of the west wall of the city. It was called the Altar of Land and Grain, a place where the emperors offered sacrifices to the God of Land and the God of Grain.

This plane arrangement of the city of Dadu was similar to a kind of ideal designing of imperial capitals in the ancient time. This ideal designing was first seen in a book entitled "A Study of Engineering" which came out in the fifth century B.C. This book exclusively dealt with engineering and also referred to the designing of imperial capitals. According to *A study of Engineering*, the imperial city walls in the four directions must form a square. The wall on each side had three gates. Inside each gate there were three main roads parallel to each other. So the main roads and streets in the city formed a criss-cross network of communications. The imperial city was supposed to face the south. In front of the central point of the imperial city (in the south direction) were located the imperial courts. At the back of the imperial city (in the north direction) were concentrated the market-places. To the left of the imperial courts (in the east direction) was located the Imperial Ancestral Temple. To the right of the imperial city (in the west direction) was situated the Altar of Land and Grain. It is clear that the planning of Dadu City was made on the basis of this ancient ideal designing and also in the light of the specific conditions of the distribution of lakes and waterways on the spot. This plane arrangement was aimed at placing the imperial palaces on the most important position of the whole city. This designing embodied the absolute power of feudal emperors (Fig. 1.5).

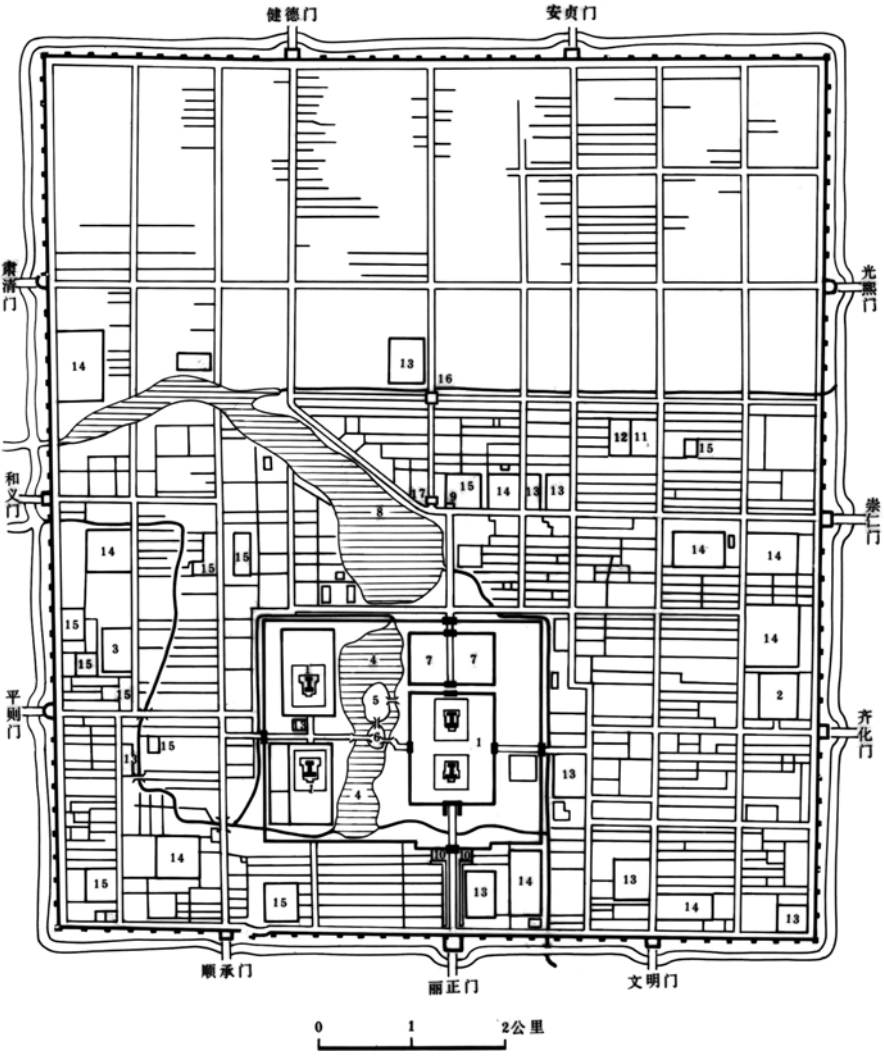

Fig. 1.5 Plan of Khanbaliq of Yuan Dynasty
1. Palaces, *2*. Imperial Ancestral Temple, *3*. Altar of Land and Grain, *4*. Heavenly Water Pond, *5*. Jade Flower Island, *6*. Round City, *7*. Imperial Garden, *8*. Jishui Tan (Waster Storing Pond), *9*. Central Platform, *10*. Corridor of a Thousand Steps, *11*. Confucian Temple, *12*. Imperial College, *13*. Yamun, *14*. Barns, *15*. Temples, *16*. Bell Tower, *17*. Drum Tower (Reproduced on the basis of Xu Pingfang's *Atlas of Dadu*)

Eight years after the construction of the large-scale well-planned city of Dadu started, Marco Polo came here. He was thought highly of by Khublai and appointed as an high official in the imperial courts of Yuan Dynasty. In his famous travelling notes, he made a detailed description of the city of Dadu. He called it "Khanbaliq", which meant "the city of the great Khan". His book was read by many people in the

West. It is well-known that in the fifteenth century, Christopher Columbus himself hadn't made up his mind to make a voyage to China until he read "Marco Polo's Travelling Notes". Columbus believed that the earth was round, and thought that he would certainly reach China by sailing westward in a ship, since Marco Polo could succeed in getting to China through going eastward by land. Of course he failed to get to China. But the determination of this brave and talented man led to an unexpected discovery—the discovery of the New Continent.

1.2.4 Part Four: The City of Beijing in Ming and Qing Dynasties: A Remark-able Example of the Imperial Capitals for Its Excellent Planning and Designing

The domination of Yuan Dynasty lasted less than 100 years only. It was replaced by Ming Dynasty founded by the Han Nationality. The Ming rulers rose up in the lower reaches of the Yangzi River and made Nanjing their first capital. Then they began their northern expedition. In 1368 they captured the city of Dadu, and changed its name into Peiping (North Pacification). When the third emperor of Ming Dynasty came to the throne, he decided to move his capital northward to Beijing (North Capital). This is the first time to use the name of Beijing. At this time a large-scale reconstruction of the city was carried out. In 1420 the rebuilding of the city was basically completed.

When the Ming troops first conquered Dadu City, they leveled down the Yuan imperial palaces to the ground. For the sake of defence, they built up a new bulwark on the bottle-neck of the Water Storing Pond, which was positioned 2.5 km inside the original northern city wall.

The reconstruction work consisted of the following items:

1. The imperial city was rebuilt, with the original central axis as the central line. The new imperial city moved a bit southward, which was later called the Purple Forbidden City (which is now well-preserved and opened up as the Palace Museum). In the Forbidden City, the six great halls symbolic of the imperial power ranged from south to north on the central axis of the whole city. The other buildings were as usual arranged on either side of the six great halls in strict symmetry.
2. With the southward moving of the imperial city, the south wall of the imperial city and the south wall of the city of Beijing proper were also moved southward. And as a result, the imperial city and the big city got larger space each. A new Imperial Ancestral Temple and a new Altar of Land and Grain were respectively put up in the increased space on the two sides of the central trunk line in front of the Forbidden City. The two groups of buildings which were erected in keeping with the old tradition, were more closely connected with the imperial city. With these two groups of new buildings, the position of the central trunk line became more conspicuous from the viewpoint of the plane arrangement.

Besides, in the very front of the imperial city was opened up a new T-shape court square, out of which the present Tian An Men Square grew. On the two sides of the court square, many central governmental offices and organs were concentrated symmetrically.

3. As a result of the southward moving of the south wall of the old big city, there appeared an expanse of open land to the south end of the Heavenly Water Pond. So a new artificial lake was dug out in this place, which linked the Heavenly Water Pond and made it much larger. The original parts of the lake were called the Middle Sea and the North Sea while the expanded part of the lake was called the South Sea. Just to the north of the Forbidden City, a new man-made hill was piled up with the earth dug out from the South Sea and from moat around the Forbidden City. This hill was named the Jing Hill or the Coal Hill. The middle peak of the Jing Hill is 47 m in height. It formed a remarkable point of the central axis of the whole city and became the new geometric centre of the rebuilt city.
4. On the old site of the geometric centre of the former Dadu City, a new Drum Tower and a new Bell Tower were put up. The two buildings marked the apex of the central axis of the whole of the new city.
5. While the city was reconstructed, two groups of buildings were put up just to the south of the city. The two groups of buildings stood side by side. The one on the east side was called the Temple of Heaven, a place where the emperors offered sacrifices to the Heaven and prayed for good harvests. The one on the west side was called the Altar of Mountain and River, a place where the emperors offered sacrifices to the God of Mountain and the God of River. Between the two groups of buildings, there was a central trunk line which led northward straight to the middle south gate of the big city. This entrance was called Zhengyang Gate or Front Gate. In 1553, an outer city wall was built to reinforce the defence of the imperial capital. This newly-built outer city enveloped the Temple of Heaven and the Altar of Mountain and River (which was later called the Xiannong Altar). The old city in the north was called "the Inner City" while the newly-built city in the south was called "the Outer City". The combination of the two cities formed an outline which resembles a Chinese character 凸 meaning "protruding".

With the Outer City built, the central axis of the Inner City extended southward to the due south gate of the Outer City. The new central axis was as long as nearly eight kilometres. The new central line became even more outstanding in the plane arrangement of the old city of Beijing.

With the Outer City built, the construction of the old city of Beijing was fundamentally completed. In 1644, Qing Dynasty—the last feudal dynasty in China's history—was founded. The rulers of Qing Dynasty also took Beijing as their capital. They didn't make any more changes in the construction of the city. The city remained as it had been until the liberation of Beijing City in 1949. This is now what we call the old city of Beijing (Fig. 1.6).

This old city of Beijing which was developed on the basis of Dadu City of Yuan Dynasty, has been considered an excellent example of the construction of feudal capitals in China's history. It embodied all the better the absolute power of feudal emperors.

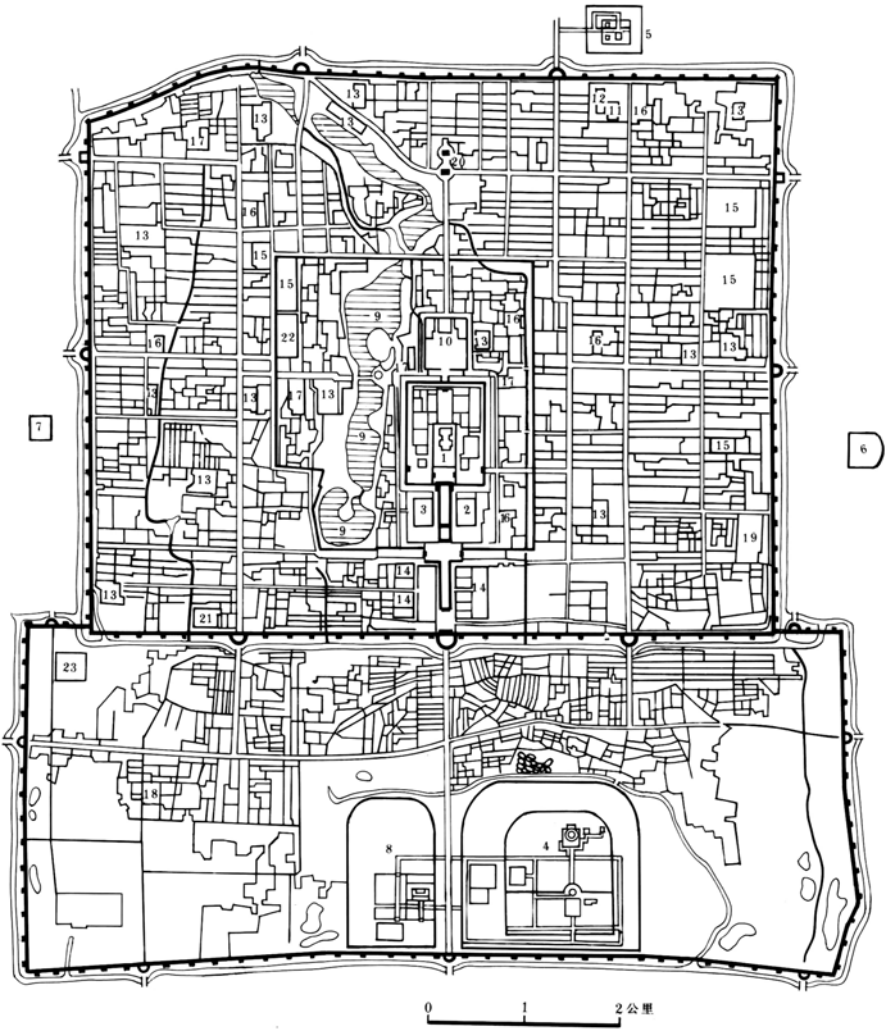

Fig. 1.6 Plan of old Beijing City
1. Palaces, *2*. Imperial Ancestral Temple, *3*. Altar of Land and Grain, *4*. Altar of Heaven, *5*. Altar of Earth, *6*. Altar of Sun, *7*. Altar of Moon, *8*. Xiannong Altar (Altar of the God of Agriculture), *9*. Western Garden, *10*. Jing Hill, *11*. Confucian Temple, *12*. Imperial College, *13*. Residence of Princes and Princesses, *14*. Yamun, *15*. Barns, *16*. Buddhist Temples, *17*. Taoist temples, *18*. Islamic mosques, *19*. Examination Hall, *20*. Bell and Drum Towers, *21*. Elephants stall, *22*. Catholic church, 23. Barrack (From *A Brief History of Chinese Architecture*, vol. 1, pp. 183–184)

But as a Chinese saying goes: "things will develop in the opposite direction when they become extreme." The planning and designing of the old city of Beijing demonstrated that the autocratic feudalism in Chinese history had gone to its extreme. And this extreme autocracy led to its own collapse.

In 1911, the democratic revolution led by Dr. Sun Yat-sen broke out. It put an end to the domination of feudal dynasties which had lasted over 2,000 years in China.

In 1919, the May Fourth Movement broke out in the old city of Beijing. It marked the prelude to China's new democratic revolution.

After 30 years' hard and bitter struggles, the Chinese people succeeded in achieving their liberation in 1949. During the most arduous struggles, many people, including the great internationalist Dr. Norman Bethune, sacrificed their lives.

On October 1, 1949, Comrade Mao Tsetung solemnly proclaimed the birth of the People's Republic of China, on the rostrum of Tian An Men Gate (Heavenly Peace Gate). The old city of Beijing became the capital of the People's Republic of China.

We were confronted then with a new question: How should we transform the old capital planned and designed in the interest of the feudal emperors into a new capital of the people who live in the new era of socialism?

We know very well that the guiding principle of the planning and designing of the old city of Beijing was to extol the absolute power or autocratic monarch. Now what should be the guiding principle of the overall planning of the new city of Beijing which serves as the people's capital in the new socialist era?

I'll deal with this question in my next talk.

Thank you very much for your attention.

1.3 A Discussion on the New City Plan of Beijing

The transformation of the old city of Beijing started as soon as it was made the capital of the People's Republic of China, to meet the needs of a new era. In addition to the establishment of a special city-planning institution, three guiding principles have been formulated: it must serve first, proletarian politics, second, industrial and agricultural production, and third, the labouring people.

To serve proletarian politics means to turn the old city, which was constructed in the past to satisfy the political needs of the feudal emperors, into a new one which will best suit the political demands of a people's capital in the new era of socialism.

To serve industrial and agricultural production means to turn the old city which used to be the largest consumer centre in the country, into a base for modernised industrial production and centre of well-developed suburban agriculture.

To serve the labouring people means to completely reform the slummy districts swarming with working people in the past, and on an over-all scale, give preference in our city planning to those projects of urban construction which will satisfy the immediate needs in their lives. Under guidance of these three principles, great achievements have been made in both the city planning and the construction of Beijing and profound changes have been brought about in its functions and appearance during the last 30 years. There are experiences of success as well as lessons of disappointment in the process. However, to comment on them at length here would

be both unnecessary and beyond my power. As a scholar of the historical geography, the question I would like to put forth for discussion is exactly the one which I posed at the conclusion of my last lecture. I shall repeat it here.

How do we transform an imperial capital which was once planned and designed for the benefit of feudal emperors in the past into a people's capital of the socialist new era? Or rather, in contrast with the theme of glorifying the supremacy of feudal monarchs as illustrated in the city planning of the old Beijing, what new theme should we adopt for the city planning of today's Beijing serving as a people's capital and how can such a theme be effectually materialised?

This problem is not merely one of engineering technology, but above all, one of great significance to the development of history and culture. In China today, with the transformation of social system, the values of an age-old tradition are also undergoing unprecedented changes. We could never imagine that a new socialist culture would drop from the sky, nor could it be transplanted from a certain foreign land. It can only grow up out of its native soil. For instance, isn't the Renaissance, which had its root in ancient Greek and Roman culture, and which, in turn, with a completely new mental outlook, created a great new epoch in European culture of the middle ages, such a shining precedent?

In China today, people have also been discussing and looking forward to the advent of a great new era of renaissance, sprouting out of its native soil. Consequently, how to regard one's own historical and cultural heritage becomes a problem of considerable importance.

Our basic principle is critical inheritance. During the long period of feudal society, the Chinese people have created a magnificent ancient culture, which, however, also contains some feudal dregs. It is wrong to accept ancient culture without discrimination, and equally wrong to reject it altogether; the only correct attitude, of course, is to assimilate its essence and discard its dregs, to make the past serve the present and weed through the old to bring forth the new, so as to create a new culture characteristic of the epoch, on the basis formed in the course of history. Naturally, during this process of creating a new culture, it is necessary for us to endeavour to absorb all that is advanced from other countries to serve our own purpose, to use a catch-phrase, "To make foreign things serve China."

So far, we have only touched upon abstract principles. But I've already digressed too far from the point in question. So let us return to it now.

In fact, the old city of Beijing which has been kept intact all through is part of China's historical and cultural legacy. The reconstruction of the city shall also be carried on under the guidance of the principle of critical inheritance. First of all, we should keep one thing in mind; that is, as a people's capital of the socialist new era, it must adopt a theme for its city planning in praise of the people, of their strength, their dignity, of the truth: "The people, and the people alone, are the motive force in the creation of the world." It should not only demonstrate the great creations of the people in the past, but also embody the stark reality that the people have become masters of their country. The fulfillment of this new theme shall serve as a thorough criticism of the old theme centred upon the eulogy of the supremacy of the feudal monarchy.

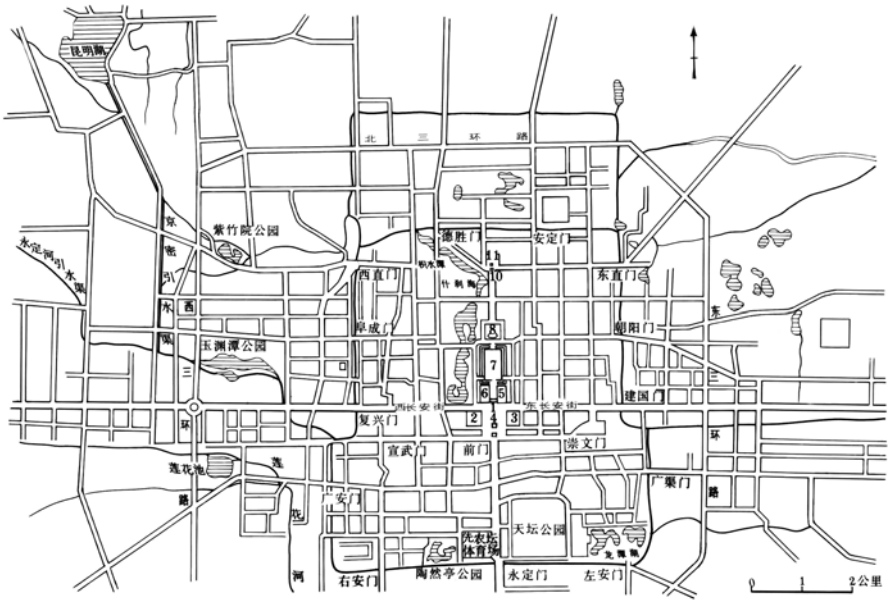

Fig. 1.7 Sketch map of reconstruction of Beijing's old city
1. Tian An Men Gate, *2*. People's Conference Hall, *3*. Museum of Chinese Revolution and Museum of Chinese History, *4*. Monument of the People's Heroes, *5*. Working People's Palace of Culture, *6*. Sun Yat-sen Park, *7*. Palace Museum, *8*. Jing Hill Park, *9*. North Sea Park, *10*. Bell Tower, *11*. Drum Tower (Redrawn according to Urban Traffic Map in *Beijing Tourism Atlas*, simplified version, 2nd edition, 1972)

How to bring about the fulfillment of this new theme is a problem of vital importance in the new city planning of Beijing.

It seems to be a very difficult problem, but actually many valuable experiences have been gathered during the transformation of the old city of Beijing since liberation, and need to be summed up and brought up to a theoretical height so that they may give further guidance to the city planning and construction of Beijing later on. I shall cite only one example here, the reconstruction of the Tian An Men Square for illustration (Fig. 1.7).

Tian An Men Square is closer to the centre of the city now than in the past. It was decided in the city planning of an earlier stage after liberation that the reconstruction and extension of Beijing should centre around the old city. Today Beijing's new urban districts have broken the bounds of the former city walls and expanded in every direction. The limits of extension were roughly set at the third suburban ring road which is now under construction. Within this limit, the layout of the streets was to retain, on the whole, the traditional pattern. Beyond it, the main lines of communication were to radiate in all directions. The plane design of the city preserved the traditional character of balance and symmetry, thus enhancing the outstanding position of the Tian An Men Square which used to be a court square in front of Tian An Men, the south gate of the Forbidden City. It was nominally a "gate", but in reality,

an imperial palace built on a purple terrace. The artisans who undertook the construction of Tian An Men have bestowed upon it such majestic beauty as to illustrate fully the characteristic of ancient Chinese architecture. The feudal emperors' aim in building such an enormous structure on this spot was not merely for the sake of fortification, but also to display the dignity of their kingly abode. According to the tradition of feudal dynasties, here was the so-called "outer court" where receptions of distinguished foreign guests and celebrations of grand occasions took place. The last feudal dynasty, Qing Dynasty, also used this "outer court" to celebrate the issuing of the imperial edict on the coronation day, that is, to publicise the coronation of a new emperor to the subjects of the kingdom. The imperial edict was placed on a tray carved in the shape of cloud and carried to Tian An Men from the Forbidden City in a miniature "Dragon Pavilion". Then, jubilant music was played on Tian An Men, whose square was strewn with prostrate civil and military officials and "elders" chosen and dispatched here to represent the common people. After the edict was read by the Edict Reader on Tian An Men, it was placed in the beak of a carved golden phoenix and lowered slowly down along the middle of the gate where it was put back into the "Dragon Pavilion" again and carried to the "Ministry of Rites" to the east of the square, where fair copies of it were made in yellow paper and distributed to the whole kingdom. The sole purpose of this ritual performance was to show that the divine rights of monarchs came directly from the Heaven. This is only an illustration of how feudal emperors used this court square to make a display of themselves and fool the people.

The square was somewhat T-shaped and closely confined by red walls all around, leaving only one entrance on every side for passage. These entrances, however, were strictly forbidden to the common people (Figs. 1.8 and 1.9).

But the dialectics of history is relentless. When Qing Dynasty was overthrown in 1911, it was this square which had been so strictly forbidden to the ordinary people that became the rallying centre of the revolutionary masses for patriotic demonstrations. And it was here, some 60 years ago, that the May Fourth Movement, which set the new democratic revolution ablaze, broke out. Again, it was here that the last mass movement was launched on the eve of the nation's liberation, against Chiang Kai-shek's attempt to unleash a civil war and his persecution of young students.

Due to this glorious revolutionary tradition, the Tian An Men Square was chosen to be the site for the grand founding ceremony of the People's Republic of China on October 1, 1949. Subsequently Tian An Men, the magnificent structure erected by labouring people in ancient times, was engraved on the national emblem of the republic to symbolize the renaissance of an ancient culture. The square has been transformed from a feudal court square into a people's square in the new socialist epoch. It has now become the centre of the country's political life, cherished by people of all nationalities.

But, at the time when the founding ceremony was being celebrated, the square was still confined on all sides by walls which seriously hindered popular activities by obstructing their sight and compressing their hilarious atmosphere within the square. As we look at it today, Tian An Men represents the essence of ancient Chinese architecture whereas those walls represent the dregs of feudalism.

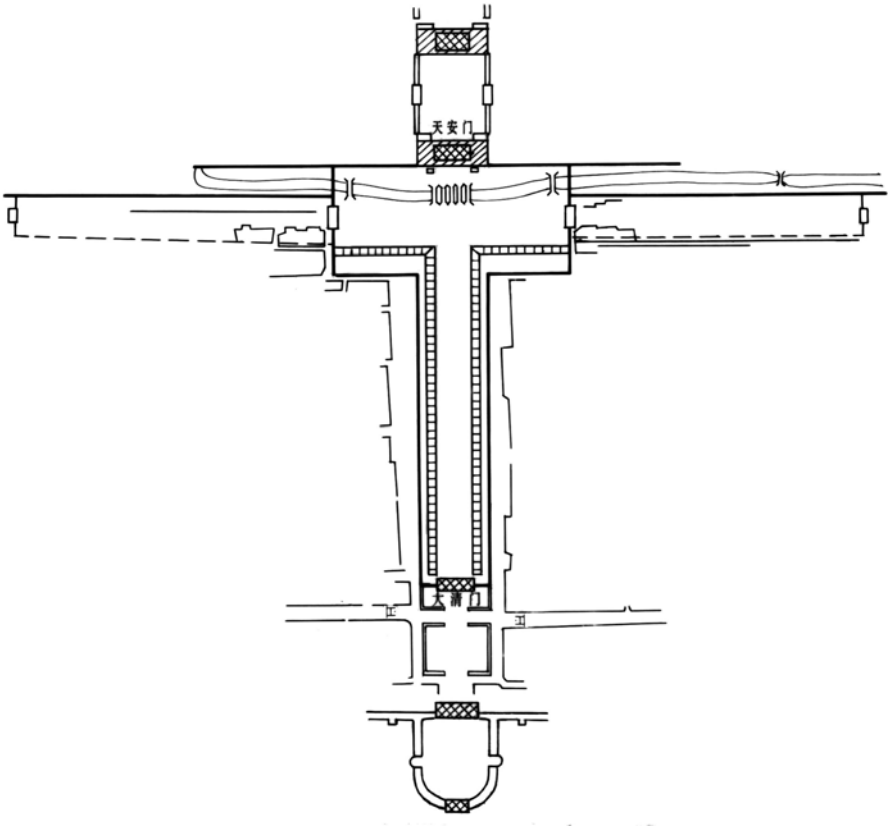

Fig. 1.8 Qing Dynasty's T-shaped imperial square

We must preserve the essence part and, according to the principle of making the past serve the present and weeding through the old to bring forth the new, weave it into the urban life of the present day, so that it may better serve the people. As to the feudal dregs, we must discard them in order to clear the way for our advance towards a new life.

On October 1, 1959, when we celebrated the tenth anniversary of the founding of the republic, the first transformation project of the Tian An Men Square was brought to a successful termination in accordance to the new city planning programme. After the reconstruction, the old walls on the three sides had disappeared and an entirely new square, many folds larger than the old one, presented itself to the public. It remains on the same premises, but has taken on a brand new appearance. Its magnificent, solemn, spacious and shining physiognomy is the embodiment of the ocean-like mind and overwhelming power of the people. The Monument of the People's Heroes towering in the centre of the square, had been completed a year before. With the People's Conference Hall that represents the centre of popular power on its west side and the Museum of Chinese Revolution and the Museum of Chinese History

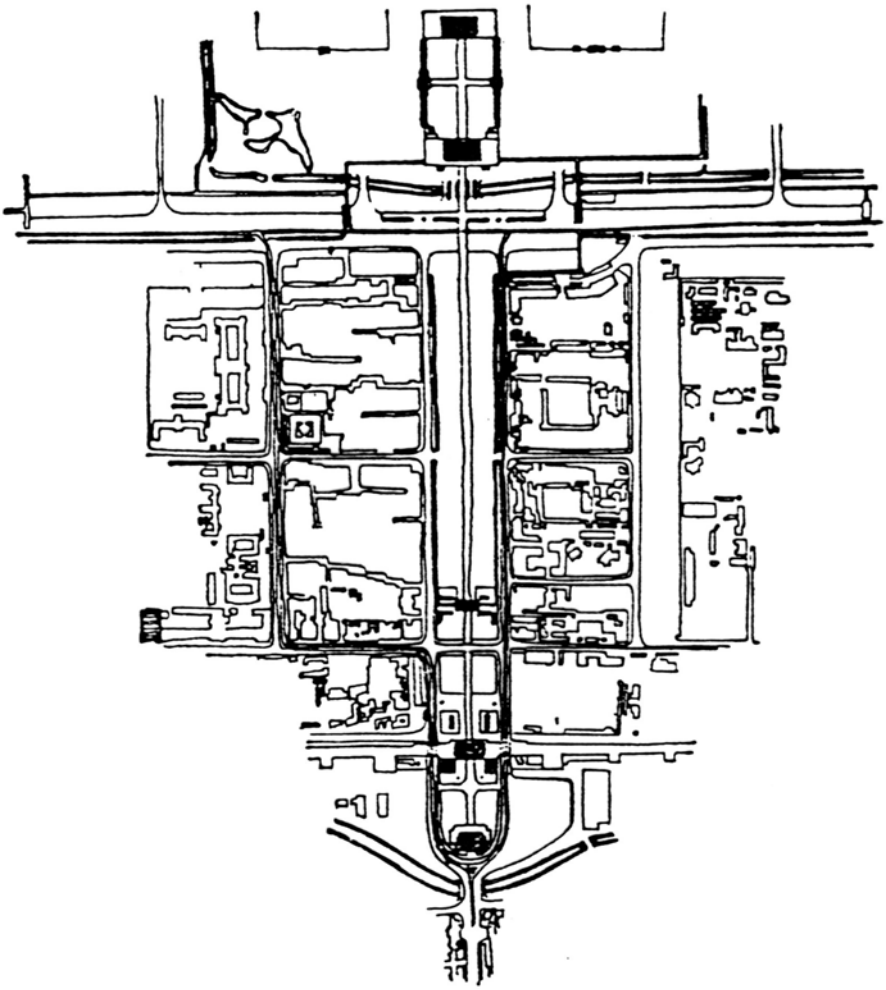

Fig. 1.9 Tian An Men Square before redevelopment

which serve to praise the people as the motive force in history-making, the square has become the heart of the political life of China's various nationalities, whence were spread abroad the aspirations of the Chinese people.

During the reconstruction of the square, its two wings, the East and West Chang An Streets, were extended accordingly. Thus, the great smooth boulevard now forms a new thoroughfare threading the whole city from east to west. By contrast, it has definitely belittled the traditional thoroughfare which runs across the old city from south to north. This is as good as thoroughly negating the theme in the design of the old city, thus giving prominence to the unique position of the people's square in the plane layout of the whole city. The Forbidden City, which perched imposingly in the centre of the city during the old days, is now but a "backyard" of the

people's square where only in spare time do people come and enjoy themselves in appreciation of the magnificent palaces built by the labouring people of ancient times and the gems of art in store there.

When Chairman Mao's Memorial Hall was completed in July 1977, the people's square was further expanded and endowed with new significance, adding to the serenity and tranquility of the south end. The lofty antique building of Qian Men (or Zheng Yang Men) has been preserved as well as the majestic Tian An Men. But these two age-old gates have now lost their former function as vanguards of the Forbidden City. They now serve with their artistic features as boundary marks of the new people's square on its south and north borders respectively. Once the thoroughfare—South Qian Men Street—from Qian Men to Yong Ding Men is expanded, the prominence of the Tian An Men Square as the centre of the whole city of Beijing will be further enhanced (Fig. 1.10).

The square, which is now still undergoing further planning, is only an example to illustrate that if we persist in critical inheritance on the basis formed in the course of history and in accordance with the principles of making the past serve the present and weeding through the old to bring forth the new, a court square whose theme it was to extol feudal emperors can certainly be transformed into a people's square whose theme it is to praise the strength of the people. By analogy, the city of Beijing whose theme it was to extol feudal emperors, can likewise be transformed into a people's capital whose theme it is to praise the strength of the people.

But we must also acknowledge that there did arise controversies in regard to certain measures taken during the transformation of the old city. Although the demolition of the outer red walls enclosing Tian An Men Square did not give rise to any dissent, it was not the case with that of the old city walls. When the question of removing the old city walls was first taken into consideration in the new city planning, opinions varied. Now that the city walls have already been removed, we have come to realize through the test of practice that whether it was absolutely necessary to get rid of them is indeed a question worth investigation, especially when part of the city moat has been turned into an undercurrent with their removal, thus reducing the water area in the city, which has proved detrimental to the improvement of its environment. It was particularly true with the moat outside Qian Men which runs through the middle of the city from west to east. If it had been preserved, it would not only have added to the natural beauty of the city, but also promoted its climate conditioning and helped to provide the city with fresh air, which would be extremely advantageous to the improvement of the city's environment and would supply its residents with excellent recreation ground.

It ought to be mentioned here that before the Cultural Revolution, there was a certain project in a district planning for the transformation of Tian An Men Square to bring a section of the moat outside Qian Men into the new plan of the Tian An Men Square. As a result, there would appear in the south of the square, a wooded garden abounding in natural views. If this proposal had been adopted, it would have added to the serenity and tranquility in the southern part of Tian An Men Square by setting off the green lawns around Chairman Mao's Memorial Hall with a riverside park outside Qian Men. But all this has proved to be something irremediable now.

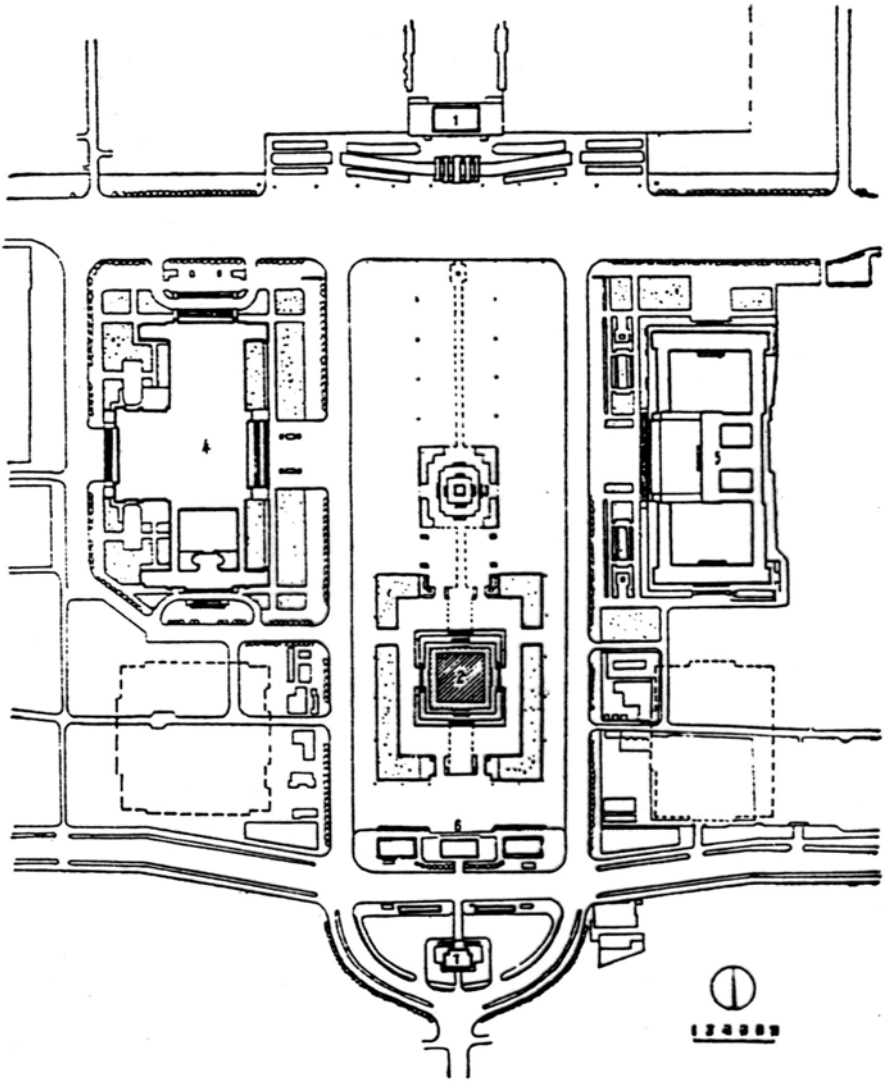

Fig. 1.10 Plan of Tian An Men Square on completion of Chairman Mao's Memorial Hall
1. Tian An Men Gate, *2*. Chairman Mao's Memorial Hall, *3*. Monument of the People's Heroes, *4*. People's Conference Hall, *5*. Museum of Chinese Revolution and Museum of Chinese History, *6*. Zheng Yang Gate (Front Gate), *7*. Archery Tower (From *Journal of Architecture*, 1977, no. 4)

This is an example which illustrates that during the transformation of the old city of Beijing, there did exist setbacks in our experience which need to be summed up for future reference when we revise the city plan of Beijing. Of course, this is only my personal view on the matter which may not be correct after all. The heartening thing is that we are free to carry on liberal discussions on controversial issues now.

A correct conclusion is sure to be brought about through practice as to the truth and falsehood of an issue. There was a time in the past when academic discussion was confused with political problems, which impeded free discussion and brought about harmful results. For instance, when the question of preserving or demolishing the city walls of Beijing was being discussed, those who favoured its preservation were inclined to be labelled as "conservative", "retrograde" or even "reactionary", thus forcing people to refrain from speaking their mind. Consequently, many valuable opinions were stifled, which proved detrimental to our work. This state of affairs was allowed to develop to an incredible degree during the 10 years when the "gang of four" was in power, especially in the sphere of culture and learning where "ten thousand horses stood mute". It is most encouraging to see that during the last 2 years there has emerged once more the flourishing scene of allowing a hundred flowers to blossom and hundred schools to contend. Emancipation of the mind and free airing of views are considered to be vital conditions of accelerating the realisation of the modernisation.

As has been proved by experience, as far as critical inheritance of history and culture is concerned, it is not always so easy to distinguish the essence from the dregs. Therefore, it becomes quite necessary to carry on thorough discussion and free debate on all controversial matters. Only by this can we really tell the right from the wrong and distinguish the essence from the dregs, thus achieving the purpose of making the past serve the present and weeding through the old to bring out the new. This is also true with the city construction of Beijing, as well as the cultural construction of the whole nation, only the problem is even more complicated.

In concluding my lecture, I would like to repeat the point that I brought up at the beginning of my talk, i.e. a new China is forging ahead towards modernisation along the road of the new Long March. For this purpose, we have to learn from the West everything that is advanced. Likewise, we shall also absorb all that is valuable from our historical and cultural heritage, which is more important and more complicated a problem in the construction of our new socialist culture. We are quite sure to greet the advent of a new era in our country, which may well be termed a "renaissance" by solving the above-mentioned problem step by step in the process.

It is a great pleasure for me to have obtained this opportunity to come here on the kind invitation of your university, and give a very inadequate introduction of one of the problems confronting my country and my people to my most amiable Canadian friends and colleagues, with the aim to help in my small way to promote mutual understanding and cultural exchange between our two countries, which has been my greatest wish.

Once more, let me give my heart-felt thanks to the revered President of the University of British Columbia, the honourable Chairman and members of Cecil H. and Ida Green Visiting Professorships and all who have come to my lecture today.

Chapter 2
The Transformation of the Old City of Beijing, China—A Concrete Manifestation of New China's Cultural Reconstruction

In the modern world, China is both a developing nation and a newly emerging socialist state. Coming from an ancient cultural tradition, she now faces a new era of unprecedented social change. While overhauling her backward economy and actively pursuing reconstruction and modernization, she is also rapidly developing a new socialist culture. In the process of modernization and reconstruction, it is necessary for China to adopt the foreign science and technology according to her own needs. But the development of a new socialist culture, however, entails a more important and complex problem: how to identify and preserve the valuable part of China's own traditional culture.

It is impossible, of course, for China's new socialist culture to drop from the sky, or be imported intact from any particular foreign country. It can only grow from China's own native soil. This is not to say that all foreign cultural influence should be rejected, but it can only contribute positively to China's new, modern culture by being first fused with China's unique traditional culture. Taking into account this background of great social change, this essay attempts to describe and explain a concrete example of the issues which must be faced in creating the new socialist culture. In presenting the problem of transforming an old, historical city into a modern, new one, I can only offer the perspective of an historical geographer, not that of a specialist in city planning, but hope this discussion has some value in that context.

This is a reprint of Chapter XXI in a collection of research papers entitled: *World Patterns of Modern Urban Change—Essays in Honor of Chauncy D. Harris*, edited by Michael P. Conzon, published 1986 by the Department of Geography, University of Chicago.—Editor's note.

R. Hou, *Symposium on Chinese Historical Geography*,
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2.1 The Relevance of Ancient Chinese Planning Theory

With the growth of world urbanization in recent times, city planning as a specialized science has become more complex and more important each day. But it is not a new science, as it was already flourishing in some of the great civilizations of antiquity. Ancient China was no exception, and Paul Wheatley has drawn particular attention to the symbolic nature of the "ideal" planned layout of ancient China's cities, citing corroborative evidence in the *Book of Artificers* (Kao Gong Ji). One of the outstanding features of the ideal layout is the north-south axis of the whole city, and "this axial design is superbly executed in Pei-Ching [Beijing]."[1]

The *Book of Artificers* was completed around the fifth century BC and deals primarily with manufacturing technology. It also records the plan for the construction of the imperial capital, which is somewhat ambiguous and has been subject to varying interpretations and reconstructions. The main points of the plan include the following. First, the capital should be laid out as a square, surrounded by a city wall; each side should extend nine *li* (Chinese mile, equal to about 1/2 km) and contain three city gates. Second, within the city there should be nine longitudinal and nine latitudinal thoroughfares, or three longitudinal and three latitudinal thoroughfares, each consisting of three chariot lanes. Third, in the center of the capital is the Imperial Palace of the emperor. On the left side of the Imperial Palace is the "Tai Miao," where the emperor pays homage to his ancestors. On the right side is the "She-ji Tan," where he worships the gods of soil and grain. The front part of the Imperial Palace is the emperor's administrative center, and to the rear of the Imperial Palace is the capital's main market and commercial center.

These declarations in the *Book of Artificers* refer to the capital and largest city of the empire; "left," "right," "front," and "back" refer to the four cardinal directions (respectively east, west, south, and north). The Imperial Palace of the emperor faced true south and was located in the geometric center of the whole city. Tai Miao (the Imperial Ancestral Temple) lay to its east, She-ji Tan (the Altar of Soil and Grain) lay to its west, and the city market to its north. The city was aligned along a north-south axis, facing the south and with its back to the north. This orientation bore a close relationship to the residential traditions of the lower reaches of the Yellow River (Huang Ho), where Chinese civilization originated. The plains of the lower Yellow River, small ones such as the Jing-Wei and Yi-Lo Basins as well as the great North China Plain, have a flat and open topography. They are located in the temperate zone, characterized by strong prevailing monsoons and four distinct seasons, with hot, rainy summers and cold, blustery winters. In order to maximize ventilation in summer, while in winter providing maximum exposure to the sun and shelter from the cold north wind, residential structures in this area were built to open toward the south, with their backs to the north. Over time, these evolved into the *si-he-yuan*

[1] Paul Wheatley, *The Pivot of the Four Quarters: A Preliminary Enquiry into the Origins and Character of the Ancient Chinese City.* Chicago: Aldine Publishing Company, 1971, p. 425.

(house built around a courtyard). The *si-he-yuan* has structures facing the center on all four sides, with the principal one, called the *zheng-fang*, on the north.

The *si-he-yuan* is, in fact, the "cell" of traditional Chinese city structure. If the streets and alleys defined by rows of *si-he-yuan* are arranged in a certain pattern and surrounded by a wall, a city is formed. The emperor's palace in the national capital was simply a grand *si-he-yuan*, or a collection of them, surrounded by a palace wall and referred to as the Gong Cheng or Imperial City. The Imperial City was supposed to have a dominant position, at the center of the city's primary north-south axis, and this central location symbolized the center of the cosmos. Also, according to ancient custom the "Tai Miao" could only be built in the nation's capital.

China is an agrarian nation, and the "She-ji Tan" was an important symbol of the emperor's authority. As for the market, it was a necessity of city life. All these basic elements of the city were clearly set forth in the *Book of Artificers*. Of all the written works concerning the construction of the capital city which have been passed down from antiquity, this is the earliest and most important, and had the greatest influence on the actual design of the ancient capitals.

Of the several imperial capitals in Chinese history, the last built was Beijing, or more specifically, that part of modern Beijing referred to as the "Old City," and it is the actual design of this city that comes the closest to expressing the ancient principle of "palace in front, market in back, ancestral temple on right, altar of soil and grain on left." After the foundation of New China, the capital was re-established in Beijing, with its center in the Old City, and work commenced to build a "people's capital" for the new socialist era. Thus, the redevelopment of Beijing's Old City plan became an urgent task. In order to fully understand the nature of this task, it is necessary to examine the plan of Beijing's Old City in some detail.

2.2 Early Planning and the Rise of Dadu City

Although Beijing is an ancient city with a history spanning 3,000 years, it has been in its present location only since the establishment of Dadu City by the Yuan Dynasty (1271–1368) in the thirteenth century. The previous location was in what is now the southwest suburbs of the city. The last and largest city built in this old location was Zhongdu, the capital of the Jin Dynasty (1115–1234). The establishment of Zhongdu marked the beginning of Beijing's emergence as a national political center.

To the northeast of Zhongdu City there was a scenic area with a natural lake, which was utilized by the Jin emperor. The lake was expanded on its southern part and two islands were created and an imperial retreat, called the Tai-ning Palace (Palace of Great Tranquility) was built (Fig. 2.1). In the year 1215, the army of the Mongolian leader Genghis Khan swept down from the north, occupying Zhongdu City and razing the Imperial Palace. But Tai-ning Palace outside the city was spared. Forty-five years later, Genghis Khan's grandson, Kublai Khan, in order to consolidate his rule over China, decided to establish his capital in Zhongdu. But the

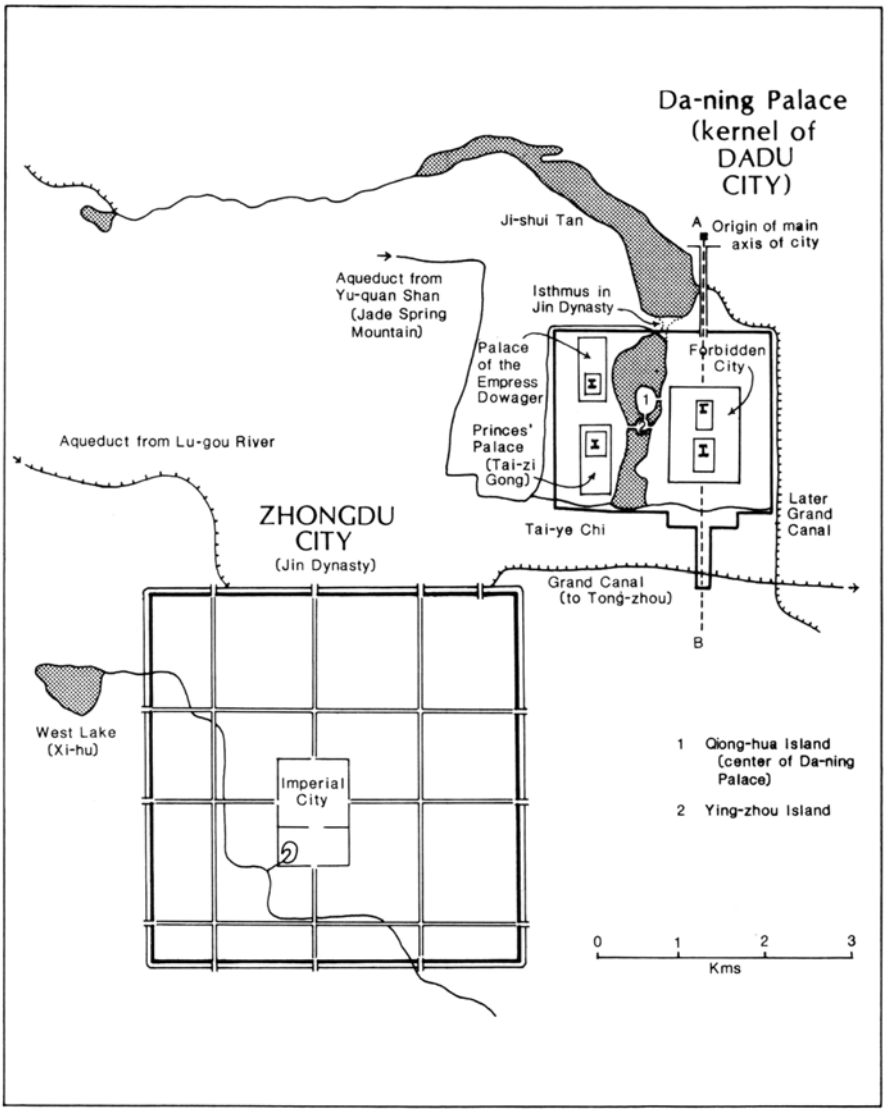


Fig. 2.1 Beijing's early urban nuclei: Zhongdu City, Tai-ning Palace, and the kernel of Dadu City

Imperial Palace there was in ruins and would have been extremely difficult to rebuild. Worse yet, Zhongdu had but a meager water supply from a small lake (West Lake, now called Lotus Lake) just west of the city. The complex problems of providing water for the city, and especially channels for water transport, became more critical day by day.

Man-made canals were needed, primarily to ensure that the capital could be supplied with the large quantities of grain it required. During the Jin Dynasty, an

aqueduct had been constructed to divert the water of the Yongding River (then called the Lu-gou River) eastward, following the natural topography, to the north moat of Zhongdu City. From there a canal continued eastward to Tong-zhou (east of present-day Beijing). The plan was to bring together river shipments of grain and other material at Tong-zhou for transshipment to Zhongdu. But when the Yongding River flooded, however, it could not be effectively controlled, and the scheme proved to be unworkable.

Kublai Khan therefore decided to abandon old Zhongdu City and commissioned the Han scholar Liu Bing-zhong, who was acquainted with the ancient classics as well as experienced in city construction, to draw up plans for a new city centered on the lake by Tai-ning Palace. Liu Bing-zhong and his student Guo Shou-jing, an expert astronomer and hydraulic engineer, began directing the construction of the new city and its canal system in 1267, but the work was not completed until 1285. What they created was the historically renowned Dadu City. It was during the construction of Dadu that Marco Polo visited China and became an official of the Yuan Dynasty. Later, after his return to Italy, he recalled the grandeur of Dadu and the splendor of the palace in his account of "Khanbaliq" in *Marco Polo's Journal.*

This account of the founding and initial construction of Dadu City is well enough documented, but the decisions concerning planning and design of the city are more obscure since no official papers or other accounts have been passed down. The only direct evidence for the city's internal organization consists of a restored map of Dadu City and some incomplete historical records. My own reconstruction of the city's plan development is as follows.

First, it was decided that the north-south axis of the city would be located close by the east bank of the northern part of the lake, which at that time was called Ji-shui Tan (see Fig. 2.1). The north end of this axis was set at the northeast bank of Ji-shui Tan. The emperor's palace, surrounded on four sides by a palace wall (which became known much later as the "Forbidden City"), was located on the east bank of the southern part of the lake and centered on the city's north-south axis.

On the west bank were two palace complexes, the southerly one being the palace of the crown prince and the northerly one the palace of the emperor's mother, or "empress dowager." These two complexes were also surrounded each on four sides by a palace wall, and faced the emperor's palace from afar across the lake. In the middle of the lake, equidistant from the three palaces, was a small island, which remained from the old Tai-ning Palace complex, called Ying-zhou. Bridges extending from Ying-zhou Island to the east and west shores of the lake connected the three palaces together. North of Ying-zhou Island was a larger island, called Qiong-hua Island, upon which was the main concentration of buildings of the Tai-ning Palace. Surrounding the three palace complexes was a city wall, which defined what was known as the "Royal City." Henceforth the south lake was surrounded by the Royal City, and according to tradition, was given the name "Tai-ye Chi" (Supreme Liquid Lake). Around the shore of Tai-ye Chi an imperial park was planned.

Since the northern part of the lake now lay outside the Royal City, and being separated from the southern part, a canal was constructed to divert its outflow

around the east wall of the Royal City and on toward the south suburbs. At the same time, a new source of water was found for the Royal City's Tai-ye Chi; an aqueduct was dug connecting the lake to a spring at the foot of Yu-quan (Pearl Spring) Hill northwest of the city. The outflow from the lake passed along the front of the Imperial Palace, then out to join the canal which drained Ji-shui Tan (see Fig. 2.1).

A large secular city was constructed around the Royal City. The plan for the large city placed its geometric center at the north end of the axis of the Royal City. At that site a platform was built, and on it were inscribed the four characters "Zhong Xin Zhi Tai," meaning "Central Platform." This shows clearly the careful measurement that went into the city's layout. From the Central Platform on the east to its western end, Ji-shui Tan is about 3.3 km in east-west extent. The location of the west wall of the enlarged city was set a little farther than this from the city center. Ideally, this should have been the standard distance determining the location of the east wall of the enlarged city. The land at that easterly location, however, was swampy and unsuitable for heavy construction, so the east wall could not be placed that far out. The south wall of the enlarged city was located about 3.75 km from the Central Platform, that being the distance which allowed the Royal City to be included within the enlarged city. It was then decided that the north wall should be placed at the same distance. Consequently, the shape of the enlarged city after the construction of the four walls was that of a slightly elongated rectangle.

The east, west, and south walls of the enlarged city each had three gates, but the north wall only two. Inside the southernmost gate of the east wall was built the Tai Miao, and inside the southernmost gate of the west wall was built the She-ji Tan. Spanning the area between the eleven city gates, which were spaced at approximately equal distances from one another, were wide avenues. Including the "wall streets," which ran along the insides of the city walls, there were nine aligned north-south and nine east-west. Many smaller lanes were laid out running east-west between the primary north-south avenues. Thus, the basic layout of all of Dadu City was accomplished (Fig. 2.2).

At this point, it is important to note the special significance of the location of the central gate of the south city wall, at the south end of the city's north-south axis. Along the sides of the "Imperial Road" which connected this city gate to the south gate of the Royal City, a T-shaped square was built. This was equivalent to the so-called "Wai Chao" (Outer Court) of antiquity. Precisely located along the central axis of the whole city were the chief buildings of the emperor's palace, as well as the emperor's throne. The purpose of this was to demonstrate that the emperor was "number one under heaven," a concept with great symbolic meaning.

The last major project in the construction of Dadu was the tapping of the springs of the mountains to the northwest to provide the city's water supply (Fig. 2.3). All these springs, except for those of Yu-quan Hill which were used exclusively to feed the Royal City's Tai-ye Chi, were brought together into a single channel which flowed into Dadu City's Ji-shui Tan. From there, these waters were channeled southward around the east wall of the Royal City, joining the old Jin Dynasty canal in the

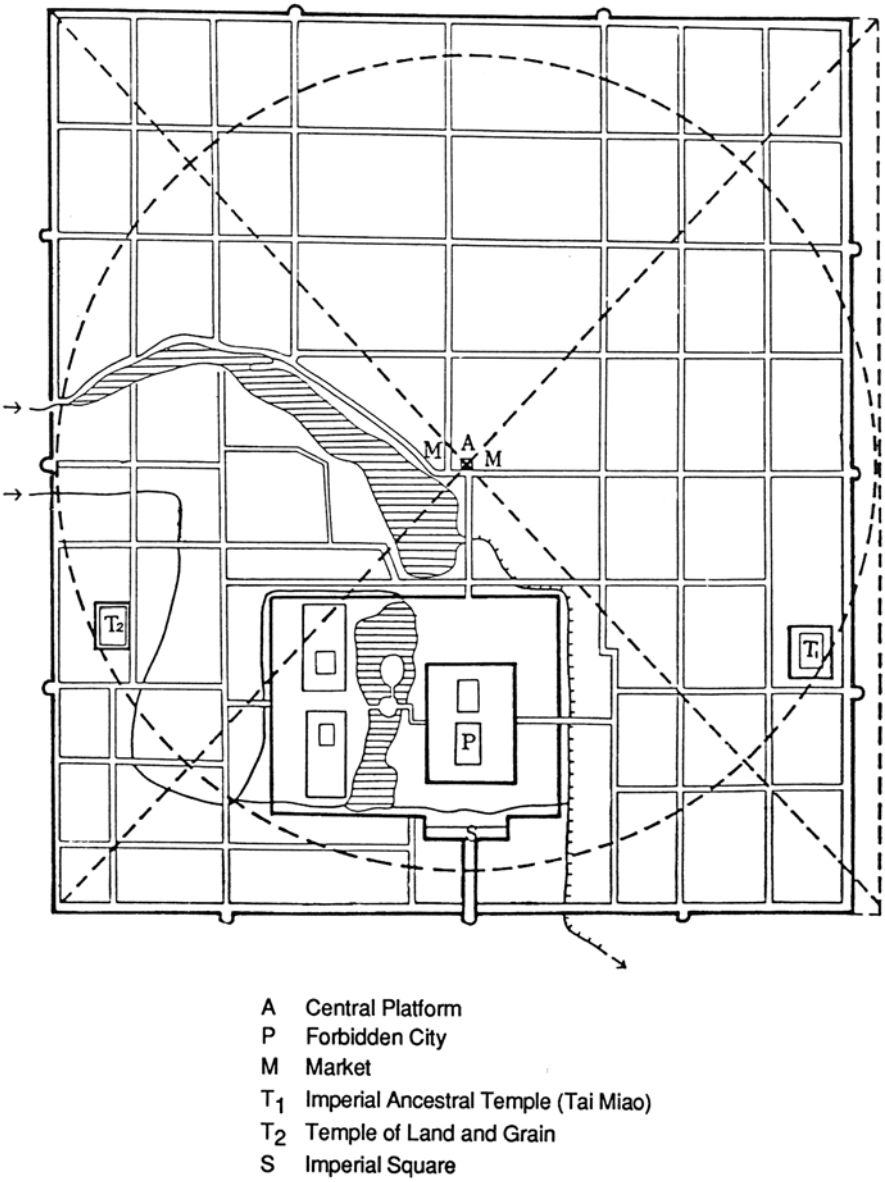


Fig. 2.2 The layout of Dadu City (Beijing)

southern suburbs which led to Tong-zhou. At Tong-zhou this joined with the historically renowned Grand Canal, which linked the area to China's southern regions. The northern terminus of the Grand Canal system therefore was Ji-shui Tan, which became a bustling port, crowded with boats laden with grain and goods

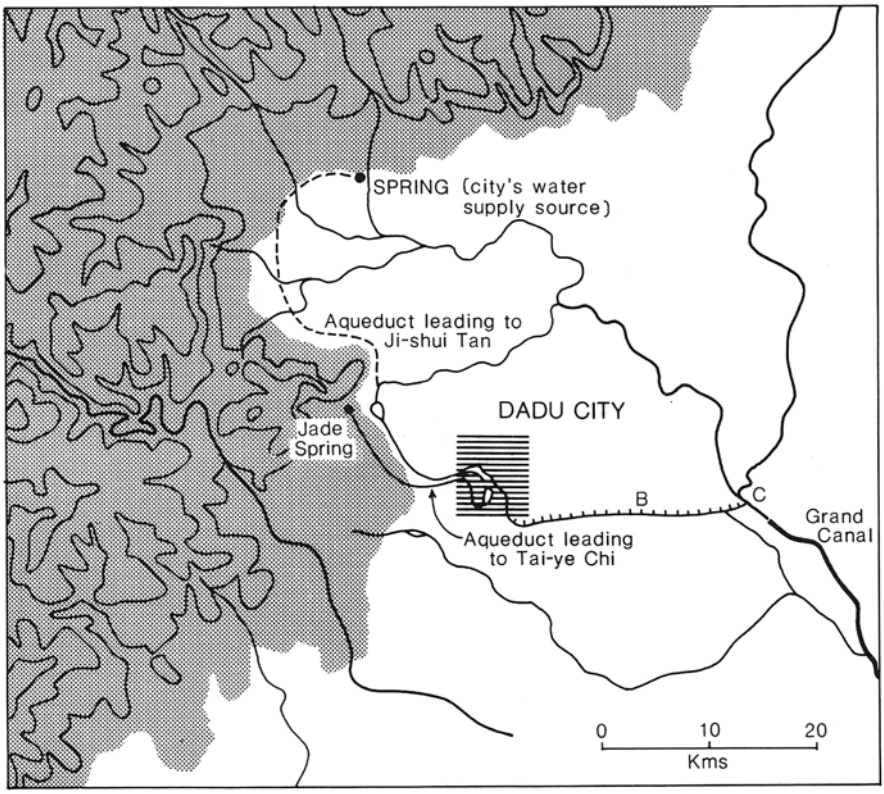


Fig. 2.3 Waterways in the vicinity of Dadu City (Beijing)

from the lower valley of the Changjiang (Yangtze River). An area on its northeast shore, including the vicinity of the Central Platform and a street along the north side of the lake, became the most prosperous commercial center of the city (Fig. 2.4).

The Yuan Dynasty's construction of Dadu City required 18 years from beginning to end. If the design of Dadu is compared to the elements of ideal city layout set forth in the *Book of Artificers*, such as "palace in front, market in back, temple of ancestors on right, altar of soil and grain on left," and the street plan, it can be seen that these principles were completely realized in the construction of the city. Thus, the design of Dadu City without question had its origins deep in Chinese culture. But it was not just a machine-like copy of the ancient ideal form; its sides were not built in the form of a perfect square, but rather the ideal was modified to meet the requirements of reality to produce a creative work. By building the city around a wide body of water and extending its north-south dimension, it was possible to create a great city which combined grandeur with beautiful scenery. Moreover, the main elements of the ideal plan were still strongly represented, and this was no mean achievement.

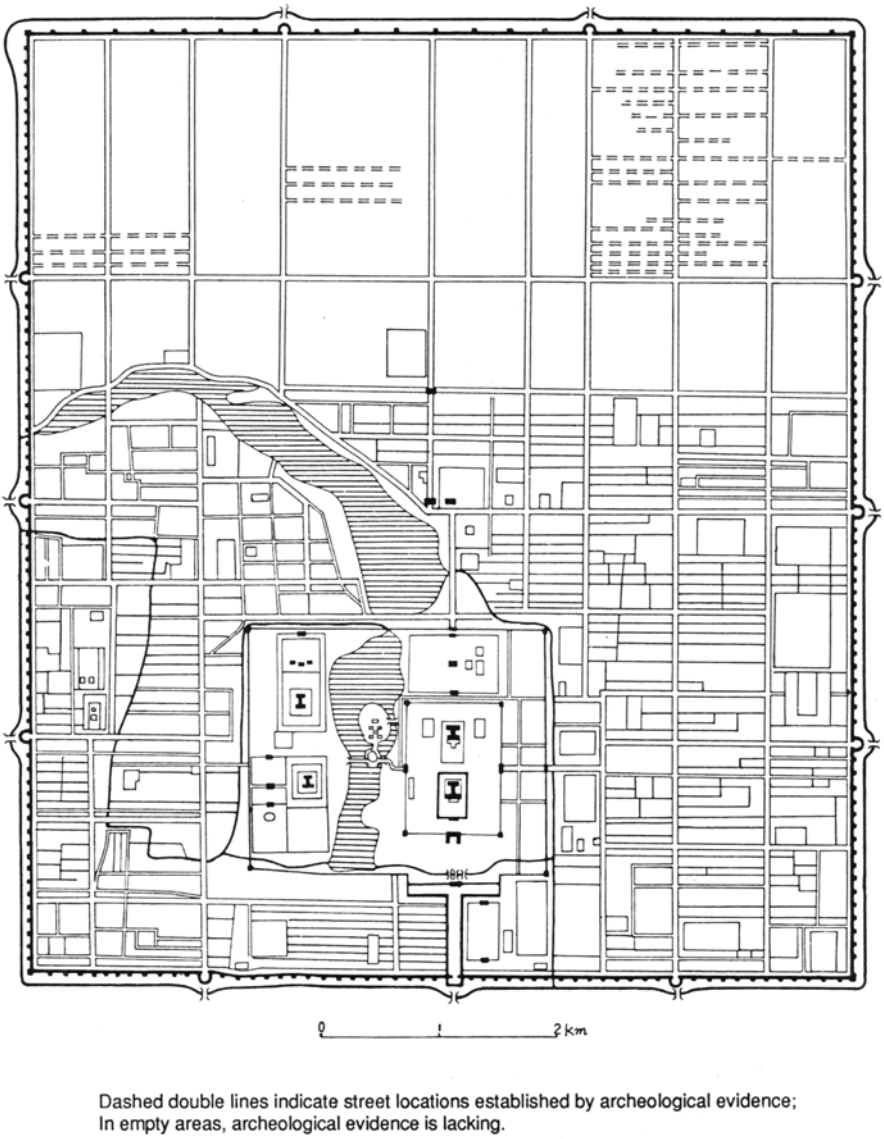
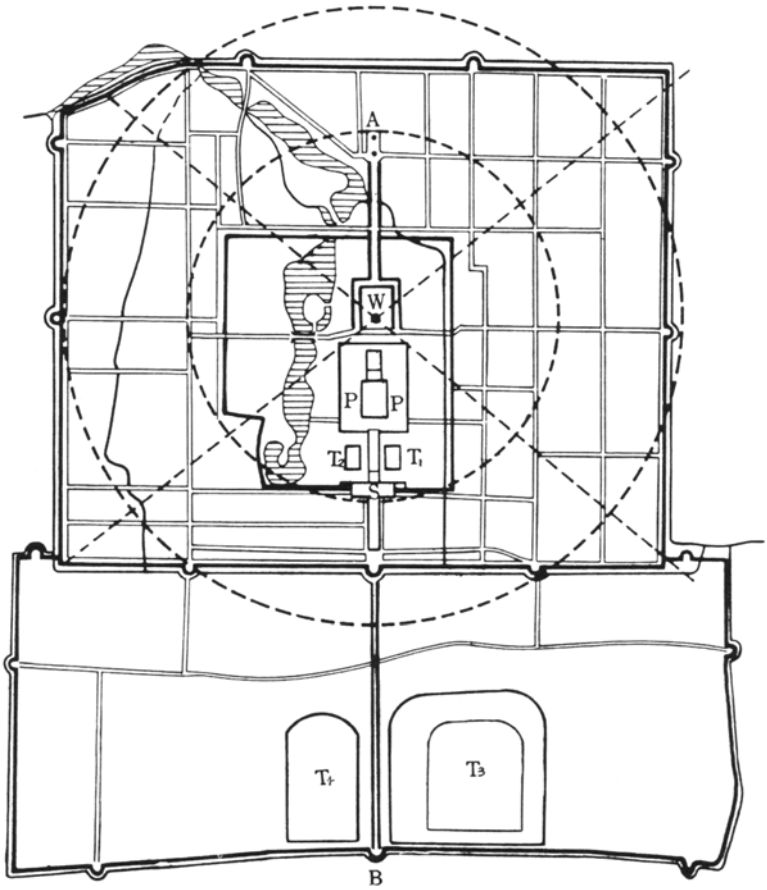


Fig. 2.4 Reconstruction of the layout of Dadu City (Beijing) during the Yuan Dynasty

2.3 Planning Changes in the Ming and Qing Periods

Less than a century after Dadu City was built, an uprising in the lower reaches of the Changjiang (Yangtze River) resulted in the establishment of the Ming Dynasty (1368–1644), which eventually extended its rule over the whole of China. The Ming

Dynasty originally had its capital at Nanjing. After it occupied Dadu, it changed that city's name to Beiping or "North Pacification." During the reign of the third emperor, who intended to rule from Beiping, to begin with the name was changed to Beijing, or "Northern Capital," and then the capital function itself was moved from Nanjing to Beijing. Concurrently, a major reconstruction of the city was begun (Fig. 2.5).



P	Forbidden City
W	Long Life Mountain
T1	Imperial Ancestral Temple (Tai Miao)
T_2	Temple of Land and Grain (She-ji Tan)
T_3	Temple of Heaven (Tian Tan)
T_4	Temple of Mountains and Rivers (Shan Chuan Tan)
A	Bell Tower and Drum Tower
B	Outer City's Mid-South Gate
AB	Central axis of the city
S	Imperial Square

Fig. 2.5 Dadu City's transformation into Beijing City under the Ming dynasty

First, the north city wall was moved about 2.5 km to the south, leaving the northwest part of Ji-shui Tan outside the city. Then both the south city wall and the emperor's palace were rebuilt a little to the south. This reconstruction produced the new emperor's palace, or the Forbidden City, which has been passed down to the present, and is today's Palace Museum. Within the Ming Dynasty's Forbidden City, the most important buildings were a row of six great palaces, built along the city's main axis, which symbolized the supreme power of the emperor. The geometric center of the whole city was no longer at the Central Platform, but had shifted south to a point just north of the new Forbidden City. In order to clearly mark the new city center, soil excavated from a new artificial lake at the southern end of the Tai-ye Chi and from a newly constructed moat of the Forbidden City was used to build a hill about seventy meters high. This was named Wan-sui Shan (Long Life Mountain) and symbolized the eternal ruling power of the emperor.[2] In addition, the Tai Miao and She-ji Tan were moved from their old locations inside the east and west walls to new locations just outside the south gate of the Forbidden City. They were still placed on the left and right sides of the meridional axis, respectively, in keeping with the tradition of "Tai Miao to the right and She-ji Tan to the left." At the same time, the south, north, and east walls of the Royal City were extended a bit, so the Tai Miao, She-ji Tan, and the new lake south of Tai-ye Chi were all contained within them.[3]

More importantly, two major new groups of buildings were constructed in the southern suburbs, one east and one west of the meridional axis. To the east was the Tian Tan (Temple of Heaven), where the emperor paid homage to the gods of heaven, and to the west was the Shan Chuan Tan (Altar of Mountain and River), where he paid his respects to the gods of mountain and river.[4] Up until 1553, this southern part of Beijing was outside the city wall; then an "outer wall" was built to formally incorporate the above-mentioned temple and altar into the city. The middle gate of this new outer wall was situated on the center axis, between these two groups of buildings. The main north-south road within the gate was built along the axis.

At the northern end of the axis, where the old Central Platform was located, two new buildings were constructed: the Bell Tower to the north and the Drum Tower to the south. The newly extended north-south axis had a full length of almost 8 km. The Forbidden City occupied the most important location on the axis; to its north, standing like a picture screen, was Wan-sui Shan; to its south, on the left and right, were the Tai Miao and the She-ji Tan. Between these two temples was the Central Imperial Avenue, which started at the Wu Men (Meridional Gate) at the center of the south side of the Forbidden City and extended to the Tian-an Men (Gate of Heavenly Peace)[5] at the center of the south side of the

[2] Later the name was changed to Jing Shan (Scenic Mountain) and also Mei Shan (Coal Hill).

[3] During this period, the canal formerly outside the Royal City's east wall was incorporated into the Royal City, and shipping on the Grand Canal was thus unable to reach Ji-shui Tan. The lower part of Ji-shui Tan was connected with Tai-ye Chi to the south, and the aqueduct which had been specifically created to supply water to Tai-ye Chi was abandoned. Altogether, the city's water system regressed under the Ming Dynasty's management.

[4] The name "Shan Chuan Tan" was later changed to "Xian-nong Tang" (Altar of the God of Agriculture).

[5] During the Ming Dynasty, the Tian-an Men was called the Cheng-tian Men.

Royal City. After passing through the Tian-an Men, the avenue widened into a T-shaped palace square. The square was bounded on three sides by red brick walls. Inside the east and west walls, long corridors called the "Corridor of a Thousand Steps" were built. Outside the south central gate of the square was the south central gate of the inner city wall. This gate was known as the Zheng-yang Men, or Front Gate, and the part of Beijing which lay beyond it was called the outer city. Along the main axis of the city, which had been extended, the fundamental principles of the design of Dadu City were further developed, and a higher aesthetic level was achieved.

The Qing Dynasty (1644–1911), the last imperial dynasty in China's history, also established its capital in Beijing. Besides erecting more palace buildings in the Forbidden City and in the imperial park around Tai-ye Chi, it did not do much to change the layout of the city. Thus Beijing City—or as we now call it, Beijing's Old City—was preserved until the eve of the birth of New China. Starting with the principles set forth in the *Book of Artificers* with adjustments made to accommodate local geographical characteristics, and then having gone through numerous reconstructions, Beijing has finally come down to us as the ultimate expression of the ideal traditional Chinese city.

It is just this Beijing City that has been the object of high praise from Western urban planners. For example, the renowned Danish architect Steen Eiler Rasmussen, in the preface to his book *Towns and Buildings*, wrote:

> There are excellent German and Japanese guide books giving detailed information about every single palace and temple in Peking. But they do not contain a single mention of the fact that the entire city is one of the wonders of the world, in its symmetry and clarity a unique monument, the culmination of a great civilization.[6]

Another example is provided by the distinguished American city planner Edmund Bacon, who was Executive Director of the Philadelphia Planning Commission for 20 years and made an important contribution to historic preservation and restoration in that city. In his book *Design of Cities* he wrote this regarding Beijing's Old City:

> Possibly the greatest single work of man on the face of the earth is Peking. This Chinese city, designed as the domicile of the Emperor, was intended to mark the center of the universe. The city is deeply enmeshed in ritualistic formulae and religious concepts which do not concern us now. Nevertheless, it is so brilliant in design that it provides a rich storehouse of ideas for the city of today.[7]

Bacon's comment is noteworthy. As a center of imperial rule, he said, it was a great design achievement and should be studied by city planners today. At the same time, he points out that it contains much that does not serve the needs of the present. This clearly reveals the dilemma we face today.

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[6] Steen Eiler Rasmussen, *Towns and Buildings*, paperback edition. Cambridge, Mass.: First M. I. T. Press, 1969. Preface, p. v.

[7] Edmund N. Bacon, *Design of Cities*, revised edition. London: Penguin Books, 1980, p. 244.

2.4 Plan Changes in the New China Era

Following the progress of history and the passage of time, old cities—especially those of intricate design—unavoidably face the necessity of continuous redevelopment. This is especially true in the case of Beijing's Old City, since the single underlying motif of all its splendid architecture and ingenious design—namely, symbolizing the supremacy of a medieval sovereign—stands in such sharp contrast to the spirit of the present time. The establishment of New China represents the beginning of a new, socialist era. As Beijing is the nation's capital in this new era, the reconstruction of the city should reflect the fact that the people are now the true masters of their country.

How can this reconstruction effectively be carried out? First, it must be seen that this is not simply a matter of engineering and technology, but also a problem concerning our custodianship of a venerable historical and cultural inheritance, as well as the challenge of creating a new socialist civilization.

All of Beijing's Old City is part of China's historical and cultural inheritance. It is a symbol of the magnificent development of China's culture in imperial times. As Rasmussen pointed out, it is a significant monument to the highest achievements of a great civilization. The new Beijing City, as the people's capital and a symbol of the new socialist culture, can only rise from this historical foundation. But as we assume our charge over this historical and cultural legacy, we must adhere to the principle of maintaining a critical perspective. We can neither totally deny the legacy nor totally accept it. It is important to distinguish between the "wheat" and the "chaff"; we must accept and make full use of the wheat, while criticizing and giving up the chaff. In this way we can follow the principles of "making the past serve the present" and "weed through the old to bring forth the new," in order to use our historical foundation to create something new. We must note, however, that the standards for distinguishing the "wheat" from the "chaff" have changed through time. Today, we place a high value on all things which benefit the masses or fully express the people's creative abilities. That which truly embodies this populist spirit should be accepted and developed. That which does not should be criticized and given up. Today, this principle must be applied to the reconstruction of Beijing's Old City.

Some reconstruction work affecting the layout of Beijing's Old City has already been done since the establishment of New China. The most notable example of this is the reconstruction of Tian-an Men Square. As noted earlier Tian-an Men was originally fronted by a T-shaped square. This was designed to serve as an imperial square—a place where the emperor performed important ceremonies (Fig. 2.6). On its east, west, and south sides were red walls which totally shut off public access. It was thus a great obstacle to east-west communications within the city. Viewed from the south end of this imperial square, the Tian-an Men loomed to the north as a lofty, ornate palace built upon a red platform. In old times, this sight served to create an impression of grandeur and solemnity. In 1911, after the overthrow of the last dynasty, Tian-an Men Square was opened and people were allowed to pass through, but the red walls were kept as before. On October 1, 1949, the declaration of the

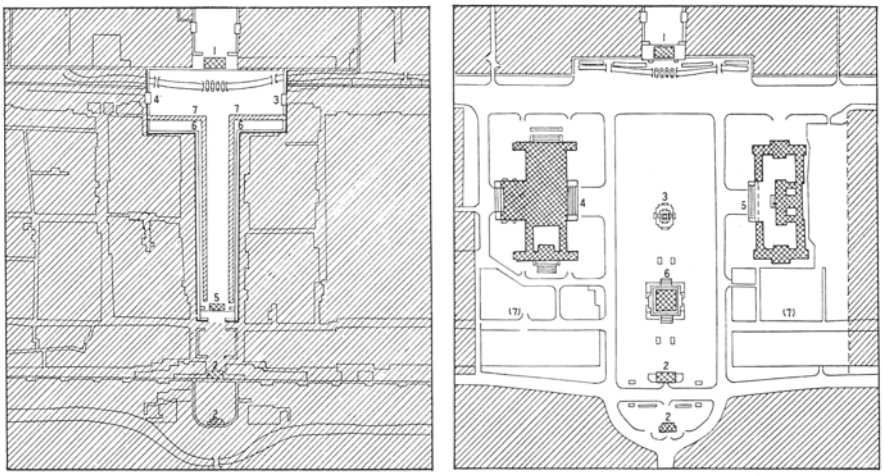

Fig. 2.6 From imperial square to people's square at the Tian-an Men, Beijing

establishment of New China took place there. An important reason for this was that Tian-an Men Square was the site of the outbreak of the May 4th Movement of 1919, which set the stage for the New Democratic Revolution. Thus it is one of the places in Beijing's Old City with an honored revolutionary tradition.

The Tian-an Men, which stands above the square, expresses the full talent and intelligence of China's working people in the art of construction. It could be considered a masterpiece among the ancient structures of Beijing. As for the red walls on the east, west, and south sides of the square, they still obstructed the movement of people and were actually a public nuisance. Therefore, on the tenth anniversary of the founding of the nation, the red walls surrounding the square were totally demolished, and a new square appeared which was several times larger than the old one. On the west and east sides of the square, two modern buildings were constructed. On the west arose the Great Hall of the People, and on the east was built the structure containing the Museum of Chinese History and the Museum of Chinese Revolution. In the center of the square stands the Monument to the People's Heroes. On the eve of the 30th anniversary of the revolution, the Memorial Hall of Chairman Mao was built on the south side of square, just inside the Zheng-yang Gate. The transformation of Tian-an Men Square to the center of political activity was essentially complete. Although its location remains the same, its nature and function have totally changed, and it has an entirely new appearance (see Fig. 2.6).[8]

[8] The actual work, of course, was not without problems. For instance, in the cases of the demolition of the old city wall and most of the old gates and the filling of the moat, there was serious disagreement in the beginning. From today's point of view, these are simply irretrievably lost.

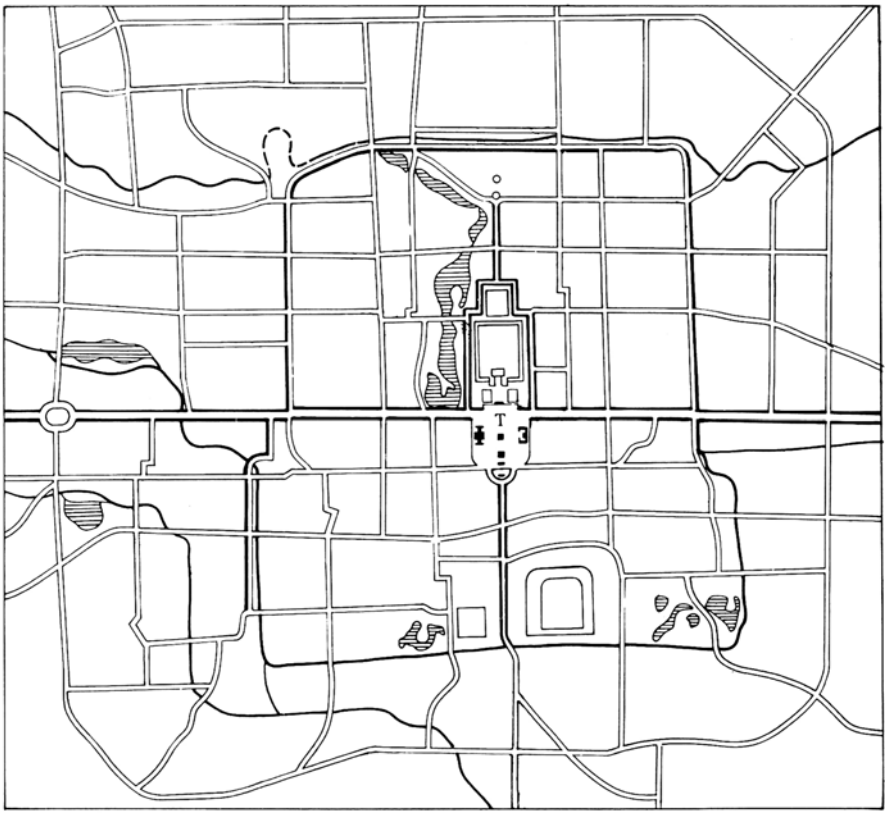

Fig. 2.7 Chang-an Street, Beijing, extending east and west from Tian-an Men

At the beginning of the reconstruction of Tian-an Men Square, its left and right wings extending along Chang-an Street (the street's name was derived from the former left and right Chang-an Gates on either side of the old square) were widened and extended to become a broad, tree-lined thoroughfare. This thoroughfare extended to the east and west suburbs and created a major new axis for the whole city (Fig. 2.7). On one hand this reinforced the primacy of Tian-an Men Square's location in the layout of the whole city, and on the other hand it relegated the location of the old Forbidden City to "backyard" status. That ancient symbol of imperial primacy thus lost its exhalted position relative to the rest of the city.

Although work remains to be done in the reconstruction of Tian-an Men Square, its position as the center of political activity in the city has been established. The old buildings on the square, such as the Tian-an Men and the Zheng-yang Men, and the modern buildings, such as the Great Hall of the People and the Museum of Chinese History and the Museum of Chinese Revolution, all go together very well, showing at the same time continuity with the past and the new spirit of the present.

The principle of "weed through the old to bring forth the new" has been fully realized. With regard to the improvement of the layout of Beijing's Old City, it cannot be said that this was not a success.

There are still many opportunities for today's city planners to apply their creative talents, in accordance with this principle, to the reconstruction of Beijing's Old City. For instance, one such case is the question of what to do with the old Ji-shui Tan. Should we consider it an obstacle to the city's development and fill it in to create land for buildings? Or should we consider it a place of historical significance in the development of the city and protect and improve it?

The Ji-shui Tan of antiquity, as discussed earlier, had a great influence on the location and layout of Beijing's Old City. The city's main axis was set next to the eastern shore of Ji-shui Tan, and the width of the lake determined the location of the east and west city walls. It could be said that had Ji-shui Tan not existed, Beijing would not exist in anything like its present form. In Dadu City of the Yuan Dynasty, Ji-shui Tan was of great importance as the northern terminus of the Grand Canal. After the early period of the Ming Dynasty, when the north city wall was moved southward 2.5 km, the northwest part of Ji-shui Tan was excluded from the city, and the area of the lake inside the city was greatly reduced. Subsequent reconstruction of Beijing's Old City, while further developing the primary themes of the original city plan, resulted in the filling of the Grand Canal's bed within the city and the elimination of its upper reaches. All that remained was the spring from Yu-quan Hill, which flowed into Ji-shui Tan and thence on to Tai-ye Chi. After this rearrangement of Beijing's water system, Tai-ye Chi, which was inside the Royal City, was again enlarged by the addition of a new lake at its southern end. The trees and structures around it increased in number, and it developed into the most scenic park district in the city. The lake became known as the "Three Seas"—the "South Sea" (Nan-hai), the "Middle Sea" (Zhong-hai), and the "North Sea" (Bei-hai). The "North Sea" has now been opened to the public; known as the Bei-hai Park, it is renowned for its most beautiful scenery. This was the location of the Jin Dynasty's imperial retreat, Tai-ning Palace.

Ji-shui Tan, which lay outside the Imperial City, has a much different fate than the "Three Seas," with their imperial parks and gardens. Throughout the Ming and Qing dynasties and up to the establishment of New China, it never received much attention from the highest rulers. Thus it has not benefited from any definite plan or development, and has quite naturally become a neglected backwater. The lake shrank into three parts, and only the northwestern most part was still called Ji-shui Tan. A larger part of the lake, to the southeast, was called Shi-cha Hai. The area remained, however, one of the most scenic parts of the city. Especially lovely was the view looking west from the east shore of Shi-cha Hai; the reflected peaks of West Mountain seemed like part of the city landscape. Therefore this region in old times, especially during the Qing Dynasty, attracted some of the imperial nobility. They built great houses near the lake shore and channeled lake water into their private gardens. In addition, a number of large, wealthy temples were established around the lake. But, apart from the nobles' houses and temples, the greatest part of the lake region became a public recreation place for the common people. The southern part, especially, evolved naturally into a

real "people's park." Concurrently there arose in that place a common people's market, where prices were low and merchandise was good. Because of a profusion of lotus growing along the lake shore there, this market came to be called the "Lotus Market." Up to the eve of the birth of New China, this region remained a haven for the common people, where they could relax and enjoy life in a rustic setting. This informality contrasted sharply with the detailed planning and arrangement of Tai-ye Chi and its imperial gardens.

Now, inside Beijing's Old City, this overlooked lake is still there, and along its shores there are still patches of greenery and glimpses of its former beauty.

Further planning and reconstruction of the Ji-shui Tan district has already been scheduled as part of the effort to improve and reconstruct Beijing's Old City, in coordination with the overall plan for greater Beijing (Fig. 2.8). As this process goes forward, we must consider the historical importance and value of this region. We must consider the strong association of the common people with this place and the present necessity of creating more spacious, pleasant and culturally meaningful recreation areas for our citizens. We must consider the potential for improving the natural environment and making the city a more beautiful place. We must also build our plan upon the historical base we have inherited, all the while maintaining a critical attitude and doing our best to realize the principle of "weeding through the old to bring forth the new." Ji-shui Tan is waiting for us to make this effort.

2.5 Conclusion

This essay examines only two examples, from the geographical perspectives of city location and design, in an attempt to assess what attitude we should have and what basic rules we should observe in the process of reconstructing Beijing's Old City.

In July of 1983, the Chinese Communist Party Central Committee and the State Council approved in principle the Master Plan for the City Construction of Metropolitan Beijing. This plan clearly evaluates Beijing's Old City, and while pointing out those strengths and notable traditional characteristics which should be preserved in the process of reconstruction, it also emphasizes the creation of a new style characteristic of the people's capital in the new era.[9] Thus, we have reason to believe that by the end of this century a new Beijing City will emerge, one which will maintain not only its ancient cultural tradition, but with a new face reflecting a prosperous, new socialist culture. At the same time we also hope that this new culture, which is still developing, can make an important contribution to the civilization of all mankind.

[9] See *The Beijing Daily* (*Beijing Ribao*), August 3, 1983, and *The Beijing Evening News* (*Beijing Wanbao*), August 4, 1983.

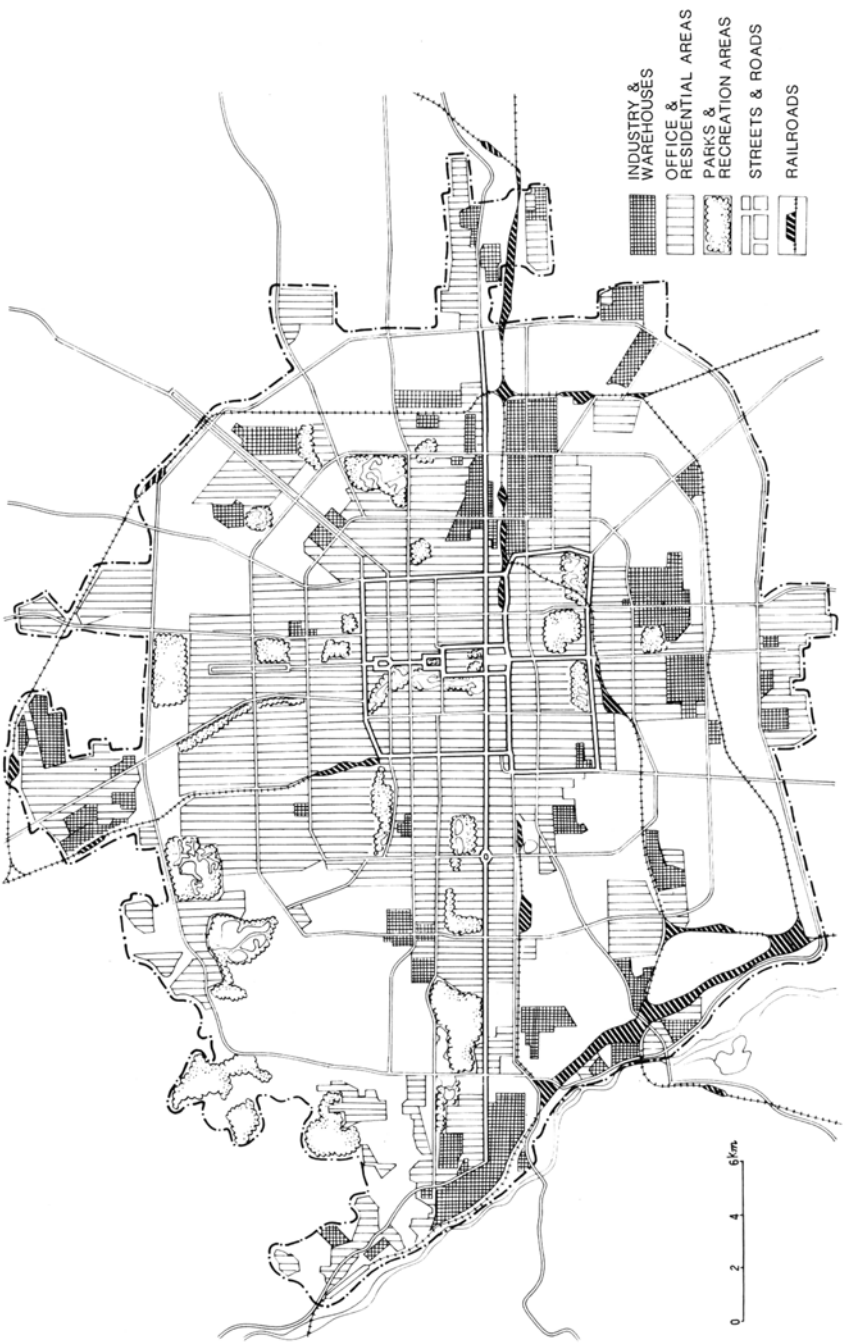

Fig. 2.8 Land use for metropolitan Beijing, 1983

Chapter 3
Views on Three Milestones in the Construction of Beijing City

3.1 The City Plan of Beijing Through the Centuries

'If you do not understand the past of Beijing City, you are unable to know the present of it and of course it is impossible for you to estimate the future of it too. The development of a city is a continuous process in which the past, present and future are situated on the same chain of time'.[1] Beijing is a world-famous city of history and culture, whose planning and construction has deep historical and cultural origins. Especially on the newly selected location through the Yuan and Ming dynasties, the favorable conditions of river and lake water system were fully utilized. The convex contour of closely combined inner and outer cities in spatial structure was finally completed in accordance with the planning principles which come down in one continuous line of the construction of capital city in China since the ancient time and above all with the consecutive renewals and reforms. At the center of it, there goes through a middle axis from north to south, i.e. starting from the Gulou and the Zhonglou (the Drum-tower and the Bell-tower) in the north running down to the Yongdingmen (a city gate) in the due south, the length of which is approximately 8 km. This spatial structure of organic combination of inner and outer cities had been perfectly preserved up to 1949, the year of the establishment of New China.

This article was published in *China City Planning Review*, vol. 6, 1994. The abstract at the beginning of the article is presented as follows, "This article has made comments on the three milestones in the construction of Beijing City: the Forbidden City, the Tian'anmen Square and the Public Building Complex outstandingly embodying the new style and features of the capital of the 21st century, along the northern extension line of the middle axis of the whole city. According to this demonstration, the author has further pointed out that the development of the third milestone is in fact the break-through in Beijing's traditional thought of design and demonstrated the origin of this traditional thought of design in accordance with the discovery in archaeology."—Editor's note.

Section headings 3.1, 3.2, and 3.3 were added in the course of publishing this version.

[1] Zhu Wenyi, *Space, Symbol and City* (in Chinese), China Building Industry Press, 1993, p. 167.

R. Hou, *Symposium on Chinese Historical Geography*,
China Academic Library, DOI 10.1007/978-3-662-45272-1_3

New China established its capital again in Beijing and according to the needs of time has carried out the city planning and construction in succession, taking the old city as the core. Judging from the spatial structure of the whole city, the most important thing, and foremost thing too, was the enlargement of the Tian'anmen Square, i.e. to convert the enclosed square of imperial court of old days into a broad and magnificent city square. At the same time, two wings of the Tian'anmen Square, the eastward and westward Chang'an Boulevards, were also broadened and extended, thus making a scene just like a horizontal axis from east to west crossing the vertical axis of old days from north to south at the Tian'anmen Square.

Along with the demolishing of city wall of old days, the construction of Second, Third and Fourth Ring Roads was carried out one by one. All these ring roads have naturally led to the extension of north-to-south middle axis inside the old city. This had been fully shown in the city planning map of early stage. The south extension line of middle axis inside the old city had as its basis the road bed stretching from Yongding Gate down to Dahong Gate at Nanyuan. As for the north extension line of the middle axis, there is no basis available because the area from the Gulou and the Zhonglou to the north Second Ring Road was totally blocked by the dwellings. This was directly related to the practice of breaking the historical tradition of Jin Zhongdu, the middle capital of Jin Dynasty, and not establishing the due north gate at the time of founding the Yuan Dadu, grand capital of Yuan Dynasty. There is also no basis available for the further extension to the due north after crossing the residential areas, and there was the blocking of important buildings in between as well.

Therefore, except the portion inside the old city wall, this north extension line of the middle axis hadn't started being opened up until the eve of the convening of the Eleventh Asian Games in 1990, so that it could be linked with the north Fourth Ring Road under construction for the same purpose at that time. The northern portion of it is Beichen Road now. The location of the then-established main venue of the Asian Games, that is, the National Olympic Sports Center, is on the east side of the intersection of Beichen Road and north Fourth Ring Road. To the north sits the Beijing International Convention Center constructed at the same time, and the two face each other across the Fourth Ring Road. This place is just situated to the due north of the old city, wide in area, nearer to the capital airport and rather convenient for the international communication. So far as the selection of geographical location thereof is concerned, therefore, it is very suitable too for this grand international activity, with the call for 'Unity, Friendship, Progress', to have this place as the center to take place.

In fact, it is just the successful convening of the Asian Games in Beijing and the decision of constructing the National Olympic Sports Center thereupon that makes me become conscious that in the planning and construction of Beijing City, the concept which can be called 'Three Milestones' is taking form (Fig. 3.1). The study reads as follows:

The First Milestone is the core construction of the Beijing City in history, the Forbidden City. It has been 570 odd years old since it was built, representing the

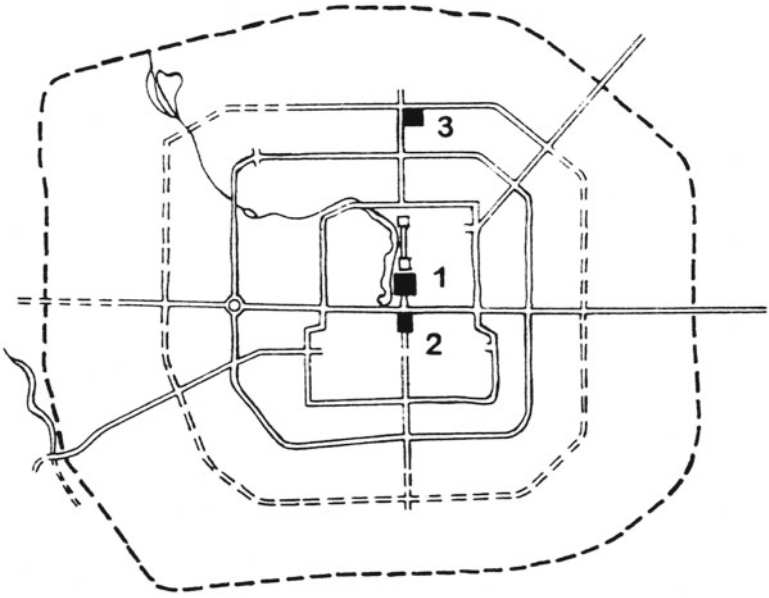

Fig. 3.1 Views on three milestones in the construction of Beijing City
1 Forbidden City (Palace Museum), *2* Tian'anmen Square, *3* National Olympic Sports Center

core of the Beijing City construction under the rule of feudal dynasties and being a masterpiece in China's traditional art of architecture as well. Up to now it still erects at the center of the spatial structure of the whole city, but it is not only the art wealth of the Chinese people but has been classified as the 'World Cultural Heritage' with global reputation also.

The Second Milestone is the Tian'anmen Square which symbolizes outstandingly that a new age has arrived after the founding of New China. It has gifted the middle axis of the whole city of long tradition with wholly new significance, reflecting the age characteristics of 'making the past serve the present; weeding through the old to bring forth the new' in city construction and the special meaning of inheriting the past and ushering in the future in cultural tradition.

The Third Milestone, as mentioned above, is that in the beginning it was only due to the convening of the Asian Games and the construction of the National Olympic Sports Center that it started showing the arrival of the age of Beijing marching towards an international metropolis. The first time I openly put forward this idea was May 14, 1991 when I was making a report at the academic discussion in Architectural College, Qinghua University. At that time I only indicated it orally and did not write in the text of speech.[2]

Now 3 years have passed. Facing the twenty-first century and inheriting the fine tradition of various master plans since the 1950s, the latest Master Plan of Beijing City has further put forward the new target of establishing the modern international

[2] Please refer to Zhu Wenyi's "A Theory of Urban Design" for further account in *Space, Symbol and City* (in Chinese), China Building Industry Press, 1993, p. 248.

metropolis under the new situation of reform and opening to the outside world and of establishing socialist economic system. It is also pointed out in the target 'to protect the famous historical and cultural cities under the consideration of the whole, especially to do this from the view of macroscopic environment of urban layout'.

What was first and foremost to put forward thereon was the 'protection of middle axis of the old city' and the direction that on the north and south extension lines of the middle axis of the old city, the following symbolic planning and design were to be made out respectively: 'the south extension line should embody the image of South Gate of the city; along the north extension line should be retained the broad green belts, on the two sides and north point of which the public building complex should be the culmination and the termination of the city axis, reflecting outstandingly the new style and features of the capital in the 21st century'.

What should be specially noticed here is that the west and east sides of the north extension line of middle axis are the very sites of the National Olympic Sports Center and the Chinese Nation Garden under construction. As for the north point of it, it is going to be built into the public building complex, and its completion in accordance with the plan in the area will really be considered the Third Milestone in the history of the city's planning and construction (Fig. 3.2).

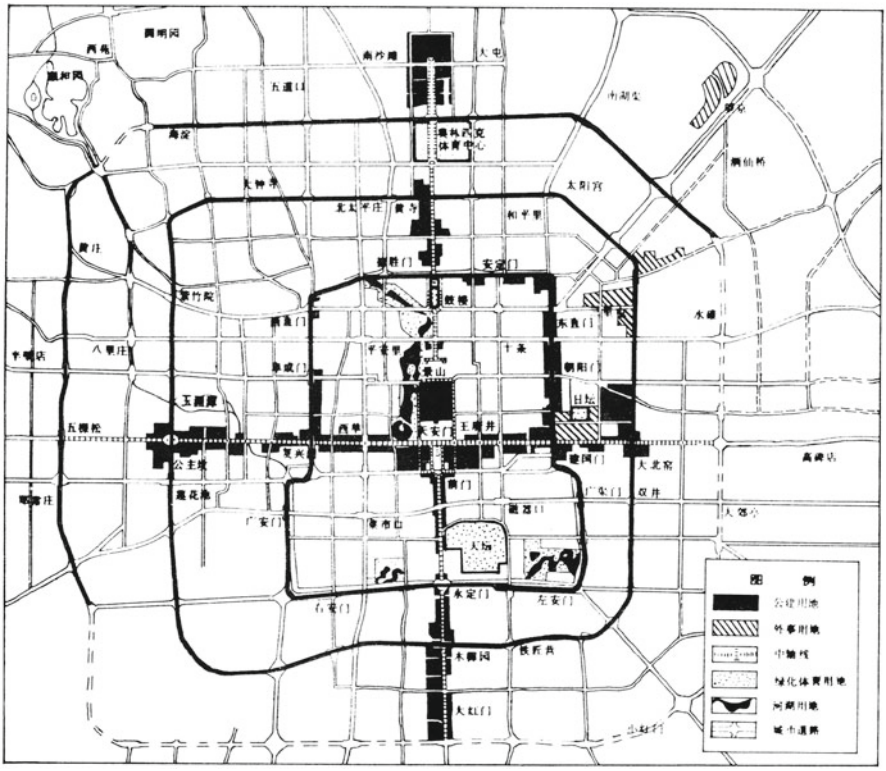

Fig. 3.2 The north extension of the middle axis of Beijing City
(From *Beijing Daily*, April 1, 1994)

3.2 Shifting Priorities with the Extension of the Middle Axis in Different Ages

It is necessary to explain further too that the extension towards the due north of this middle axis of the whole city in the planning is actually a new development against historical tradition.

The original middle axis inside the Beijing old city was defined at the time when the Yuan Dadu, the capital city of Yuan Dynasty, was first constructed, but its historical origins in fact existed very long. What is more important is that it in a concentrated way embodied the traditional thought in the days of the imperial power: Facing the South to be Emperor, i.e. the emperor should face the due south to rule the world. This was reflected conspicuously in the beginning of the planning and design of the Yuan Dadu.

The planning and design of the Yuan Dadu can be traced up to the description of 'the Way the Craftsmen Build the City-state' in *Kaogongji*, *Zhou Li* (the book recording the work of craftsmen at the Warring States Period, 475–221 BC), but the design of the city walls was in fact totally different from the description of the book. Now it is explained separately as follows:

So far as the layout of the core buildings in 'the Way the Craftsmen Build the City-state' is concerned, it reads like this: the Imperial Ancestral Temple on the left side, the Altar of Land and Grain on the right side, Court facing ahead and Market on the back side (*zuozu youshe, mianchao houshi*).

By comparison, it is analyzed with the help of sketch map of the Yuan Dadu that by the so-said *zuozu* it means in fact the Imperial Ancestral Temple at the foot of the east wall inside the city. By *youshe* it means in fact the Altar of Land and Grain at the foot of the west wall inside the city. By *mianchao* it denotes the place analogous to the 'Grand Inner Portion' on the extension line from the 'Central Terrace' towards the due south inside the city, i.e. the predecessor of the Forbidden City. By *houshi* it denotes the bazar area near the 'Central Terrace' on the due north of the 'Imperial Palace' (the Grand Inner Portion) (Fig. 3.3).

In accordance with the above mentioned comparison, it explains just as it is in 'the Way the Craftsmen Build the City-state', that the 'left' is the east, the 'right' is the west and the 'back' is the north. Only the site where the royal court was located is specially called 'court facing ahead' not 'in front'. Why? After pondering over it scrupulously, I think if the 'court facing ahead' is understood as 'court in front', it seems not so exact. Because the word 'facing' (*mian*) contains the meaning 'looking forward to', that is to say: if you sit in the middle looking forward to the due south, that will be the court; if you turn back looking towards the north, that will be the site of market. Here it implies the meaning of giving priority to the south.

In fact, in the Chinese history, the main palaces of the capitals of successive dynasties all faced the due south in the planning. After the Yuan Dadu in the Yuan Dynasty, the further developed Beijing Capital City of the Ming and Qing dynasties further embodied this point in concentration, i.e. the well preserved Forbidden City and two sides thereof, the Imperial Ancestral Temple (now the Working

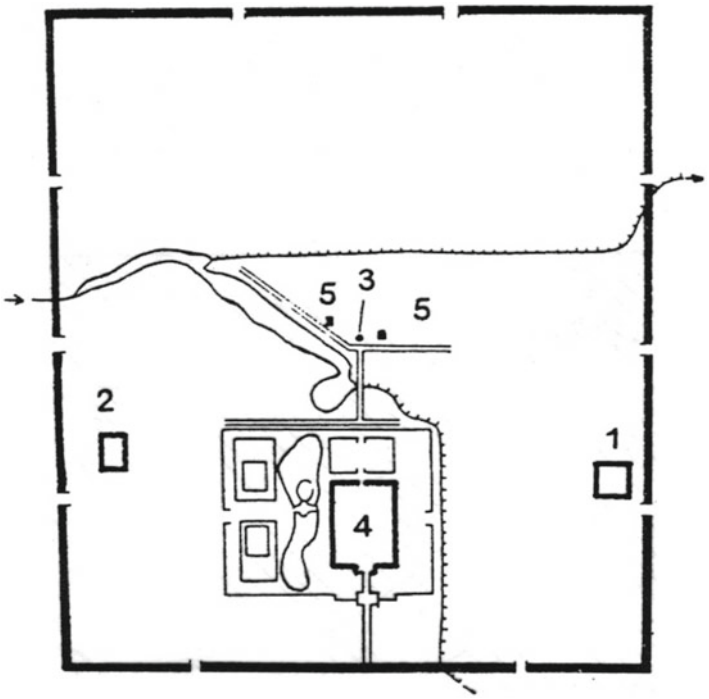

Fig. 3.3 The sketch map of Yuan Dadu of the Yuan Dynasty
1 Imperial Ancestral Temple, *2* Altar to the God of Land and the God of Grain, *3* Central Terrace, *4* Imperial Palace, *5* The distribution area of market (Redrawn from Hou Renzhi, *Historical Atlas of Beijing*, Beijing Publishing House, 1988, pp. 27–28)

People's Palace of Culture) and the Altar of Land and Grain (now the Zhongshan or Sun Yat-sen Park).

Having been aware of above mentioned points, let us now analyze further the general planning of the Yuan Dadu—why it is totally different from the planning system of 'the Way the Craftsmen Build the City-state' on the city outline and the installation of city gates.

In accordance with the design of the big city in 'the Way the Craftsmen Build the City-state', it is square, each side being nine *li* with three gates on each side (*fang jiuli, pang sanmen*). However, the Yuan Dadu is not a square, but a rectangle slightly longer from north to south. Besides three gates the each for the east, west and south sides, there are only two gates, the east and west ones, on the north side with the right in the middle portion totally closed. This kind of difference is utterly not accidental.

The reason why the plane structure of the Yuan Dadu is rectangle is directly related to the full use of the natural lakes and rivers which flow from northwest to the due south inside the city. I have another special article to elaborate this and will

not talk too much here.[3] As for the fact that there is no gate right in the center of the north city wall is concerned, it is against the traditional regulations of the Way the Craftsmen Build the City-state, hence a very unique issue worth attention.

Actually, it is due to the very fact that the north gate was deliberately omitted that the middle axis running from north to south, which was the basis for the design of the whole city, taking the 'Central Terrace' of the whole city as the starting point, only streched to the south. Just under such circumstances, when the Yuan Dadu was rebuilt at the early years of the Ming Dynasty, it was further extended southward along the original middle axis on the basis of reducing the northern city first, and the Wansui Hill (now the Coal Hill) was piled up in place of the original 'Central Terrace' as the symbol of center for designing the new city. At the same time, on the due south of Wansui Hill, the Imperial Palace, now the Forbidden City, was constructed along the middle axis.

Besides this, the Imperial Ancestral Temple in the east part and the Altar of Land and Grain in the west part of the Yuan Dadu were respectively moved to the east and west sides of the due south part of the Forbidden City, which was still fit for the ancient system of *zuozu youshe, mianchao houshi*. Then the newly built six big halls on the middle axis inside the Forbidden City further embodied the traditional system of Facing the South to be Emperor (Fig. 3.4).[4]

After the completion of the Yuan Dadu, the middle axis of the whole city kept extending towards the south suburb again in accordance with the tradition of Praying to the Heaven in the South Suburb (*jitian yu nanjiao*). After crossing a small river which flew from west to east, the axis had two imperial building complexes separately built on the east side and west side, Temple of Heaven on the east and Altar of Mountain and River (now the Xian Nong Tan) on the west. After that, the city walls on three sides, east, west and south, were built, enclosing these two important complexes inside the city walls, as a result of which, Beijing started having inner and outer parts.

From that onwards, Beijing City, the combination of inner and outer parts, became the last built capital city in the times of the ruling of imperial power. It further embodied the thought 'Facing the South to be Emperor' in the traditional ideology, and was preserved intact until the birth of New China in 1949 (see Fig. 3.4).

Now only after having the full knowledge of the theme which is embodied in concentration in the original planning and construction of Beijing City, can we really learn that today the creation of the northern extension line of the middle axis of the whole city and the further construction of public architectural complex at the north point thereof, which 'outstandingly embodies the new style and features of the capital in the 21st century', are of epoch-making significance.

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[3] Hou Renzhi, "On the Transformation of the Beijing Old City," *City Planning* (in Chinese), 1983, no. 1.

[4] Hou Renzhi, "Inheritance and Development of Design and Planning in Forbidden City", *Chinese Studies* (in Chinese), vol. 1, 1993.

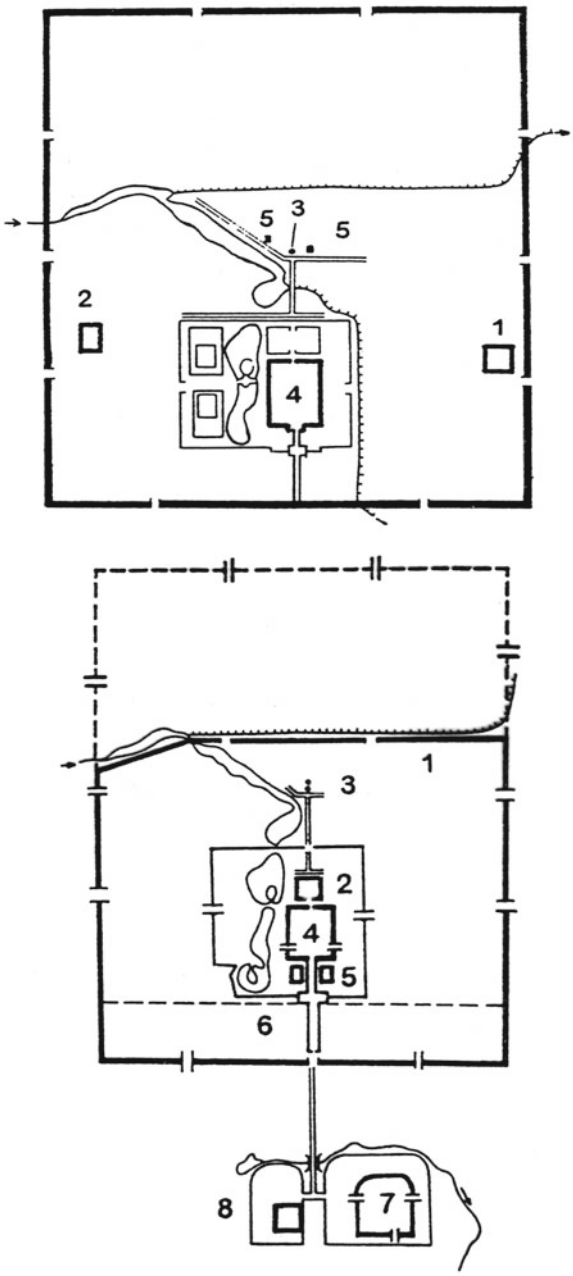

Fig. 3.4 Surface planes of Beijing City in the middle ages of the Ming Dynasty the Qing Dynasty
1 The rebuilt and newly built north city wall at the beginning of the Ming Dynasty, *2* Wansui Hill (now Jing Hill), *3* Bell Tower (north) and Drum Tower (south), *4* Forbidden City, *5* Imperial Ancestral Temple, *6* Altar of Land and Grain, *7* Temple of Heaven, *8* Altar of Mountain and River (now the Xian Nong Tan) (Source: Same as Fig. 3.3, pp. 31–32)

3.3 The Traditional Thought of "Facing the South to Be Emperor"

Finally, what is to be explained more is that it has been emphasized more than once above that in the palace construction of various dynasties in China, the traditional thought of 'Facing the South to be Emperor' was embodied from the beginning to the end, and the southward extension of the middle axis of the Beijing City in old days again and again was also influenced by this traditional thought. Then from where did come this kind of traditional thought?

So far as the answer of this question is concerned, the discovery by archaeologists has provided the most important reference materials.

In the early years of 1970s, the ruins of a palace of no later than early Shang Dynasty were excavated at Erlitou, Yanshi County, Henan Province. At the middle part of the palace hall, there is an obvious rammed terrace base, about 0.8 m high above the present ground, 108 m in length from west to east, 100 m in width from north to south. At the center of the southern part of the terrace base, there are ruins of doors between eight bays in width. Located at the northern part of the center of the terrace base 3.1 m thick, the palace hall is 36 m in length from east to west, 25 m in width from north to south. In accordance with the arrangement of the pillar holes round it, it can be concluded that this building is eight bays in width and three bays in length. Slightly north of the base center there is the relic of the hall, 30.4 m in length from west to east and 11.4 m in width from north to south. The whole building structure, with the hall as the principal part, faces southwards as shown in the Fig. 3.5.[5] In accordance with the restored figure made out of the above mentioned discovery, the characteristics are much more explicit that the whole construction of the palace faces the due south (Fig. 3.6).[6]

Therefore, it can be imagined that the palace hall in the Central Plains Region (comprising the middle and lower reaches of the Yellow River) in China from the ancient time on faced the due south. Thereafter, this rule was inherited in successive dynasties without exception. Hence, the so-called thought of Facing the South to be Emperor gradually took shape in the ideology. This speciality of the dynasties established in the China Central Plains is reflected in capital planning and design of successive dynasties.

The forming of this characteristic was closely related to the geographical environment of the Yellow River Valley. The Yellow River Valley is located just at the region where the semi-tropical monsoon climate of northern globe is most typical. In winter, the high atmospheric pressure in the northwest of Asian continent is formed and the cold and strong north wind attacks the middle and lower parts of

[5] Erlitou Work Team, Institute of Archaeology, Chinese Academy of Social Sciences, "Brief Report on the Excavation of Early Shang Palace Site in Yanshi County, Henan Province," *Archaeology* (in Chinese), vol. 6, 1974. Two palace remains were founded there. No. 2 palace site is 150 m northeast to the no. 1 palace, with a smaller size and similar shape.

[6] China Academy of Building Research, *Chinese Ancient Architecture* (in Chinese), China Building Industry Press, 1983.

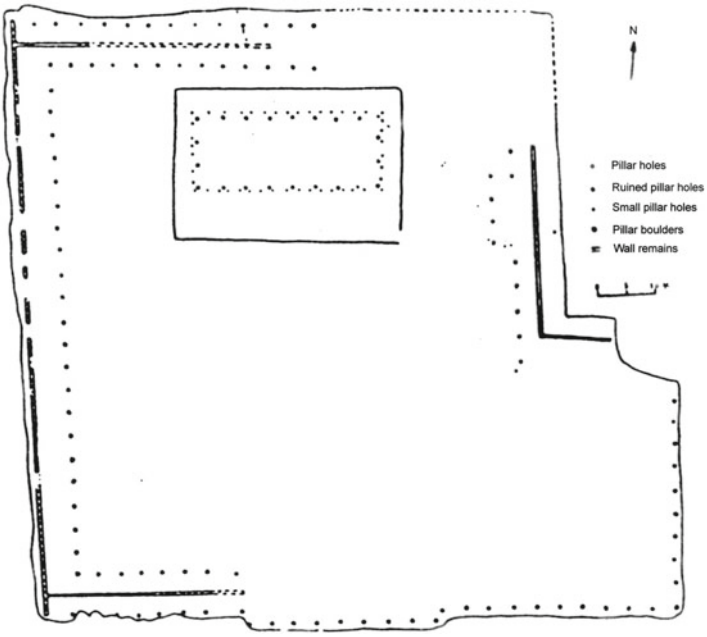

Fig. 3.5 Plan of No. 1 palace base at Erlitou, Yanshi County
(From *Archeology*, no. 4, 1974)

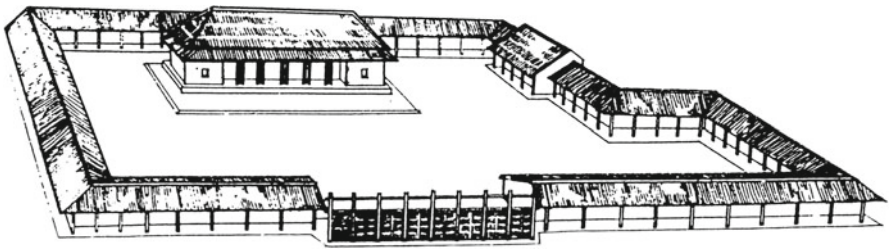

Fig. 3.6 Drawing of restored palace
(Redrawn from the *Ancient Architecture in China*, 1983, p. 24)

Yellow River with the severe cold lingering on for months. In summer, the center of high atmospheric pressure moves towards the southeast Pacific Ocean and the south monsoon bringing rain makes the temperature rise in such a way that summer heat even becomes unbearable. As a result of that, it is most suitable for the facade of the house to face the due south with the closure of the northern side to avoid wind and coldness of winter. The opening of doors and windows towards the southern side is not only convenient to get winter sunshine obliquely coming into rooms, but also for

the air circulating in summer time. It can be imagined that in order to adapt to this climatic characteristic, the earliest palace buildings in Yellow River Valley since the ancient time, have adopted the style of backing to the north and facing the south, as it is seen in the archaeological discovery at Erlitou, Yanshi County. Having been existing for a long time, this practice became a custom. When it was recorded in 'the Way the Craftsmen Build the City-state', it was quite enough to make clear upon noticing 'the Imperial Ancestral Temple on the left side, the Altar of Land and Grain on the right side, Court facing ahead and Market on the back side' their relative positions. Here the words 'facing ahead' are of great importance. It denotes fronting the southern direction, as a result of which the tradition of so-called 'facing the south to be emperor' in the ideology finally came into being.

In accordance with the geomancy theory in later times there is also explanation concerning the question of facing the south in construction design. For example, Zhang Ziwei of the Song Dynasty wrote in his book entitled *Yu Sui Zhen Jing* that temples, courts, palaces, and prefecture and county offices all face the south without any exception, the reason of which is to manage in the face of brightness.[7] There is no record concerning whether in the beginning of Yuan Dynasty the absence of the gate of due north was owing to the impact of geomancy theory or not. So let us lay it aside for the time being. However, it is very obvious that the geographical conditions of the Yellow River Valley led to the construction of palace facing the south in the beginning.

Translated by Li Guanghui

[7] "Xuan Sui Zhai Xuan", vol. 19 of *Yu Sui Zhen Jing*, the Ming Jiajing version, proofread by Li Wentian in Qing Dynasty.

Chapter 4
From Beijing to Washington—A Contemplation in the Concept of Municipal Planning

4.1 Recommendation of the Topic

Beijing and Washington are two capital cities with totally different social systems. The design and planning of the two cities have their unique features respectively. Chronologically, there is a long interval between their initial constructions, yet their design and planning both reflect the depth of their own cultural and historical background. The original plan of old Beijing is a masterpiece of city planning in feudal China, while the plan of Washington inherits the elegance of the sixteenth-century Renaissance tradition and the graceful urban design of Western Europe, and is a marvellous specimen of the achievement in the era of rising capitalism.

China, after the lapse of feudal dynasties, suffered from the oppression of semi-colonialism and semi-feudalism. She is now in the era of socialist construction. America, on the other hand, is a highly developed capitalist nation, still following

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There was an introductory note in front of this paper when it first came out as follows, "Comparison between Chinese and foreign municipalities is one of the most important aspects of scientific urban research. Such research has only begun in China. It will help us to improve the process and development of urban construction, to inherit better the wealth of China's culture, to absorb more appropriately the cultural achievements of foreign countries, and thus, to be able to create the kind of Chinese city and urban culture that will bear the special characteristics of the Age of Socialism. Professor Hou's paper 'From Beijing to Washington—A Contemplation on the Concept of Municipal Planning' is a persuasive study based on a comparison between Chinese and foreign municipalities. He discusses the subject from the aspects of history, culture and chronological differences. He points out the special features of Beijing and Washington and the development of the basic conceptual theme from their designs and plans for construction of their capitals. He puts forth a detailed comparison between the two cities and offers ingenious suggestions on the future construction and development of Beijing. Professor Hou made a special study in 1984 at the College of Architecture in Cornell University on the subject of the comparison between Beijing and Washington, the choice of the sites of the capitals and their design and plan. This is the first article of his research".—Editor's note

R. Hou, *Symposium on Chinese Historical Geography*,
China Academic Library, DOI 10.1007/978-3-662-45272-1_4

the capitalist road and even casting her influence abroad. The two capital cities, which are the focal point of expression for their respective national cultures and histories, would be confronted with problems in city planning and design.

For city planning and design, Beijing and Washington share some similarities in form, but they are fundamentally different. The most prominent feature in common is the decision at the infant stage of city construction to fix a central axis line for the layout of the whole city. Nevertheless, their fundamental difference consists in the respective themes to be represented owing to the totally different social systems in the very beginning of their planning.

4.2 The City of Beijing (Peking)

4.2.1 Changes of Beijing's City Sites and Its Present Location

The origin of the primitive settlement of Beijing could be dated back to over 3,000 years ago. It was located at the southwest part of present Beijing city which had not begun to be built until about 720 years ago (1267 A.D.). The lake district of the ancient Gaoliang River was chosen to be the center for the design and plan of the new city, that is, the Dadu City (the Great Capital) of the Yuan Dynasty (1279–1368). The city underwent some reconstruction in the early days of the Ming Dynasty (1368–1644) and a new name Beijing was given to it. In 1553 A.D., an outer wall was added in the southern part of Beijing city. Thus, we have an inner city and an outer city of Beijing, both encircled by city walls. The two combined took the shape of a Chinese character "凸", occupying an area of 62 m^2. Hence the surface plan of Beijing city was fixed, and it had been preserved as it was until 1949 A.D., when the New China was born. It is now called the Old City of Beijing.

At the beginning of building old Beijing, the southern half of the lake was enclosed within the city and was designed as the central part of the royal garden in the Imperial City. In accordance with the feudal tradition, it was named "Tai Ye Chi" (the Holy Water Pond). In the early part of the Ming Dynasty a new lake was dug at the southern tip of the Holy Water Pond. This is the present Nan Hai (the South Sea). The upper part of the original lake left out of the Imperial City was called Ji-shui Tan (the Reservoir). It was also in the early years of the Ming Dynasty that the northern city wall of the capital was moved southward, thus excluding the northwestern part of Ji-shui Tan from the city. The excluded part was called Tai-ping Hu (the Peaceful Lake), which was filled up during the Cultural Revolution. And the other part inside the northern wall of the great city but outside of the Imperial City is the Shicha Hai of today, made up of Qian Hai (the Front Lake), Hou Hai (the Back Lake) and Xi Hai (the West Lake). The southwestern tip of Qian Hai had also been filled up and reclaimed for building sites recently.

In sum, the original lake district furnished essential geographical conditions for the establishment of Old City of Beijing. Its original appearance had long been altered, but it still occupies an important place. There is a plan to connect the six South and North lakes (that is, Nan Hai, Zhong Hai and Bei Hai in the south and

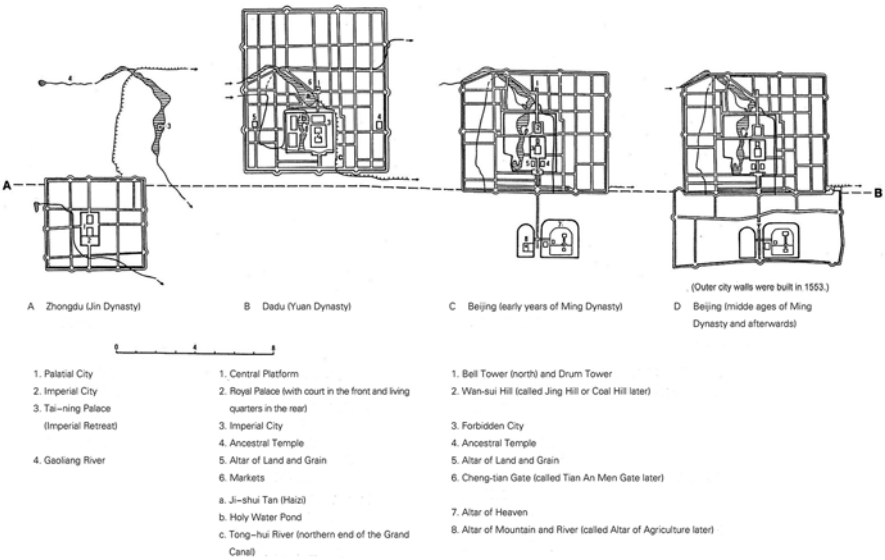

Fig. 4.1 City sites of old Beijing
(From Zhongdu City in Jin Dynasty to Beijing in Ming and Qing dynasties) (*Broken line* from *A* **to** *B* is a reference line to demonstrate the relative positions of city sites vertically)

Qian Hai, Hou Hai and Xi Hai in the north), which is part of the general plan for developing the new Beijing. In order to illustrate the theme of the plan of the Old City, it's better to show the changes of watercourses and city sites of old Beijing in the following figure (Fig. 4.1).

4.2.2 Theme of City Plan

As shown in Fig. 4.1, we see clearly that several changes in the shape of the Old City of Beijing, from rectangular to the ingenious shape of a Chinese character "凸", took place. However, the axis line running through the city from north to south, though extended, had no sideward shift. Actually the axis line was the basis of the surface plan of the capital. This is true of the design of the Inner City as it is of the Outer City. It must be pointed out that even before the building of the outer walls, two groups of architecture had been built in 1420 A.D., that is, the Temple of Heaven and the Altar of Mountain and River (later renamed the Altar of Agriculture). They were located symmetrically on the east and west sides of the prolonged axis line. And with building of the outer walls in 1553 A.D., a newly prolonged central axis line with a total length of 8 km., implicitly linking the Inner City and the Outer City, appeared, which impressed one with the sense of unity so much that it appeared that the two parts of the city had been planned and completed at the same time. And the "凸"-shaped capital, when compared with Dadu of Yuan Dynasty and Beijing in the

early years of the Ming Dynasty, renders a greater sense of stableness and security. It is this feature of the layout of the city that has won enormous appreciations and praise from Western architects and city planners for its aesthetic value. The Danish architect S. E. Rasmussen remarked Beijing as "one of the wonders of the world, in its symmetry and clarity a unique monument, the culmination of a great civilization."[1] The American city planner E. N. Bacon praised highly of it, saying "Possibly the greatest single work of man on the face of the earth was Peking.... it is so brilliant in design that it provides a rich storehouse of ideas for the city of today." He also highlighted central axis line and the lakes adjacent in yellow and blue, which appeared prominent and vivid against the greyish surface plan.[2]

One should, however, note more the thought underneath the design of the surface plan. From the architectural perspective, two points should be clarified:

4.2.2.1 Relationship Between Building of City Walls and City Plan

According to Chinese tradition, all ancient cities were built with walls. Hence the Chinese character "城" (*cheng*) has a dual meaning. It may mean "a city" or "the wall of a city." It can also be used as a verb. For example, in "Cart Driving," one poem from Minor Odes, *Book of Poetry*, one of ancient classics, there is a line, "wall the place in the north." Here the word "wall," used as a verb, means "to build." Building of city walls is most essential in the design and plan of a capital city. For example, *Kaogongji* (*A Study of Engineering*), a volume of the ancient classics *Zhou Li* or *The Rites of Zhou* completed during the Age of Autumn and Spring (770–476 B.C.), had a paragraph "The Way the Craftsmen Build the City," which summarized the experiences in city building since the founding of Zhou Dynasty, and on its basis established a standard for capital city building as follows:

> A capital city should be square in shape, each side being nine *li* long. There should be three gates on each side. Within the city, there are nine thoroughfares running longitudinally and another nine latitudinally, each wide enough for nine chariots driving abreast. On the left side within the city an ancestral temple should be erected. And on the right side there should be an altar of harvest. The court should be built to face the front while the market square should be placed at the rear of the court.

It is self-evident that the imperial court is in the center of the city. For this idea, reference can be made to He Ye-ju's *Research on the System of Capital City Building*, from which some quotation could be cited as follows:

> Why was the imperial court located in the middle of the capital? I think this is closely related to the doctrine of "to choose the middle" esteemed by the people of Zhou and it cast great influence on the determination of the location of a capital. To build the capital in the middle of a kingdom is not only convenient for the subjects from different directions to pay tributes to the king, but also easier for the king to reign over the country from the center.[3]

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[1] Steen Eiler Rasmussen, *Towns and Buildings*, MIT Press, paperback edition, 1969, Preface, p. v.

[2] Edmund N. Bacon, *Design of Cities*, revised edition, 1980, p. 244.

[3] China Building Industry Press, 1985, pp. 55–56.

It should be noted that of all the capital cities built in the feudal dynasties in China, the Dadu City of Yuan Dynasty is the one built according to the standards closest to that set by "the Way the Craftsmen Build the City." Certainly this was directly related to the main designer of the city Liu Bingzhong (Liu Kan). Liu was a practically-minded person and well versed in classics. He had lectured in the Zijin College at the eastern foot of the Taihang Mountain, where the famous astrologist and expert on water conservancy Guo Shoujing studied under him. Before the establishment of Yuan Dynasty, Liu had been ordered by Kublai Khan to design on the northern shore of the Shandian River on the upper reaches of the present Luan River, Kaiping City (called Shangdu City later), whose remains can still be found today. This achievement won Liu the recognition of Kublai Khan, so the latter bestowed him the name "Bingzhong" (Adherence to Loyalty). In 1260 A.D., Kublai Khan entered and got stationed in Zhongdu, which had developed from a primitive settlement. Seven years later he decided to build a new city around the Tai-ning Palace (an imperial summer retreat in the lake district) to the northeast of Zhongdu City, and he again appointed Liu in charge of the task. Guo Shoujing was also recommended to participate and made great contribution especially to water conservancy and excavation of the Grand Canal.

It is necessary to point out that the shape of the Great Capital was rectangular with the north-south walls longer than the east-west walls, rather than square as prescribed in "The Way the Craftsmen Build the City." This was out of necessity to fully utilize the watercourses. Another discrepancy was that residential palaces in the "Grand Inner Portion" (predecessor of the Forbidden City) did not lie at the geometric center of the capital but slightly south of it, though it was still situated on the axis line in the plan, which also fitted into the doctrine of "to choose the middle."

From the construction of Dadu of Yuan Dynasty to the supplement of outer walls in the middle ages of the Ming Dynasty, the surface plan of this city had underwent several alterations, and thus become vastly different from the ideal described in the classics, but the basic concept the city was trying to express was still the same. Moreover, it had been more prominent, especially owing to prolonging the axis line twice. Therefore, the following part will be devoted to the discussion of the design of the axis line and the concept beneath.

4.2.2.2 Implications of Axis Line Design and Its Historical and Cultural Background

The artistic effect that the axis line rendered in the layout of the Old City of Beijing has been highly appreciated by city planners home and abroad, while its implications and historical and cultural background are to be further explored.

In another paper "Reformation of the Old City of Beijing"[4] by the author, it is recorded that Kublai Khan decided to build the new capital before the founding of Yuan Dynasty and the geometric center of the plan of the capital was fixed on the

[4] *City Planning*, 1983, no. 1.

northeastern shore of the lake Jishui Tan. At this spot was erected a stone tablet with four characters "中心之台" (The Central Platform) carved in it. Taking the platform as the starting point, a straight line was drawn closely along the eastern shore of the Jishui Tan as the central axis of the whole city. The imperial palaces were built on the eastern shore of the Holy Water Pond, exactly in the middle of the axis, so that the front court Da-ming Palace and the residential palace Yanchun Ge (Prolonged Spring Palace) both occupied the most significant sites of the city. Hence, the idea embodied by the central axis became very clear, that is, the absolute power of the emperor. The Ancestral Temple and the Altar of Harvest, the two complexes of symbolic significance, were placed on the left and right sides of the Palace respectively within the city walls as prescribed by "The Way the Craftsmen Build the City." Later, as the capital was rebuilt by the Ming emperors, the original geometrical centre of the Inner City was moved south to the Central Peak of the Jing Hill, which was the original site of the Prolonged Spring Palace during the Yuan Dynasty. And these two groups of buildings were also moved southward, still at the two sides of front rail of the Forbidden City. This resulted in a more prominent concept of axis. With the building of the Temple of Heaven and the Altar of Mountain and River in the southern suburb, the axis was further prolonged to the south. Its influence on the planning and design of the Old City of Beijing became even more significant, also making the theme represented thereby more prominent.

Another question to be further clarified is: How is it decided that the axis of the capital as it appeared on the surface plan runs perpendicularly from north to south and extends this way? The question seems simple, but it concerns the issue of orientation in the design and planning of a capital, that is, it must face towards the due south. From it derives the doctrine of "facing the south to be king." There is no direct reference in documents to when this idea applied to city planning originated. However, in "the Way the Craftsmen Build the City" in *Kaogongji*, *Zhouli*, there is an implication that the city should be built towards the south. As for the layout of the capital, there are such prescriptions, "left for the Ancestral Temple and right for the Altar of Harvest"—"left" refers to east and right west, and "court in the front (south) and market at the rear (north)." The north-south orientation of city had long been accepted by Chinese as a tradition and passed down. Archaeological discoveries have provided concrete evidence. All the ruins of the foundations of the palaces from early Shang Dynasty attest to that the original structures above were facing south.[5] Two

[5] In the upper layer of Erlitou site of remains of Xia Dynasty, found in Yanshi County, Henan Province, were found two large palace remains known as the earliest so far, which could be dated to about 3700 years before present. One of the two was almost square with a rectangle platform base slightly north to its center. A hall of 304 m from east to west and 11.4 m from north to south could be reconstructed according to the arrangement of the holes of pillars in the foundation. There was a court before the hall. Wall remains were found surrounding the palace and corridors insides the walls. The gate was in the middle of the south wall. For details, please refer to "Brief Report on the Excavation of Erlitou Site in Yanshi County, Henan Province" by Luoyang Excavation Team of Institute of Archaeology, Chinese Academy of Sciences (*Archaeology*, vol. 5, 1965). In addition, at the site of the middle Shang capital named Panlong in the present Huangpi County, Hubei Province, two foundation remains of two large palaces found also face south. For further informa-

foundations found in the Shang ruins indicate that the palaces not only faced southward but also stood on the same north-south line with one in front of the other, which should be the primitive form of the principle —"court in the front and living quarters at the rear."[6] The foundations of city walls were also excavated in the capital relics of Shang; they appeared almost square, only the palaces were in the northeast of the city.[7] Most probably the idea of building the palaces in the middle of the city, i.e. on the central axis, hadn't took shape or established as a rule until the Zhou Dynasty (Western Zhou, ca. 1066–771 B.C.). This is the initial thought from which the traditional principle recorded in the classic of *Zhouli* developed. These became the rules for workmen to follow in the building of a capital in later years. The theory of "to choose the middle" was a reflection of that thought as it appeared in the passage of "Judge the Situation" (*Shenshi*) in *The Book of Spring and Autumn by Lü Buwei* (*Lüshi chunqiu*) that "All rulers of ancient times did choose the middle place under the Heaven to establish their kingdoms." Beijing, a famous historical and cultural city, has preserved these characteristics in the planning and design of its buildings.

4.2.3 The Essential Task of Transforming Old Beijing and the Achievements

With the birth of New China, the task of transforming Old Beijing into the capital of the People's Republic of China was put on the agenda. This is to say, while preserving the special characteristics of this famous historic city of cultural richness, we must supply new concepts which reflect the spirit of the new era. This is not an easy task. What we have done in the past 30 years showed that we have committed some irretrievable mistakes and damage. Nevertheless, we have had some achievements among which the transformation of Tian An Men Square is one.

Tian An Men Square was once the imperial court of feudal sovereignty. It was surrounded on three sides by red walls, along the inside of which there was a long corridor respectively made up of rooms whose eaves and ridges were connected successively. It was called the "A Thousand Steps Corridor." The court within the red walls was in a "T" shape. It had been the place where royal ceremonies took place showing off the absolute authority of the feudal emperors. The place was out of bounds to the common people. The court was located on the central axis which is symbolic in the sense that it expressed the feudal ideology of "the Emperor is the Almighty Sovereign." Entering the gate of Tian An Men, one must pass through layers of enclosed space in order to reach the nuclei of the royal buildings. They are the

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tion, please refer to "Summary of Archaeological Fieldwork in Panlong City in 1974" in *Cultural Relics* (in Chinese), 1976, no. 2.

[6] Please refer to "Summary of Archaeological Fieldwork in Panlong City in 1974" cited in note 5.

[7] Panlong City is square-shaped and remained intact until 1954. Details can be found in the "Brief Report on the excavation of Shang sites in Zhengzhou," *Cultural Relics Material Collection* (in Chinese), no. 1, Cultural Relics Publishing House, 1977.

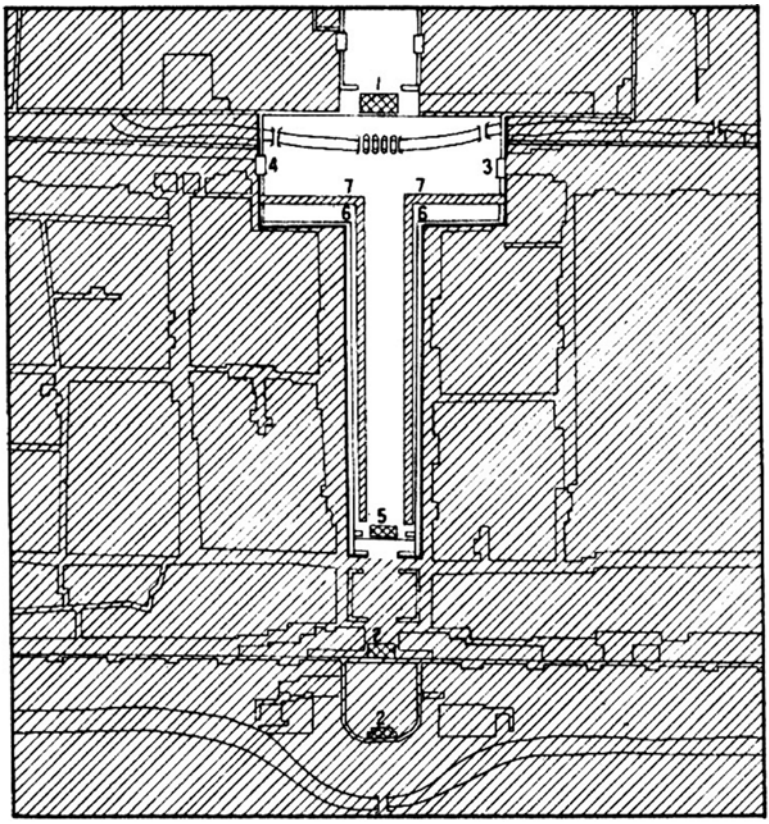

Fig. 4.2 Imperial square before Tian An Men in Qing Dynasty
1 Tian An Men, *2* Zheng Yang Gate and Archery Tower, *3* Left Chang An Men, *4* Right Chang An Men, *5* Da Qing Men of Qing Dynasty, *6* The Red Walls, *7* A Thousand Steps Corridor

grandest buildings in the imperial city—Tai He Dian (the Palace of Prosperity and Peace), Zhong He Dian (the Central Peace Palace), Bao He Dian (the Palace of Precious Peace), and the royal residential palaces in the rear part of the imperial city—Qian Qing Gong (the Palace of Piety and Purity), Jiao Tai Dian (the Palace of Mutual Prosperity) and Kun Ning Gong (the Palace of Feminine Calmness) (Fig. 4.2).

The 1911 Revolution (Xinhai Revolution) ended more than 2,000 years of feudalism and it was not until then that the imperial court in front of Tian An Men was open to the public. It was in Tian An Men Square that the famous May 4th Movement in 1919 first started and began the overture of the Neo-Democratic Revolution. This is one of the most important historical incidents which took place in the city of Beijing. Under the leadership of the Chinese Communist Party and after 30 years of struggle, the People's Republic of China was born. The inauguration of the People's Republic took place in the year 1949, on the first of October in Tian An Men Square. This incident gave a new significance to Tian An Men. This grand and

gorgeous old building, constructed by working people under the feudal yoke, obtained a new significance as it was designed to be one of the patterns on the national emblem of the People's Republic of China, which symbolized the rebirth of an ancient civilization. In spite of this, the old red walls were still there hindering the common people from going into the Square for their various social, recreational or political activities. Therefore, it was of practical necessity to transform the Square. In order to celebrate the tenth anniversary of New China, Tian An Men Square underwent massive transformation. The old red walls were completely demolished and the Square itself was thereby expanded. Two grand structures were built. They were, on the east the Museum of Chinese History and the Museum of Chinese Revolution, and on the west the Great Hall of the People, which stands for the power of the Chinese people. In the middle of the Square, a monument in memorial of the heroes of the people was erected. Thus on the same old location, Tian An Men Square showed its new face and new significance. Here the old concept of "the Almighty Sovereign" was totally eradicated, and in its place the new concept of "the Almighty People" was expressed. The basic layout of the Square was set, although there was much to be improved. All those who have visited Tian An Men Square could grasp the concept of a new era embodied in the Square that is situated on the original axis of the city. Hence, the transformation should be considered successful (see Figs. 4.2 and 4.3).

In addition to this, the East and West Chang'an Avenues were broadened and prolonged and so became a major horizontal axis from west to east across the city. This horizontal axis, to a certain extent, neutralized the dominating effect of the original perpendicular axis from north to south. Meanwhile, it also broadened the field of perception. The Forbidden City, which had always been the focal point of the capital, has now become "the backyard" and support to Tian An Men Square. Its present function as the "Palace Museum" is more appropriately represented. The objective effects mentioned above can clearly be seen on the surface plan of Beijing. Its characteristics as the political centre for China are fully expressed by this transformation of Tian An Men Square (Fig. 4.4).

So much for the discussion of the plan and design of Old Beijing and its future development and transformation. Let us now turn to an exploration of the design and plan of the city of Washington. Comparisons will be made between Beijing and Washington in the discussion.

4.3 The City of Washington

4.3.1 Choice of the Site and the Original Design of the City

Early in 1791 (the 56th year of the reign of Emperor Qianlong), the site of Washington was decided and the planning began, and it was only 8 years after the announcement of Declaration of Independence. From the very beginning the issue of choosing a permanent seat of government had aroused much controversy and the decision was difficult to make, so it was long delayed. Finally, the Congress authorized

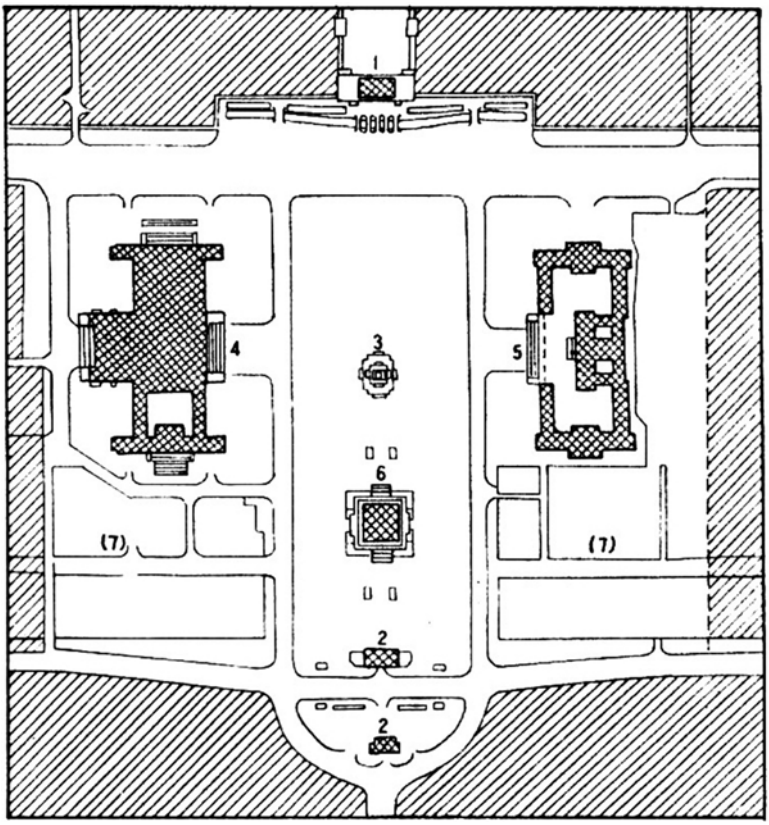

Fig. 4.3 The enlarged Tian An Men Square after the founding of New China
1 Tian An Men, *2* Qian Men (Zheng Yang Men) and Archery Tower, *3* Monument of People's Heroes, *4* Great Hall of the People, *5* Museum of Chinese History and Museum of Chinese Revolution, *6* Chairman Mao's Memorial Hall, *7* Dong and Xi Jiao Min Xiang

President George Washington to decide on the site of the capital. The president surveyed and inspected in person the prospective location and finally decided on the present site of the capital. It is situated in the central part of the Atlantic seacoast, on a triangular area between the Potomac River and its eastern tributary called the Anacostia River or the Eastern Branch. The site is a plain with slightly inclining slopes. There is a hill in the middle of the plain. It looked prominent and was called, at that time, Jenkins Hill. Borderlines of private properties crisscrossed the whole area. Most of the land was covered by wild woods, with marshlands dotted on the plain. It was in fact an area not wholly cultivated. On the northern part of the triangular district, the land rose and several rivers and creeks flowed down the slope. The most well known was Goose Creek which flows along the foot of Jenkins Hill and then turns westward to join the Potomac. Two small settlements were respectively established on the tip of the triangle and at the northwestern corner. Only a few

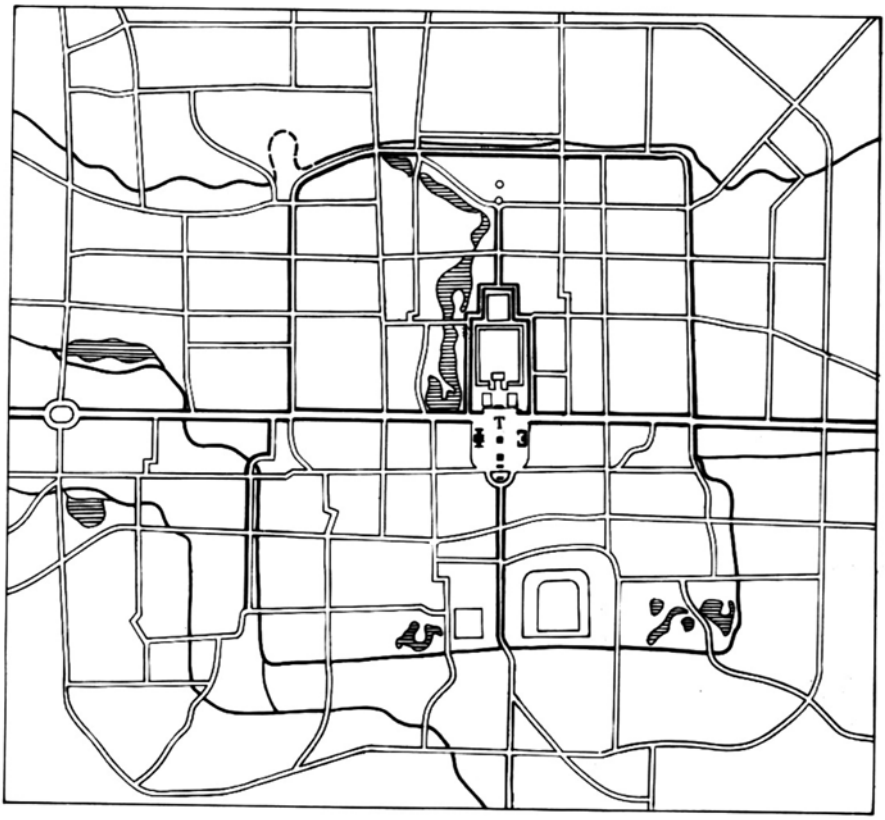

Fig. 4.4 Boulevards extending eastward and westward from Tian An Men Square respectively—East and West Chang An Streets

residents lived there, though grid-like streets were shown on the map drawn in the primary survey. Georgetown, located at the northwestern corner opposite to Rock Creek, was the largest settlement of the time (Fig. 4.5).

The primary survey of the chosen site had been undertaken by Andrew Ellicott, and Pierre Charles L'Enfant responsible for the design and plan of the capital. L'Enfant was a French-born American engineer and architect, possessing great brilliance and passion. He was 37 years old at that time. L'Enfant's father had been the imperial artist at Versailles, and there he had lived when he was a boy. Later he obtained his education at the Royal Academy of Painting and Sculpture in Paris, where his father taught. In 1777 L'Enfant and other French volunteers crossed the Atlantic Ocean to go to America and offer help to the people of the British colonies in their struggle against the British rulers for their independence. His achievements in military engineering won him high esteem from the Commander-in-Chief George Washington so that he was promoted to the rank of Major in the army. In 1791 he was assigned the duty of designing the plan of the capital. With enormous energy

Fig. 4.5 Site of Washington with the boundary lines of private properties

and amazing efficiency he had completed the task by the end of August of the same year and submitted the plan to Washington immediately. It was at the very beginning that L'Enfant had spotted Jenkins Hill and realized that it was the perfect foundation for the main buildings of the Federal Government. He thought of the site as God-sent. These buildings together with the later additions and improvements comprised the strikingly magnificent and dignified architecture of the present Capitol. As to Jenkins Hill, it has long since been renamed "Capitol Hill."

With Capitol Hill as the centre, L'Enfant designed the central axis in the plan of the capital. The axis was 5.5 km long, starting from the eastern shore of the Potomac in the west to the western shore of the Anacostia in the east. Along the western section of the axis, that is, from the west of Capitol Hill to the east shore of the Potomac of that time, a space was to be reserved as a large green lawn for the recess and recreation of the people. This part, undergoing plans and development, was the famous "Mall" today. The presidential office and residence, that is, the present White House was designed to be located to the north of the western part of the Mall rather than on the axis—moved westward to its present site, which commands a wonderful view of the wide expanse of the lower Potomac when one looks to the south. Linking the White House and Capitol Hill is a broad thoroughfare running in a oblique line, which is the

present Pennsylvania Avenue. The west-east axis stands prominently in the surface plan, and the Mall for whom the space was previously saved, also looks outstanding. Besides, there is often a public square at the meeting point of roads intersected with each other at right angles or diagonally. The lower section of Goose Creek, running through the centre of the city immediately along the northern side of the Mall before it pours itself into the Potomac, was planned to be canalized to connect with the canal at the foot of the Capitol Hill. It was named the Tiber River, after the Roman Tiber.

For the design and plan of the municipality, the two rivers were used as the boundary of the southern part and the borderline of the highland was to be the boundary of the northern part of the capital. And it was on this principle that the city of Washington was built, developed and expanded. We must acknowledge that without the plan and design by L'Enfant, there would not be the magnificent design of the central part of the world famous city of Washington. It is because of this that the central part of Washington proper is referred to by some people as "L'Enfant City" (Fig. 4.6).[8]

Here let me try to make a comparison between the plans of Old Beijing and Washington, which might help the audience understand the further discussion better.

Two essential points are worth our notice:

One, both cities have a central axis line. For Old Beijing, the axis was from north to south, closely following the eastern shore of the natural lakes. The orientation of the axis, though constrained by natural factors, was greatly influenced by cultural elements deeply rooted in the history, as we have discussed above. For Washington, the central axis was from west to east between the two rivers and it was decided solely by natural conditions. There were no historical or cultural factors involved.

Two, in the plan of the Old City of Beijing, the surrounding walls were an integral part of the whole city, while in Washington, rivers and highlands were utilized as the boundaries of the city for there was neither necessity nor tradition of wall building for a city. Actually no cities in the U.S. are equipped with walls.

The above mentioned differences, though superficial, reflect the differences of the cultural traditions between China and the West. It is even more important that such differences are embodied in the key concepts in the capital plan. As the topic pertinent to Beijing has been explored, we would confine the following part to the discussion of Washington's city plan.

4.3.2 On the Concepts of Municipal Design and Planning

The concept of the design and plan of Beijing Old City originated in the Shang and Zhou dynasties when slavery still prevailed, and was written down in "the Way the Craftsmen Build the City" in *Kaogongji, Zhouli*. As the centralized reign of the feudal dynasties took shape, the concept of building a capital based on the doctrine

[8] The plan of the city designed by Pierre L'Enfant was engraved on a stone podium at the Pennsylvania Avenue. On Aug 6th, 1984, the mayor of Washington City officially announced the day as "L'Enfant Day" to memorize the great attribution made by L'Enfant.

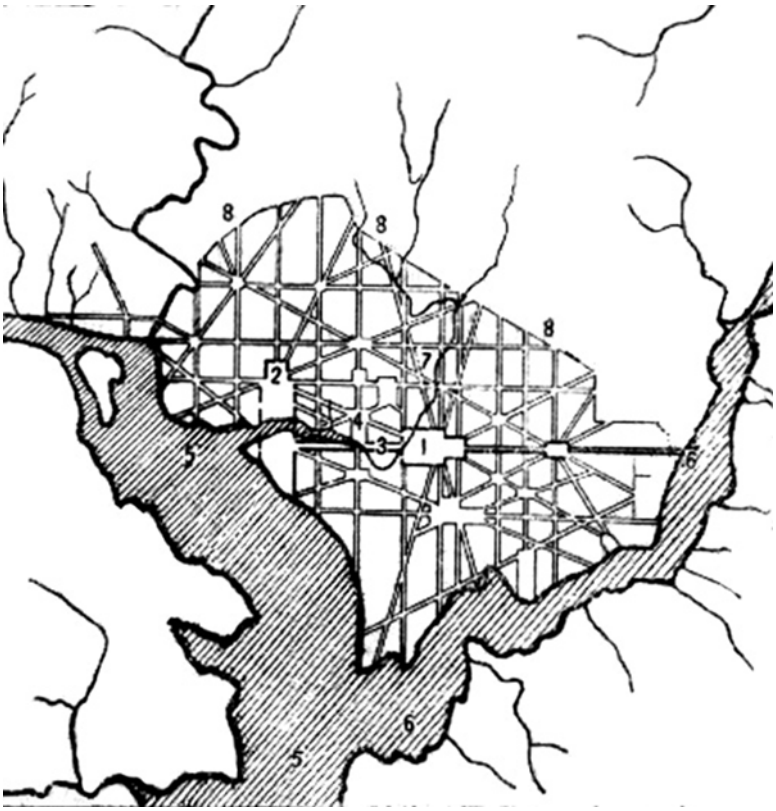

Fig. 4.6 Washington, as it was chosen to be the capital, with the central axis and main thoroughfares as designed by L'Enfant
1 The Congress, *2* The White House, *3* The Green Lawn area on the horizontal axis, *4* Pennsylvania Ave, 5 The Potomac River, 6 The Anacostia River, *7* The Goose Greek (Tiber River), *8* The marginal region of the highland in the north (This diagram is a copy of the map of survey by Ellicott in 1793)

of "Almighty Sovereignty" had varied in forms of expression. Then came the time when Dadu of the Yuan Dynasty was built, which not only inherited the standards and system of building a city prescribed in the classic of *Kaogongji*, *Zhouli*, but also utilized the natural distribution of the water sources, thus laying the foundation of Beijing, the capital city of the Ming and Qing dynasties. Hence, we can claim that the design and plan of the Old City of Beijing is an overarching masterpiece in building capital cities during the more than 2,000 years of feudalism in China.

The historical background of the building of the city of Washington is totally different from that of Old Beijing. To study the basic concept embodied in the design and planning of Washington, we must first understand characteristics of its historical background.

4.3.2.1 The Characteristics of the Period and Its Reflection on the Design and Plan of the Capital

The construction of the city of Washington was one of the victorious achievements gained by the North American people who fought against the colonization of its suzerain state the Great Britain. The nature of this struggle was fully expressed in the Declaration of Independence approved by the Continental Congress convened by delegates from 13 colonies in North America. The Declaration held "all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness." In the original draft there was a chapter concerning the abolition of slavery, but it was deleted for the opposition from the representatives of the State of South Carolina. Karl Marx highly esteemed the Declaration and he claimed that "It is the first declaration of human rights".[9] It was the time of the rise of capitalism in North America, and the people of all classes reacted enthusiastically to the Declaration, including the most oppressed blacks, who also joined in the struggle against the British oppressors and made significant contributions.

After the War of Independence, the ruling class of the new born country came to realize that their acquired social status and power must be further confirmed and consolidated. Hence they started the Constitution Movement, in an attempt to defend their acquired privilege by means of the establishment of the American Constitution. Two years before the founding of the United States of America, in Philadelphia, the old capital or temporary capital before the building of the city of Washington, the Constitutional Convention took place and created the United States Constitution, which formulated the three divisions of power—the Legislature, the Judiciary, and the Executive, as the principle of governmental organization. Later, when L'Enfant set out to plan the construction of the new capital Washington, this principle was also adopted as the guiding line, which was shown in the layout of the three main structures of the Capitol, the White House and the Supreme Court. It is difficult to identify the exact location of the Supreme Court in today's city plan. The present Supreme Court is built to the northeast of the Capitol, not far away from the latter. Nevertheless, such layout still indicates the idea of the division of power.

The most salient and influential feature of L'Enfant's plan is the determination of main axis line centered on the Capitol Hill, and along the axis he reserved the space for the Mall, which laid the basis for the development of the nuclear area of Washington in the future. This section of the axis resembled that part from the Scenic Hill (Jing Shan) to the Zheng Yang Men on the axis of Old City of Beijing in its significance to the whole plan of the city. Nevertheless, the concepts represented by the two were totally different for the one in the Old City of Beijing emphasized the doctrine of "Almighty Sovereignty" while its counterpart in Washington tried to demonstrate the importance of human rights. Thus the approaches to municipal design and planning were also different. The former chose the strictly enclosed design, while the latter chose to be "completely open to all". Different concepts gave rise to different forms of expression.

[9] *Complete Works of Marx and Engels* (in Chinese), vol. 16, People's Press, 1964, p. 20.

4.3.2.2 Further Development of the Axis Line and the Objective Effects of the Main Buildings

L'Enfant's blueprint for the design of Washington and his concept of building the city had not been appropriately noticed and appreciated for the entire century that followed. And the person who made such an outstanding contribution to the construction of Washington hadn't received appropriate acknowledgement in his lifetime either. He was very poor and destitute in the last years of his life. It was only with the financial aid and a piece of land offered by one of his friends that his body could be buried. Not until the beginning of this century were his talent and achievement acknowledged and his remains were moved to the National Cemetery of Arlington and buried on top of the hill in 1909. On the headstone was carved the draft plan of the capital as a memorial to his achievement. Looking to the east from the tomb of L'Enfant, one can see the Mall situated on the original axis line as designed by him across the Potomac between the Lincoln Memorial and the United States Capitol. In fact, one can see all the important buildings laid out on the plan. Indeed, there is no better place for L'Enfant to have his permanent rest.

It seems advisable for us to recall some of the incidents that occurred during the 100 years of the nineteenth century on the Mall to the west of Capitol Hill:

Firstly, L'Enfant's plan to canalize the Tiber River to reach the foot of Capitol Hill had never been taken into serious consideration. As a result, the Tiber had become a stinky sewer for litter and rubbish and was filled up and abandoned later. What remained to the date is a small sluice shed not far from the White House, marking the originally designated site of the canal.

Secondly, the Smithsonian Institution was built in 1847 without reference to L'Enfant's design of the boundary of the Mall, and the Institution went so far as to be situated inside the Mall. A proposal had once been made to tear down the building, but was turned down for the preservation of historical relics and architecture.

Thirdly, the designated location of the White House was moved further westward to its present site.

Fourthly, the present Washington Monument is not built on the originally planned spot due to the weak foundation there. It is now 40 m south to the original site, and therefore not on the city's central axis line according to the original design. Nor does it fall on the perpendicular line leading southward from the White House, but is 120 m to the east of that line. However, one would have such a visual impression that the Monument is on the horizontal axis line.

Lastly and the most importantly, the marshy lowland to the south of the western extreme of the axis on the eastern shore of the Potomac has been reclaimed. Thus the original axis line between the two rivers of the Potomac and the Anacostia was prolonged from 5.5 to 7.3 km. Meanwhile, the broad riverbed of the Potomac was utilized and a narrow stretch of land reclaimed along the eastern shore from south to north, which is the present Potomac River Park beautifully dotted with lakes (Figs. 4.7 and 4.8).

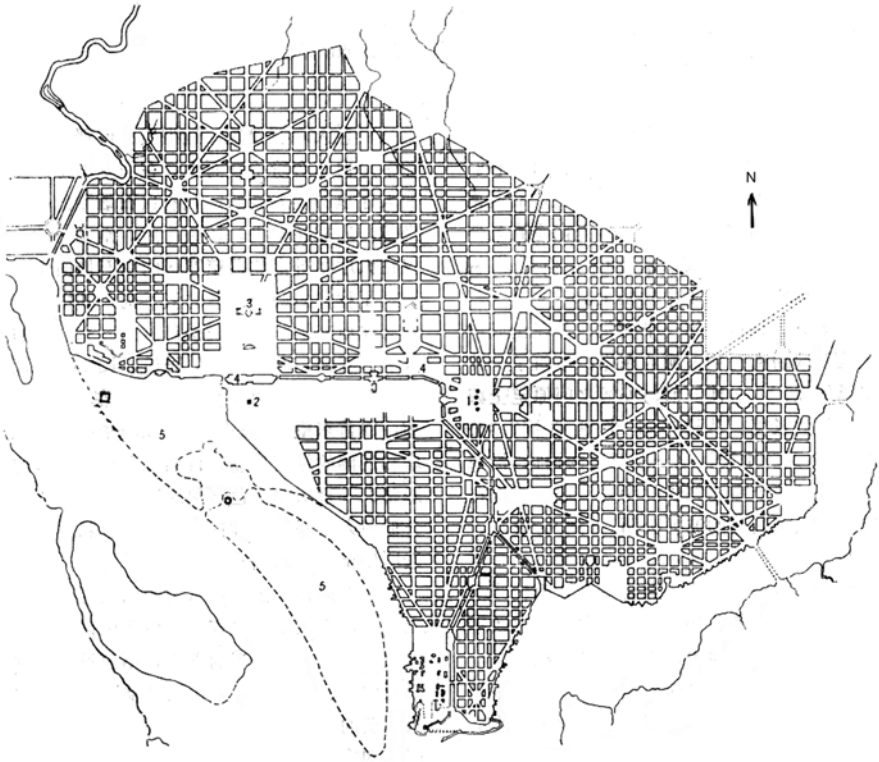

Fig. 4.7 Reclamation of the marshland on the east shore and the shallow water area of the Potomac. *1* Site of the Capitol Building, *2* The original designated location of the Washington Monument, *3* The original designated location of the White House, *4* The Canal, *5* Potomac River Park
The *dotted lines* shows the riverside after reclamation
New starting point on the east shore of the Potomac. It is the location of the Lincoln Memorial built later
The site for the Jefferson Memorial built later. The site of the White House on the above diagram was later moved to a site further west on the perpendicular line north of the Jefferson Memorial

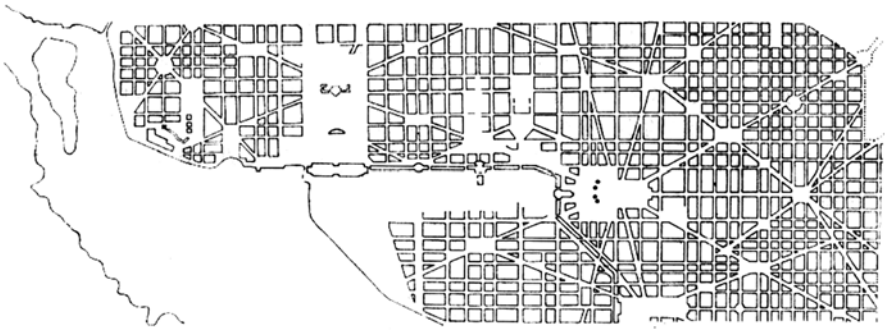

Fig. 4.8 The original shoreline which was at the starting spot on the central axis line on the east shore of the Potomac

The last change is most significant in its influence on the development of the capital's central axis line. It was on the reclaimed land on the western extreme of the central axis that the Lincoln Memorial was constructed in 1922. This signified graphically the starting point of the axis line from west to east of the capital. This horizontal axis of Washington from west to east is less than one kilometer shorter than the perpendicular axis of Old Beijing from north to south. In 1976 the Constitution Gardens on the north side of the long narrow "Reflecting Pool" in front of the Memorial, were opened to the public in order to celebrate the 200th anniversary of Independence Day.

It should be highlighted the construction of the Lincoln Memorial for it has not only further developed the original central axis designed by L'Enfant, but also furnished the underlying theme embodied by the central axis line with a new implication. The Lincoln Memorial is a structure of white marble, simple and dignified. Mounting the many marble steps in front of the Memorial, one comes to see an immense white marble sculpture of President Lincoln sitting and meditating in the middle of the hall. There is no other thing or decoration around except that in the far end of the hall the two famous speeches by Lincoln were carved on the north and the south sides respectively. One contains the phrase he used to describe a government which has "a new rebirth of freedom", that is, "of the people, by the people, and for the people". When one comes to pay his/her respect to the Memorial, stands before the statue and looks back eastward beyond the tall Washington Monument and the great span of green lawn of the Mall to the big white vault of the Capitol, he/she cannot help thinking of the great contribution President Lincoln made to the United States of America.

In spite of all these, we must also see that since the establishment of the Federal Government, the principles of human rights and the ideal that all men are born free and equal as expressed in the Declaration of Independence not only had not been truly realized, but the internal conflicts had become even more serious. Among them the major one was the rivalry between the North as represented by the employers of laborers, and the South as represented by the owners of slaves. When Lincoln was elected President of America in 1860, he declared his strong opposition to slavery, and issued the Preliminary Emancipation Proclamation in September, 1862. By that time the Civil War had broken out, and the issue of the Proclamation made the situation increasingly tense. Although the North army won the final victory, Lincoln, after being elected President for the second time in November, 1864, was assassinated by a killer sent by Southern slave owners in April, 1865.

Although the struggle led by President Lincoln saved the United States from falling apart, the problem of racial discrimination still existed. In 1866, the year after Lincoln was assassinated, a group of Southern racists established a reactionary organization called the KKK (Ku-Klux-Klan), which brutally attacked and murdered black people. In August, 1963, the well-known anti-racism activist, Rev. Martin Luther King, Jr., delivered his famous speech "I have a Dream" before 200,000 people in front of the Lincoln Memorial to commemorate the signing of the Emancipation Proclamation. Unfortunately, he got assassinated by racists in April,

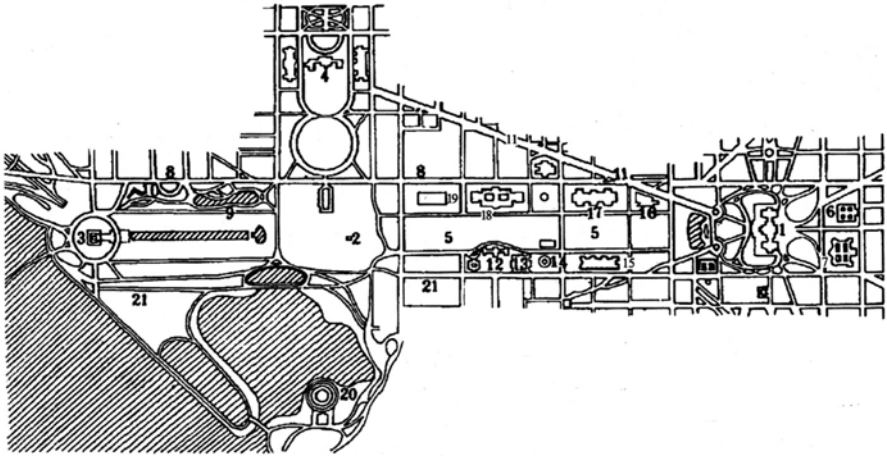

Fig. 4.9 The Mall of Washington on the axis line
1 The Congress, *2* Washington Monument, *3* Lincoln Memorial, *4* The White House, *5* National Mall, *6* Supreme Court, *7* Library of Congress, *8* Constitution Ave, *9* Constitution Gardens, *10* The Vietnam Veterans Memorial, *11* Pennsylvania Ave, *12* Smithsonian Institution, *13* National Museum of African Art, *14* Hirshhorn Museum and Sculpture Garden, *15* National Air & Space Museum, *16* National Gallery of Art East Building, *17* National Gallery of Art, *18* National Museum of Natural History, *19* National Museum of American History, *20* Jefferson Memorial, *21* Independence Ave

1968 when he went to Memphis, Tennessee to support a strike for equal pay for equal work, his "dream" yet realized by a long way.

Symbolically the construction of the Lincoln Memorial at the starting point of the central axis of the capital is a further development of the underlying theme prescribed by L'Enfant in his plan, that is, the idea of human rights. However, this ideal has never been fulfilled. Karl Marx once commented the revolution led by Lincoln "an earnest of a new epoch to come that it fell to the lot of Abraham Lincoln to lead his country through the matchless struggle for the rescue of an enchained race and the reconstruction of a social world".[10] It is nevertheless an undeniable fact that the "new epoch to come" remains an age the American people have to strive for (Fig. 4.9).

4.3.2.3 A Problem Provoking Further Thinking

In a warm and sunny morning in the spring of 1980, I visited the Lincoln Memorial for the first time. It impressed me so deeply both upon my feeling and my mind that the memories never faded away. Later, I visited the United States three times and every time I paid my respects to the Lincoln Memorial to recapture the feeling

[10] Ibid., p. 21.

that I had got at my first visit, no matter how pressing my schedule was. In the summer of 1984 when I visited there again, I came across a statute of three soldiers on the lawn unexpectedly in front of the Memorial in the west of the Constitution Gardens. When I approached the statue, I realized that it was a monument that honors U.S. service members of the U.S. armed forces who fought in the Vietnam War after the Second World War. The design of the memorial is an open lawn in a wide V shape which gradually declines towards the interior angle. Along the cleft are two low, black granite walls, the Vietnam Veterans Memorial Wall, on which are engraved the names of the more than fifty thousand Americans dead in the Vietnam War with their rankings. As one walked down along the wall and looked at the names, a mournful sense would well up in his/her heart, so it was also called "America's Wailing Wall". One wing of the V-shaped Memorial pointed the Washington Monument in the southeast, and the other to the Lincoln Memorial in the southwest. This ingenious design was the work of a Chinese-American architect Maya Lin.[11] The implication of this design is also thought-provoking, for the American people had strongly protested sending troops to Vietnam and deemed the war as unjust. The site chosen for the Vietnam Veterans Memorial is on the Mall located at the central axis. Looking along the extension of the two walls, one can see the Washington Monument and the Lincoln Memorial in the distance, which would remind him/her of the vast discrepancy in nature between the ideals embraced by the founding fathers of the United States of America and the unjust Vietnam War. When I, a foreign visitor, stood on the axis of the city of Washington and saw this memorial there, I could not help think of the difficulties and hardships the common people of America must overcome in order to realize the ideals of their founding fathers.

4.4 Other Mountain's Stone May Polish the Jade—Some Examples Which Can Be Referred to in the Construction of Washington

Right from the very beginning of urban construction, the sister cities of Beijing and Washington both tried their best to express their underlying concepts in their design of a central axis line. In spite of the differences in their historical background, their aims to reflect the spirit of their age are the same. At the present time, the urban development of the two cities has far exceeded their original design and plans. Although the city walls of Old Beijing have been torn down and the city expanded rapidly to the areas which used to be outside the city, the Old City is still the nucleus of the overall plan for a new Beijing. The case is the same with Washington

[11] The design was selected in 1982, when Maya Lin was a student of architecture department of Yale University.

which has also exceeded the original limits of the two rivers and the northern highland, but the L'Enfant City still serves as the heart of the plan of the whole city. For Beijing, with the reformation of the social system in China, the problems it confronted with in its construction are much different from those of Washington. The most urgent task which should be addressed in its planning and construction is how to preserve the best of tradition and at the same time to add new conceptual elements, in order to reflect the initiation of a new era of socialism. In this respect, the issue of the central axis line is most delicate and important. For example, the transformation of Tian An Men Square is successful in this sense. Furthermore, while considering inheriting the best tradition of China to utilize the old for the benefit of the present, we must also try our best to absorb the best of foreign experience for the benefit of China. We must concede that regarding the issue of urban construction, capitalist countries have a lot of experience worthy of learning, only it is necessary for us to know how to differentiate the truly advanced experience from the bad and to keep away from copying blindly. To learn indiscriminately would bring nothing but harms. Take the plan of Washington for example. Layout of all the buildings along the central axis line and their functions are properly regulated, on which lessons could be drawn. The Capitol stands on the central point of the axis and all other buildings in the city are not allowed to be built higher than it, which contributes to a special skyline of the city. The space stretching from the Capitol westward to the Mall in front of the Washington Monument is wide and level, commanding a broad view. To the south and north of the Mall, museums and galleries are arranged in order. On the southern side, there are the National Air and Space Museum, the Hirshhorn Museum and Sculpture Garden, the Smithsonian Institution (which contains an exhibition on the history of the capital planning) and others. On the northern side are the National Gallery of Art, the National Museum of Natural History, the National Museum of American History and further north is the National Archives. To the southeast of the Capitol is the world famous Library of Congress with its recently built annex building, standing side by side with the Supreme Court. The heart of the capital here is a concentration of the characteristics of Washington as the national centre of political and cultural activities. The design of the capital in its entirety is of dignity and diversity. All the museums and galleries on either side of the axis, thought of the relatively same height, differ from one another in their architectural designs, varying from the classic redbrick-castle style of the Smithsonian Institution to the ultra-modern design of the National Air and Space Museum—they all express the characteristics of their age. And among them the most renowned is the East Wing extension to the National Gallery of Art built recently. This site used to be a triangular land at the northeastern corner of the Mall not far from the Capitol Hill, making it most important and subtle to deal with in architectural design. Here the world famous Chinese-American architect Pei Yi Ming showed his talent and designed a unique building which adds charm to the Mall.

The above discussion reminds me of the construction of the Great Hall of the People and the Museum of Chinese History and the Museum of Chinese Revolution

during the transformation of Tian An Men Square on the occasion of the tenth anniversary of New China, as mentioned earlier, which highlighted the identity of the national cultural center of Beijing besides its position of the national political center. However, at that time the dual role of this capital had not been fully recognized. Considering the great significance of further promoting cultural and ideological progress and the requirements of building Beijing as the national cultural center, due attention should be paid to the historical characteristics of the city's plan in the overall design and planning of the city. The design of the central part on the axis line of Washington discussed above can serve as one of the examples for us.

Translated by Cheung Hou Cha
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Chapter 5
Oversea Communications Between China and East Africa Before the So-called Discovery of New Sea-Route

At the end of the fifteenth and the beginning of the sixteenth century, a series of long-distance sea voyages started out from Western Europe. The earliest and most widely publicized among them were (1) the trans-Atlantic voyage which in 1492 brought Christopher Columbus to districts now known as Cuba and Haiti; and (2) the voyage undertaken by Vasco da Gama in 1498, in the course of which he rounded the Cape of Good Hope, crossed the Indian Ocean and eventually reached the modern Kozhikode (formerly known as Calicut, mentioned in ancient Chinese records as Kuli) in South India. With this tremendous expansion of geographical vista, the Europeans landed in a continent where they had never set foot before and found a passageway hitherto unknown to the East. These events they commemorate under the imposing titles of discovery of the new continent and discovery of the new sea-route respectively. With these began the era of "great geographical discoveries", which looms large in the history of European geographical discovery and standard textbooks on European history.

The subsequent expansion of European colonialism has disseminated these ideas to practically every corner of the world. In reality, however, the achievements of Columbus and da Gama may be considered in a certain sense "discoveries" only if one postulates a limited view point—that of the Europeans. Any attempt to enlarge the viewpoint to take in other areas or to endow it with a world-wide significance would be seriously mistaken.

This essay purports to deal exclusively with what the Europeans call the discovery of the new sea-route.

To begin with, a brief retrospect of the historical facts is perhaps called for. The search for the new sea-route is commonly thought of as entering its last crucial phase with the effort of Bartholomew Diaz, who by continuing to cruise southward along the western coast of Africa (many parts of which had repeatedly been touched by former navigators), finally reached in 1487 the southernmost point of the African

This paper was read at Beijing Scientific Symposium in 1964.—Editor's note.

R. Hou, *Symposium on Chinese Historical Geography*,
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continent, later known as the Cape of Good Hope. It was not until 10 years later that da Gama pushed the voyage yet further by sailing northward along the eastern coast of Africa, reaching in April, 1498 Malindi in Kenya (mentioned in Chinese records as Malin or Maliniti). Then, starting out from Malindi, da Gama began the last and most important section of his voyage by crossing the Indian Ocean, ending up in Kozhikode in May of the same year.[1]

In this manner was "discovered" the much-vaunted new sea-route to the East. To the Asian and African peoples, however, the route was by no means new, so that any claim to have "discovered" it is out of the question. It can be confidently established that every section of the route had been traversed by Asian and African navigators and explicitly recorded in historical texts.

Let us first take up the route along the African coast. We know from the distinguished Greek historian Herodotus (484–425 B.C.) that the first cruise around the African continent dates back to about 600 B.C. In trying to show that the African continent (then called Libya), besides being joined to Asia by a narrow isthmus, was completely surrounded by the ocean, he cited as evidence the following facts. In 600 B.C. or there-abouts, a fleet manned by Phoenicians, who were experienced sailors, left the Red Sea under the orders of the Egyptian Pharaoh Necos, and made its way southward into the open ocean. It took them 2 years to return safely to Egypt, having finished the voyage in accordance with Necos' plan which necessitated their entering the Mediterranean Sea via the Strait of Gibralter.[2] That was an astonishing feat in the history of navigation.[3] We may suppose that in rounding the southernmost point of the African continent and sailing up northward, da Gama was not aware that he was following a route which had already been discovered by Phoenician sailors more than 2,000 years ago, the only difference being that he was sailing in a direction opposite to that of his predecessors.

Indeed, besides that remarkable voyage made by the Phoenicians, history knows of other instances that men had sailed southward along the eastern coast of Africa, rounded the cape and entered the Atlantic Ocean. In the 1420s, or about 70 years before da Gamma's eastern voyage, an Arabian navigator had taken exactly that route.[4] The Arabs had then established extensive oversea trade along the eastern coast of Africa, which penetrated as far southward as Mozambique, and it was from

[1] J. N. L. Baker, *A History of Geographical Discovery and Exploration*, London, 1931, pp. 63–70.

[2] Herodotus, *The History of Herodotus*, translated by G. Rawlingson, New York, 1946, pp. 216–217.

[3] The account of Herodotus has raised much controversy, but of late there has been a tendency to belief. See J. Oliver Thomson, *History of Ancient Geography*, Cambridge, 1948, pp. 71–73. J. N. L. Baker points out that "the geographical conditions do not make such a feat impossible." *op. cit.*, p. 23.

[4] *World History* (in Russian), vol. 4, M. M. Smirin (chief editor), Moscow, 1958, p. 88. G. Ferrand cited the identification of D. Couto and maintained that the Java had sailed as far as the southern tip of the African continent long before. See Gahriel Ferrand, An Investigation of the Voyage in Kunlun and China North Sea (in Chinese), translated by Feng Chengjun, Zhonghua Book Company, 1957, p. 66.

none other than those Arabian traders that da Gama obtained the necessary information which enabled him to continue his voyage in a northward direction.[5]

Another point to be stressed is that while the voyage from the eastern coast of Africa across the Indian Ocean to South India is justly regarded by the Europeans as the last and most important section of their so-called new route, since their final objective of reaching the East virtually hinged upon its successful completion, that very route had not only been opened up by the Asian and African peoples long before but had remained in constant use for a considerable period of time. Special mention should be made of Ibn Madjid, a great Arabian navigator, who came from a family of sailors and whose knowledge and experience about the sea was unrivaled in his day.[6] It was with his expert guidance that da Gama finally accomplished the last and most important section of his voyage.

Here it is necessary to recall the magnificent contribution made by the Asian and African peoples toward opening up the trade route across the Indian Ocean.

Trading relations connecting the South China Sea with the Indian Ocean had long existed prior to the end of the fifteenth century. The scale and financial prosperity of these ventures were such that hardly any other areas in the world could offer a contemporary parallel. On this topic, which forms an extremely important chapter in the history of ancient navigation and transportation, many dissertations and books have been written by Chinese and foreign scholars. The scope of this essay permits us merely to cite a few examples from Chinese documents by way of illustration.

The earliest mention in Chinese records of voyages over the South China Sea and the Indian Ocean goes back to the first and second centuries B.C.[7] Since then a long line of messengers, monks and merchants had used the same sea route, voyages back and forth between China and Ceylon or India being especially frequent. A well-known example is that of the Chinese monk Fa Hsien, who in 409 sailed from Tomoliti (whose ancient site was located on the western bank of the Hooghly River, near the Ganges Delta in modern India) to Shihtzukuo (now Ceylon); and in 412 boarded a large merchant vessel which brought him from Shihtzukuo back to China.[8] His contribution to the cultural exchange between China on the one hand and India and Ceylon on the other has become almost proverbial down to the present day.

The earlier seventh century saw the founding of the T'ang Dynasty (618–906 A.D.) in China and the rise of the Khalifah Empire of the Arabs (632–1258 A.D.) in Southwest Asia.[9] Contacts between the two were numerous, and a new stage began in East-west trade over the South China Sea and the Indian Ocean. The volume of trade in the two-way traffic over the Indian Ocean continued to swell after

[5] K. G. Jayne, V*asco da Gama and His Successors: 1460–1580*, London, 1910, p. 48. See also J. N. L. Baker, *op. cit*., pp. 69–70.

[6] With reference to the life and work of Ibn Madjid, see article on Shihab al-Din Ahmad ъ Madjid in the *Encyclopaedia of Islam*, pp. 362–370, London, 1934.

[7] *Han Shu* (Dynastic History of Han), Chüan 28, *Ti Li Chih* (Book on Geography).

[8] For detailed account of Fa Hsien's travel in India and Ceylon, see his own work *Fo Kuo Chi*.

[9] The Khalifah Empire is recorded in ancient Chinese works as *Ta Shih*.

the eighth century. In China, throughout the long period during which the T'ang Dynasty gave way to Sung (Northern Sung 960–1127, Southern Sung 1127–1279 A.D.), and the latter in turn to Yüan (1279–1368 A.D.), there were chartered ports along the southeastern seacoast which made oversea trade their special business, and government officials were specially appointed to take charge of trading affairs. Among these ports, Canton had at first the largest amount of foreign trade.[10] Beginning from the middle of the thirteenth century, however, it was eclipsed by Chüan-chow (Zayton). In the latter, we possess lively sketches by a couple of contemporary witnesses, who arrived in China toward the end of the thirteenth century and in the middle of the fourteenth century respectively, namely the renowned Venetian traveller Marco Polo and Ibn Battuta of Tangier, Africa. This is what Marco Polo wrote:

> At this city you must know is the Haven of Zayton, frequented by all the ships of India, which bring thither spicery and all other kinds of costly wares… I assure you that for one shipload of pepper that goes to Alexandria and elsewhere, destined for Christendom, there come a hundred such, aye and more too, to this Haven of Zayton; for it is one of the two greatest havens in the world for commerce.[11]

Ibn Battuta was even more emphatic:

> I must tell you that the first Chinese city that I reached after crossing the sea was Zayton (now is called Chüan-chou-fu)…. The harbour of Zayton is one of the greatest in the world; I am wrong: it is the greatest! I have seen there about one hundred of first-class junks together; as for small ones, they were past counting.[12]

Ships that voyaged over the South China Sea and the Indian Ocean during the T'ang and Sung Dynasties included, besides Chinese ships, those of the following nationalities, all mentioned in Chinese records: Persian ships, Shihtzukuo ships, ships from the Western Regions, or simply, "foreign" ships. These seagoing vessels had from a very early time made use of the monsoon in their voyages, which accounted for the fact that most vessels sailing from China started out between autumn and winter when the dry monsoon blew from the northeast whereas most ships coming to China chose the summer season when the wet monsoon blew from the southwest.

In periods when China's foreign trade was exceedingly active, for instance, in the Sung Dynasty, the number of foreign traders in China was so large that special residential quarters were set apart for them in all chartered ports. Some of these traders elected to stay in China, or even assumed important posts in the Chinese government. A case in point is P'u Shou-keng, responsible official for trading affairs in

[10] A distinguished Chinese geographer Chia Tan in the eighth century made a valuable record on the sea-route from Canton to the Gulf of Iran. See *Hsin T'ang Shu* (New Dynastic History of T'ang), *Chüan* 43, *Ti Li Chih* (Book on Geography).

[11] H. Yule and H. Cordier, *The Book of Ser Marco Polo: Concerning the Kingdoms and Marvels of the East*, revised 3rd. ed., pp. 234–235, London, 1903.

[12] *Voyages d'Ibn Batoutah*, vol. 4. Paris, 1922, pp. 268–269.

Chüan-chow at the end of the Sung Dynasty, whom research showed to be the descendant of an immigrant Arab who settled in China.[13]

In the first three decades of the fifteenth century, the government of the Ming Dynasty (1368–1644 A.D.) in China expended great efforts in developing oversea communications between China and the Indian Ocean. These efforts were crowned by the seven long-distance voyages led by Cheng Ho. As Cheng Ho's expeditions were by all odds the most impressive achievement in the history of navigation prior to the Europeans' sailing for the Orient, which did not begin till the end of the fifteenth century, a short description of those remarkable events may not be out of place here.

The seven voyages of Cheng Ho spanned a period of 29 years (1405–1433 A.D.).[14] His fleet was composed of more than sixty galleys and a large number of smaller auxiliary vessels, making a total of well over two hundred. On his seventh voyage (1431), he was accompanied by various kinds of nautical technicians, soldiers, interpreters, scribes and medical and service personnel to the number of 27550.[15] When we recall that 61 years later (1492) Columbus had only three ships and eighty-seven sailors with him in making his first trans-Atlantic voyage, and that 66 years later (1497) da Gama brought only four ships and 148 (or, according to some authorities, 178) men to the Orient, we may arrive at a truer estimate of the size of Cheng Ho's expeditions.

The farthest points reached by Cheng Ho's fleet in the seven voyages, which headed in somewhat different directions, are: Hormuz (mentioned in Chinese records as Hulumussu) on what is now the Iranian Bay, Jeddah (mentioned in Chinese records as Chihta) on the eastern coast of the Red Sea, and Mombasa (mentioned in Chinese records as Manpasa) on the eastern coast of Africa. The last of these voyages has bequeathed some very valuable legacies to us of the present day, including a tolerably complete sailing record and a copy of the original sailing chart.[16]

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[13] Situzo Kuwabara has made an extensive study on the life of P'u Shou-keng and his scholarly work has been translated into Chinese by Chen Yü-ch'ing entitled *P'u Shou-keng K'ao* (2nd. print, Shanghai, 1954).

[14] The dates of the seven voyages of Cheng Ho are as follows:

1. 1405–1407, 2. 1407–1409, 3. 1409–1411, 4. 1413–1415, 5. 1417–1419, 6. 1421–1423, 7. 1431–1433.

During the last 90 years various studies on the life of Cheng Ho have been published by European and American scholars. The French Orientalist P. Pelliot has written a comprehensive dissertation, "Les grands voyages maritimes Chinois au début du xve siècle," *Toung Pao*, 1933, pp. 237–452. Owing to the lack of indispensable source materials, mistakes in his conclusions on the dates of the last six voyages of Cheng Ho are unavoidable.

[15] Chu Yün-ming, *Chien Wen Chi,* article on the voyages of Cheng Ho, *Chi Lu Hui Pien* edition, *Chüan* 202, p. 37.

[16] Chu Yün-ming, *ibid*., and *Cheng Ho Hang Hai T'u* (The Sailing Chart of Cheng Ho), edited by Hsiang Ta, Peking, 1961.

Cheng Ho's routes over the Indian Ocean require some attention. Variations were slight among those for east of Ceylon and South India, which may be passed over, but as we follow him further westward, we notice certain interesting features.

It should first be pointed out that the two sea routes leading from the western coast of South India to the Iranian Bay and to the Red Sea had both a long history behind them. However, in early times, oversea communications between those regions were presumably achieved by sailing along the coast. It was only when later navigators learned to make use of the monsoon, which was a familiar phenomenon in that area, that a direct route over the Arabian Sea was opened up.

Who was the first to notice and turn to account the monsoon that blew over the Arabian Sea and thus opened up the above-mentioned route? Some authorities ascribe the discovery of the monsoon to Hippalus, an Alexandrian in the employ of the Roman Empire c. 40 A.D.–50. Hence, as one historian puts it, "Hippalus deserves as much honour in Roman annals as does Columbus in modern history." Others contend that before Hippalus the Arabs had already made use of monsoon in sailing over the Arabian Sea. Still others would credit Nearchos, one of the generals who accompanied the Macedonian king Alexander in his Asian expedition in the fourth century B.C. with the so-called "discovery".[17] Be that as it may, the fact remains that navigators over the Arabian Sea had, from a very early time, learned to make use of the monsoon to strike out an oversea route, thus enabling themselves to abandon the tortuous coastal sailing. When Cheng Ho's fleet arrived in the Iranian Bay or entered the Red Sea, these routes were already scenes of busy trafficking.

There is another problem that deserves a far more thorough probing. Among the routes shown in Cheng Ho's chart (Fig. 5.1) is one that leads from the present Belligamme in the south of Ceylon or from Kozhikode on the western coast of South India to Brava or to Moqadisho on the eastern coast of Africa. When was this direct route first opened up? We know that oversea communications between the equatorial regions on the eastern coast of Africa and India or China also go a long way back. Indeed, descriptions of the sea coast in what is now Somalia and Kenya may be found in Chinese records as early as the eighth and ninth centuries.[18] In 1071 (or the fourth year of Hsining in the Sung Dynasty), ambassadors from Tsengtan, a country on the eastern coast of Africa, after 160 days of sailing along the coast, landed in the city of Canton in China. A second embassy came in 1083. The Sung rulers obviously thought very highly of this diplomatic relationship and loaded the ambassadors with rich gifts.[19] Now Tsengtan is actually a scribal error for Tsengpa,

[17] For detailed information, see *S. A. Huzayyin, Arabia and the Far East, Their Cultural Relations in Graeco-Roman and Irano-Arabian Times*, Cairo, 1942, pp. 112–113, and J. N. L. Baker, *op. cit.*, pp. 19–20.

[18] Tu Huan (in *Ching Hsing Chi*) and Tuan Ch'eng-shih (in *Yu Yang Tsa Tsu*) of the T'ang Dynasty gave the earliest information in Chinese records about Berbera and Malindi respectively. Tuan's work is easily available, while Tu's work is now preserved in the form of citations in other works. A collection of these citations with commentaries has been published recently by Chang Yi-ch'un under the title *Ching Hsing Chi Chien Chu,* Peking, 1963.

[19] *Sung Shih* (Dynastic History of Sung), *Chüan* 490, section on Tsengtan.

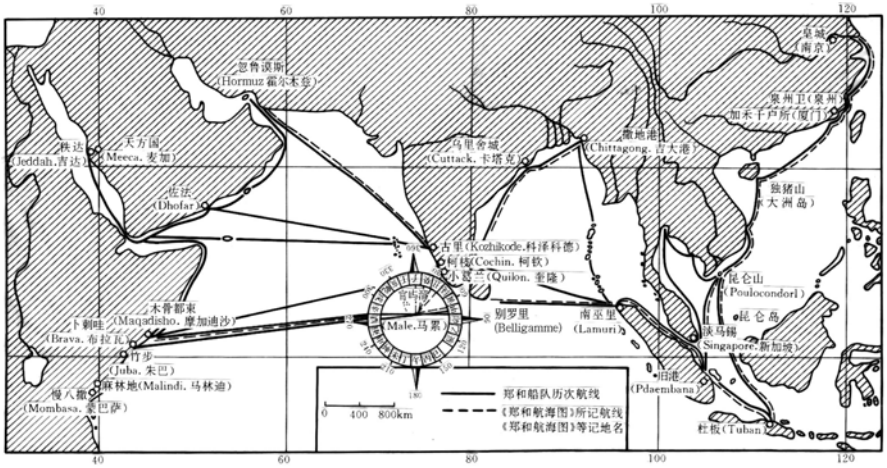

Fig. 5.1 Routes of Zheng He's voyage

which represents a clipped pronunciation of Zanzibar.[20] The two are, however, not strictly identical, as Tsengtan in those days embraced the eastern coast of Africa together with the islands off the coast. From the twelfth century on reference to various countries on the eastern coast of Africa occurred with greater frequency in Chinese geographical works.[21] Particularly worthy of notice are the results of recent archaeological excavations on the eastern coast of Africa. These include T'ang and Sung copper coins as well as large quantities of chinawares (fragmentary or otherwise) dating back to the Sung Dynasty, the Yüan Dynasty or a later date. All this is incontrovertible proof that trade relations had long existed between China and the eastern coast of Africa.[22] But the contact (direct or indirect) was exclusively dependent on the route over the Arabian Sea, and remained so up to the middle of the thirteenth century.

It should be recognized that there was a profound difference between the direct route that led from Ceylon or South India across the Indian Ocean to the eastern coast of Africa and the other route over the Arabian Sea. One needed only the monsoon to sail safely along the latter route. In case of the former, however, even with the help of the monsoon, successful voyaging would be extremely difficult, if not impossible, unless one enlisted the additional aid of the compass. Chinese

[20] Feng Ch'eng-chün, *Chu Fan Chih Chiao Chu*, Shanghai, 1956, pp. 54–55. *Chu Fan Chih* was written by Chao Ju-kua in 1225. It has been translated and annotated by F. Hirth and W. W. Rockhill (*Chao Ju-kua: His Work on the Chinese and Arab Trade in the XIIth and XIIIth Centuries, entitled Chu-fan-chi.* St. Petersburg, 1911).

[21] See Feng Ch'eng-chün, *ibid*., and Wang Ta-yüan, *Tao Yi Chih Lueh*, written about 1349.

[22] Hsia Nai, "Porcelain Links in Sino-African History," *Wen Wu Monthly*, 1963, no. 1, pp. 17–19; Zhang Tiesheng, "Discussion of Sino-Africa Relation based on Eastern African History," *History Studies*, no. 2, 1963.

navigators began using the compass in making their voyages in the eleventh or twelfth century.[23] The compass is one of the most significant contributions made by the Chinese labouring people to world civilization. For, with the invention of that instrument, man finally gave up his old way of sailing closely to, or a short distance from, a winding and tortuous seacoast, and launched out boldly for the open ocean. Thus the seemingly unlimited kingdom of billowing waves became another sphere where man could display his power and adventurist spirit.

It has been conjectured that the knowledge and use of the mariner's compass passed from China to Europe via the Arabs.[24] At any rate, European seagoing ships only began using the compass at the end of the twelfth or beginning of the thirteenth century. It is conceivable that the direct route across the Indian Ocean joining Ceylon or South India with the eastern coast of Africa could have been discovered before the beginning of the fifteenth century when Cheng Ho made his voyage. But as far as Chinese maps and documents are concerned, the first unmistakable reference to the route occurred at the time of Cheng Ho's expeditions. The appended sailing chart of Cheng Ho shows clearly that there were two direct routes leading from Ceylon and South India, respectively, to the eastern coast of Africa. The routes might pass through Kuanyuliu (the Island of Male), but it was not necessary. We know for certain that in the seventh voyage, Kuanyuliu was used as a midway station. Cheng Ho's original chart contains the following note:

> From Kuanyuliu… one arrives at Mukutushu (i.e. Moqadisho), following the Keng-yu needle.[25]

We shall find, by checking the route against a modern map, that the sailing direction is wonderfully accurate, as what he called the Keng-yu needle represents roughly 262° on the compass.

The geographical work of Fei Hsin,[26] who accompanied Cheng Ho on four of his voyages, tells us:

> Sailing southward from Peiloli (Belligamme) in Ceylon… one may arrive at Brava after twenty-one days and nights.
>
> With a favourable wind, it is possible to sail from Hsiaokelan (Quilon) to Mukutushu in twenty days and nights.

Here are clearly set forth the two direct routes across the Indian Ocean, one leading from Belligamme in Ceylon to Brava on the eastern coast of Africa, and the other from Quilon to Moqadisho, also on the eastern coast of Africa. However, the

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[23] Chu Yü, *P'ing Chou K'ê T'an*, Shou Shan Kê edition, Chüan 2, 1922, p. 3. Hsu Ching, *Hsüan Ho Feng Shih Kao Li T'u Ching*, T'ien Lu Lin Lang edition, *chüan* 34, p. 12, 1931.

[24] Situzo Kuwabara, *A Study of P'u Shou-keng* (in Japanese), Tokyo, 1935, pp. 92–93.

[25] Hsiang Ta, *Cheng Ho Hang Hai T'u* (The Sailing Chart of Cheng Ho), p. 57.

[26] Feng Ch'eng-chün, *Hsing Ch'a Sheng Lan Chiao Chu*, Shanghai, 1954, pp. 21, 24. *Hsing Ch'a Sheng Lan* written by Fei Hsin is one of the three important geographical works compiled at the time of Cheng Ho's navigations. The other two works are *Ying Ya Sheng Lan* by Ma Huan and *Hsi Yang Fan Kuo Chih* by Kung Chen. Both Ma and Kung also took part in Cheng Ho's voyages and gave an account of the countries they visited in their works.

direction given is incorrect, and Cheng Ho's chart should be regarded as the final authority. The opening up of the sea route was the joint work of the Asian and African peoples who inhabited those districts. As has been pointed out before, it was by following this route, and by enlisting the guidance of the expert Arabian sailor, Ibn Madjid, that da Gama successfully accomplished his voyage at the end of the fifteenth century.

Cheng Ho's voyages must not be looked on as a fortuitous incident. They were an important extension of the oversea communications and friendly trade relations that had long existed between the Asian and African peoples. Official organization enabled these voyages to be carried out on an unprecedented scale, but it did nothing to change their nature, since there is ample evidence to show that these voyages aimed primarily at enlarging oversea trade. That the Ming court was also eager to hunt down foreign treasures and fancy products need not be denied, but the means adopted remained as always one of peaceful exchange and free bartering. Trade relations built on such a basis naturally fostered diplomatic relations. What is more important, following these voyages, private trade also had considerable development. The immense amount of gold, silver, coins, silken fabrics, chinaware and copper ware with which Cheng Ho's fleet was loaded, was a means to promote private trade, in return for such exotic goods as spiceries, dyes, pearls, precious stones and rare birds and animals (lions, zebras, ostriches, leopards, giraffes, etc.).[27] The fleet also carried foreign messengers and merchants back and forth. All in all, China's private oversea trade greatly expanded during this period.

To sum up, Cheng Ho's voyages were a powerful stimulant to the oversea trade and cultural interflow between China on the one hand and South Asia and East Africa on the other. The direct route connecting China with East Africa marks, in particular, a new stage in oversea communications.

But ever since da Gama "discovered" this route to the Orient, more and more Westerners followed in his wake. Not satisfied with merely reaching India, they kept pushing farther eastward, and it did not take them long to sail through the Strait of Malacca and enter the South China Sea, arriving eventually in 1516 at Canton, which formed the southern entrance to China on the seaboard. In the van were the Portuguese, while many other nations of Western Europe, such as Spain, Holland, Great Britain and France, showed an equally ardent desire not to be left behind.

Since then a totally different chapter in the history of oversea communications between the East and the West has to be written and here is the proper place for the present study to stop.

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[27] Details concerning these transactions, please see *Ying Ya Lan Sheng* (*Wonders Overseas*), Xing Cha Sheng Lan (*Description of the Starry Raft*), and *Xi Yang Fan Guo Zhi* (*Foreign States in the West Sea*). Upon arrival, Chinese vessels would give presents to the local authorities in the name of Ming Dynasty. Then the local authorities or executives would command the people to start commercial activities.

Chapter 6
A Modern Interpretation of Ancient Chinese Geographical Literature

6.1 *A Commentary on the Book of Rivers*

China is now facing a great historical transformation. In order to get rid of the backwardness of her science and technology and to speed up the effort of the realization of her socialist modernization, it is necessary for us, on the one hand, to learn the advanced knowledge and experience of others countries. And, on the other hand, we must also re-estimate the real value of all the things we have inherited from our forefathers: Chinese culture, old traditions and history. We must absorb and utilize all the things that are beneficial to us. It is through such endeavours that we hope to produce a new culture which is typically Chinese and modern. In other words, we need a new culture for the age of socialism. This great historical transformation is in reality a new Renaissance of China.

Since liberation, this Chinese Renaissance has developed rapidly in the different fields of human knowledge. Indeed, there were serious interruptions and damages during the 10 years of political turmoil. Nevertheless, all the things that obey the law of historical development will prosper in spite of the will of the reactionary gangs. And this is true to the Chinese Renaissance.

To give a full account of the Renaissance in this short talk is impossible. It is also out of my personal ability to do so. However, it is possible for me to try to use my personal judgment to re-estimate the real value of ancient Chinese culture and traditions from the field of studies with which I am familiar. Let me illustrate my view point by showing two concrete examples. I sincerely wish that by so doing I may offer some help to my friends who want to know something about New China.

On Feb 11, 1981, according to the China-Canada Culture Exchange Protocol, the author paid his visit to Canada to give lectures from Feb 11 to Mar 24. The essay is edited based on the original English speech draft on Feb 13, 1981.—Editor's note.

R. Hou, *Symposium on Chinese Historical Geography*,
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I would like to introduce to you two important books of ancient Chinese geography in order to illustrate how we, the modern Chinese students, make use of ancient Chinese literature and bring to light from them new value and inspiration.

The first book was compiled in the sixth century A.D. It is a voluminous manuscript called A *Commentary on the Book of Rivers*.

The other book was written 340 years ago by an outstanding Chinese traveller. It was written in the form of a diary with detailed descriptions of his observation and fieldwork. The title of the book is *Hsü Xia-Ke's Travels*, which is named after the author.

Both of these books were written in very beautiful and fluent prose. Indeed they had been preserved because of their literary style and beauty. It is only in modern time that their importance in scientific terms was recognized.

We shall discuss *A Commentary on the Book of Rivers* first. I would like to introduce to you the life of the author and a brief summary of the contents of the book.

Li Tao-Yuan, the author of *A Commentary on the Book of Rivers* was a native of Tsor-Hsien of the present Hopei Province which is about a hundred kilometers in the southwest of Beijing. He was born between 465 and 472 A.D. and died in 527 A.D., which is about 1,453 years ago.

During the time of Li Tao-Yuan, China was divided into the South and the North. In the South, there were several kingdoms of Han nationality which governed the district one after the other chronologically. In the North, there were different minority nationalities fighting against one another for the sovereignty of the district. And throughout the whole era of the South and the North Dynasties, political hostility existed between the two parts of China. However, in spite of the existence of such political hostility, Li Tao-Yuan kept up his studies and research on the geography of China as a united whole. This idea of unity is most important to us modern students of Chinese Geography. We learn from Li Tao-Yuan that political fragmentation does not mean fragmentation of culture. It is this unity within a developing culture that acts as a motivating force which bound the different nationalities in China steadily. Under such controlling force, they influenced and assimilated one another and a new type of culture with Han nationality as the main stem gradually formed and finally yielded a new culture of special Chinese characteristics. But, at the same time, there still existed in the minority nationalities, their own traditions and culture with their special characteristics. Another point to be noted is that in the process of the development of the Chinese culture, there were the continual absorption and assimilation of foreign civilization and influence. It is an undeniable fact that Chinese culture was enriched by foreign influence.

Li Tao-Yuan's father was a civil officer of a local district. He had to travel on duty to different places in different districts and the young boy Tao-Yuan went with his father on such occasions visiting places. This gave Li Tao-Yuan many chances to travel and thus nurtured his interest in studying geography. When Li Tao-Yuan grew up to be an official himself, he had even more chances to travel and so he visited many more places, which broadened his knowledge and experience. And his interest in studying the geography of his motherland increased by leaps and bounds. In addition to his fieldwork observation and practical experience, Li added to his

knowledge by reading a lot of books, ancient materials and manuscripts. It must be mentioned that China of that time was a kingdom which had enjoyed a cultural unity for several 100 years through the prosperous dynasties of Qin and Han, and the Chinese culture had developed rapidly. There were many writings concerning national and regional geography, history, folklores and tradition, and some of them were of good quality. According to a study and calculation of the writings of Li Tao-Yuan, we find that the books and writings he used for reference in his work amount to 437. It is a pity that most of these books have been lost. In addition to these references, he also collected a lot of writings from stone tablets and folklores and folk literature for his own reference. During the time of Li Tao-Yuan, there were some geographical literature and writings circulating among the elite circles. To Li, these were far from being satisfactory, some being too simple, some being too dry and insipid, and others being too confusing with no definite system for reference and research. It must be noted that most of these materials of geographical descriptions were little more than the compilation and gathering of raw materials and rough sketches on all sorts of natural phenomena. And there was no standard system of classification for these geographical records.

Li Tao-Yuan decided to set up a standard and unified system of recording the geographical materials of China. He used *The Book of Rivers*, a book written by some scholar before him, as an outline for his studies. The original *Book of Rivers* was completed in the third century A.D. It had the descriptions and records of 137 rivers in China, with reference to their sources, estuaries, tributaries, etc. It had a definite system of recording of its own. The only defect of the book is that there was little or practically no reference to the geographical condition of the land irrigated by each river. Li Tao-Yuan used this book as an outline for his research; he filled up many vacancies and supplemented a lot of materials. The number of rivers he studied and recorded increased to 1,252. More important is the fact that he compiled detailed descriptions of each river including the geographical condition of it, the natural phenomena of the district concerned and their changes, with reference to the historical development and influences. Many of the descriptions were facts collected and recorded by Li himself. The completed works of Li Tao-Yuan amounted to 300,000 words which is about 20 times more than that of the original *Book of Rivers*. As to the system of compiling his book, Li decided that all the rivers originally recorded in the old book (*The Book of Rivers*) should be printed in bold type while all the materials supplemented by Li himself should be printed in small type, as references and footnotes. The name of the new book still preserved the name of the old, i.e. *The Book of Rivers*, but the only change was by adding the word "Commentary" and thus the full name of the book became *A Commentary on the Book of Rivers*.

In his life time, Li Tao-Yuan had written many books and essays, but only this book got left. This book was preserved to us because of its beauty in writing style, especially its excellence in describing natural scenery. For example, in his records of the Three Gorges of the Yangtze River, the readers would be deeply attracted by his interesting description of lively actions and meditating quietude, its changing colours and poetic sounds of the magnificent pictures of Mother Nature. It is this

passage of the Three Gorges of the Yangtze River that students of latter times used to recite and memorize as a model of standard prosaic style and literary form.

Recently the Three Gorges of the Yangtze River was opened to all foreign friends and tourists as one of the sight-seeing spots in Central China. Special launch trips are arranged at scheduled time. Our foreign friends are welcome to come to China to enjoy the trip to the Gorges. I regret that I do not have the ability to translate and bring to life the beautiful prose style and literary achievement of Li Tao-Yuan in his descriptions of the magnificent scenery of the Three Gorges. I must confess that his special literary style and accomplishment are very difficult to interpret and translate. Without understanding, it would be difficult for our foreign friends to appreciate the beauty and essence of Chinese literature and prose form.

To consider Li's book from the point of view of a modern scholar, its beautiful literary style is not the only point of attraction and influence. I would like to point out that the scientific value of his observation and research is even more important. This emphasis is also based on my own personal experience. Let me show my point by telling a short story.

In the summer of 1949, after I concluded my studies in the University of Liverpool, England, I returned to Peking which had just been liberated. The next spring, under the direction of the Municipality of Peking, a Committee for City Planning was established. Its duty was to make plans for the reform of old Beijing and the construction of a new Beijing city. I was responsible for the research of the historical geography of Beijing. Actually, I had done some research on this subject during my studies at the University of Liverpool under the guidance and tutorship of Prof. H. C. Darby. But this time the aim of the research was much more concrete: I was to make clear the process of the development of the old city of Peking (Beijing), especially to make clear why the geographical site of the city had experienced many changes. This was not an easy job, because the long history of Beijing is very complicated. Well, from where should I begin? I was inspired by Prof. Darby's theory when I considered this problem. Prof. Darby emphasized that in the long process of the development of geographical environment, we must try to choose from the different periods in the development some historical cross-sections and endeavour to restore them to their original conditions. Then we line up these historical cross-sections chronologically, and study them by means of comparison and discover the process of development of each restored cross-section. Thus we can obtain a deeper understanding of the geographical outlook of the district concerned.

Under the guidance and inspiration of this theory, I looked through Li Tao-Yuan's *A Commentary on the Book of Rivers*, and extracted from its contents the passages concerning the geographical condition of Beijing and its surrounding areas. I succeeded in restoring a map of Beijing and its surrounding districts of more than 1,450 years ago. This is the earliest one which is possible to be reconstructed. With the help of this map, we were able to trace out the origin of the city of Beijing. The same map also offered a reliable guide to the study of the changes and development of Beijing and its surrounding areas in later times. The above story shows that because of the needs of the modernization of China, we revived ancient Chinese Classics through the use of modern scientific theory and methods. Considering the above

incident from such an angle, we may say that this can be considered as an example of Chinese Renaissance.

Let me now show you a restoration based on *A Commentary on the Book of Rivers*: a map of Beijing and its surrounding areas, and several other maps reconstructed from a series of later geographical studies in slides. As to the process of their chronological developments, I am not going to discuss them here, as they are not the content of our lecture.

Concerning the modern estimation of the value of the book *Hsü Hsia-Ke's Travels*, I would like to discuss it in the next lecture.

6.2 *Hsü Xia-Ke's Travels*

In my last lecture, I tried to use a specific example to illustrate how we discover the scientific value of Li Tao-Yuan's book: *A Commentary on the Book of Rivers*, which was famous and well-remembered for its beautiful prose form. Today I would like to introduce to you another famous Chinese book which is also well-remembered by the Chinese people for its excellent literary style and prose form. Through the records of the author's geographical observations and investigations in his book, we discovered its scientific value and also the author's achievements and influence in his time. To us modern students of geography, the latter point is more important. The name of the book is *Hsü Xia-Ke's Travels* which I mentioned in my last lecture.

As in Western history, there are also famous travellers in the Chinese history. They also made long and difficult journeys and travels. The records and literature of what they had done broadened our knowledge of geography and also helped to promote the development of human civilization. For instance, in the first half of the second century B.C. (138–126 B.C.) the famous traveller Zhang Qian who by the command of the Central Government of his time, started from Chang-An, the political capital city, travelled westward and crossed the Pamir Plateau and finally reached Central Asia. He made diplomatic contacts with the political sovereignty there. He spent more than 10 years in his travels and return journey, conquering numerous difficulties and untold hardship. He became the pathfinder of the famous "Silk Route". Again, for instance, in the last years of the fourth century (399–412), Fa-Xien, a much respected monk, also travelled from Chang-An. After crossing the Pamir Plateau, he turned down south to India. From India, he travelled by boat to Ceylon, then sailed in a big sea-going boat back to China. Again, in the first half of the seventh century (627–645), another famous monk called Shuen-Zhaung, followed a similar route taken by Fa-Xien some 200 years before. He started from Chang-An, went westward and arrived in India where he stayed for more than 10 years. Then he travelled by land back to Chang-An. Without doubt, the achievements of these travellers are never to be neglected. Their achievements helped to broaden the knowledge of the Chinese people. Also, they brought back the influence of other people from abroad. However, to investigate into the aims of their endeavour, we may obtain the conclusion that their achievements were by-products only.

To Zhang Qian, his aim was to carry out a political mission; whereas to Fa-Xien or Shuen-Zhaung, it was religious fervour that motivated them to take the travels and stand all the trials of hardship.

Now, the traveller Hsü Xia-Ke of late sixteenth century (1587–1641) is also well known for his daring journeys. Nevertheless, his travels were completely different from that of the people we mentioned above. More than half of his lifetime was spent in travelling. He travelled with neither political assignment nor any religious motives. He travelled because he wanted to seek knowledge and to explore the secrets of Mother Nature. Hsü Xia-Ke was a native of Jiang-Yin Xien in Jiang-Su Province on the southern bank of the Yangtze River. It was at the age of 22, that is, 1607 A.D., that he left his home at the Yangtze Delta and started his planned trips. His aim was to visit the most famous mountains in China. Usually, he completed one trip within a year. The mountains he travelled to visit in the North included the Tai-Shan in the Province of Shantung, and the Pan-Shan which is near the northeast of Peking. He also journeyed to the northern part of the Province of Shansi where he visited the Wu-Tai Mountain. Then he went to the Northwest where he explored the magnificent sceneries of Hua-Shan of Shensi Province and the Wu-Dong Shan of Hupei Province. In Central China, he visited the famous mountains of Huang-Shan in the Province of Anhui and the Lu-Shan of the Province of Kiangsi. Then he made a trip down South to the Lo-Fu Shan of Kuangtung Province, and also to the Southeastern coastline where he explored the Yen-Dang Shan of Chekiang Province. In early 1636, he made a long-distance travel to the provinces of Southwestern China, reaching the western border of Yunnan Province. It took him nearly 4 years to complete the trip back and forth. It was the longest journey he had ever made, a distance of about 7,000 km. In all his travels, he made very detailed records and descriptions of his observation, especially that of the provinces of Kuangsi, Kweichow and Yunnan. He wrote down all the geographical phenomena of these places in a detailed way. I would like to point out that if we find in his earlier travels he only enjoyed the beautiful and magnificent sceneries of Nature, then in his latter journeys we find his interest was that of all the natural phenomena. He persisted to walk in all his tours and very seldom he rode or took a boat. Thus, he was able to walk to the farthest corners of the countryside and wilderness and climb to the deepest canyons and the loftiest mountains. He nurtured the habit of writing down immediately everything he had a chance to explore and observe. He made detailed records in the form of a diary of all his trips and activities, with also his own personal opinions and deductions from what he had seen, especially his opinions on natural and geographical phenomena. He had very keen observation power and he was not afraid of the dangers in his journey. Very often, he climbed a high cliff or a deep canyon alone or crept into a deep cave without the company of anybody to explore and investigate. Some writers after him described his activities saying “he climbed high like a monkey and explored caves like a snake”. In addition to these, he wrote in an excellent prose style, interesting and attractive, with vivid descriptions of natural sceneries. The way he recorded geographical phenomena was accurate and concise in effect. It was actually because of these special accurate records of his observation and fieldwork that he was much respected and esteemed by the scholars

of his time. His writings were copied and read and were considered as the finest literary accomplishment. After his death, his writings were collected and compiled into a volume with the title *Hsü Xia-Ke's Travels*. It was a collection of more than 400,000 words. It is a pity that some of the contents have been lost during the past years. The present volume is not the original edition.

The book was titled "Travels", but actually it is a classic on geographical research with very important scientific contents. It is important because it opened up a new way in the study of geography in China, using a thoroughly empirical method. Its influence and achievement in the development of Chinese sciences are unique. I must confess that it is out of my ability to convey to you the literary value of Hsü's book. However, it is necessary for me to explain briefly what the author had done in opening up a new way of geographical research.

Even before the time of Hsü Xia-Ke, the study of geography had a long development in China. There were many books which may be classified into the field of Chinese Geography. However, most of these earlier writings and books were nothing more than confusing collections of geographical phenomena. Practically none or very few of them referred to the reasons or factors yielding or influencing such phenomena. Furthermore, most of the writers of this kind of books were "indoor scholars" who did not have any fieldwork experience. All they did was to write books which were based on some legends from some miscellaneous documents. Very few of them were books of serious research and systematic compilation. The rare exception probably is the work of Li Tao-Yuan's *A Commentary on the Book of Rivers* published in the sixth century A.D. The fact is that the oppression of feudalism lasted for so long a time that the level of production was very low, and as a result of this, geographical research and records were also limited. When it came to Hsü's time, he broke away from the old tradition and walked out of the small study of his house and made long outdoor trips with definite purposes and preparations. He made outdoor observations at first hand. With his keen observation he discovered and accumulated the numerous, colourful geographical phenomena and the knowledge of the internal causes of these phenomena. For instance, he looked into the nature and characteristics of rocks, the power of water in erosion, the use and influence of underground water, the shaping and structure of land forms, the changes of temperature and wind on different levels and latitudes and their influences on vegetations, and many other things which he tried to give scientific explanations of their making. More significant was the travels he made in the latter years of his life when he visited the southwestern part of China where he systematically observed the special nature of topography of the great expanse of karstland there, and made classified descriptions of them. His intense interest in the investigation of the caves in the karstland led him to go into more than 100 deep caves of which he made very minute observations and detailed records. For example, he went twice to the eastern part of Kweilin in the present Autonomous Region of Kuangxi Zhuang, to explore the famous "Seven Stars Cave". He investigated and recorded the outside and inside details of this great cave in a minute way. The "Seven Star Cave" is one of the most mysterious and complicated caves in the karstland of southwest China. In 1953, some Chinese geographers surveyed and measured the system of the "Seven Stars Cave" by modern

methods and equipment. They drafted the ground plan inside and a rough sketch of the outside environment of the cave. When comparing their survey with the descriptions and records of Hsü Xia-Ke, they were very much amazed by its similarity and accuracy. The conclusion is that we can consider and use Hsü's book and his records as reliable references in the research of these caves and the karstland of China. I would like to emphasize that the distribution of limestone in the provinces of southwest China is most widespread in areas of limestone topography in the world. And the time Hsü Xia-Ke spent in exploring and investigating this area was also the longest of all his travels. The records of the distribution of limestone topography, the difference of geographical zones, the different types of topography and the causes of their forming were written down by Hsü Xia-Ke in details with also his own explanation. Undoubtedly these records of Hsü's are the earliest documents of its kind concerning such a big area of limestone topography.[1]

The facts mentioned above show clearly that by his life-work in the research and investigation outdoor, Hsü Xia-Ke had paved a new way for the studies of geography in China. As a pioneer in the scientific research in geography Hsü is probably comparable to Alexander von Humboldt who laid the foundation of the studies of geography in Germany. Von Humboldt lived about 150 years after Hsü Xia-Ke. Von Humboldt also devoted his life in making long-distance travels and investigations. However, von Humboldt lived in a time when the modern industrialization in Europe had already begun and when the studies of natural sciences in the West had also developed rapidly with inventions and making of new scientific equipment and instruments which were of much help to geographical research and fieldwork. These conditions offered necessary facilities to Western geographers for their research which former geographers had been unable to obtain. Alexander von Humboldt was able to use the new equipment and, furthermore, he had also the opportunity to go by sea to the developing South America for his geographical research. Thus, he was able to offer his achievements to the civilization of the whole world. As to Hsü Xia-Ke, although he had the desire and ambition to expand the area of his observation and investigation, and even expressed the wish to go to the countries outside China, owing to the condition of China of his time, he was unable to fulfill his wish. It must be noted also that Chinese society of Hsü Xia-Ke's time had only just began to witness the spirit of capitalism. But due to the oppression of the feudalistic sovereignty, its development was retarded, and consequently the

[1] Probably it is interesting to know how Professor J. Needham, the distinguished author of the voluminous work *Science and Civilization in China*, writes about Hsü Xia-Ke: "Hsü notes… read more like those of a 20th-century field surveyor than a 17th-century scholar. He had a wonderful power of analysing topographical detail, and made systematic use of special terms which enlarged the ordinary nomenclature… Everything was noted carefully in feet or *li*, without vague stock phrases." (vol. 3, p. 524) And it is no wonder that the famous Chinese geologist Prof. Ting Wen-Chiang, who made a great contribution on the study of Hsü's life, once said that Hsü "was essentially a geographical explorer. The spirit of inquiry is so startlingly modern, that it alone would have ranked him as the earliest leader of modern geography in China". (Ting, *The New China Review*, III, 5, Oct. 1921, pp. 325–337.)

development of natural sciences was very slow, and thus, having any scientific instruments for fieldwork for Hsü was definitely out of the question. All Hsü Xia-Ke could do was to walk with his two feet in his travels and to work with his empty hands in his research and investigation. Indeed, he collected some rocks or plants as specimens for his studies even they were rare, as he had to carry everything for himself with his two hands and on his bare shoulders. Under such an environment, how could Hsü Xia-Ke's work compare with Alexander von Humboldt who could make use of sea transportation and use big boats to carry his great amount of specimens and manuscripts?

The story of Alexander von Humboldt is very different. He spent 5 years in South America. When he returned to Europe in 1804, he brought with him in the boat 30 large cases of specimens and records for his studies and references. He was able to live in Paris for 20 years to study and analyse his records and to write his 30 volumes of research on the New World. After that, he went back to Berlin. Then, again, he travelled to Central Asia. He spent the latter part of his life in studying and writing. He died at the old age of 90 in 1859.

Hsü Xia-Ke spent more than 3 years in the southwest of China exploring (1636–1640). When he returned to his native land, he brought back only a few rocks as reference plus an exhausted body. And within a year after his being back home, he died of poverty and illness, with the research and exploration of Chinese geography unfinished. According to an account of his life, even when he was seriously ill in bed, he still had his few rocks by his bedside and continued to study them and fondle them until the last moment of his life. He was only 56 when he died. Except the few 100,000 words of fieldwork diary and records of observation and a few essays on his studies, he left no other writings.

The main reasons that I try to compare Hsü Xia-Ke of China of 340 years ago to Alexander von Humboldt of Germany of 130 years ago are not only to show the difference of their fate, but also to convey to you by means of emphasizing their important influences to the development of the sciences in the East and in the West, how the studies of sciences had developed into two different ways from times of these two prominent geographers on.

The scientific activities of von Humboldt had a far-reaching influence in Europe. For instance, it was under his influence that the British government sent a boat "The Beagle" in 1831 to the seacoast around South America for a scientific survey and research. On board the ship, a young man brought along with him von Humboldt's books. He read the books enthusiastically and sent letters home asking for more of von Humboldt's new books. The name of this young man is Charles Darwin. With this expedition as his starting point for his scientific research, he finally established the theory of "The Origin of Species". And with Darwin, sciences in the West had a big leap from the starting point of von Humboldt.

To return to our consideration of Hsü Xia-Ke's contributions to sciences in China, we find that in spite of his hard work, he had very little influence in the intellectual circle of his time. Indeed, there were some people who acknowledged his talent as a literary man; there were also some but fewer people who appreciated Hsü's life as an explorer who faced dangers bravely. However, there was practically

none who noticed his achievements in geographical research and, after his death, there was no one to follow his footsteps or continue his studies. Even his book of such a mine of geographical wealth was ignored and it was not until recently that its value in geography was discovered. Isn't it most absurd and unreasonable?

I would like to point out that even before the time of Hsü Xia-Ke, science and technology had developed steadily in China. There had been important inventions by the ancient Chinese, such as the compass for sea travelling, the method of printing in block types, etc. These inventions were first used by the Chinese and then they were taken up by the world at large. Their influence on world culture and civilization is great and important. And even in Hsü Xia-Ke's time, there were important scientific writings and literature, such as *Ben Cao Gang Mu* (*The Principles and Index of Herbs and Minerals for Medicine*) by Li Shi-Zhen (1518–1593). Its influence on botany, mineralogy and pharmacology is undeniably great. There was also the book written by Sung Ying-Sing (born ca. 1600) *Tien Gong Kai Wu* (*Exploitation of the Works of Nature*). We know that its first edition dated to 1637 and it was a very important work on agriculture, textile weaving, pottery, foundry and casting and other contents concerning the making of tools and instruments.[2] These two books and the one written by Hsü Xia-Ke were the forerunners in the scientific research in old China. They opened up new paths for the people after them. Their achievements were undoubtedly among the most advanced in their age and also in the world. Nevertheless, the development of Chinese scientific research after the time of Hsü Xia-Ke lagged far behind that of the West. Thus, even until recent times, to learn from the advanced science and technology of the West is still our problem which we must acknowledge. How did it happen?

As a student of historical geography I do not have the ability to answer this question in full. However, from the angle of the development of natural sciences, there are some few points which we ought to notice when we look into this problem.

Since we know that as production of social development, natural science and technology also develop accordingly. And as early as the third century B.C. ancient China had already been in the state of feudalism, a feudalistic kingdom of centralisation of states and sovereignty. In China, the authority of the Emperor is supreme and unquestionable. Since then and for a long time of feudalism of more than 2,000 years, the society of China had been built on the economy of small-scale farming; then out of this grew the handicraft workshops. In the early part of feudalism in ancient China, such mode of production developed and with it, the field of science and technology yielded new inventions and discoveries. When it came to the latter part of feudalism, productivity in China continued to develop, but management of individual craftsman workshops gradually changed into that of small workshops with hired labourers. This became the soil for the growth of capitalism.

In Hsü Xia-Ke's time, the districts along the middle reaches and the estuary of the Yangtze River, especially the region of its delta, developed greatly in the capacity

[2] For an English-language edition, see *T'ien-kung K'ai-wu: Chinese Technology in the Seventeenth Century* (University Park: Pennsylvania State University Press, 1966).

of production and with this also grew capitalism. With such social background, the progressive intellectuals of that time naturally paid much attention to the research of natural sciences and technology. Their interest was on the investigation and exploration of Nature and also the summarization and propagation of the techniques of production. Such prominent personalities like Li Shi-Zhen, Sung Ying-Sing and Hsü Xia-Ke were leading representatives of the time. But the reactionary forces and backward influences which supported the feudalistic sovereignty went all out to suppress and shatter this new progress in search of truth. Their tactics were to control the governmental examinations. At that time the means of the Emperor and the bureaucrats to select government officials were to give examinations, the contents and subjects of which emphasised loyalty and fidelity of the persons who took the examinations. Natural sciences were not included in the examinations. All those that worked on scientific studies were considered by society as "Laolies" or manual workers and all manual workers or labourers were looked down upon by "Laohsins" or brainworkers. "Brainworkers are the controllers and manual workers are the controlled." This was the social attitude and public opinion of Hsü's time. Thus, the Chinese society was clearly divided into two categories: those who controlled and those who were controlled. And the Chinese term brainworkers means the social group who knows nothing about the ways of production—all they know is using their ink-brushes to play with words. Thus the few people who devoted their time to the research of sciences were also considered as manual workers. And in the eyes of the brainworkers, they were lower in social status, or the outcasts of society, and among this lowly group were the medical men. And for them to take and pass the exams was undoubtedly out of the question. For instance, Li Shi-Zhen was among those of this group who had taken the exams several times but failed each time. As to Hsü Xia-Ke, he despised this corrupt and unfair system of examinations. Even when he was a young man, he showed his hatred of the corruption of the bureaucracy. He decided to devote his life to outdoor fieldwork and explorations, making torturous journeys against all hardships in order to find out the secret of Nature. Here, we see a man against the society of his time, a rebel who broke away from the bound of old traditions and society and did become a pioneer of the new era.

Yet, in the age of the supremacy of imperialistic feudalism, Hsü Xia-Ke was not to live to do what he had wished. Only 3 years after his death, there began the worst of the feudalistic dynasties in the history of China, that is, the Ching Dynasty, the difficult time under the oppression of the Manchu minority. The intellectuals of the Han society were under strict control of the government. No words or feeling against the Manchus were allowed. Punishment of death was the penalty for all those who wrote anything against the imperial Manchu sovereignty and his relatives. This was called in the Chinese history as the "Criminal Case of the Words", that is, people were put in jail and put to death because of the words they had written. The condition was so bad that many of the intellectuals were driven to hide themselves or to leave their positions. All they could do was to write abstract essays, of no practical use. The beginning or germination of capitalistic thinking and its influence on ideology, that is, the ideas of reacting against the restrictions of feudalism, the efforts to seek

freedom and democracy, the new idea of individuality and self-expression, were suppressed and punished. It was the time of the decline of the world of thought in China. There were no more people like Li Shi-Zhen or Sung Ying-Sing or Hsü Xia-Ke in the field of scientific research for over a century. Nevertheless, in the world of literature, there appeared the book by Cao Xue-Chin called *The Dreams of the Red Chamber*, which reflected and echoed the voice of the time. The writer Cao 200 years ago used his book as a weapon to attack and expose the corruption of the declining feudalism. From this standpoint we may consider Cao's book as a masterpiece of his time.

In China, the age after feudalism is semi-colonial, semi-feudal. Unlike the West, it was not followed by the age of capitalism. We call it "semi-colonialism" because it was the developed capitalist nations that sent troops to China to break down her "closed door policy" and thus put her under the control of the foreign powers. We call it "semi-feudalism" because China still had feudalistic emperors; the only difference was that this feudalistic big heads could no more give orders and be obeyed by the people like former times. Instead, they must rely on the foreign powers to suppress the rebellious people.

In 1911, Dr. Sun Yat-Sen led a revolution successfully against the Manchus and thus ended the imperial dynasties of feudalism which lasted for more than 2,000 years. However, it did not end or smash completely the feudalistic forces and their traditional influences. It was in 1919 that the famous "May 4th Movement" broke out; its slogan was: "Anti-imperialism and Anti-feudalism." To us Chinese historians, it means the beginning of the Revolution of Neo-democracy. It was led by the Chinese Communist Party until its final victory in 1949, the liberation of the Chinese People.

In short, from the Opium War in 1840 when the foreign military forces invaded China to the establishment of the People's Republic of China, for a lengthened time of more than 100 years, the people of China had lived under the yokes of both imperialism and feudalism. They were in most miserable condition, unable to earn their barest living. In such condition, scientist research and technical development were out of the question. The result was the backwardness of China in science and technology.

The birth of New China means the beginning of the age of her socialist reconstruction, which lasts until now for already 30 years. There have been tremendous changes since then through the efforts of her people in the spirit of self-reliance. Nevertheless, because of the backwardness of our science and technology and the weakness of our social foundation, China is still a poor and developing country, especially after the so-called Cultural Revolution during which we experienced the worst possible damage and interruption, not only in production, but also in practically every field. And it is through the 10 years of political turmoil that we begin to realize how the left-over poisonous effects of feudalism and their social influences interfere with our socialist construction, for instance, "The Homologized Court" (that is, everything must be decided by the only one top officer as final); "Tenure System" (that is, once you become the head of a government office, you will always and for the rest time of your life stay as the head of that office); "Personality Cult";

"Isolationist Policy and Self-praising"; "Bureaucracy"; "the social influences and tradition of individual production"; etc. Indeed, these bad points can also be found in capitalist society. However, in China, the destructive effects of such rubbish are much more serious.

Now in new China one of our most important tasks is to restore the spirit of these scientists and scholars, and in geography to rekindle the spirit and method of Hsü Xia-Ke. We have gotten over the bitter experience of the Cultural Revolution. We have brought about greater stability. With the desire to build China into a modern socialist country, we begin the New Long March. But when we raise our heads and look around at the world and the neighbouring countries, we find that their achievements in science and technology have progressed far front before us. We must break away from the former condition of isolation, and learn from our foreign friends their advanced science and technology, so that we can expedite our modernization. Of course, we will still maintain our principle of self-reliance. And by self-reliance we mean that we must also try our very best to discover new value from our ancient civilization. That is to say, we should not simply take everything for granted from the West without any investigations or analyses. Undoubtedly, we shall absorb and utilize everything that is beneficial to our country. But more important is the effort of us to discover the rich hereditary endowments in our history and culture, and to transform them for the use of the modernization of China.

Three hundred and forty years ago, Hsü Xia-Ke had opened up a new way in the seeking of secrets of Nature. Owing to the feudalistic reactionary forces and influences, he had no successor or follower. And now, we the modern Chinese students are determined to sweep away all the rubbish of feudalism, in order to build our New Culture and Civilization. It is because of this determination that I am sure a new age of Renaissance in China will be at hand. We look forward anxiously to its coming, and I am sure that our Western friends will also welcome its appearance.

I thank you.

Chapter 7
The Ancient Great Wall in a New Era

About one century after the fall of Alexander's empire which extended from Macedonia eastward as far as the Indus River, a great empire began to merge in the central part of China. It was the Empire of Qin.

The founder of this Qin Empire who came to the throne in 221 B.C., claimed to be the first emperor of China or, in Chinese, Shi Huangdi. It is from the word Qin that the empire was known to the West as China.[1] However, before the Qin Empire China had already had a long period of historical development. The real contribution of Qin Shi Huang is that he was the first ruler in China who created a political system of centralized government by ending the power of the contending feudal states. This marks the beginning of the history of imperial dynasties with absolute power in the hands of a monarch, which lasted for more than 2,000 years until 1911 A.D.

Besides his political achievement, Qin Shi Huang left two material legacies for the present day. One is his tomb with the famous clay army discovered recently. The other is the Great Wall.

Walls were built in China as military fortifications long before Qin Shi Huang's time, but the building of the Great Wall was attributed to Qin Shi Huang. He was the first emperor who mobilized thousands of peasants to connect the walls constructed by three former feudal states along their northern boundaries. In addition, he built new sections both at the east and the west ends. Eventually a great long wall of thousands of miles came into existence; hence the name *Wanli Changcheng* which means a long wall of 10,000 *li*, or simply the Great Wall. Since then the Great Wall

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This article is selected from *Symposium Papers of 8th General Assembly of International Council on Monuments and Sites, and International Symposium "Old Cultures in New Worlds", October 10–15, 1987*, vol. 1. Washington, DC: ICOMOS, 1987. Print.—Editor's note.

[1] The word "China" is derived from the Roman alphabet "Chin", an "-a" added to manifest its location. This standpoint has been confirmed in *The Cambridge History of China* (1986).—Editor's note.

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was repaired and rebuilt again and again but not entirely along the same line. The last and most well preserved one was built during the Ming Dynasty (1368–1644). Its length is estimated at 12,000 *li*, or 6,000 km with its east end actually making a sheer descent into the Bohai Gulf, symbolizing the dragon's head dipping into the water. Its west end reaches as far as the north edge of the Tibetan-Qinghai Plateau where the famous pass Jia Yu Guan was situated on the ancient Silk Road. The most majestic parts of this Ming Great Wall north of Beijing have become the best vantage points where modern visitors enjoy a spectacular glimpse of this massive but ingenious engineering achievement made by the sheer hands of man.

I do not intend to give you a full picture of the construction of the Great Wall, which is far beyond my ability. There are quite a number of books in the West devoted to the study of the Great Wall. The most comprehensive and readable English language work is probably that by a colleague, Luo Zhewen and his collaborators, Dick Wilson, Jean-Pierre Drege and Hubert Delahaye.

There is one point I would like to emphasize here. This is the tragic human aspect of the construction of the Great Wall in old China. This tragic nature is fully illustrated by the legend of the girl, Meng Jiang, who lived in the reign of Emperor Qin Shi Huang. Her husband, together with thousands of other peasants, was conscripted to build the wall but few came home healthy or even alive. Meng Jiang, being very anxious to see her husband, trudged hundreds of *li* northward to the foot of the Great Wall, only to find white skeletons piled at the foot of the wall. Her wailing and lamentations shook the heavens, and the newly built wall crumbled.[2] The legend of Meng Jiang comes down via one of the classical works of ancient China. There may have been no real Meng Jiang. However, there were indeed thousands of young women having the same fate as Meng Jiang. She has touched deeply the hearts of later generations with her pure and sincere love. Even more important, the symbolism of Meng Jiang's spirit of opposition against persecution has always inspired people under oppression.

As we look back in Chinese history, there has been no need for a long time to rebuild the Great Wall to protect the central part of China. Now, with the birth of New China, under the guidance of the socialist principle that the different nationalities both within and beyond the Great Wall together with those in other parts of China are united as one big family, the old dream of "all men are brothers" has begun to be realized. As the Chinese proverb goes, the march of history has "turned arms into silk and gold". It has likewise changed the former battlefield along the Great Wall into the good earth of the new epoch.

The Great Wall itself, constructed with the sweat and blood, toil and effort of innumerable peasants, has been transformed into a monument symbolizing the renaissance of an ancient civilization. Due to this transformation, in recent years the work of restoring and repairing the Great Wall at key points has been started with the enthusiastic support and generous contributions of many Chinese people as well as friends in foreign lands.

[2] There is another version of the legend saying that a section of the wall crumbled, exposing to Meng Jiang the bones of her husband.

At the same time, through recent research, some important features of the Great Wall have been revealed for the first time by using modern techniques of infrared light and remote-sensing.[3] For instance, the real length of the Great Wall within the administrative boundary of the Beijing Municipal Government is 629 km, which is far longer than what had been previously known. Furthermore, the wall itself is by no means a single but rather a complex defensive system following various topographical features, dotted with different kinds of terraces, fortresses, passes and observation towers. Wherever it was necessary for a garrison, a detour wall was added to the main body. The intricacy of the design has never before been mentioned in any records or discussion. Now a full and accurate picture, essential for the purpose of historical presentation, is revealed to us. Besides the Ming wall, the ruined foundations of some earlier walls have also been discovered. We hope it will be possible to extend the same kind of study to the whole line of Ming Great Wall.

With the growing interest in the Great Wall, an association has been organized in Beijing to sponsor research and promote education about the Great Wall. Members of this association include those who have made substantial contributions either to the study or the preservation of the Great Wall. The most active members, of course, are the sponsors of this organization. Most of them are prominent figures in public affairs. Honorary memberships will also be offered to foreign friends who meet the same requirement for the Chinese members.

Furthermore, for the sake of the increasing number of visitors, at Ba Daling, the spot nearest to Beijing where one can get the best view of the Great Wall, a museum is under construction. By means of essential exhibitions and visual aids visitors, especially those who come from abroad, will be able to get a full picture of the history and a better understanding of this great wonder of the world.

In each age, a country, a society, responds to the conditions prevailing in that period. Ancient society in the central part of China, from before the Qin through the Ming Dynasty, responded to the pressing need for secure defence by building this fortification. Now it is no longer needed. Today China is responding to the modern challenge by honoring and preserving its history, symbolized by the Great Wall, when it is steadily going forward to build a new society for the future.

[3] Zeng Zhaoming and Gu Wei, *An Investigation on the Present Condition of the Great Wall in the Beijing District*, Remote-sensing Centre of the Ministry of Geology and Mining, 1985.

Chapter 8
Ancient City Ruins in the Deserts of the Inner Mongolia Autonomous Region of China

During the first century B.C. the Chinese built cities along the Hexi Corridor to protect the ancient Silk Road from raids by Huns. A Hun ruler reciprocated by founding his own city and later Chinese dynasties repeated the process. Urban populations were fed by cultivating oases and by harnessing melt-water streams to irrigate and reclaim areas of grassland. Where trees fell and cultivation broke surface layers of alluvium and clay, water and wind began to erode and expose underlying beds of sand. Blowing sand encroached upon the cultivated area and eventually drifted across the ruins of former cities. Sites of cities that once housed tens of thousands of people are now being explored scientifically. Research into the recurrent history of desertification throws light on present-day problems faced by one-sixth of the world's population living in arid regions and by one-third of the earth's land surface covered by deserts. By learning from past events we may be able to halt future advances of deserts.

The scenes of my lecture are extremely dreary places, age-old ruins buried, or partly buried, by blown sand for centuries. Nevertheless, these long-forgotten ancient cities have a prosperous past behind them: some have enjoyed great fame in history, others have been visited by travellers of world renown. Now, in today's New China, my young colleagues and I have penetrated into the deserts to investigate these ruins of ancient cities, not to indulge in nostalgic contemplations of the past, nor to revel in the vanished splendours of bygone days. We look back on the past for one purpose only: to make out why such a region that once flourished in history should have turned into a desert. To clarify this point is a matter of great moment. It is for the purpose of creating a better future that we endeavour to understand the past.[1]

At the invitation of American Council for International Exchange of Scholar, the author visited University of Illinois at Urbana-Champaign as a Fulbright Scholar in Residence. In 9 Dec, the author gave the speech named "Outstanding Ancient City Ruins in the Deserts of the Inner Mongolia Autonomous Region of China"; in 1985, the English version was published in *Journal of Historical Geography*, vol. 11, no. 3, pp. 241–252.—Editor's note.

[1] A review of major areas of research and recent progress in historical geography in China has been published by the author in English in *Geography in China* (Beijing: Science Press, 1984, pp. 133–146).

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8.1 Building Cities on the Silk Road

Let us first of all look back on the prosperous stage of this area and start from the world-famous epoch of the Silk Road. As is well known, the historic Silk Road was a most important trade route which spanned the hinterlands of Asia. Its main line started at the east end, from Chang-an, the greatest political centre of ancient China and predecessor of the present Xi-an, and passed in a northwesterly direction through the Gansu (or Hexi) Corridor where it forked into two routes at Dunhuang, the ancient city which is well known to the world for the art treasures in its caves. These two routes stretched along the southern and northern borders of the Taklamakan Desert in the south part of China's Xinjiang Uygur Autonomous Region. They joined together again at the present Meru in Turkmen Soviet Socialist Republic. Then a single road went on westward to the shores of the Mediterranean Sea where finally it reached the dominions of Rome.

The part of the Silk Road in China was first opened up during the reign of Emperor Wu in the Han Dynasty (140–87 B.C.) when Chang-an was made the capital. Besides being the political centre of the Han Dynasty, Chang-an was also the greatest economic and cultural centre. The Silk Road, with Chang-an as its starting point, was subject to attacks by the Huns from the Mongolian Plateau in the north, at the narrow strip of the Gansu Corridor which was about 1,000 km in length and varying from 10 to 100 km in width. This narrow belt was called the Gansu Corridor because it was situated in Gansu Province; it was also called the Hexi Corridor because it was situated in the westernmost upper reaches of the Yellow River (Fig. 8.1).[2] It ran along the northern foot of the Qilian Mountains at an average elevation of 1,500 m.

The highlands of Qilian were on the northeastern border of the high Tibetan Plateau, the so-called "roof of the world" with an elevation of 4,000 m in the eastern part, gradually rising to 5,000 m and more in the west. The mountain tops were covered with snow all the year round and when snow melted, small patches of oases were formed at the foot of the mountains; and it was through these oases that the Silk Road was directed. To the north lay the boundless Gobi and the desert. The narrow belt through which the Silk Road passed ran between the mountains and the desert, hence the name "corridor".

This corridor formed part of the arid area in west China, receiving an average annual rainfall below 100 mm in most places and lower than 50 mm in its western part. Fortunately, patches of oases scattered here and there were richly endowed with water and grass. The area was then occupied by Huns, a nomadic tribe in the north, who still remained in an uncivilized state and presented a serious threat to the Han Dynasty.

During the reign of Emperor Wu in the Han Dynasty, China, being a powerful country with a flourishing agriculture, industry and commerce as well as increased

[2] The help of Mr. Alick Newman at University College London in redrawing the maps is gratefully acknowledged.

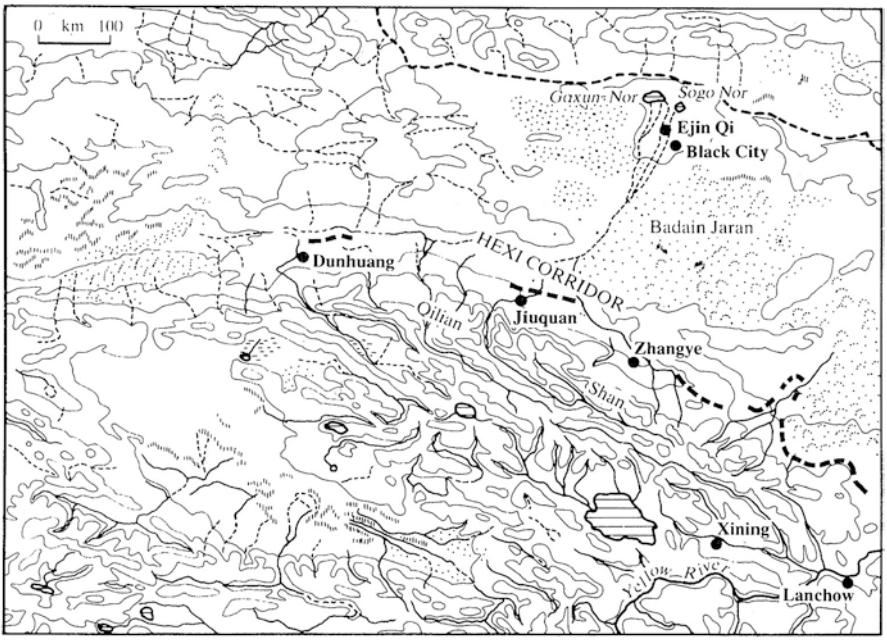

Fig. 8.1 The physical features of the Hexi Corridor

revenues, was anxious to carry on trade with the world outside. In the decade after 129 B.C. she repeatedly dispatched troops on punitive expeditions against the Huns who fled to the north of the desert. As a result, the Han Dynasty took possession of vast tracts of land in the Hexi Corridor and opened up a trade route leading from Chang-an right to central Asia and Europe, thus bringing an era of prosperity to the Silk Road.

All the while, the Huns who had retreated to the north of the desert were still watching for an opportunity to return south. It was very easy for them to thrust into the middle of the corridor and cut off the Silk Road, for in the central part of the corridor the melted water running down from the north slope of the Qilian Mountains converged into a huge river called the Ruo-shui, now also bearing the name Ejin, which, rising approximately from 40°N latitude, flows north by east and crosses the space between the desert and the Gobi over a span of about 300 km, and finally empties itself by two different channels into Lake Sogo Nor and Lake Gaxun Nor where the elevation drops to 820 m or so. Thenceforward, the terrain gradually rises again towards the north.

This is the present pattern of surface drainage, but it was not so more than 2,000 years ago when water in the lower reaches of the Ruo-shui emptied itself into a vast lake called Ju-yan situated further to the southeast of the above-mentioned lakes (Fig. 8.2). The climate at that time was also arid enough, but the Ruo-shui River, running by different channels before it emptied itself into the lake, moistened the land along the way and formed a delta area abounding in water and grass, with

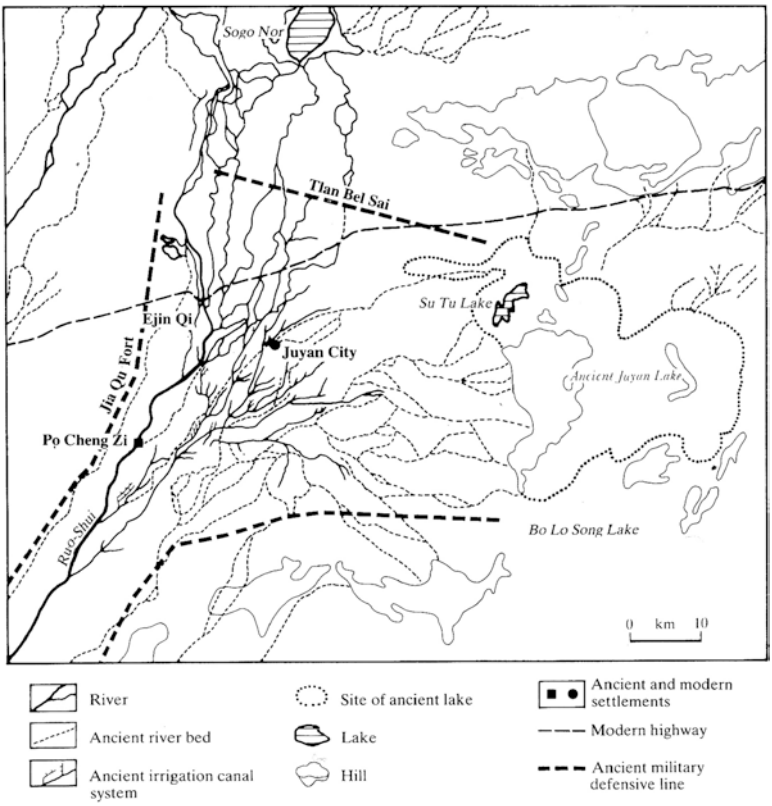

Fig. 8.2 The ancient delta of the Ruo-shui

dense and luxuriant groves of Euphrates poplars covering its banks. On the way southward, the Huns found it very convenient to assemble at the delta before pushing forward along the Ruo-shui. It provided them with a most ideal route to cross the Gobi and the desert which stretched over hundreds of kilometres from east to west, but it exposed the Silk Road to an extremely serious threat.

To protect the Silk Road, the Han Dynasty had to enclose the banks of the Ruo-shui and the delta of Lake Ju-yan within their military defence line. By stationing garrison troops in the delta, they opened up an important area for reclamation and developed agricultural irrigation. At that time, the Ruo-shui settlement area was mainly composed of the middle and lower parts of the delta and in the year 102 B.C. the famous Ju-yan City was built at the centre of the area. But if you go there today, you will see that everything has changed. What meets your eyes is a vast stretch of sand dunes. With the help of a local guide we were able to penetrate into this area five and a half years ago. We saw nothing but ruins of castles, beacon towers, houses, abandoned fields and irrigation ditches, broken earthenware, wells choked with sand, slightly worn millstones, antique coins, arrowheads and many other artefacts. The ancient Ju-yan Lake had shrunk to a small lake. Amidst the deep sand to the

south-west of this little lake, we found the ruins of an ancient city bordering dried up river beds both on the east and south sides. Inside the ruined city walls, the surface was scattered with Chinese tamarisks and sand-sage. Judging from the ruins, we conjectured that it was a city of considerable size and tentatively inferred that it was the site of the city of Ju-yan.

The city of Ju-yan, associated with an irrigated agriculture that flourished in the Han Dynasty, is now yielding a harvest of an entirely different kind. During the last few decades, excavation has brought to light great quantities of historical relics, which are called by archaeologists "the Ju-yan slips of the Han Dynasty". The Han slips discovered here were not made of bamboo as in south China but of wood, on which were recorded documents and archives referring to the Ju-yan area during the Han Dynasty. They were strung together with cords and meant for preservation. More than 30,000 Han slips excavated in this area have been given the name "Ju-yan". Still more are being dug out to add to the growing collection of historical data, rich and detailed in content. It is no exaggeration to call it a bountiful harvest.

Ruins of another ancient city lie some 15 km south by west of the ruins which we have inferred to be the site of the city of Ju-yan. This is the famous Black City, much frequented and more than once excavated by native and foreign investigators. Way back in 1934 when I was a young college student, I read an article in the February issue of the same year's British magazine *The Listener*, written by the distinguished Swedish geographer and explorer Sven Hedin, entitled "The 'Black City' of the Gobi Desert". It immediately attracted my youthful interest, but it was not until 50 years later that I was lucky enough to have a chance to visit the scene and see for myself the ruins of the ancient city. Although quite close to Ju-yan, the Black City, completed in 1035 A.D., was constructed much later than the former. Some 950 years ago, it was a local administrative centre, with the attribute "Black Mountain" preceding the name of the administrative division. Later it was shortened to Black City; in the Mongolian language it is called Chara Choto, which bears the same meaning.

This area and the environs of the Hexi Corridor were under the rule of a local regime established by a national minority, known in Chinese history as the West Xia (1038–1227). The West Xia Dynasty was exterminated by the Mongols in 1227, the year when their illustrious chieftain Genghis Khan breathed his last. It was not until Kublai Khan, Genghis Khan's grandson, had unified China and established the Yuan Dynasty that the Black City resumed its position as administrative centre of the region, with a new name Yijinai. The Venetian traveller Marco Polo passed through here in 1272, and by a roundabout route through the Mongolian Plateau, he reached first the city of Shangdu, built by Kublai Khan and later the city of Dadu, predecessor of the present Beijing. Yijinai is now written in Chinese characters as Ejin, whereas in Marco Polo's Travels it is Etsina. Marco Polo stated that he had to acquire stocks of food for forty days there before continuing his journey, which shows that the neighbourhood of the Black City was still an agricultural area at that time.

To reach the Black City today, one has to cross a desolate and unpopulated desert, only a little easier than to approach the ancient city of Ju-yan. The walls of the Black City still stand lofty and magnificent in the desert today. They look as if they were square, but actually the south wall is 425 m long, 15 m longer than the north wall; and the east wall is 405 m long, 48 m longer than the west wall. On the city walls, we saw stones that had been used as projectiles in ancient times, still piled there as if the garrison had been preparing for a defensive battle. The strange thing is that historically the city was actually taken after a fierce battle. But the stones have remained undisturbed on the city walls ever since, suggesting that the city may have been abandoned as soon as the battle was over. That decisive battle took place in the late 1360s when the emergent Ming Dynasty, having captured Dadu and exterminated the Yuan Dynasty, dispatched a contingent of troops to take the Black City in their advance westward. They stormed into the city and reduced its buildings to ashes. When the expedition was finished, not only was the Black City abandoned, but the middle and lower reaches of the Ruo-shui River were separated from the Hexi Corridor by the newly-built Great Wall. The Ming Dynasty concentrated the energy exclusively on developing the Corridor. The ancient Ju-yan area, protected by an earlier Great Wall, was now given up as "beyond the frontier" and no further effort was spent on its development.

From our investigations, we are of the opinion that the area reclaimed during the Han Dynasty, with the city of Ju-yan at its core, consisted mainly of the middle and lower parts of the ancient Ruo-shui delta. Reclamation by the West Xia and Yuan Dynasties, with the Black City at its core, shifted to the upper middle part of the same delta. Certain places were reclaimed on the basis of work done in the Han period; in fact, the Black City itself may have been built upon the ruins of a Han castle. From the Han Dynasty down to the West Xia and Yuan Dynasties, the southward shift of the reclamation area was directly related to the drying up of waterways in the delta area. This, however, is a subject undergoing further investigation.

8.2 Land Reclamation and Desertification

The ancient Ju-yan area is an outstanding example of desertification occurring in historic times, but many other places in west Inner Mongolia Autonomous Region have suffered a similar fate. During the early years of the Han Dynasty when the Ju-yan area was first reclaimed, another area of importance was also being reclaimed on the south prairie west of the Yin Mountains. Although the average annual rainfall here was higher than in the ancient Ju-yan area, it nevertheless turned into a desert in the end. This area is situated in the north of the present Ulanbuhe Desert. In Mongolian, "ulan" means "red" and "buhe" means "bull", the whole phrase signifying that the scourge of the wind and sand is like an unruly bull. The north part of the Ulanbuhe Desert was originally an alluvial plain formed by the Yellow River, flowing in ancient times north along the west side of the Ordos Plateau, heading straight for the foot of the Yin Mountains (Fig. 8.3). There it turned east and formed the first

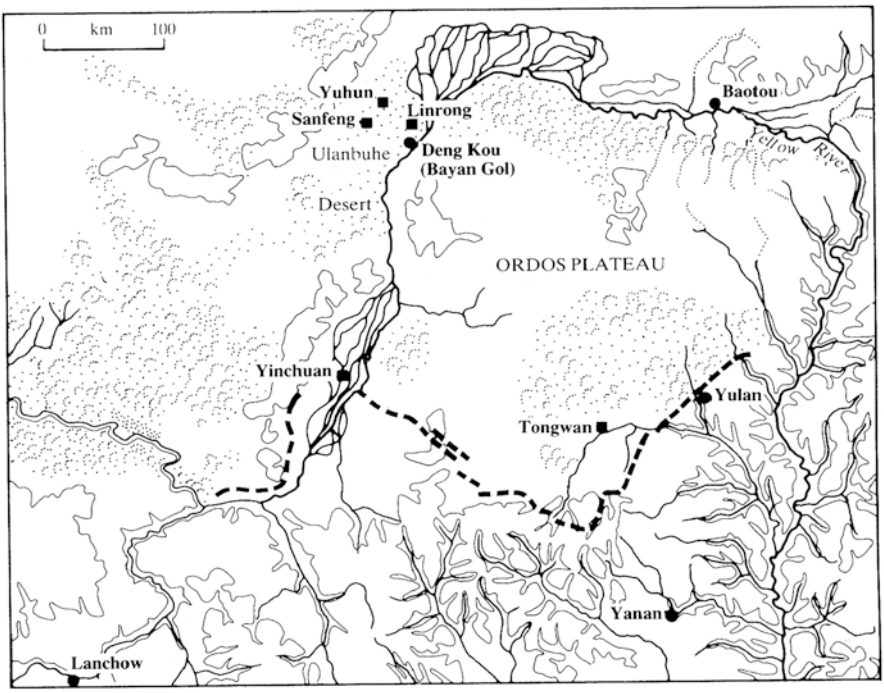

Fig. 8.3 Ordos Plateau and adjacent areas

abrupt turn at the Bend of the Yellow River. As early as the late Pleistocene epoch, the river bed had begun to move eastward long before reaching the Bend. This movement still continues gradually to the present day. During the process of eastward turning, water from the Yellow River frequently overflowed into a lake occupying the deserted old river bed, and occasionally flooded surrounding low-lying country. More than 2,000 years ago, when the Han Dynasty first began to open up this area, a long narrow lake ran from east to west at the foot of the Yin Mountains. It was called Tusheng Lake. During the Han Dynasty land was reclaimed on the alluvial plain to the south of this lake. People were moved here to settle on the land and military fortresses were established to defend the new settlements against invasion and plunder by Huns from the north. During this period, hordes of settlers moved from the hinterlands to the banks of the Yellow River near the southern edge of the Yin Mountains, including the northern part of the present Ulanbuhe Desert and the Ordos Plateau. In 127 B.C. alone no fewer than 100,000 people moved here. The western part of the Yin Mountains and the plains south of Tusheng Lake were particularly important as areas for new settlements. A broad and smooth mountain path to the north-west of Tusheng Lake passed through the gorge of the Yin Mountains and afforded an important pass leading to Hun territory beyond the mountains. To defend the southern entrance to this pass, a small stone fort was built on the steep slope to its west. This fort, the renowned Cock and Deer Fort, has been preserved to this day.

Close to the south-west shore of Tusheng Lake, some 20 km to the south-east of the Cock and Deer Fort, a large city called Yuhun was the city westernmost on the frontier built by the Han Dynasty in this area (Fig. 8.4). It was a place of strategic importance commanding the gorge of the fort, but it was soon reduced to ruins.

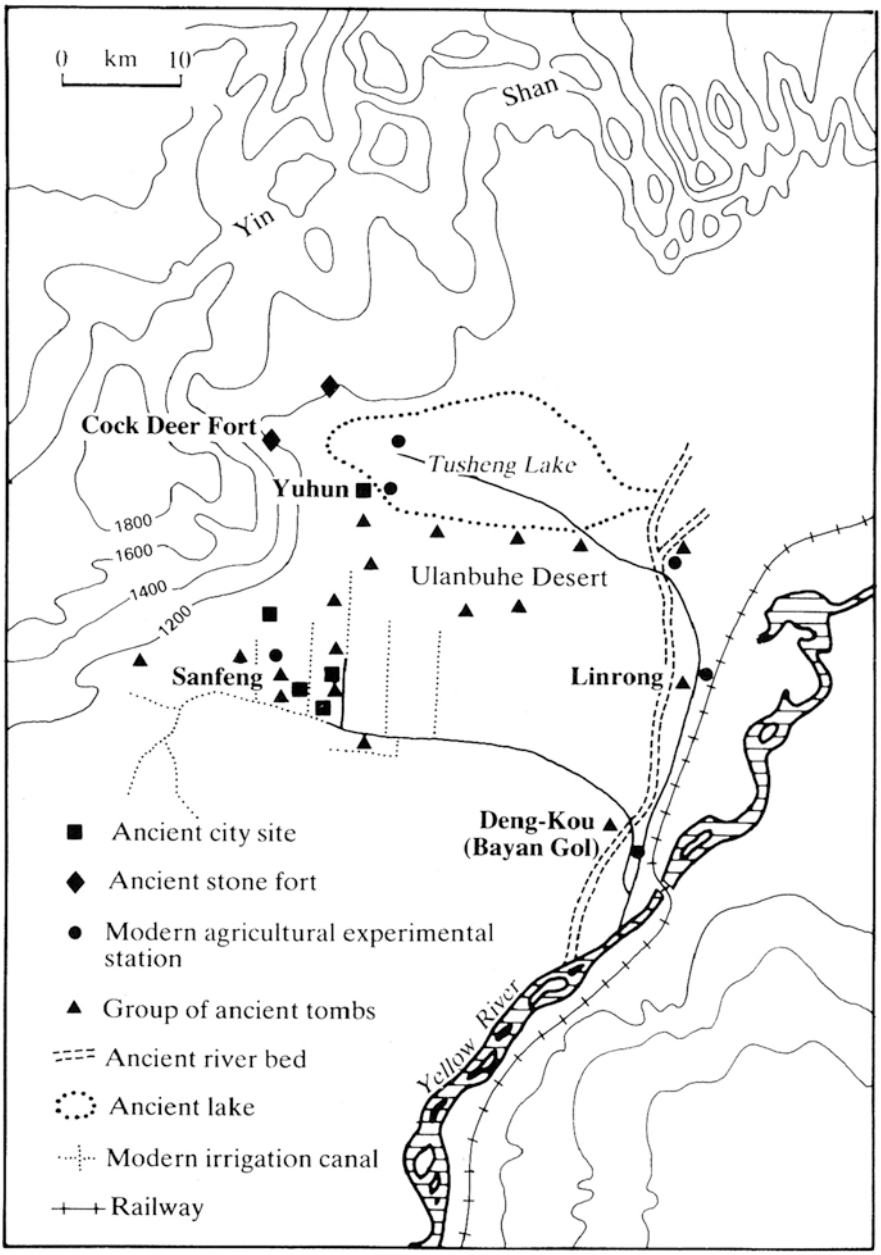

Fig. 8.4 Sites of ancient cities in the northern Ulanbuhe Desert

Remains of city walls are still discernible and sites of blacksmiths' workshops in the city may be identified by fragments of scrap iron, bronze arrowheads and heaps of debris scattered all over the place. Some local shepherds we met told us that there was a huge pit filled with skeletons outside the city, marking the site of an ancient battlefield. Ruins of two other Han cities have been discovered. The first lies some 20 km to the south and the other some 30 km to the south-east of Yuhun. The former was called Sanfeng and the latter Linrong. The space between these two and Yuhun is dotted with groups of Han graves as well as ruins of hamlets and fields, discernible even to this day. As a result of peaceful co-existence between the Han Dynasty and the Huns, the last 50 years B.C. enjoyed an unprecedented spell of quiet and stability. During this period reclamation extended from the neighbourhoods of the three cities to the southern edge of the Yin Mountains. Historical records indicate that population increased, cows and horses flocked in the fields and that cities which had been securely guarded in the past now shut their gates at a very late hour. It really became a scene of prosperity and abundance.

What does it look like now? The Mongolian term "Ulanbuhe" aptly describes the present state of this area, a region devastated by moving sand. The process started long before modern times. In 981 A.D. a traveller named Wang Yan-de crossed the Yellow River at the Ordos Plateau, passed through here and journeyed westward to the Ju-yan area. He took detailed notes of living conditions in this district, recording: "No food crops ever grew here, except a kind of grass called Denshiang, the seeds of which are gathered for food". According to our investigation, Denshiang is what we now call *shami* (sand seeds or *Agriophyllum arenarium*), a kind of pioneering plant growing on sand dunes, the first that ever grew on them. The fact that sand seeds could be gathered for food shows that they grew in abundance and yielded large quantities of seeds. It may be inferred that a 1,000 years ago, this area was still in the early stages of blown sand encroachment and has been entirely desertified in the course of the present millennium.

Near the city of Yuhun, we saw wind-eroded pits of varying sizes, huge pits formed by intense wind erosion. In a natural section at the edge of a wind-eroded pit, we could identify clearly that a horizontally-deposited layer of clay, 70 mm thick, had under it nothing but fine sand. It is easy to see that when the surface layer was broken, the fine sand underneath was liable to be blown away by fierce north-west winds. This is the chief source of blown sand in this area. The thickness of the surface layer of clay we saw here varied from place to place, thicker in some places, thinner in others. It was not very difficult to reclaim land where the clay was thick, but where it was thin, if the primeval vegetation was removed and the surface exposed to wind erosion, the place was likely to turn into a sandy tract of its own accord. This is exactly what history has taught us.

8.3 The Settlement and Abandonment of Tongwan

Finally, please allow me to touch upon another ancient city in the desert. It is the biggest among the relict sites of ancient cities in the desert of western Inner Mongolia and the most remarkable in architectural engineering I have seen so far.

It was built in 413 A.D. as the capital of a short-lived minor Hun kingdom, but its builder, Helianbobo, gave it the extremely pretentious name Tongwan, which means "ruling over all nations". It must be pointed out that the year when the city of Tongwan was founded corresponds to the third year after the West Goths captured Rome and was nearly half a century before Anglo-Saxons entered Britain. It was recorded in history that Helianbobo conscripted 100,000 men to construct this enormous city and that in the operation, thousands of artisans were killed for failing to achieve the desired solidity. Up to the present, this great city, though long abandoned, has preserved a 24-m high watch-tower standing aloft amidst the rolling sand dunes, reflecting dazzling rays in a scorching sun. It was situated in the south of the Ordos Plateau, close to the north bank of a river called the Red Willow River (Hangliu River) which crossed the south-eastern corner of the Mowusu Desert, carrying vast amounts of sand and clay with it, turning the water turbid. Consequently, it was called the Salawusu River in Mongolian, meaning "yellow water" (Fig. 8.5). The Salawusu River is important in Chinese archaeology because an important late Paleolithic site was discovered here. The people who lived here some 50,000 years ago were called "men of the River Bend", because the site was near the Bend of the Yellow River.

Although deeply buried in the desert, the city of Tongwan has been investigated before, but earlier investigations have been satisfied either with mere descriptions of the ruins or with reporting the discovery of relics. No one appears to have been interested in pursuing inquiries into the relationship between the development of the

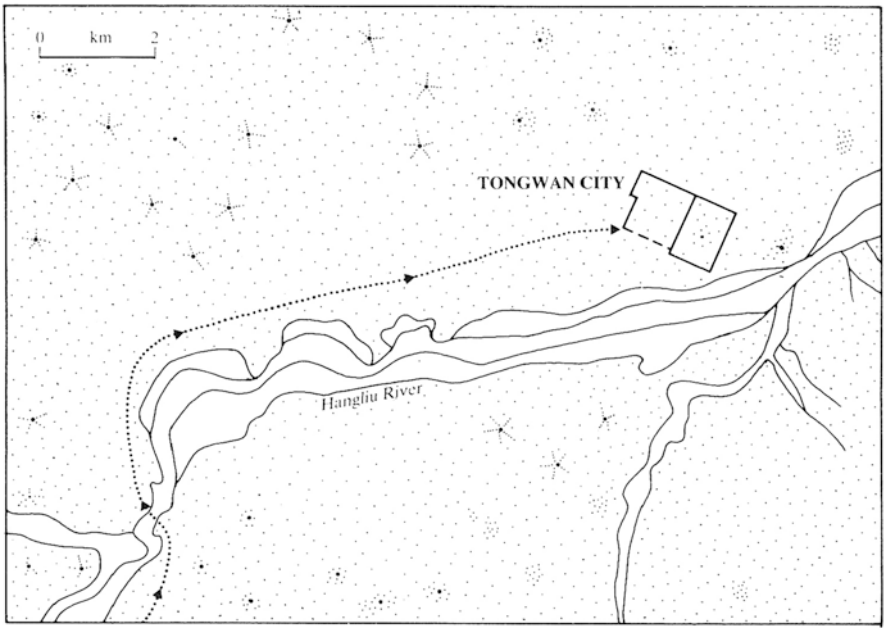

Fig. 8.5 The site of the ancient city of Tongwan

city and changes in the local environment. In the first instance, was this place a desert when Helianbobo chose the site? How could he have built his capital in a desert? If it was not a desert at the time, when did it turn into one? Where has all that rolling sand come from? As historical geographers, my young colleagues and I visited the historically renowned city of Tongwan with the aim of solving these problems. The visit has left deep impressions on my mind.

It was a summer morning in 1983, the sun had not yet shown its full might. The weather was fine, the sky clear and cloudless. We set out on foot with excitement from our encampment by the Red Willow River towards the city of Tongwan which lay 10 km away. What a splendid tri-coloured picture presented itself to our eyes! Overhead was a spacious, blue sky, arching over the rolling sand which looked like turbulent waves of a vast sea. Suddenly, in the distance between the blue sky and the yellow sand emerged something which looked like an enormous white sail on an ancient seagoing vessel. "Look, the White City!" someone cried out. The White City was the name given to Tongwan by shepherds in the neighbourhood. It is a more appropriate name than the latter, because its lofty walls actually shine with dazzling white rays in the sun. On the instant of seeing it, I was affected with an unforgettable poetic sensation, feeling as if I were facing a huge landscape painting. But what is of greater significance is the clear and unequivocal thread it supplies to our investigation of changes in the environment in this area. If it were not for the tall ancient city towering there, people would be inclined to believe that it had been an unpopulated desert from time immemorial. But no, that is not the case. The city of Tongwan was certainly not built in a desert in the beginning. This place was not a desert, but a vast prairie, richly endowed with water and grass.

In the days of Helianbobo, China was in a state of chaos, rent into separate little kingdoms by many contending forces. Besides the Jin Dynasty established by the Han nationality, 15 minor kingdoms had been set up by national minorities, rising to power one after another. Helianbobo rose on the Ordos Plateau and founded a small kingdom called Xia, occupying the whole plateau and surrounding grasslands. He once stormed into Chang-an. His courtiers advised him to make it his capital, but he insisted on returning to the Ordos Plateau and personally chose a site to build his future capital, Tongwan. It was recorded in a chronicle that when the construction of the city was about to begin, he appeared on the scene himself and mounting a high spot nearby, looked about him and declared with pride: "Among the innumerable places I have seen between the north of the Horse Mountain and the south of the Yellow River, there is no country like this, which is surrounded by vast stretches of grassland and a limpid river". Here, "north of the Horse Mountain" refers to an area on the loess plateau north of the present Liupan Mountain, "south of the Yellow River" refers to an area at the southern edge of the Yin Mountains, "the limpid river" refers to today's Red Willow River, noted for its turbid waters, and "vast stretches of grassland" refer to the present Mowusu Desert.

Unlike the delta area where the ancient city of Ju-yan stood and the alluvial plain near the city of Yuhun, both arid regions receiving very little rainfall, the city of Tongwan enjoyed quite good natural conditions, with an average annual rainfall of nearly 100 mm and plentiful water sources. Why, then, has it also turned into a

desert? The city of Tongwan was the largest among the sites of ancient ruined cities partly buried in the sand of the Ordos Plateau. Around it are many other sand-buried ruins of smaller castles and hamlets. It is note-worthy that these relics of ancient settlement were distributed in the desert in such a way that they seemed to move from the north-west towards the south-east in accordance with a progressive sequence through time. For example, the ruins of the Han Dynasty, 2,000 years ago, extended to the furthest limit of the north-western frontier. Moving backward a little to the south-east, are ruins mostly of the Tang and Song Dynasties, hundreds or even a 1,000 years later than the Han Dynasty. Ruins from the Ming and Qing Dynasties of the last 300–400 years, are distributed mostly along the innermost south-eastern border of the desert area. This distinctive pattern of distribution is not only closely related to the growth and decline of the power of the Chinese dynasties but also is directly connected with the chronological order of desertification in these areas: the inevitable consequence of unreasonable utilization of land, caused primarily by the reclamation of places unfit for agriculture and secondly by excessive firewood cutting and pasturing. Details of that process await further examination and study.

In short, the Ordos Plateau is one of the most remarkable examples of desertification in Chinese history. The main reason for its desertification lies not in changes of climate or other natural elements but in the activities of man. The area of such "desertified land" accounts for only 9.2 % of the total area of deserts in north China, occupying 1,095,000 km^2 or 11.4 % of the total area of China's territory. The percentage is small, but the cause of desertification is highly significant.

Now in the world, especially in developing countries, desertification remains a serious problem. Deserts and desertified land occupy one-third of the earth's surface and nearly one-sixth of the world's population live in such areas. For this reason, ways of preventing and curing desertification, as important measures of environmental protection, have become questions of world-wide and outstanding interest in the sphere of desert studies today. Some of the circumstances concerning desertification which developing countries are confronting at present, have repeatedly occurred in our history. To sum up this process scientifically is a task, we may say, of definite relevance to our present and future welfare. In our opinion, it is a task all historical geographers should participate in. I believe the historical geographers of my country will strive to make contributions to this cause which calls for international cooperation.

Chapter 9
I Come from Yenching University

9.1 Interaction Between the Cultures of East and West and the Trend of the Times

When I came as a first-year freshman to Yenching University, it was the autumn of 1932. At that time almost 10 years had passed since construction along a set lay-out had started of the university campus, and it was almost reaching completion.

On the campus the scenery everywhere was very beautiful, overflowing with an ever thriving vitality. This first impression the university had on me when I just arrived, has never left me. Therefore, I will now write down from memory how the very construction of the campus has influenced me. I will discuss this from the following aspects:

1. The campus with its beautiful scenery and classical Chinese architecture.
2. The probe into the campus' history and research on traditional culture.

The recently constructed Yenching University had chosen the north-western outskirts of Peking as its campus location, an area famous historically for its gardens. The main gate faced west, facing in the distance Xishan, the Western Mountains. Inside the main gate one crossed a large marble bridge spanning a pool clear as a mirror, and reached the teaching centre. Large buildings in classical Chinese architectural style stood on three sides, with in the centre a wide space with luscious green grass. From the teaching centre one drifted into the campus' hinterland with its winding hills and dense foliage. The main road rose and fell unobstructed by anything ahead, only small footpaths joining it. But suddenly, after going through a section of hills, the ripples of a vast lake stretched out in front, exceeding all one's expectations. The glint of the water had the colour of the sky, the field of vision was

This is the speech given by the author at the Symposium on the Experience of Peking University and Higher Education in China at Claremont McKenna College in 1996.—Editor's note.

R. Hou, *Symposium on Chinese Historical Geography*,
China Academic Library, DOI 10.1007/978-3-662-45272-1_9

open and wide: it was the magnificent Lake Without a Name. A small island adorned the centre of the lake, adding to the boundless view. The buildings of the men's dormitories were lined up one by one on the northern shore of the lake. Tucked away behind hills and a dense forest on the southern shore of the lake was the women's dormitories, in the traditional courtyard style. From the first day of entering the university I was captured by the natural scenery of the campus. I came to know only afterwards that here used to be a famous garden called Shuchun Yuan, the "Garden of the Fair Spring", closely connected to the Qing imperial court 200 years ago. The streams filling the rivers and lakes of the garden came from the adjoining Shaoyuan, a famous garden 300 years ago in the Ming dynasty already renowned for its streams. When Yenching University opened up its campus in 1921 however, the structures of these two historic gardens had already disappeared without a trace. Yenching University used exactly the spot of these two famous gardens, and after adopting special designs and using the conditions of the natural environment to the full, a very special university campus was built. Even more important, however, was that for the buildings on the campus classical Chinese architectural forms were used, creating an even closer harmony between historical traditions and modern needs.

Furthermore, it has to be pointed out that the principal lay-out of the campus was carried out under the guidance of the American architect Henry K. Murphy, which proved it was in fact a new creation completed under the influence of the cultural exchange between East and West, representing the trend of the times rather well.[1]

At the Yenching University campus there were several other equally picturesque buildings, like a small bell pavilion on a hill under a pine tree, the "Overlooking the Water Cottage" (Linhu Xuan) on the lakeside, the small "Contemplating Merit Pavilion" (Siyi Ting) on the lake's island, and the "Broad Elegant Pagoda" (Boya Ta) towering over the shore, structures which were all rather spectacular. The expression "glimmering lake reflecting pagoda" became the famed proverbial portrayal of the campus' scenery. The Boya pagoda and the Siyi pavilion are well worth talking about in more detail.

The name of the Boya pagoda had much to do with the American professor at that time at the Philosophy Department of Yenching University, Bo Chenguang or Lucius C. Porter. He was influenced deeply by traditional Chinese culture and had been working at the Peking office of the Harvard-Yenching Studies Institute. More importantly, his elders had done a great deal to develop Tongzhou Union University, one of the predecessors to Yenching University. When Yenching University started constructing a water-pagoda to add to the streams inside the campus, in order to commemorate these historical origins, the shape of the famous pagoda of Tongzhou, the Randeng pagoda ("Sparkling Lamp Pagoda") was adopted, and the name Boya pagoda was chosen. "BO" refers to the first character in Porter's Chinese name, and "YA" implicates an "elegant scholar". In English the pagoda is simply called "Porter's Pagoda".

[1] Jeffrey William Cody, Henry K. Murphy, *An American Architect in China*, Chapter 5 "Old Wine in a New Bottle: Yenching University, 1918–1927." A Dissertation of Cornell University for the Degree of Doctor of Philosophy, Cornell University, 1989.

The name of the Siyi pavilion has an even more commemorative meaning than the Boya Pagoda's. The "SI" in the name is a diminutive form of "Luce", while "YI" has the meaning of "a magnanimous act undertaken for the public good". In English it is called "Luce Pavilion". It is in commemoration of Henry W. Luce, the first vice-president of Yenching University, who did so much to raise funds to set up Yenching University.[2]

I feel very privileged in arriving at Yenching in the period it had just been completed and being captured by the beauty of its surroundings; I was even more inspired by Professor William Hung's research at that time on the campus' history, which even influenced the direction of my later research.

In the very first beginning, when I had only just enrolled in the university, Professor William Hung's main work on the research of Shaoyuan, "On the Painting and Records of Shaoyuan", had been published smartly by the Yinde Compilation Office of Yenching University Press (the foreword was written on 29 October, 1932). The photo reprint in this book of the hand-drawn "Friends Gathering at Shaoyuan" by the prominent calligrapher Mi Wanzhong, the owner of the garden, drawn in the 45th year of Wanli of the Ming dynasty (1617 AD), makes the scene of 300 years ago appear vividly before one's eyes. It is said that when Yenching University was established, Professor William Hung had learned from archives that this scroll was still around somewhere, and after painstaking searches he was finally able to purchase it for the Yenching University Library. After the publication of the photo reprint, Professor Hung obtained a poetry text from the late Ming concerning Mi Wanzhong and a description of the lay-out of Shaoyuan, which enabled him furthermore to verify the ancient site of Shaoyuan and its geographical position. At the end of the scroll was added a map of the rivers, lakes and other waterways of the campus and its surroundings, which was extremely valid for reference. Also included was a record stating that the English envoy Lord George Macartney stayed temporarily at the ancient site of Shaoyuan when coming to the Qing court during the reign of the Qianlong emperor.

Thereafter, Hung wrote in English about his research on the Shuchun Yuan, in which he covered important historical circumstances of most of the places inside the Yenching University campus. Furthermore, he gave his special report in English at the "university lecture", which was very well received by both teachers and students.[3]

This historical research by Professor Hung led me to start an actual investigation in the area of the historically famous gardens in the western suburbs of Peking, then extending it to the research of the development of the whole Peking area.

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[2] Reference: Hou Renzhi, *Anecdotes about Yanyuan* (in Chinese, 《燕园史话》), Beijing: Peking University Press, 1988, pp. 74–75.

Susan Chan Egan, *A Latter-day Confucian, Reminiscences of William Hung*, Cambridge: Harvard University, 1987, pp. 81–85.

[3] Recently, with the aid of some newly discovered finds and new investigations in historical geography, I wrote, with William Hung's research as base, the paper "On Mi Wanzhong's 'Map of the Rebuilt Shaoyuan'", published in 1993 in vol. 1 of *Guoxue Yanjiu* (National Studies) "by the Research Centre of Traditional Chinese Culture of Peking University."

When teaching students in class, Professor Hung was original and demanding, which made me benefit even more from his wisdom. For example, when I was only a second-year student, I attended his class about "Methods on Elementary Historiography". One of the important things was the exercise in writing scientific papers, in which his requirements were very specific. For example, one had to get hold of first-hand material, to annotate the sources of the material, to have new insights or new explanations, and then to write one's paper following a standard form. Only half the time of the term was used for teaching. After that, every student was given a certain topic and asked to go to the library to find material, write everything down on cards divided by subject, and start to sort out the research. The paper for that term made up the academic record. The topic handed out to me at that time was "Who was the most fervent book collector in history?" After browsing through the materials in the library, I found three scholars fit for the description, and I started comparative research on the materials I had found. In class I made oral reports to Professor Hung, and finally I chose one scholar from the Ming Dynasty, and wrote my "term paper": "The most fervent book collector Hu Yinlin". As a result, I was given a remark by Professor Hung in two black characters, written with a calligraphy brush: "Very Fine". This made me feel immensely encouraged, and I kept his calligraphy. Now 62 years have passed, and even though every side of life has changed, I have kept it until today, because it is the first lesson on academic training I had from Yenching University.

Professor Hung's guidance was not only confined to the classroom, he deliberately created some opportunities for me outside the classes, which gave me an even broader job training. This was even more the case when I became his research student. For example, Professor Alice Boring, Dean of the Pre-medical Department of the university, invited me to make a report in English for PAUW on the subject "geographical Peking". The full name of this organisation is Peking Association of University Women, and its members, most of them being graduates of American universities, were naturally good at speaking English. However, as I had never written a lecture in English before, I was of course a bit shy and tried desperately to refuse. Only then professor Boring told me straight on the spot that she had originally invited Professor Hung to talk on historical Peking, but he had insisted on recommending me to talk on geographical Peking. After this information I went to see Professor Hung immediately to explain my English was not sufficient to give a talk in public, and to ask him to replace me by somebody else. Professor Hung pointed very solemnly to me and said, "Well, this is an excellent opportunity for you to practise, is it not?" He insisted on me writing out the speech and practising it on him beforehand, before going to the association to do the report. This was a deliberate training for me, and I could not but go along.

Professor Hung had noticed at a very early stage that my academic interest had turned from history to historical geography, so he deliberately arranged for me to go abroad for advanced studies, to get an even better training in the theory of the field. One afternoon in the autumn of 1938, I was summoned to go to Professor Hung's study at his home, and the first thing he said to me was "there is no school exceeding a master, and there is no master exceeding a famous master". He paused for a while,

and then explained, "Harvard is a famous university, but they don't have a department of geography there. The University of Liverpool in England is of course not as famous as Harvard, but they have a famous professor in geography who has also a great knowledge of the geography of China, Professor Percy Maude Roxby. After research by our school it has been decided to send you there next autumn to advance on your historical geography." Professor Hung had close ties with the Harvard-Yenching Institute, and had always sent research students from Yenching's graduate school of history to Harvard for further study, but because of my special interest, he recommended me to go to the University of Liverpool to specialise in historical geography. The following year war broke out in Europe, and I couldn't go. When after the great war had ended I was finally able to go to the University of Liverpool, Professor Roxby had retired, but his successor, Sir Clifford Darby, influenced me deeply. The theories and methods on historical geography initiated by him were introduced by me in China for the first time, and I made my own contribution to the development in the field of Chinese historical geography. When talking now about these matters, I cannot but think of the opportunity Yenching University gave me in the first place.

Just now I have given a few examples of how William Hung guided and trained me, but it was not only Professor Hung who let me share in his knowledge in my years of study at Yenching. There were two other full-time professors at the Department of History: Gu Jiegang and Deng Zhicheng. Both of them were renowned historians, although they were not as good at English as William Hung, who had a thorough knowledge of both Chinese and Western topics. If William Hung's appointment as professor at Yenching had a historical origin, for he was a Christian convert and had close ties to the founding of Yenching, it needs to be pointed out that Gu Jiegang and Deng Zhicheng were not Christian converts nor proficient in English, but because the two of them had made special contributions to the world of Chinese historiography, they were employed by Yenching University. Professor Deng Zhicheng guided me in my research on Chinese historical treatises, and Professor Gu Jiegang deepened my interest in researching Peking's historical geography (I will talk about that later in more detail). Just like Professor Hung, Professor Gu Jiegang had been employed at the Harvard-Yenching Institute's Peking office, where William Hung even had been in charge. I should add that with financial help of the Harvard-Yenching Institute the magazine *Yanjing Xuebao* was edited and published at Yenching, recognised in China and abroad to be one of the leading academic journals on the research of Chinese literature, history and philosophy. Also, there were the publications in volumes of the Yinde collection, about traditional Chinese books and records, esteemed equally in the academic worlds of both China and the West as the *Yanjing Xuebao*. Professor William Hung contributed enormously to the establishing and printing of the Yinde collection. It has to be added here that although after the merging of Yenching University and Peking University in 1952 the above mentioned publications came to a halt, reprints continued to be in circulation. More significantly, the Alumni of Yenching University in Peking and the Second Campus of Peking University started co-operating in 1993 and established the Yanjing Graduate Institute, in order to continue and expand the

spirit and stamina of Yenching. At the same time, the academic efforts of mainly the Alumni of Yenching University were bundled to re-edit and republish *Yanjing Xuebao*, of which the first "New Issue no. 1" was published in August 1995. Moreover, there are plans in progress for continued compilation of the Yinde collection.

It has to be added here that after Yenching University merged with Peking University in 1952 the campus expanded greatly, but the original campus of Yenching University has been fully preserved, the glimmering lake and pagoda reflected thereon are just like in the old days. In 1990, the Municipal Government of Peking decided to have the area around the "Lake Without Name" of the original Yenching campus site put on the municipal cultural heritage list, and had this engraved on a stele to be remembered forever.

9.2 The Tradition of Patriotism and the Spirit of Devotion

The campus of Yenching University was as pretty as a Chinese landscape painting, but this didn't mean it was a small paradise closed off from the outer world. It was built on the ancient sites of gardens of former times, but the fate of the whole country was still in the midst of restless movement. The first couple of years after the school was set up, the Peking government was controlled continuously by warlords who strived for power by selling out their country, and bureaucracy. The successive national governments in Nanking were facing against Japanese and other foreign aggressions.

It was at this time that the Japanese aggressors staged the "Mukden Incident" of 18 September 1931, to occupy the three provinces in China's Northeast, and the resistance movement against Japan to save the country, initiated by the Chinese people in all kinds of ways, started to develop from this point in time.

The situation as described above was the historical background for my enrollment at Yenching University as a freshman in 1932. At that time, because the Chinese government had moved south, Peking was renamed Beiping, "northern peace", and after Mukden Incident it came day by day closer to the nation's defence front lines.

One day, not long after I became a student, I was strolling on the campus and arrived at the area close to the library full of hills and streams, when suddenly a stone stele, straight as a brush, appeared in front of me, upon which from the top down in large characters one line was inscribed:

MEMORIAL STELE TO LADY WEI SHIYI

Followed by an inscription stating lady Wei Shiyi's life story and a short commemorative text. The last three lines, in small characters, stated the persons who erected the stele and the date it had been put up:

> Erected in honour by all members of the men's and women's student unions of Yenching University, together with the student union of the Yenching high school for girls, in the 16th Year of the Republic.

So this was the stele erected on the campus to remember the second-year female student Wei Shiyi, who only 1 year before the erection (1926 in fact) on March 18, as a member of the Peking young student patriotism movement, had been killed by the Warlord Regime. This massacre in Peking where so many people were killed and which shocked the whole nation was known as "the March 18 Massacre". My high school was far from Peking when this massacre took place, but I was deeply influenced by the student movement of that time. After coming to Yenching I hadn't expected to experience the profound lesson of that patriotic student movement once again, a lesson which was expressed so well in the inscription on the stele, which reads as follows:

> In the country there are great parasites, the government is without law.
> Foxes and rats infest the capital, they vie with each other in unbridled unruliness.
> The gates of the government are awash with blood from the killing of our heros.
> They slaughtered little me, but in the end there will be a reckoning!
> Whether the Dipper stars do not pour wine, or that the Sieve constellation winnows grain (i.e., whether high officials are aloof or they do care)
> The prosperity or decay of the country depends on the support of people!
> Please let those who have survived never forget this!

When going over this inscription carefully, I cannot but think that such an stele, so strong in attacking the government and denouncing the warlords, at that time was indeed an important patriotic symbol for the young students of Yenching University, and an indisputable illustration of the protection and development of the young students' patriotic ideals by the Yenching University staff. Thinking back of it now, it must have been the first lesson in patriotism I was taught by Yenching University.

In the 4 years after I enrolled in Yenching University, the Japanese invaders occupied the three provinces of China's Northeast, and advanced even further to the Great Wall Line in the north. Apart from the normal teaching and studying routine, the staff and students on the campus of Yenching were incessantly engaged in anti-Japanese activities. Among the professors circulated a publication about promoting resistance against Japan, with big characters "The Torch" in its cover printed, as I remember correctly the calligraphy was by Rong Geng, professor of Chinese literature. Gu Jiegang, professor of history, got everybody in their spare time together to compile propaganda material for resistance against Japan and saving the country, which was published under the name "Popular Literature Editing House". The students were constantly busy with activities supporting the army defending the Great Wall Line to resist the Japanese army. Because of the "non-resistance policy" of the central government in Nanking, a patriotic student movement finally broke out on 9 December 1935, which spread gradually to other cities. From the very beginning of the movement the students of Yenching had an important leading role; moreover, they were supported by their teachers, including several foreign teachers. Two of them were quite extraordinary, one was Randolph Sailer, the very popular American professor of psychology, the other one was the American journalist and part-time lecturer at the Department of Journalism at Yenching, Edgar Snow. At that time, the Chinese Communist Party had already established Yan'an as its base to propagate resistance against Japan and form a united front. It was after this student movement of 9 December that Edgar Snow travelled to Yan'an and subsequently wrote his very

influential book, *Red Star Over China*. It was also this student movement that increased the admiration of the students for Dr. Sailer, for he showed enormous care and support for students who, though suffering hunger and cold, had walked for miles to join the demonstrations.

Six months after the 9 December demonstrations I graduated from my department at Yenching University. The evening before my graduation Professor Gu Jiegang told me that the university had appointed him as part-time head of the history department from the next term onward, and he hoped I would stay on as his assistant. From August 1936 till June 1937, Professor Gu tried out a new approach with his class "Exercise in research on ancient sites and ancient objects". Every fortnight on Saturday afternoon he would take the students to an old building or ancient site which he had chosen beforehand, either inside Peking's city walls or in the surrounding countryside, to make an on-the-spot investigation. He wanted me to make a written report beforehand on the basis of his reference materials and my own inspection results, and hand this out to the students for reference. It was a training very precious for me, which deepened my interest in doing research on Peking's historical geography.

On 7 July 1937 the Japanese aggressors staged the "Marco Polo Bridge Incident" or "July 7 Incident" in the outskirts of Peking, and they attacked and occupied the city, setting off the widespread War of Resistance Against Japan. Professor Gu Jiegang left Peking quickly for the South, to escape an arrest by the Japanese. Thereafter, I obtained a scholarship by the Harvard-Yenching Institute and became a M.A. research student under the guidance of Professor William Hung. National University had, just as Peking University and Qinghua University, already after the Marco Polo Bridge Incident moved to the south. Although Yenching University was situated in an enemy-occupied area, it could continue to exist because it was run by an American Christian organisation, and Yenching was like a solitary island where the youth in enemy-occupied north China could still pursue their studies. As a research student the first problem I had was what to choose as the field of research and the subject for my thesis. Actually, William Hung had proposed me a subject long ago, when I wrote my graduation paper. Because he knew my interest had moved to historical geography, he hoped I would take the chapter on Shandong province from the work *Tianxia junguo libing shu* (*The Blessings and Ills of All Regions of the Empire*) of the famous late Ming early Qing scholar Gu Yanwu, and then add a compilation from the early Qing to the late Qing and early Republic. The point was to disclose all good and bad aspects of every place inside Shandong province of the past 300 years, to be of reference when building up the nation. For although we were occupied by the enemy, everyone believed the war would eventually be won, and the nation would be built up again. The choice of Shandong was made because it is my original home, and also because the library of Yenching had the most Local Gazetteers on Shandong province. These Local Gazetteers are characteristic of China, they are books compiled by the authorities on the situation of all districts in all provinces, usually compiled every odd years. Because I had only limited time then, I could not but choose another subject for my thesis with a rather smaller scope. M.A. research students now have enough time to do research. It was

very important then that I could get a better understanding of the idea of Gu Yanwu's *Tianxia junguo libing shu*. He was born in the late Ming dynasty, and felt great concern for the deteriorating society and politics which caused the people great suffering. Then he compiled his *Tianxia junguo libing shu*. In the foreword to his work, he wrote the following: "I am moved by the many ills that beset all the corners of our land, and thus am ashamed of the lack of skill of the students of the Classics". Then he started propagating his idea of "Use the Classics", attacking the shallow style of study of his contemporaries, and he recommended openly "everybody has a responsibility to protect the world". Thereupon, he called out loudly in distress, saying:

> As of today, it is our responsibility (as scholars) to save our people from their state of utter distress and open up an era of peace for ten thousand generations.

Even when the Qing armies had entered through the passes and snatched away the ruling power of the Ming dynasty, he kept resisting Qing dynasty rule, and refrained from being employed. When my country was in imminent danger, I was able to understand the deeds of his life much better, and I was deeply moved. In the period that the country's crisis deepened after the occupation of Peking, it took me 3 years to finish my sequel to *The Blessings and Ills of All Regions of the Empire* on Shandong province. William Hung was there to recommend it, and he had my M.A. thesis published as a special edition of the 19th issue of *Yanjing Xuebao*. This work, written under the enemy puppet regime, was full of ideals of saving the country and rebuilding the land, which without Yenching University and the guidance of Professor William Hung would have never seen the light.

However, when in the winter of 1941 this book had just been published, the Japanese invasion army that had recently occupied China meeting with the persistent resistance of the Chinese people, suddenly attacked the American naval base at Pearl Harbour from the air on December 8 (Peking time), setting off the Pacific War. It was very early that day that the Japanese military police surrounded Yenching University quickly and consequently occupied the campus. All students and staff members were expelled from the area, the staff with American nationality were locked up in concentration camps, and a couple of staff and students were arrested and confined in the army barracks of the Japanese military police in Peking, including the university president Leighton Stuart. Eleven people of the staff were arrested in all, among whom I was the youngest. Both my professors, William Hung and Deng Zhicheng, were arrested too.

Here I should go into the reasons of my arrest.

After finishing my M.A. in June 1940, I had decided to stay on at Yenching to teach, and I had already started to prepare classes. Dr. Leighton Stuart the university president, invited me for a talk. He wanted me to be in charge of some student matters part time besides teaching, because there were many problems the students were facing due to the campus' position on occupied territory. Some students had financial problems because of the war, some students couldn't work quietly because of the puppet regime, they all needed to be given care and support. Because I had been a student here for 8 years myself, I was rather good in understanding the students.

After three meetings, it was decided to set up a Student Welfare Committee, chaired by Professor Sailer who was very popular with the students, to facilitate tackling the Japanese if they would come to the university to stir up trouble. I was vice chairman of this committee and acted as a contact with the students. Another committee member was chosen among the young and enthusiastic professors of the Colleges of Arts, Natural Sciences and Public Affairs, and the Dean was invited to be secretary of the Committee, to make it easier to communicate with the whole school's various administrative organisations and the university president. On 21 June 1940 President Stuart signed a memo and sent it to everybody appointed. I have kept my personal copy until today, and added it to this paper. Therefore, before I even entered a classroom, I walked into the office of the Student Welfare Committee inside the large office building.

The fact that I had accepted this task had to do with the education I was given by Yenching University as well. The Yenching University motto "Freedom Through Truth for Service" was known by heart by all university students. The understanding of this motto by the students might have been profound or superficial, but there was one thing the students themselves could all feel in a minor or major degree: the spirit of helping others, to be found everywhere on the campus. This spirit of helping was most concrete in the relationship between students and staff, and also most obvious there. The establishing of a Student Welfare Committee by the president of the university is a very concrete example of this spirit. Honouring this university motto became my unshakable duty.

Student life at Yenching University had, apart from compulsory studying, its special characteristics. Especially when the nation's crisis deepened daily and the students' activities outside the classroom became gradually more and more restricted, one characteristic became obvious, and that was the existence of an organisation called Small Christian Fellowship. As a Christian university, Yenching University had established Colleges of Arts, Natural Sciences and Public Affairs, which were officially registered at the central government in Nanking of that time, but there existed also a College of Religion, which didn't enroll students publicly but attracted students majoring in religion. The College of Religion had its own building, in which was built a small worship hall, where believing and non-believing staff and students could freely attend the Sunday service, although not many people did. There was yet another organisation, called the Christian Fellowship of Yenching University, whose office was inside the building of the College of Religion also. The Fellowship was divided into a number of small fellowships, which were led mainly by student believers. Non-believers could join freely, and some fellowships invited Christian professors to join as advisor. Every fellowship had its own name, some names had to do with religion, like "Friends of Jesus", or "Shining Salt Group", but not all names were like that. For example, there was a fellowship which from the start was organised by six people, and was therefore called the "Group of Six". These fellowships were full of vigour, because they did not only study the Bible and discuss religious doctrine, but touched upon the problems in daily life, most importantly the discussion about current affairs. If it hadn't been under the name of a fellowship meeting, discussions about current affairs wouldn't have been possible, because it was forbid-

den explicitly by the puppet regime of that time. Later, the fellowship organisations developed into some small groups specialising in discussions about vocational study. I helped organising a small group on vocational study, whereby everybody came together once every weekend to exchange what one had learned when studying vocationally, called the "Saturday Symposium". Actually these student organisations, given the objective situation at that time, really set off the students' self-education, and brought about the spreading of patriotic ideals. Because the same thing had happened to me when I was a student, I was perfectly happy to share some work in caring for the students through an organisation at school.

At the office of the Student Welfare Committee Dr. Sailer and me took shifts, and started our "spare-time" work for the students. I hadn't attended his classes when I was a student, even though his class on "Mental Hygiene" was universally appraised and received enthusiastically by the students. Now I could see with my own eyes how he gave himself totally for his work, and couldn't help thinking about the Yenching motto about "service", a motto which had clearly been manifested in him. He arranged mainly "Self-Help Work" for the students with urgent financial needs, all kinds of odd jobs being paid for by the hour. Because of the war, the amount of students applying for Self-Help Work increased daily. Sailer's work load increased accordingly, but his attitude towards the students and his work spirit were so admirable that I will never forget.

My main work had to do with the students' problems of quite another nature, problems which were linked with the day-by-day development of the War of Resistance Against Japan. The Japanese invaders were getting crazier every day in "mopping up" the occupied area, so there were a minority of students then who insisted on giving up their personal opportunity to study, and plunge into the struggle to defeat the enemy and save the country. Students whom I was familiar with came directly to me, and there were also students who went straightaway to university president Leighton Stuart to discuss their plans. The president wanted me to be in charge of these matters, but he also established one principle, being that as soon as the students dropped out to join the work for "the United Front Against Japan", no matter if they wanted to go to the hinterland (being the land under Kuomintang rule) or the liberated area (being the area of the Eighth Route Army of the Communist Party), they would have to receive equal treatment: to be given support, including making contacts for their route and helping out with travel costs. If they asked to change their subject of study or asked to leave to go to work, that was a different matter. I started to help the students to leave school on this principle, but as it was best to go unnoticed, I could only operate under the strictest secrecy. At that time, there was an international friend of China, Rewi Alley, who set up an organisation in Sichuan called "Chinese Industrial Cooperation", which got together mainly scattered labour groups in the inner provinces to expand production and support resistance against Japan. A very good friend of his, the English lecturer at Yenching, E. Ralph Lapwood, had as early as 1939 left Yenching, and travelled through mountains in the west and the liberated area of the Eighth Route Army towards Sichuan, where he worked for this Industrial Cooperation. There were several students of the school who, influenced by him, wanted to leave and support the same Cooperation. There were also students who actively sought to join the direct struggle against

Japan with the liberated area of the Eighth Route Army. In the position of vice-chairman of the Student Welfare Committee in the period of 1 year since the autumn of 1940, I helped these students to leave university. For a more detailed record of these affairs please read my account "Reminiscences on the Closing Down of Yenching University" in the volume *Peking under the Japanese Puppet Regime*.[4] Unfortunately, some messages written by students who had gone south were intercepted, and I was arrested by the Japanese military police. In June 1942 I was sentenced by a Japanese military court to prison for 1 year with the execution suspended for 3 years, and was released on bail, but I had no freedom of migration or travel. When my 3-year suspension period was just over, the Japanese invasion army lost the war and surrendered. The university president Stuart was released, and he immediately re-established the university committee, seven people in all, and I was asked to join too, even though I was still quite young.[5] The new university committee set down one strict rule, being that whoever had worked for the enemy when Yenching was closed off by the Japanese bandits, was not allowed to return to university. This rule again proved that Yenching University stuck firmly to its principles, and the rule was resolutely supported by staff and students alike.

Before I end this paper, I should make some additional remarks, being that when I came out of prison and went through my suspension period, in the field of conducting myself in society and the field of studying I received the unremitting guidance and strict demands of William Hung. The couple of letters he wrote to me by hand then are still treasured by me today. Four of these letters I had even photo reprinted, and they will appear in the second issue of the new edition of *Yanjing Xuebao* (*Yenching Journal of Chinese Studies*). This *Yanjing Xuebao*, the magazine that in the past by spreading the splendid Chinese traditional culture became famous at home and abroad, will now, under the enthusiastic support of the Alumni of Yenching University, continue to be published by the Yenching Graduate Institute, keeping its editorial characteristics. How things will develop in the next phase, is a problem I feel should also be considered deeply.

Peking University
March, 1996

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[4] See The Research Committee on Historical Materials of the Peking Committee of the Political Consultative Conference of the People's Republic (eds.) *Peking under the Japanese Puppet Regime*, Beijing Publishing House, 1987.

[5] On 19 August 1945, William Hung wrote me to inform me that I had been chosen as one of the members of the Yenching University Committee, and urged me to return to Peking to attend the conference. I have added the original letter here, with a translation in English:

> Dr. Leighton Stuart has been released on Friday and we talked for days, which was extremely nice. The new university committee has held its first meeting yesterday. Tomorrow (Monday) early in the morning at nine we will have our second meeting. If you, my young friend, would like to be one of the committee members, you will have to return tonight. I tried to phone you several times but couldn't get through, so had no other way than ask mister Guo to go to Tientsin to invite you. We will talk later. Hastily I remain, wishing you,…Renzhi, good health. (Written on the 19th).

Chapter 10
In Memory of Professor P. M. Roxby—From the School of Geography of the University of Liverpool

A telegram came this morning informing us of the sad news of Professor Roxby's death yesterday in China.

> Thus, Professor Roxby lowered his guiding hand!
> His help to China has stopped!
> May he rest in peace forever!

A great educator of geography, a real scholar in his field and a true friend of China during the hard time of her suffering!

I sincerely believe that when his death is announced in the news-papers, all Chinese geographers, including my senior fellow workers, and especially those who were his pupils, will mourn his untimely death. All those who knew him will remember with grief the loss of a great personality.

I came to the School of Geography at the University of Liverpool drawn by his academic fame and achievements and hoping to further my training under his guidance, in the school established by him. I still remember my Chinese history teacher, Professor William Hung of Yenching University summoning me to say, "It is better to select a teacher than to select a school. But the most happy coincidence is a superior and accomplished teacher in a better school." Professor Roxby was undoubtedly a teacher of utmost accomplishment in the field of geographical education. Unfortunately, by the time I arrived in England, he had already retired from the university and departed for China as a representative of the British Council. In spite of his advanced years, he accepted the responsibility of promoting Sino-British cooperation in science and culture.

Professor Roxby has left behind the School he established and nurtured. He never considered the possibility of dying in the far-off country which he sympathized with,

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The Chinese version of this essay was published in *History and Geography Weekly*, the supplementary issue of *Yishi Bao* based in Tianjin on March 18, 1947. The English text has been transcribed from an unpublished manuscript.—Editor's note.

R. Hou, *Symposium on Chinese Historical Geography*,
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and which he helped so much during her days of suffering. He offered his life for work in and friendship with China.

Early this morning I ran to the School amidst heavy snow taking with me the sad news. I raised my head and looked at the newly painted door of the School. There I saw the golden words inscribed above it: "School of Geography." Tears filled my eyes. I meditated mournfully that for several decades, hundreds of students of geography had been taught there by the old beloved professor. Now he lay dead in far-off China, my motherland.

I entered the building to seek my tutor, and Professor Roxby's successor, Professor H.C. Darby, intending to inform him of the sad news. I found him in the library reading room. Even before I opened my mouth I noticed his sadness.

"Professor Roxby is dead," I murmured. "Yes, I know," Professor Darby solemnly replied, "Mr. Smith phoned me early this morning." (Mr. W. Smith is a lecturer in Chinese geography whose own specialty is the economic geography of England.) "We are waiting for more details. It is a pity indeed. We were to wait for his return in the summer to offer an open-to-all lecture on China." We left the reading room.

Later, I met Mr. F. J. Monkhouse, a young lecturer who taught me cartography. The first few words he said were "As a 'cultural ambassador' to China, Professor Roxby was the best one." I replied, "Undoubtedly. A cultural ambassador is actually an ambassador of friendship. It is not unusual that cultural ambassadors come before any political ambassadors. Such people are pioneers of their age. They are born not made. As a Chinese student of geography my sorrow is twofold. Personally I have lost a respected teacher in my field; as a Chinese student, my country has lost a great friend!" I declared this loudly, standing near the staircase, resembling someone who is making a public speech, but actually it was an expression of my uncontrollable sorrow.

I then went upstairs to the top storey of the building, to the Center for the Study of Chinese Geography. The Center was organized and established by Professor Roxby. Another Chinese fellow-student also came, a Mr. Wu Chuen-Chun from Nanking University, who was a lecturer of geography there. We exchanged information concerning Professor Roxby's death. At the end, he suddenly blurted out, "You know, immediately after the Japanese started the Sino-Japanese War, they tried to buy scrap iron and copper here in England. I don't know how Professor Roxby came to know of this, but anyway, he wrote to the newspapers practically daily, disclosing the facts, and denouncing the Japanese until he finally stopped their plan." Thus even before England declared war against Japan, Professor Roxby had already become our comrade in the trench.

Just by chance, I looked back at the wall. There, hanging on it, was a glass frame with Chinese calligraphy by Professor Gu Jie-Gang, who had tutored me in China. It was the full text of "Yu Gong," one of the most ancient classics on Chinese geography, taken from *Shang Shu*, an ancient historical scripture. The frame was a present from two Chinese students of Professor Roxby at the opening of the Center. They are Professor Zhang Yin-Tang of Qinghua University at Peking, and Professor Lin Chao of Central University at Nanking. Looking at the glass frame, I couldn't help but reflect, "Now that Professor Roxby has gone, will this Center continue to

function? Will the English geographers keep up their interest in studying China?" True sympathy is rooted in real understanding. Real understanding should be built upon thorough investigation and sound research. Professor Roxby is one person who obtained his real understanding of China through his thorough research. His understanding generated sincere sympathy which he offered whole-heartedly in his help to China. Thus, he was a true friend to China during her age of suffering. And now, Professor Roxby has left us. May we wish him rest in peace forever.

I recently wrote two essays for the Chinese periodical *History and Geography Weekly*. Both concerned Professor Roxby. The first is a Chinese translation of Professor Darby's Inaugural Lecture at the time he succeeded Professor Roxby as Dean of the School of Geography at Liverpool University. It contains the following passage concerning Professor Roxby:

> It is customary in an inaugural lecture to render homage to one's predecessors. It is a good custom. But it would be impertinent of me to praise Professor Roxby's 40 years' work here; his own creation, the School of Geography with its long line of devoted students, speaks for itself. Numbered among his students are not only those who have been fortunate enough to study in Liverpool. Others in other universities in Britain are his pupils, and have gained from his idealism and humanity. Beyond Britain, and particularly in China and Egypt, the same generous influence has been felt. Professor Roxby's work on China has not only enriched our knowledge in the more technical geographic sense, but has deepened our understanding of Chinese civilization.

Professor Roxby has gone, and now it is through words such as those of Professor Darby's that we feel his affection and guidance. I admit that when I translated Professor Darby's words I felt he had spoken what I wanted very much to express from my own heart.

Once again I remember the many people who expressed their affection and respect for Professor Roxby since my arrival in England. Here is a letter from a former English student of Professor Roxby, a mother of two children who graduated from the School of Geography at Liverpool:

> I too studied geography at Liverpool many years ago under Professor Roxby, for whom I have great affection and respect. It is a pity that he is not in Liverpool now.

I would like to change the last sentence of her letter to "It is a pity that he is not in this world now." I know she will mourn for him. Her words not only express her own feeling but that of his many friends in England. Professor Roxby was not only a scholar of geography, but a great teacher in geographical education. As a great teacher he not only offered us his knowledge, but also, in Professor Darby's words, nurtured us with his ideals and personality, which is the most important thing.

As an educator, Professor Roxby leaves behind him such a deep impression and influence that he and his achievements will live after him forever. Truly, the spark of his physical life is no more, but his "ideals and personality" will live and be carried on by those who succeed him.

For me, a student who came from far-off China, hoping to be taught by Professor Roxby personally, this hope will now never be realized. Nevertheless, the moment I arrived at the School, I found myself surrounded by his voice, his image and his influences. This is the place where he had worked for 40 years. Every corner reflects

his image of warm-heartedness and far-sightedness. Recently, for example, a dance party was organized in honour of Mr. and Mrs. Scott (the leader of the Liberal Party). A few hundred people were invited. I was surprised to also get an invitation and found out that they had done so because Professor Roxby had written from China requesting help for me. Even though I knew nothing about dancing, I nevertheless attended. There I met many of Professor Roxby's friends. All of them talked of him when I was presented to them. I could not help but have the impression that there was an inseparable relationship between every Chinese student here and Professor Roxby. From what these friends told me, I realized what deep affection and consideration the English people have for China, and what influence Professor Roxby has had on his friends. After the party, I wanted to write Professor Roxby a letter, thanking him for his kindness, even though we never got to meet. I have the following draft written in my diary. "Although I had not the opportunity to personally meet you before I left China, I nevertheless still seem to be meeting you everywhere in England." I had intended to write this to him, but later changed my mind, thinking it not so polite to say so, despite its truthfulness. Thus I delayed mailing the letter and it remained undelivered.

In my second essay for the *History and Geography Weekly* titled "A Review of Wartime English Geographers and Their Present State," I mentioned the three volumes on China edited by Professor Roxby. Although this work was completed in collaboration with others, it is chiefly the fruit of his own research on Chinese geography.

Professor Roxby wrote many scholarly papers and theses, but never published a book (with the exception of a booklet). Yet all recent English texts on Chinese geography, without exception, mention his name. In addition to his writings for periodicals, he wrote the section on Chinese Geography for the *Encyclopaedia Britannica*. Because he never published a book on Chinese geography, not many people in China know him. His achievements are rooted in the field of teaching geography rather than as an author. Yet his academic achievements in geography cannot be denied. An editorial published in the first issue of the *History and Geography Weekly* contains the following passage:

> Many of us consider history and geography as academic topics only for historians and geographers, but not for common people. Such a comprehension is incomplete. If not corrected, it will hinder the development and influence of the study and research of history and geography. Our periodical is preparing to take up the responsibility of media in the popularization of historical and geographical studies. We hope to establish a normal relationship between the research of history and geography and the education of history and geography.

In the eyes of modern geographers, Professor Roxby was the first colleague to accomplish the task of promoting the desired normal relationship between research and education in geography.

On hearing the sad news of Professor Roxby's passing away, I cannot help leaving my daily work undone and planning this short passage to express my feelings about

his unforgettable memory. By sending it to this periodical, I hope Professor Roxby's life and work may be an inspiration to all readers. However, do forgive my toughness in writing.

Let us remember Professor Roxby as a great teacher of geography in our time! Let us remember him as our true friend, a friend of China when she was suffering. May we wish that his blessings, ideals and personality be with us, forever!

February 18, 1947. A very cold day.

Chapter 11
Address at the Commencement of Liverpool University

It is a rare honour to speak on behalf of the Graduates and Honorary Graduates to express our gratitude to the University of Liverpool for all we have received from her in training of our minds and increasing our awarenesses.

The young graduates among us will be discovering more and more of this debt as the years pass by.

Others of us must reminisce.

My membership of the University should have begun in 1940 or 1941. In 1939 Yenching University (a private university in Beijing now absorbed into the National Peking University) awarded me the Blue Funnel Scholarship, established by the Alfred Holt Shipping Company. All told the scholarship has been held by six persons working in Physics, Statistics, Economics and Geography.

I remember clearly how one morning in the spring of 1939, my professor, the distinguished Chinese historian, William Hung, summoned me to his office and said, "Choosing a teacher is more important than choosing a school. The happiest thing is when the good teacher you need is to be found in a good school." While I was wondering what he was talking about, he continued, "We have nominated you for a scholarship for advanced study in the School of Geography of Liverpool University. There you will find a world-renowned teacher of geography in a university of world-wide connections. He is Professor Percy Maude Roxby."

It was not to be. Because the Second World War broke out. In 1941, instead of sitting in a Liverpool University lecture hall, I found myself in a Japanese army prison, along with Professor Hung and other colleagues (including Dr. Lin Chia-Tung, an earlier Blue Funneller who studied Statistics here).

The link between Liverpool University and Yenching University survived the war, and in 1946 my dream of coming to Liverpool University was realized, but 7 years late. By this time Professor Roxby had retired after 40 years of service.

This was the speech at the commencement at the Liverpool University by Hou Renzhi on behalf of the honorary graduates on Sept. 4 1984. The title was later added by the editor.—Editor's note.

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Ironically, he had gone to China as representative of the British Council. Professor H.C. Darby succeeded him as Head of the School of Geography. His Inaugural Lecture "The Theory and Practice of Geography" made such an impression on me that I translated it into Chinese and it was published in Tientsin in the *History and Geography Weekly*, a supplement of the famous *Yi Shi Newspaper* on March 18, 1947. Alas! that same issue also contained an essay I wrote commemorating Professor Roxby who had just died in China. I have brought a photograph of that issue of the *Weekly* together with an English version of my article, for presentation to the Library of the School of Geography.

The many new ideas on historical geography that Professor Darby developed in his teaching have been influential in China, producing a new school of study that has grown especially fast in the past decade. Just before I came abroad early this year, we established a new Research Centre on Historical Geography along these lines in Peking University.

There is a Chinese proverb 饮水思源: "When drinking water remember the water source." I published a book—a collection of my scientific papers which bear on some aspects of the socialist reconstruction of China. It was natural and proper for me to borrow the title of Professor Darby's Inaugural Lecture, simply adding the word "Historical": "The Theory and Practice of Historical Geography." I am giving a copy of the first edition of this little book to the Harold Cohen Library, which itself is a "water source" so ocean-like that I almost drowned in it nearly 40 years ago.

My key thought for this unforgettable day is pride and gratitude that Liverpool University has been such a bounteous source of the living water of creative thought that flows from people to people and gives us all hope for the future.

Some 40 years ago, just after the Second World War, Professor Darby said it for his particular discipline, ending his Inaugural Lecture with the following words, by which I would like to end mine:

> As I stand here amid the devastation of war on Brownlow Hill, and in Liverpool, a city with contacts as world-wide as those of any city, I cannot help but think that the point of view of the Geographers both abroad and at home is not without some bearing on the *New World* we hope will be our future.

Thank you.

Chapter 12
Hou Renzhi's Acceptance Address for the George Davidson Medal

When I was informed that the American Geographical Society was going to award me The George Davidson Medal, I had not thought that in these late years of my life I would receive such a high international honor. This happy news has also brought a considerable and important attention on the part of many of my colleagues in the circle of Chinese geography. I wanted very much to come and to accept this prestigious award personally. Yet, because of my poor health, I cannot but request my good friend, Dr. Diane Obenchain, who is a Visiting Professor at Peking University and who is working with me cooperatively on a project, to represent me. However, if Dr. Murphy or any other member of The Honors Committee of The American Geographical Society has the opportunity to come to China, I ardently hope that we can meet each other at Peking University so that I may in person express my heartfelt gratitude for this award.

What I would like to first explain is that George Babcock Cressey, who, in 1952, was the first to receive The George Davidson Medal, had, in fact, great influence upon me from the very start. Sixty-three years ago, in 1936, the year I graduated from Yenching University, I was fortunate enough to read Cressey's book *China's Geographic Foundations*. This drew my profound interest and is one of the main reasons why I was moved to change from strictly historical studies to research in historical geography. However, because of the 8-year Anti-Japanese War, it was not until the summer of 1946 that I was able to go as planned to Liverpool University in England to specialize in the study of historical geography under the expert guidance of Professor H. C. Darby.

In 1949, Professor G. B. Cressey, as the newly-elected President of the International Geographical Society, was invited to Liverpool University to give a

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On Nov 11, 1999, this speech was read by Dr. Diane Obenchain at the request of Dr. Hou Renzhi at National Geographic Society in New York. There was no title originally and the present on was added by the editor.—Editor's note.

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guest lecture entitled "China's Prospects." This occasion remains quite distinctly in my memory. The day was April 27th, in the afternoon. A great many people came to hear the lecture, which indicated a tremendous interest in China's future. I also was very moved by the lecture. Professor Darby presided over the lecture and at his request I was invited to give a few words in gratitude on behalf of the audience at the end of the lecture. This was the first time that I had occasion to meet Professor Cressey and it has remained an unforgettable memory for the rest of my life.

What should be mentioned especially here is that it was only 5 months and 3 days after Professor Cressey's lecture that New China was born on October 1st, 1949. And it was just 3 days before the birth of New China that I returned to Beijing from England.

When New China established the "Beijing City Planning Committee" for reconstruction of the capital, Beijing, I had the honor to be invited as a member of the committee. For research reference and for the purposes of planning construction, my first responsibility was to make geographical investigation of the newly-designated cultural and educational region of the capital. This important region in the northwest suburbs of Beijing city, called the Haidian, was the famous terrain of the summer palaces of the Qing period, and has become today the location of Peking University, Qinghua University, the Chinese Academy of Sciences, Renmin University, the National Library, the National University of the Minorities, the Agricultural University and several others.

Since the days of those initial tasks on the "Beijing City Planning Committee", 50 years have passed. During these 50 years, except for the few years that I participated in investigations of China's Northwestern desert areas, most of my research work has concentrated upon the historical geography of Beijing city. My intention has been to make a contribution to the planning and construction of the capital.

During the past 50 years, China has undergone enormous changes. Particularly during the last 20 years of reform and opening out to the larger world, cultural exchanges between China and other countries have increased daily. Now, as I look back over the past 20 years, during which I have had the opportunity to visit the United States 12 times, I feel greatly honored to have been invited as a Fulbright Scholar in Residence to give lectures at Illinois University during 1981–1982. I will always remember that significant time.

Following this, I received a letter of invitation from Dr. Alison Casarett, Vice Provost and Dean of the Graduate School of Cornell University, requesting that I be their Chinese Scholar in Residence during the years 1983–1984 under the Luce Foundation Program for China Studies. In her letter she said, "I note your recent strong interest in the comparative design and layout of the older city portions of Beijing and Washington, D.C." What she said was exactly true. Therefore, her invitation was indeed a precious opportunity for me. Not only did I spend one semester doing in-house research on the campus of Cornell University, which is full of natural beauty, but I also, while on the "Cornell in Washington Program," was able to carry out on-location investigation of the central part of the city of Washington, D.C. In the end, I was able to complete my piece for Chinese readers entitled, "From Beijing to Washington, D.C.—Explorations into Thematic Design in City Planning."

To look back on the past is at the same time to look ahead to future developments. This year I am 88 years old. As I look back to that year when G.B. Cressey gave his lecture "China's Prospects," a new picture now unfolds before my eyes. To have this high honor of receiving The George Davidson Medal is truly a great encouragement to me. I will continue to work hard in carrying out research on the historical geography of Beijing. At the same time I join hands and go forward together with the next generation of excellent young scholars. I am very grateful to Professor Diane Obenchain who has represented me in reading my address to you today and extended once again my heartfelt respect and gratitude toward the Council of the American Geographical Society for awarding me this most precious honor. Thank you.