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The Genesis of Urban Landscape:
The Pearl River Delta in South China

University of Kassel 2005
The Department of Urban and Regional Sociology and the Department of Urban Design and Settlement Planning in the Faculty of Architecture, Urban Planning & Landscape Planning at the University of Kassel are currently working on a project dealing with the Pearl River Delta called “The Genesis of Urban Landscape”.

Involved is an international group of students under the aegis of Prof. Dr. Ipsen, Prof. Drey and Prof. Li. The project is sponsored by the DAAD (German Academic Exchange Service).
Preface

In 2003 a project about the running process of urbanisation in the Pearl River Delta has been installed at the University of Kassel, the city where the exhibition of some parts of the Harvard Pearl River Delta Project under the guidance of Rem Koolhaas took place in 1997. This spade work tried to understand the urbanisation process in the South Chinese Delta in working out a net of new created concepts. We felt that it was now the time to come to a more systematic understanding of this process of rapid urbanisation. To prepare the project two of the editors of this book, Detlev Ipsen and Yongning Li, have done several interviews in the Delta and have studied the morphology of the ongoing process. Li started with a project to get a better understanding of the underlying process of migration. What means the migration for the development in the regions of destination and in the migrants’ homelands? Ipsen started with some work on the Delta’s urban landscapes to develop a concept of urban landscapes, which is now the key concept of this study. Particular in any delta region, where a river system, the land and the sea interact, the nature aspect of landscape is extraordinary important. In future the aesthetical aspects of landscape will become more and more important if a region wants to attract human and financial capital. The leading hypothesis is that the integration of architecture and urban design, the infrastructure and the environmental conditions, the diversity of urban areas, areas of recreation, of agriculture and industry will lead to a high aesthetical quality of an urban landscape which is the basis of future social and economic development.

The international student group attended a seminar hosted by Li to become familiar with the socio-economic, institutional and urban situation in the Pearl River Delta in the summer term of 2003. We did the field work in the Pearl River Delta in the same year’s autumn. Christl Drey and Detlev Ipsen discussed the results of the different working groups with the participants in a seminar in the following winter term. The production of thesis papers started in 2004.

The concept of the book one may call a multilevel one: The first level contents theoretical and empirical analysis. The second level includes essays and stories to contribute a portrait to the picture of the process. The third level discusses designs of future developments as some kind of scenarios to open the discussion of planning the future of the Delta.

As the hidden outline of this book one may understand it as a preparatory of a „Future Conference“ of the development in the Pearl River Delta, which should be organized in the next two years to work out scenarios of future development. The aim will be to reduce the environmental and social problems and keep and enlarge the quality of this megacity as an urban landscape, which is competitive in China and South East Asia.
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Urban Landscape and Landscape Urbanism

The title of this book, The Genesis of Urban Landscape, uses the term ‘landscape’ not as a metaphor, in the sense of scenery or backdrop, or figurally, as in economic or industrial landscape, but rather as a concept with substance which is applied analytically as well as normatively. We regard Urban Landscape as an expression which facilitates the understanding of extensive and complex forms of urbanization. Landscape urbanism is a normative concept by which strategic planning shall be managed, thus supporting the preparation of planned targets. This approach is not only applicable to the particularly dynamic developments in China or even just the Pearl River Delta. However, there are a number of reasons, to be addressed later on, which render the landscape concept of the Delta desirable.

The term Urban Landscape appears ever more frequently at conferences because the pattern of urbanization changes. A regionalization of the urbanization process can be found in many parts of the world today. In Europe and North America, this process assumed the form of suburbanization during the 1970s. The middle class left the more densely developed urban space and lived in one- and two-family houses in new settlements beyond the city limits. Multi-level apartment complexes were built for the lower income groups, some of which were located up to 30 km outside of the city, not unlike the Grand Ensembles in Paris. Enterprise zones and industrial estates were added in the following decades. Small towns in proximity to larger cities became the core of an urbanization which then moved towards regions as well. Thus, in many countries a new type of city gradually developed which can be called regional city. Within a larger space, suburbs and new urban centers merge. Remnants of agriculture sustain in the intervals, small forests are designated as recreation areas. Highways thread the space and build the backbone of trade and residential areas, weaving through the region like strings. The regional city requires a technical infrastructure; networks of water, power and gas mains emerge, which add to the accelerated urbanization of the region because costs for new settlements and industrial estates decrease as a consequence.

In these regions the traditional dualism of city and country loses its meaning. Cities, small towns and villages merge with suburbs, new cities and suburban villages. Agriculture, forests, recreation areas, traffic areas are added. In order to understand this type of space in its uniqueness, the term of the urban landscape actually suggests itself. Comprehended as landscape, it could be possible not to view the urban region as an agglomeration (accumulation) of detached and contradictory elements. The urban region determines itself not only as “intermediary city”, developing between the poles of “real” cities, but as an independent process with its own set of problems and potentials. The analysis of different patterns of land use is viewed in connection with natural spatial conditions (topography, stretches of water, soil, vegetation) and can thus be understood as an ecological unit. The examination of spatial perception and images of space introduces a systematic approach by means of the concept of landscape. Therefore, Urban Landscape is an analytical term which should facilitate the comprehension of regional urban spaces. Landscape Urbanism, however, is a normative concept; it relates to the planning concepts and projects which should provide answers to the following three questions:

- How can the ecological quality of a space be safeguarded or reestablished?
- How can an urban region develop an internal image for its inhabitants and an external image for other regions?
- How can an urban region maintain or newly develop quality of life for its inhabitants and visitors?
All three questions are closely related to the concept of sustainable development and directly linked to aspects of economic development. Qualified workers will only settle down in a city when the quality of life is high. In turn, this has an effect on the job market which plays an important role in terms of investment decisions. The image of a region is of great importance for investors as well. Only if a region has made a name for itself will it be considered in investment decisions. This applies at least in those cases where an investment is tied to qualified jobs. But image plays an important role in tourism as well, and one should not forget that tourism is a crucial business factor for a number of cities. The ecological situation of a region is significant for its quality of life and image on the one hand, but it also affects the future competitiveness of the economy, even if initially it presents a cost factor.

In order to be able to work with the terms Urban Landscape and Landscape Urbanism, a clear definition is necessary. This holds true especially because in China landscape only exists as a concept which relates to landscape architecture and its results, to gardens and parks. Our terminological definition of landscape refers to a specifically European and German perspective which will be described in the following.

**Landscape between Materiality and Image**

Before one can devote oneself to the question of which expression of landscape may open a fruitful approach to a space and the experience of space, the latest scientific discourse on the concept of landscape must at least be outlined in brief. Without such a review of the theory of landscape, our hypothesis could appear to be arbitrary and fabricated.

Consulting an etymological dictionary, it becomes clear that "land" has an old Germanic origin meaning "moorland", "prairie" and even "clearing". In the course of the Middle Ages, the term was filled with a political meaning. Then, land included the people as well, the social group which cultivated the land, and the meaning extended to even denoting a territory. The country man ("Landmann") is the man working the prairie, the "Landetal" (land valley) means a place in a space which still needs to be cleared. In the ninth century, "Landscaf" refers to a territory and is synonymous with the Latin terms "regio" or "provincia" (Müller 1977).

Along with the materiality of space, "landscape" emphasizes its texture at the same time, its shape (scape). Just like the message means the texture of information, landscape addresses the shape of a space. Certainly the German suffix "-schaft" relates to "schaffen" (to create), thus it suggests itself to understand the man-made texture and shape of a space as landscape. The emphasis, however, is on shape; therefore, the concept of the landscape painter as it was introduced by Dürer and used as a special term by Goethe, is also referred to as landscaper. Thus, landscape is an image of space as well. We understand landscape as a dialectic concept: on one side there is the material, natural or man-made texture of a space, on the other side there is the image or image-like symbol of that texture. Both are related by means of reciprocal influence. Images as models mould the making of landscape, the materiality of space is an object of the transformation and simultaneously a precondition of the landscape image.

Thus far the two categories of the concept have been maintained and frequently lead to confusion in science. Geography, which has principally worked with the concept of landscape, uses different meanings simultaneously. The ecosystem is included as well as the entity of perception or the accenting of the natural versus civilization (Hard 1970). The few sociologists who have dealt with landscape stress the social construction which influences the idea of landscape. Simmel compares the perception of a landscape with the creation of a work of art. As with a landscape painter, the gaze is detached from the endless stringing of details, thus creating something wholly new by emphasizing one thing while ne-
glecting another (Simmel 1983). The landscape painting emerges in the course of our cultural history, through poetry and painting and lost vehicles of culture, cover pictures of dime novels, the cinema, television and tourism ads (Burckhardt n.d.a). Burckhardt continues: “So now we see what the concept of landscape is based on, or what it is that turns a given environment into a landscape. One the one hand, it requires a certain agrarian type of economy which leaves a mark on an area, and furthermore it is necessary to make this uniqueness visible, created from economy and natural order, in literature and the arts” (Burckhardt n.d.a: 4). Hence, landscape presents itself as a concept which describes a relationship. The relationship is established between a human being and an environment shaped by nature and work. The relation of modern man to his thusly shaped environment is directly embedded in the complex of division of labor and alienation through which modernity has spread out during the last three centuries. In this context, an essay by the philosopher Ritter was and remains to be influential and illuminating: it is the same society which gives freedom to man through the reification of nature, and which alienates him from nature at the same time. “Where the separation of society and its ‘objective’ nature from the piece-giving surrounding nature is the condition for freedom, that is where the aesthetic inclusion and imagining of nature as landscape has the positive function of keeping open the connection of man to the piece-giving surrounding nature, and of lending him speech and visibility…” (Ritter 1978: 39). Landscape keeps the relation between the individual as societal object and the environment open for experiences which have been lost in the reified relationship with nature. Landscape does not serve as reestablishment of the perfect world; it is neither escape nor compensation, but rather the counterpart of the freedom which has been won by reifying nature.

What could be perceived as unspoiled freedom from the forces of nature in the 18th century, Ritter refers to Schiller here, has become something we partly take for granted today, and partly we are aware of the fact that it is the very reification of nature which endangers our freedom. Landscape can, when it is included in the preferences of action of the individual as well as of those of the economic and political system, contribute to developing a sustainability of modernity’s reified relationship with nature. One of the conditions which has to be considered at this point is to detach the concept of landscape from the duality of the contrast between city and country. As long as landscape is present only in the country, the debate on the causality of landscape and sustainability will become entangled in a dual pattern of thinking. On one side there is the city and the urbanized space in which resources are used up and the self-cleaning powers of nature are exploited in order to increase the freedom of one’s personal life. On the other side there is the landscape „outside“ of the urban and the industrial world which, as a reservation, is supposed to compensate this damage both mentally and physically.

**Landscape: An Interdisciplinary Concept**

A contemporary definition of the term landscape will include its dual character: for one, landscape is a material objective structure of space, and secondly a subjective culturally determined form of perception and evaluation of this material structure. The area of tension within the concept of landscape, caught between materiality and aesthetic quality, implies that landscape can only be grasped when different disciplines are related to one another.

For one, the materiality of landscape relates to its natural features: Geological formations, geomorphology, water balance, soil and local climate, wildlife – all have potential natural characteristics and interaction.

In reality, landscapes are (almost) nowhere to be viewed as isolated from human influence. The treatment of nature and its cultivation affect the material flow and modify local characteristics. Consequently, the use of fertilizer modifies the
fertility of the soil, the settlement density the local climate, the canalization of streams the water balance, etc.

The treatment of nature is not only controlled technologically, but is subject to a variety of social rules. This is what we call the social regulation of landscape. Ownership rights or right of use restrictions through conservation laws are examples. All regulations relating to planning law are an important part of further social regulation of the landscape.

The concept of culture is at the center. Culture is a system of interpretations and meanings, it contains codes which enable us to understand a landscape and the evaluations which are tied to landscapes. The image of landscape is probably the most important part of landscape culture. Therefore, regarding the relationship between landscape development and landscape image, the natural conditions and forms of utilization play an equally significant role for both. At the same time, landscape development and landscape image influence each other. The representation of a subtropical river delta has characterized the image of the Pearl River Delta for a long time; tomorrow, as a model of the Megacity Pearl River, it could impact the future development. The following diagram shows the elements of the interdisciplinary concept of landscape. The natural conditions, the land use and the social regulations form a triangle. The cultural forms of perception, the interpretations and images are located in the center in order to hint at culture being viewed as an integrative element.

With this concept of landscape it becomes clear that landscape does not only relate to rural space; to a large degree, it also relates to urban spaces. Cities as well as the countryside are linked to nature; both contain soil, water, air, and wildlife. Significantly dissimilar, however, is the use of nature which differs in the density of development, the economy, but most of all in the extent to which work and nature relate to one another. Not to be forgotten, the cultural interpretations of landscape are different for the city and the rural space as well. However, when an urban landscape develops such as that in the Pearl River Delta, containing the most diverging forms between city and country, it becomes clear how useful the term Urban Landscape is.

**Landscape Analysis**

This concept of landscape shall finally be differentiated in order to show that we have not simply chosen a theoretical term to understand the Pearl River Delta, but that it is also an instrument for the analysis of developments. Behind the form of treatment and use of nature there are complex societal processes which can be classified into individual spheres of regulation. Thus, a pattern/diagram emerges which systematically names/identifies the components of the relationships within a landscape; one could also speak of a human ecological landscape system.

With the aid of the following table we can now formulate individual effects and interactions as questions or hypothesis: How does the infrastructure planning (systemic political regulation) affect the agrarian use of a landscape; will the intensity increase, decrease or will the areas in a landscape be distributed differently? How does that affect the water balance, and which consequences does this have on the expansion of individual plant families? Or: How do the changes

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**Fig. 02: the concept of landscape**
within the value system shape the development of lifestyles, and which consequences does that entail for the leisure use of a landscape? Will that in turn affect the form of agriculture and forestry with the corresponding impact on flora and fauna? And conversely: which consequences will a modification of the water balance have on the supply of a densely settled area (e.g. qualitative problems with the potable water supply due to exceeded inflow of nitrate into the ground water), and how will politics react to this problem?

The urban landscape features a particular forming of the natural system, land use and social system. The vegetation of the city is characterized by diversity (Sukopp 1990), the land use by a tight network of spaces of flows (water mains, electrical wires, telephone networks, road networks) and the social structure by a high cultural heterogeneity and dense regulation networks. But even here, landscape is transitory (Burckhardt n.d.): the dense mediaeval city differs from the widespread Fordian in terms of landscape as well. As an example: in the medieval city, human and animal feces were collected as manure and used in the gardens located near the city wall. The Fordian city, human feces are transported into creeks and rivers via sewers. If sewage treatment plants are available, the sludge usually has to be burned due to its being toxic. The urban landscape of the megacity as it is developing in the Pearl River Delta has yet a different quality: centers of intense development are characterized by industrial villages, agricultural planes, suburban settlements, islands of protected landscapes, industrial corridors alongside main traffic roads, etc. The heterogeneous land use creates differentiated landscapes and socially fragmented spaces.

**Landscape Design**

Urban Landscapes are the result of different phases of modernization. In the Pearl River Delta, different phases of modernization overlap to form one synchronous pattern, thus creating a space of characteristic differences (Koolhaas 1997). How can planning react to these developments? How can planning promote sustainable development? What contributions can planning make to avoid that economic dynamics, cultural modernization, quality of life and ecology become a time-bomb for ecological and social crises? We suggest that the aspect of landscape and its development should at least play an important role in strategic planning. We hope for more consideration in terms of quality of life, ecology, the aesthetic of landscape and a lasting attractiveness for im-

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<td>Dense spaces</td>
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Fig. 03: levels of influence in a regionally limited landscape
migration and investments. This approach has been named Landscape Urbanism in American planning theory. Landscape Urbanism is defined as planning and design of the spaces between buildings and roads, as conscious design of fallow land and transitory spaces (Shane 2004). An interesting fact is that this approach to planning did not develop in fast-growing spaces of agglomeration, but rather in shrinking cities such as Detroit where deindustrialization leads to the city’s dissolution into landscapes. This context of origin is important because historically growth and shrinkage, blossoming and decay, intensification and dissolution, expansion and retreat are two sides respectively of one process (Braudel 1990). This context of Landscape Urbanism emphasizes that this planning approach is based on long-term considerations and sustainability. By means of designing intervals, the safeguarding of landscape islands, the restoration of stream courses in the Delta, and the care of patches of uncultivated land, we not only secure the quality for today and tomorrow, but the structure for long-term transformations is also established.

With this approach, we don’t just want to bring some “green” into the city but rather contribute, in cooperation with architecture, to the development of places within the urban landscape in the small measure of a quarter, premises of a factory, alongside rivers and traffic roads. By designing the urban space as a landscape we like to create individual forms, we like to create places which are not only decorations for streets and channels, of spaces between buildings and fallow land. Places are spots of crystallization for social activities and cultural landmarks. Places allow for space to be experienced. Places have names. Placing, along with the space of flows, creates a second structure which presents development opportunities for the social habitat as well as for ecological differentiation.

On the regional level, we want to create potentials for differences. Dense spaces shall receive islands: islands of agriculture, islands of horticulture, of parks, of unspoiled wilderness. Corridors of non-development should emerge, “linear voids” as Koolhaas has developed for Melun-Seurat in France. Along the rivers of the Delta, a green network of marinas and recreation areas could develop, framed by vegetable patches. As much as possible, old buildings and uses shall be viewed and maintained as zones of persistence. These spaces and uses are often approaches to the modernization of tomorrow. The entire region should be perceived and planned as transitory. Megacities grow and shrink. The open spaces of tomorrow could therefore be linked to the landscape structures of today and create new patterns without everything having to be remodeled or given over to decay. Both on the micro level of groups of houses, factories, parking lots and service centers and on the macro level of the region a culture of difference emerges, securing qualities today and opening development potentials for tomorrow which we cannot predict today.
Fig. 04: water (black) and cultivated land (grey) in the Pearl River Delta in 2002

Fig. 05: built-up area in the Pearl River Delta in 2002
From Growth to Development: The Institutional Arrangement and Strategic Planning for the Pearl River Delta

The Pearl River Delta (PRD) in Guangdong Province in South China, though covering just over 40,000 square kilometers, has been considered as the earliest engine of economic growth for the country in the past two decades.

Along with the changes taken place in the PRD, a tremendous literature of scholarly studies, both for policy issues and for theoretical analysis, has followed up, whether that of geographers (Lin 1997; Xu 1992), economists (Wang and Zhang 1991), strategists (Song, Luo and Liao 1999) or sociologists (Vogel 1989; Fei 1992). Among all these works, Ezra Vogel’s and Fei’s analysis of development model using the “theory of dependence” has been so popular that they have received a lot of attention from regional planning scholars as well as from development researchers. According to a summary of the PRD development approaches, Zhang finds the coincidence of Vogel and Fei’s research results that Hong Kong as the economically powerful center has greatly pushed forward the whole regional change, or the region as periphery has otherwise been dependent on Hong Kong in a stage from simple economic growth to the overall development (Zhang, D. 2002).

Looking into the process of changes of the whole region, beside the center-periphery analysis, another hypothesis as from growth to development can be significant for arguments as well. In fact, the first five to ten years with economic growth as one-dimensional goal only brought about several industrial centers in the region, later on more and more integrated efforts made by planning, both strategic and detailed, have started a new process of change: integrated regional development.

Turning from planning economy to market economy, the PRD reflects as an example or model which greatly depicts China’s change from growth to development. Each step of the changes shows actually institutional arrangement by the government at all levels from top to bottom though sometimes there is also creativeness by local people with their own way of reform and exploration. And the process of the region from simply economic growth driven to development of complexes with unique characteristics of urbanization and industrialization is to be discussed on the following pages.

How to define the Pearl River Delta (PRD)?

PRD in the natural sense

The PRD in the original sense was based mainly on physical or geographic consideration. The underlying principle of demarcation is the natural mechanism of delta formation, essentially a result of the interaction between tide and flow. It used to be suggested that the boundary of the delta should cover the places where the stream water meets and interacts with the ocean tide. In this sense, the geographic tide-river interaction actually takes the form of a so-called transitional zone (Wong and Tong 1984: 10) with an area of 17,200 square kilometers.

According to this, the delimitation of the PRD is no less obscure and confused. An uneasy acceptance of it is just the upper reach of the tide-river interaction which extends to Lubao of Shanshui city to the north, Shilong of Dongguan city on the east, Linyongshia of Zhaoqing city in the west and Tan jiang river of Kaiping city in the southwest. (Xu, Liu and Zeng 1988: 31). It has been a long-last unresolved scholarly debate of the definition ever since the 1930s with little significance of taking it as a development region.
Region as a form of social construction
The above described is just a definition of the PRD in natural or physical sense. It is mainly drawn by geographers in scholarly meaning. As a matter of fact, a region is not merely a natural space with physical features; it should be rather a form of social construction done with political policies, economic forces as well as all sorts of regional planning.

The process of formulation and step-by-step changes of PRD has proved it. At the beginning, the definition by geographers explains just the physical shape of a natural area as a result of interaction between tide and stream flow. In the 1960s and 1970s, the prosperity of Hong Kong made itself an economic center of the region. Then in the 1980s came up the booming of subcenters with industrial clusters in Shenzhen, Dongguan, Zhuhai and Guangzhou, which was growth goal driven by Special Economic Zones (SEZs) establishment decision and preferential policies to attract foreign investment. Then when moving further on, there were follow-ups of strategic planning for integrated development of the region with expansion not only in space but in complexity of infrastructure, housing, ecological zones, industrial clusters, etc.
Institutional Arrangement for Growth

Special Economic Zones in the Pearl River Delta

Right after the Cultural Revolution when Chinese government began to centralize its work on economic construction, one of the most important decisions made was to abandon political movements by new policies of economic reform and opening up the country to the outside world. Of the start-ups of the PRD development, the first push was the institutional arrangement by the central government to inaugurate its essential opening-up policy by the establishment of Special Economic Zones (SEZs).

In 1980, the first four SEZs: Shenzhen, Zhuhai, Shantou and Xiamen initialled the establishment with actual construction over night. With three in Guangdong Province and one in Fujian, the SEZs are strategically located near anticipated sources of foreign capital. In the Pearl River Delta, Shenzhen borders Hong Kong and Zhuhai borders Macao. Meanwhile, Shantou and Xiamen lie across the coast from Taiwan. After the establishment of them, there have been new sets of institutional arrangements for the speeding up of the construction and extensive opening-up following the examples. One of the most effective policies implemented was the status of Special Economic Zones extended to fourteen coastal cities in 1984 and the island of Hainan which became a provincial level SEZ as well later (Chung et al. 2001).

As planned, the practice of SEZ should be an engine of growth and it actually did. For as long as over ten years of time, the zones speed up their economy as designated territories for accelerated economic growth and the controlled importation of foreign technology and capital. The SEZs offer skilled, non-unionized labour, preferential tax rates, and other financial incentives. In the 1980s, people were astonished by the so-called “Shenzhen Speed”, because just in 1985, a year after Deng Xiaoping’s first tour to encourage the SEZs, the volume of building construction almost doubled than the previous one in Shenzhen.

At the same time, in order to make the engine more powerful, another institutional arrangement by the State Council was the approval of the demarcation of “PRD Open Economic Region”, with which greater area and more cities are involved in economic growth driven tides.

Policies for the introduction of investment

Since the early 1980s, the same time with the establishment of the SEZs in the Delta, the municipalities’ and counties’ governments have always put it first to make institutional arrangement for introducing foreign investment. As a result of that, the whole region becomes in a real sense “the world factory”, with capital, technology and even raw materials imported and products exported in very large scale.

Policy package for the then so-called “Outward Economy” were complicated. In general, the initial part of them was just a formulation of processing industry in some appointed areas lo-
Fig. 08: FDI to PRD in the last decade

Fig. 09: Sources of investment to the PRD by 1999

Fig. 10: Comparable level of urbanization by the year 2000
located in and out of the SEZs, for there was very few real sense economic entities involved as enterprises. Instead, with thousands of local people manufacturing to meet trade orders mainly from Hong Kong, the business went on formal and larger (Wang 2001: 77). After the OEM (Original Equipment Manufacturing) form had started, many joint venture companies emerged with foreign investment and later on policies for some sole-investment enterprises as well. It has been so important to manage the undertakings of introducing foreign direct investment (FDI) that all the local governments have had special organs in charge of this issue.

The quoted diagrams show vividly the foreign investment to the PRD in scale and structure investment sources. Since the effective measures taken in this region by incentive institutional arrangements, the actual utilization of foreign investment in the PRD took 72.85% of that to the whole province by the year of 1997 (Song, Luo and Liao 1999: 58). The fact that about 70% of the investment is from Hong Kong is thus quite an explanation of center and periphery model of growth in this region.

Urbanization: causes and effects
Among the changes taken place in the delta the greatest is the rapid process of urbanization which has been restructuring the society in all aspects in this region in only 20 years of time in the past.

Before the reform and opening-up period, China had long been a country with a very low level of urbanization. By the year of 1978, the urban population totalled only 17.92% of the whole, the urbanization level was just 5% higher than that in the early 1950s (Cai 2000: 90). However, the situation has changed since the 1980s. Up to 2000, the average urbanization level of the country has doubled. Of course, the data quoted in figure 10 may not be accurate for the approaches since statistics vary from time to time and even place to place, but it can show that the urbanization level is closely related to economic growth since gaps can be found between regions with different development background.

The reasons why the level of urbanization in the PRD is higher than others in the country and even in the province can be manifold, but the most important cause is the large scale development of industrialization. Unlike any hinterland regions in which the realization of urbanization relies mainly on growth of rural economy, the PRD carries out its industrialization with a powerful push by foreign direct investment (FDI).

With about 99% of the investment in sectors of service and industries, institutional changes are following immediately. Along with the establishment and construction of medium sized cities, almost all of the counties turn into small cities and some villages into towns or factories. By changing their way of working, many rural people become urban overnight. Some suburban villagers even have to accept the change of household registration from rural to urban because of the loss of land by the expansion of new urban centers. In the meanwhile, there also come into being all sorts of planning as institutional arrangements for cities, towns, and public facilities.

The urbanization at this stage in the PRD, however, is still in a sense of growth, with a larger number of people living and working in towns. The quality of urbanization remains a problem. Influenced by Hong Kong urban culture and stick to its traditional urban life style, Guangzhou as a central city can take the lead of the urbanization process in this region. But urbanism in general is still far from this just instantly urbanized region.

![Fig. 11: FDI to sectors in the PRD from 1991 to 1996](image-url)
Economic partnerships and its impact
Apart from the institutional arrangements for economic growth in periphery in the PRD, the central government never forgets to do more for the center. CEPA (Closer Economic Partnership Arrangement between Hong Kong and the Chinese mainland) is such an important case. It is actually a document prepared by the central government and signed between the State Council and Hong Kong Special Administrative Region (SAR) government. Being effective from January 1, 2004, CEPA can be considered as a boost to Hong Kong people’s first-mover advantage in the mainland. It is just a free trade agreement under WTO rules which gives preferential access to mainland market for Hong Kong companies. As there should be zero tariff on 90% of Hong Kong domestic exports to mainland with 273 types of Hong Kong-made products initially covered and easier market access for 18 service sectors, the practice of CEPA is merely an increase in competitiveness in the mainland market.

CEPA means to make Hong Kong stronger in economic growth. This can bring about not only more opportunities for Hong Kong development as a center, but also the PRD periphery area as well as south and southwest China would be impacted. There is surely going to be a reallocation of market resources and a reorganization of industrial structure to follow up soon.

Three Times of Strategic Planning
First official recognition of the Delta
The geographic definition is meaningless for the integration of the delta region, divided by the scholarly imposed boundary, with many counties (many become nowadays cities) on the periphery of it. In 1985, a new definition of the PRD was officially established. For the purpose of deciding which counties should offer preferential treatment to foreign investors following the policies by Shenzhen, the central and provincial government put forward a strategic thinking of Pearl River Delta Open Economic Region. This officially demarcated region then, covering 22,800 square kilometers, included four medium sized municipalities (Foshan, Jiangmen, Zhongshan and Dongguan) and thirteen counties at that time (Doumen, Baoan, Zengcheng, Panyu, Nanhai, Shunde, Gaoming, Heshan, Xinhui, Taishan, Kaiping, Enping and Shanshui, which was initially excluded but added in 1986). From then on, the government’s defined delta has commonly been called the “Inner Delta” or “Small Delta” by local officials as well as researchers either from home and abroad (Xu, Liu, Zeng 1988: 32; Vogel 1989: 161). Later strategic plannings are always extensions of this first official recognition in the mid 1980s.

The Strategic Planning of the PRD in the Mid of 1990s
As an open area to the outside world, the small delta became more and more dynamic with rapid economic growth. By the time of the late 1980s and early 1990s, two medium sized cities, Dongguan and Zhongshan, and two county level small cities, Shunde and Nanhai, began to be nicknamed as four “Little Dragons” (some named them as four tigers) in the region when comparing with the four famous “Little Dragons” Hong Kong, Taiwan, Singapore and South Korea in East Asia (Jin 2002: 116). The accelerated growth and development thus made other cities eager to join in and an integrated sense of the delta called for a newer demarcation of it.

In November of 1987, the state council announced that the previous designated Pearl River Delta Open Economic Region would be expanded by three more municipalities and eight more counties in an effort to hasten the economic growth of the mountainous area surrounding the Delta. Later in 1994, Guangdong provincial government launched a program of strategic planning of the PRD, in which the delta is virtually a larger region covering 41,596 square kilometers. For the first time, the government tried to plan it as a defined urban agglomeration. Beside 10 me-
dium sized cities: Guangzhou, Shenzhen, Zhuhai, Foshan, Jiangmen, Zhongshan, Dongguan, Huizhou, Zhaoqing, Huiyang there are also about 15 county level small cities included. From then on, the small delta has changed its name to greater delta (Lin 1997: 80).

As one part of the result of the strategic planning of the greater delta, a group of experts, planners and officials did in 1995 the Planning for Urban Agglomeration of Pearl River Delta Economic Region. In this plan, they started for the first time to stress on balanced and sustainable development in the region with functional system and spatial integration carefully planned. Apart from the design of two economic development axises or corridors from Guangzhou to Shenzhen and Guangzhou to Zhuhai, three urban rings as the central zone, the east coast zone and the west coast zone were mapped out in detail. In order to make full use of the infrastructure and resources of the delta, 7 other sub-axises centered by Guangzhou, Hong Kong and Macao for the development of connected places of the delta and the east wing based on Huizhou and west wing based on Jiangmen and Zhaoqing were prepared as well. This plan actually is no longer the simple designation of the delta region either in 1985 and 1987 just for the purpose of attracting foreign investment. It is, however, a scientific strategic planning which guided and influenced the regional development for the following 5 to 8 years.

**Big Delta and Pan-delta**

The end of the 20th century witnessed the handover of Hong Kong from Britain (1997) and Macao from Portugal (1999). These two Special Administrative Regions (SARs) are not only economically closely related with the PRD, spatially and culturally, they are interreliable as well. Furthermore, in the turn of the century, the infrastructure has been greatly improved, the Humen bridge between the east and west part, for instance, has made the whole region much more integrated than ever before. The changing situation is there waiting for a new round of growth and development and hence a new strategic planning of it as well.

In the new century competition between China’s three main urban agglomerations let Guangdong
government take one step ahead again. In the year of 2003, a joint research group with experts and planners from the state ministry of construction and from some local planning organizations started the third strategic planning for the PRD. By the end of the same year, the work was almost done based on the second version. Although it is not yet published to public, the news media has already given a lot of comments on it. First, there has been a new term of Big Delta, in which the boundary is not as important as before but the impact of Hong Kong, Shenzhen and Guangzhou as twin centers in the region to reinforce the fast development of the PRD is emphasized. Secondly, the metropolitan area such as Guangzhou-Foshan, Shenzhen-Huizhou with one hour-reach transportation based on better railway system is attracting people’s attention. Thirdly, flows of capital, goods, information, human resources, even culture in and out of the region being carried by much more convenient infrastructure as advanced logistic centers, airports, seaports, etc., are specially noticed. Finally, sustainable development characterized by more reasonable land use, protection of environment and natural landscape and more careful planning of towns or villages have been put on agenda now.

It should be mentioned that there has been from the end of 2003 a discussion of pan-delta or extensive PRD covering a very large area in South and Southwest China. That is the model of “9 plus 2” which means nine provinces (Fujian, Jiangxi, Hunan, Guangdong, Guangxi, Hainan, Sichuan, Guizhou and Yunnan) plus two SARs (Hong Kong and Macao). They have hold conferences for virtual cooperation, but that is not a region in a delta sense. It could only be beneficial for growth and development in sharing larger market and richer resources and it can be an interesting case in region study to prove the development theory when explaining the center and periphery relationship. In addition, the mechanism for administrative integration by meeting mechanism is a model to be noted.

**Issues From Growth to Development**

**Land use issues**

The land use is the key issue of the realization of urbanization and industrialization in China since the late 1970s. According to the state land use law, the state owns all the land in the city while the property right of land in villages belongs to the village collective. The state can confiscate farmland functioning as materials for production in urbanizing process, but not the residential land for rural household as materials for living (Li, P. 2003). Apart from planned economic zones or industrial parks in almost all the cities which caused a large amount of land waste either in hinterland or in coast areas, the PRD have had all of these kinds even in most of the towns or villages. Another phenomenon of a paradox of land use issue is the emergence of urban villages in cities in the PRD.

The typical feature of urban village of being a mixture of urban and rural area is the starting point for understanding the rise of urban villages and their existence. The rural characteristic of urban villages reveal some underlying systematic differences between urban and rural area, that is the land use policy. Often in urban villages, the residential houses were not built as planned, for the villagers they are used to make the small piece of land they can handle themselves most profitable. These houses designed and constructed by villagers can not be fitted in the usual urban planning concept, but they are really resources for solving the problems of migrant housing.

**Reservoir for migrant workers.**

The PRD is not only the earliest but one of the largest reservoirs for migrants moving in and out. The estimated number of migrant workers in this region now has been around 10 million, taking over one third of the whole population in the region. As an endless force of industrialization and urbanization in the delta, the migrants always regard it as a reservoir for them as water to be full of vigor and power (Li, Q. 2003).
Migrants are usually pouring into the most industrializing cities or towns. Dongguan, as the third largest city in the PRD, can be considered as an example of a city of migrants. As a rising star of economic growth and development and a unique model of urbanization and industrialization in South China in recent years, it expands always with newcomers of migrants joining in. Being now a city with a population of over 7 million, there are over 5 million of migrant workers or migrant businessmen out of its total population. They come from different parts of the country to seek for a fortune or a better life.

Guangzhou, as a threshold of flows of migrants in and out of the PRD, has been having difficulties in managing migrants’ lives and making itself in sound order. No matter how fast the municipality tries to improve its infrastructure, it seems that the catch-ups are never possible.

**Changes of value system for modernization**

The changes of view of value system can be never neglected in the growth and development process in the past two decades. As a huge community and with the rate of urbanization as high as over 53% in 2000, the region has its own unique culture and thus brought up generations of PRD men (Zhang, S. 2002).

Actually at the very beginning of its reaction of reform and opening up to the outside world, the practice of “light theory” by the PRD people was already known to the whole nation. In this theory or local decision for flexibility in decentralization, “they never stop for they go as fast as they can when the light is green; they go slower when the lights are yellow and they turn around when the lights are red” (Vogel 1989). In this way of thinking, the transitional period for development is not only time for economic growth, but also for renewal of value for their own idea of modernization.

The practice of economic reforms carried out in the PRD with its sense of market orientation has always been changing peoples’ minds in possible ways. This is why the PRD as migrant reservoir is in a sense “the largest business school in the world”. With all new kinds of views of value for market, technology, urbanism, management and development gained in the area, the migrants are all more confident and sophisticated when planning for their own future (Li 2004).

**Becoming the most dynamic urban agglomeration**

The PRD urban agglomeration concept was put forward and planned in the year of 1995. From then on, this area has become in just a few years a dynamic region with much more integrated rural to urban development with Guangzhou, Shenzhen and of course Hong Kong as influential centers and others as periphery.

In the past 10 years, based on the planning of the PRD urban agglomeration, the 10 prefecture level cities have all done their master planning in detail for their development functioning in the region. There are overlappings of industrial planning as well as infrastructure planning, nonetheless, this new round of planning made the delta really a dynamic agglomeration in China as well as in South East Asia. Following up with Hong Kong model and from urban division of labour, Guangzhou’s strategic planning for the new century can be one of the best in making itself as an international metropolitan zone with extension much southward and westward. From the viewpoint of the planning, Guangzhou’s role as a regional and international metropolis is to be proved to be ambitious as well as realistic.

There have been debates which city should take the lead in economic growth, for Dongguan and especially Shenzhen never give up beside Guangzhou. There are also more and more advocates for sustainable development for the whole region. Moreover there are constant discussions about the relationship between Hong Kong, Macao and the whole delta. But the final goal is always to make the agglomeration competitive in comparison with Beijing and Shanghai ones.
Landscape: urban and rural mixture

The accelerated development has brought forth overall changes of landscape in the PRD with its speed-up of urbanization and industrialization. In most of the rural places, the original fish ponds surrounded by farmlands and fruit trees are taken up by constructions of chimneys and workshops with kinds of landscape architecture in between. At the same time, in many parts of the urban area, urban villages with rural style buildings would be hardly harmonious to urban shape. Work sites under construction have always been symbolic pictures of many cities and towns. So the landscape in the whole region is just a mixture of urban and rural cultures.

Indeed, as in many other development zones in China, no matter where people stop, within 20 to 30 square kilometers, they will find easily civilizations of agriculture, industry and information society. The multi-coexistent civilization in PRD really makes it impossible to have any adequate terminology to discuss the most pertinent, most crucial phenomena within its domain or have any conceptual framework to describe, interpret, and understand exactly those forces that could redefine and revitalize it (Chung et al. 2001). In general, the discontinuity of culture and identity-finding in rural and urban development not only confuses the visitors but also frustrates the planners with rapid changes by all sorts of “event driven” forces.

Conclusion

Why strategic?

It should be noted, however, that the changes of the planning of the PRD region, though practical and meaningful, have always been seen as strategies for the regional development by the government.

For each time, the planning of the region may not be marked with “strategic”, but it is just a kind of guideline of development under central and provincial government policies. In China, the planning bureau is simply a government organ which varies only with levels as provincial, municipal and so on. Since the Pearl River Delta is a region which covers tens of municipalities and counties, any planning of it can just be a tentative planning with principles or outlines for the regional development. Then each of the planning organs at different levels of the delta can have their own plans and designs for places under its jurisdiction. The contradiction between the geographic or spatial feature and administrative coverage thus definitely makes the planning more or less in a sense a “strategic planning”.

Fig. 13: agricultural landscape and industrial work site landscape
Yet the PRD is lucky, unlike the other two main urban agglomerations with cross provincial areas centered by Beijing and Shanghai, this region can be controlled and planned with the governance of one administrative power: Guangdong Provincial Government. As for the actual parts in Hong Kong and Macao SARs, due to the traditional economic and cultural relationship between them, the integrated development with the support of central government, can be managed in the strategic planning in an integrated reality.

**Horizontal integrated regional development**

In recent years, economic growth is still a driven factor for development in the Pearl River Delta as well as in most of the regions in China. But in the mean time there has been more and more attention on integration of urban agglomerations with sustainable development. On the one hand, government officials at all levels understand it now that they should not separate with each other in the sense of resource and market if they want to make a city or a town competitive in the regional and global economic system. On the other hand, planners now play very important roles in the relocation and design of the future urban and rural region with more view of integrated development of the society rather than economic growth symbolized by GDP concerned index.

The economic growth rate has been encouraging in the PRD, but horizontal integrated development for the region can be even more essential, for it will lead to the realization of modernization not only for tomorrow but also the day after tomorrow.
Detlev Ipsen

High Speed Urbanization

After decades of politics which intended to establish China’s future in villages and small towns, the direction of Chinese regional planning has in fact been shifting for 20 years; for two years this development has been official. The politics of economic liberalization are supposed to thrive in three megacities. The megacities in the regions Beijing and Shanghai are linked to important urban centers. Only the third megacity in the Pearl River Delta, located in China’s Deep South, is built on rice fields and fruit orchards. In the 1980s only Guangzhou, named Canton by the English, was an urban if rather provincial connecting point. Therefore, the development in the Pearl River Delta presents the purest form of the new urbanization in China. Hong Kong at the farthest edge of the Delta, however, used to play and still plays an important role, at least economically and culturally. The political status of Hong Kong as British Colony and the relative autonomy as special administrative zone today are the engines of urbanization within the Pearl River Delta and at the same time prevent a spatial structural integration. The cities of the Delta compete against each other for the best relations to Hong Kong and for the leading position in the second league of the cities. But Hong Kong is not only of great importance for the south, it also plays a major role as financial center for all of China. Since the Pearl River Delta shows best the complex pattern of high speed urbanization, in this chapter I would like to present several observations which could help to better understand the spatial structural processes and to formulate the connection between the typical form of modernization of Chinese society and the spatial pattern of urbanization. Finally, I will present an evaluating commentary on the risks and potentials of these developments from my point of view.

The Pearl River Delta was traditionally one of the food chambers of China. The prosperity of the region was based on agriculture and trade which had already expanded to Europe via the old capital Guangzhou at an early stage. Under English rule the fame of the Cantonese cuisine spread across the globe, a cuisine which is considered to be among the finest in the world, not only by the inhabitants of the Delta.

Everything changed with the famous quotation of a popular proverb from the Province Sichuan by Deng Xiaoping: “It doesn’t matter whether the cat is white or black as long as it catches mice”. In 1979 Shenzhen, near the Hong Kong border, was established as an economic, urban and socio-cultural laboratory. With the special economic zones along China’s coast the process of high speed urbanization began. At that time Shenzhen was a small town with a population of 20,000 and a historic tradition of more than 1,500 years. Between 1979 and 2002, i.e. within roughly twenty years, the population increased to 7 million; people who lived in a newly planned city and worked in thousands of different factories. The computer industry alone comprises 1,500 companies which produce anything from hardware to software. Not only Shenzhen, but a large number of cities have experienced this period of promoterism in that time span. Dongguan’s population grew from 3.5 million to 7 million between 1980 and 2001. More than 10,000 factories produce shoes, instant coffee and computers. The largest factory employs 20,000 workers. Guangzhou has turned into a large city with roughly 10 million inhabitants. The GNP of that city grew from 4.3 trillion to 238 trillion RMB between 1978 and 2000. Today, approximately 40 million people live in the Pearl River Delta. With these facts, a picture of high speed urbanization and of economic growth has been outlined in brief (Huikang 2002).

Let us now come to the spatial structures of that process. The Harvard project “Great Leap Forward” was a significant contribution to making these processes known and reaching the general
Fig. 14: Pearl River Delta 1993

Fig. 15: Pearl River Delta 2002
public in the Western world. It was conducted by Rem Koolhaas in 1996 and presented at the documenta 10 in 1997 (Chung et al. 2001). Looking back, the attempt to provide the urbanization of the Delta with an entire network of new terms — the main term “Exacerbated Difference” is only one of 70 new expressions — brings to mind Columbus when he discovered Central America: he gave each bay a new name, sometimes two, in order to conquer the foreign world by using of words. I prefer to stay a little closer to the empirically observed reality.

A first approach is familiar from Europe and the United States. It is the relationship between center and periphery, between coastal region and back country. The economic growth of the Delta region and the subsequent migration and urbanization within China is being driven by the strong interdependence with Hong Kong. 79% of all investments come from Hong Kong. To a large degree, this phenomenon applies to China in general; between 1986 and 1991, 59% of all foreign investments came from Hong Kong. Trade transactions are also made via Hong Kong. The cost differentials between Hong Kong and China as a whole are the driving force of this process. The productivity of the Pearl River Delta reaches 70% of the productivity of Hong Kong, while the wages stand at only 20% (Schmidt 1997). As the income in the inner provinces of China is on an even lower level, one can speak of a wage gap between coastal region and back country. This discrepancy triggers massive migration. Young women and men move to the coastal region in order to earn money, to experience the comforts of the modern world and to learn how make use of them. Of the 7 million inhabitants of Dongguan, 5 million are migrants.

As a third structural element of space, a development toward insularity can be detected. The islands are located in the centers of the cities, in factory quarters, on the outskirts and between the cities. Small agricultural areas, fishing ponds, traditional farm houses and extremely dense residential settlements can be found everywhere; these are urban villages. According to Chinese law, the land in the cities belongs to the government, but in villages the village community holds the right of use, and individual households have small private plots of land at their disposal. Although the government has the right to dispossess the land for production, this law does not apply to land which is designed to be used for housing, i.e. settlements. Accordingly, the land used for housing as well as collective residential areas belong to the village community. The difference between city and country applies to the administration as well. While the municipal governments are in charge of the administration of the cities, villages are run by a village committee.
which is also financed through the village community. This legal situation is used to continue farming in the cities, but also to set up factories on village territory, and to build and rent out apartments in seven-story houses. The urban villages thus distinguish themselves from their urban environment through the use of space and its visual impression. They are also different in their political and economic situation. Quite frequently they are economically successful and traditional in their social structures (Li, P. 2003).

While on the one hand they maintain the traditional family and clan system as well as the socialist community structure, both are being modernized. The family can participate in modern patterns of consumption, the village community becomes an enterprise, villagers become shareholders.

The spaces of flows constitute the fourth structural element. The space of flows is the spatial expression of the movement of people, goods, materials, energies and information. Principally, they are city highways which cross, separate and find up to four stories. They are old arterial roads which stretch over kilometers with small shops and markets, repair shops and cobbler. Kilometer after kilometer busses and trucks, motorcycle taxis and people move into and out of the city. It is also the new and actually already old highway which stretches over 100 kilometers to connect Guangzhou and Shenzhen. An endless street economy, factories, trade agencies, warehouses and accommodations. The cheapest sector of the economy, the most severely polluted environment, everything is in a constant state of flux (Wong et al. 2003).

And it is the new parkways with decorative green spaces, which lead into the city as representational axes. To complement this, there is the railway with an express train to Hong Kong, three airports, dozens of container ports, regional and international shipping services. Subways and commuter trains, water mains and channels, container harbours, power lines and radio stations are under construction. The flowing spaces are the foundation of the social and economic dynamic of the cities and their destruction at the same time.

The fifth principle of space is closely linked to the velocity of the processes. We call it the placeless space. All buildings must find buyers quickly because the banks put a tight time limit on their loans. What is rational from the banks’ perspective in order to control risks leads to a rapidly change in the aesthetics of façade design and design of open space. The limited time

*Figure 16: destruction for construction in Dongguan*
available does not allow for original designs so that a highly standardized postmodernity creates waves of similarities. Triumphal arches, Arabic arcades and Roman fountains create an endless row of reproduced designs. In conclusion this leads to a placeless space. The question “where am I” is only posed cartographically not as a matter of perceiving particular and individual images and signs.

The five spatial structural observations (center-periphery, segmentation, insularity, space of flows and placeless spaces) are not unfamiliar in Europe. They are closely linked to phases of modernization which have characterized Europe and, to a certain extent, the United States since the middle of the 19th century. The relationship between coastal region and back country, city and hinterland, a country and its colony was characteristic of the 19th century; segmentation was a feature of the beginning industrialization; the space of flows and functional zoning is the central space-designing form of Fordism, which was dominant in North America and Europe from the 1920s to the 1980s; the highway is an aesthetic spatial image in this period. A lack of simultaneity in developments is known in Europe as well. New methods of production and marketing have not reached all regions at the same time. The process of insularity winds itself through all phases as the “simultaneity of the not-simultaneous”, as persistence of traditional conditions in the process of modernization. However, while in the Western world this development presents itself as phases of modernization in a chronological sequence, i.e. a diachronic process (needless to say, with overlappings and time dissonances), it is synchronized in Chinese urbanization.

The synchronic modernization brings about different layers of spatial structural patterns in a short period of time. The relationship between city and back country can be found in the waves of migration; the factory as Oikos, like in 19th century Germany, can be found in the industrial areas. This is where people work, where they eat, where they spend their leisure time and where they live. The new Fordian zoning of space can be found in new city centers, university towns, industrial and amusement parks. The dynamic and interdependence of the economy and increasingly of politics, culture and science points to the globalization of spaces and allows transnational places to emerge. The competition on the real estate market is so fierce that – at least from the front view, the facades and the decorative green spaces – the renaissance of the locality appears as an expression of flexible regulation. All of this is developing simultaneously and allows for the creation of an individual spatial structural pattern as synchronous layering. This can be interpreted as indecisiveness of the form, as a rupture of identities, but it can also be understood and applied as a resource for complex and diverse spatial and social development. The islands of urban villages can become very unique places and can furthermore create a network of landscape islands. The principle of flowing spaces could promote a parallel structure of green corridors. The segmentation, however, will not be maintained in the future because in the long run migrants will not be willing to accept the status of an invisible population. As a consequence, a certain form of social housing construction could emerge parallel to private residential development. If this is organized in small segments (the institution of the “street committee” serves as a starting point), there will be another opportunity to improve the quality of settlement development, to create places with character and independence. To summarize in one sentence: it seems as though the time is approaching when high speed urbanization is transferred into high quality urbanization. However, both depend on a continuing economic development. If the new megacity Pearl River Delta wants to become a model for China’s modernization that can compete with the Yangtze Delta (Shanghai) and Beijing, the quality of the urban processes must be paramount in the coming years. Vice versa this holds true for the other urban zones of China. The competition for investments in the independent development of high-quality products and highly skilled labor has just begun. Qualitative urbanization is the prere-
quisite for being able to join in the game. From my point of view, qualitative urbanization means the search for concepts and aesthetic forms through which the dynamic spaces of flows, the interdependence of local, regional and global processes on the one hand and the development of place and landscape as an expression of the habitat on the other hand require and shape with equal shares the development of urban landscapes.
Physically, the Pearl River Delta is known as a region most affected by exacerbated modernization and global processes. These processes have transformed scattered villages and agricultural farmlands into interlocking industries, merging urban and rural environments and recomposing an ever-expanding non-place. This chapter examines the spatial process of selected territories produced by this rapid development, emphasizing that this is also a site where the production of societal identities is undergoing recomposition.

Introduction

Whilst socialist modernization for the Chinese is ostensibly concerned with the “four aspects of modernization”, its implicit project relates to the reconfiguration of identity. Particularly since the introduction of a more open economic policy, Pearl River Delta has transformed into one of the areas with the most rapid development in China. Many researchers in a range of fields have commented on the exacerbation evident in this region. However, especially in the disciplines of architecture and urbanism, little attention has been given to the discourse of identity, or of how this high-speed development process is contributing to the development of a new societal identity.

Some scholars nonetheless have undertaken to deal with the theme although mainly in terms of Chinese identity in general. In general though, they struggle to engage with the problem of Chinese-ness vis a vis the non – China, particularly with reference to the Western influences brought by global flows, whether these be in terms of a definition of Chinese-ness and cultural identity (Cohen 1991), the ‘Occidentalist’ tendency of the Chinese postcolonial (Ning 1997), or of the definition of ‘cultural authenticity’ (Xie 1997). Recently, this attempt has also been manifested in the pursuit of artefactual forms of modern Chinese architecture and urban design (Shiling 2003). However, there is also a different approach, which sees differentiation within China itself. Siu (1993), amongst others, views the integrity of Chinese cultural identity to be challenged by development in the Pearl River Delta. Situated at the periphery of Chinese central power, throughout the history of China the region has long been regarded as having ‘enterprising ethos, a life-style, and political thinking unorthodox by Beijing standards.’ Siu indicated somehow this dichotomy as the “north-south” poles of China. Siu suggested that different meanings of being Chinese are fluidly constructed and negotiated within political structure but not without the development of associated tensions. Similarly, Rey Chow redirects the problematic of identity not to the West but to the ordinary Chinese living ‘outside’ China such as in Taiwan and Hong Kong, whether they can say “no” to political structure of mainland China (Chow 1997). In art, Clarke (2000) examines the ‘border art’ of Hong Kong and Taiwan, which confronts both China and the global. Recently, the photography of Wang Jinsong scrutinized the massive development of urban trenches, and the ways in which society is increasingly disintegrated by both traditional and, in particular, modern ‘walls’ (http://www.artkrush.com).

Inclining towards this latter view this chapter attempts to demonstrate how this postmodern urban landscape produces somehow new differentiations among Chinese society. Ipsen (also in this volume) has anatomized the construction of insular space as one of spatial development, characteristic of the Pearl River Delta. Further
exploring this insularization process, this chapter presents some selected territories where spatial interventions and development may lead to societal differentiations; identity is dialectically written and rewritten, in this phenomenon, by spatial restructuring.

**Pearl River Delta: a Plateau of Non-Place**

In the amalgamation of natural, rural and urban environment, the Pearl River Delta’s urban landscape is exemplary of contemporary China, where spatial development is intertwined with global processes producing a plateau of non-place. Writing in 1995, distinguished sociologist Manuel Castells demonstrated that the corridor of Hong Kong – Guangzhou was a “new spatial unit” characterized by considerable spatial discontinuity within the area: including rural settlements, agricultural land, underdeveloped areas separating urban centers, and scattered industrial factories all over the region. Writing in the context of network society, he stressed the importance of and substantial need for networks within the region and links with the outside world as the backbone of its further development (Castells 1996).

**Geographical studies,** notably Terry McGee (1989) and then echoed by Lin (2001), show plenty of evidence to illustrate the process, which have somewhat distinctive features when compared with development in the Western context. Examining Taiwan and Indonesia, McGee suggested that the distinguishing characteristic of Asian urbanism was in fact the lack of clear distinction between urban and rural regions. In urban area we still find the remnants of rural life not only in terms of social behavior but also in the physical environment. Vice versa, in the rural village urban influences are clearly visible. With "urban and rural activity occurring in the same geographic territory," the categories of “urban” and “rural” have become less rigid, replaced by these “blurred territories.” He revealed that there are at least five characteristics that may be involved in this phenomenon. First, it is mainly generated by non-agricultural activities, such as trading, transportation and industry, in the areas which were previously predominantly agricultural. The economic relationships within the area are perhaps as important as the dominance of the Megalopolis over their orbits in the American context. Second, this “blurred territory” is characterized by extreme fluidity and mobility by any means of transportation, from cheap two stroke motorbikes to heavy trucks to facilitate people
and goods commuting both to urban centers as well as within the area. Third, the area is characterized by an intense blending of land use where agriculture, industry, and economic land utilizations exist side by side. In this area, the pressure from growing population is also considerably high and non-agricultural activities are increasingly participated in by females. Fourth, this area produces an "invisible" or "grey zone" from the point of view of the state authorities. Urban regulation may not be applied in this "rural area" but at the same time measurement of the rural policies are incompatible. The lack of authority encourages informal-sectors and small-scale enterprises to grow as well as squatter housing in this area (McGee 1989: 94-5) Lin moreover regarded that the interlocking between global enterprises (investors) and the local villages (local cadres) as a result of place-specific social relations, such as kinship ties, interpersonal trust and connection (guanxi). Thus he argued, "Global capitalism has to seek shelter from locally specific condition in order to take a root in socialist soil" (Lin 2001).

In addition to those features anatomized by McGee, I would add the role of telecommunication systems, particularly telephones and mobile telephones, noting both its function as an accelerator of the development and also the ‘place-specific’ role of global telecommunication technology. In the Pearl River Delta, telephone shops selling telephone service are everywhere making telecommunication widely accessible. Mobile telephones, in addition to being a mode, trend and lifestyle, are widely used by the rich and by common people alike, not only for private but also for economic and business purposes. In China urban graffiti is virtually non-existent; with the significant exception of telephone numbers. These numbers offer various kinds of informal service, both legal and illegal, from services in manufacturing, well-digging, door repairs, the sale of traditional medicines, horoscopes, to the provision of fake passports, student certificates, and other official documents. And they are ubiquitous. But unlike some other expressions of sub urban culture, which function to resist authorities, the purpose of telephone graffiti is purely economical. In these nebulously defined territories, where urban and rural spatial qualities interlock, telephone numbers serve to translate fixed identity into fluid anonymity.

Here we are confronted not only with what Soja term postmodern ‘exopolis’ (Soja 1996) but also with what Hardt and Negri described as the ‘smooth space of Empire.’ This blurred urban landscape is characterized by the weft of ‘bi-

![Fig. 19: urban graffiti - telephone numbers](image-url)
nary divisions or striation of modern boundaries,’
which ‘only appears as a continuous, uniform
space’ (Hardt and Negri 2000: 190). Furthermore,
the Pearl River Delta seen from this context is
a continuum of “non-place” where clear deline-
ated borders of places are diminishing. The no-
tion of place thus must be “consecrated” within
and based on this fluid and ever-changing milieu,
producing the degree of differences rather than
polarities. In this respect, ‘place and non-place,’
as Marc Augé writes ‘are rather like opposite
polarities’ where the first is never completely
erased and the second never totally completed.
In regard to identity, the presence of both place
and non-place is like a palimpsest on which
‘the scrambled game of identity and relations is

The remainder of this chapter turns its attention
to this “ceaseless” writing of identity.

**Mobile Territories and the Subaltern**

The immediate form of non-place in the Pearl Riv-
er Delta is, without doubt, the hundreds of indus-
trial parks and estates that have spread across
the country. An unofficial survey conducted by
the Consulate of the Netherlands in September
2002 revealed that in Guangdong Province alone
there are 31 big and small industrial zones. They
are agglomerated in its major cities: Shenzhen
has 5 zones, Guangzhou 4, Foshan 1, Jiangmen 2,
Zhongshan 5, Zhuhai 5, Huizhou 3 and Dongguan
4. In Shenzhen and Dongguan in particular,
early all of their parts are industrial zones. The
Shenzhen area encompasses Longgang Greater
Industrial Estate, Shatoujial Bonded Zone, Futian
Bonded Zone, Yantian Port Bonded Zone, as well
as many other smaller areas. Those are merely a
few number of China’s industrial zones.

Normally an industrial zone is a closed or semi-
closed area, meaning that it is separated from
other activities. In the case of Shenzhen and
Zhuhai, which are special economic zones (SEZ),
the whole city is closed, meaning that only per-
mitted persons are allowed to enter the city.
Dongguan, for instance is different. It is not a
closed city but nearly all of the areas are cov-
ered by factories. Separation is therefore mainly
enacted individually. However, regardless of
whether a factory is in an SEZ-enclave or is in
an individual factory as in Dongguan, workers are
mostly housed in the self-contained dormitories
provided by those factories.

Many parties however have commented on the
attendant difficulties of these ‘gated factories.’
The problem lies not in this barrier alone but in
the structural social segregation imposed upon
the workers. Barriers are required to separate hu-
mans from machinery. But in China these barriers
also operate as the disciplinary space. Reporting
on the work environment in a silk-weaving fac-
tory in Huangzhou, Lisa Rofel wrote that the very
layout of the factory served to enforce discipline
because workers’ wages were ‘classified’ ac-
cording to their workspace in the factory (Rofel
1997). Workers’ activists have been vocal in their
criticism of working conditions inside the factory,
as well as commenting on the weakness of au-
thorities’ ability to control beyond the wall. Re-
ports containing comments such as “live in the
empty warehouse, where factory parks the van”,
“working 24 hours a day, seven days a week,”
“no weekends and no holidays” and such like are
commonly released inside, although mainly out-
side of China, to stress the condition of factories
as the site of workers’ oppression. Moreover,
as China Labor Watch reports indicate, that the
problem is continuously silenced by the presence
of a “no picture zone” in certain branded-global-
marks factories (such as Nike with its “Nike’s
Media Policy”) by which public control is virtually
impossible. Furthermore, it is not only in normal
working daily life that the voice of the workers
continues to be blocked by the wall. During the
outbreak of the SARS (Severe Acute Respiratory
Syndrome) many workers were among the social
groups in China who were barely informed of
the situation. China Labor Watch reported that
knowledge of the plague was limited not only by
the closed environment of the factory, but also
by the prohibition on workers speaking about it. At the beginning of the outbreak, some workers who were suspected of being infected by SARS were simply forced to leave the factory without any medical treatment or financial help. Later after this practice was prohibited by the Chinese authorities, then the management of factory and the police detained both those people infected, and the remainder of the workers to stay inside the factory. Powerlessness is the key issue: in a normal situation, the walls of the factory function to “intensify” the work, during the outbreak of SARS they were transformed into a prison with no escape.

China’s workers are not alone, as demonstrated by Naomi Klein in No Logo (2000) and Windows and Fences (2002), revealing how problematic this kind of development is worldwide. In Cavite and Cebu in the Philippines, Tangerang in Jakarta, as well as other export processing zones in many developing countries, workers are normally subjected to a similar system whereby total mobilization of workers occurs in the name of industrialization and export. Armitage and Roberts (2003) have claimed that global capitalism renders such mobilization a territory of cheap labor, which is mobile from one region or country to the other. In this non-place, I would add, Chinese-ness is not the primary concern. Rather it is the way in which gated factories have victimized migrant workers, transforming them into a body of machines, reconstructing them as subaltern subjects. Consequently this phenomenon has a global dimension in its own.

Imagined Place, Imagined Communities

Factories are not only a ‘mobile and mobilizing non-place.’ They also engender territories described as the ‘citadel of the wealth’ territories. The example of Nansha illustrates the creation of an enclaved industrial area which is then imagined as the core of a ‘new community.’

Nansha Information Technology Park is a joint venture between the Hong Kong University of Science and Technology (HKUST), the Fok Ying Tung Foundation and the Guangzhou Government. Nansha is a small peninsula located in the mouth of the Delta. According to its official website, the location is in the “heart and geometric centre” of the Pearl River Delta, and therefore also the centre of a network of connections. It is “encircled by 14 major cities and 420 towns … 7 domestic and international airports … and over 200 kilometers of freeway…” It has also 5 highways leading to Guangzhou ring expressway, excellent water connection with both Hong Kong and Macao and is advertised as “New Guangzhou”, since it earns Government attention as a designated economy and technological development zone and as the southward direction of future extension of the city (Nansha Information Technology Park 2003). Ricardo Bofill, who was appointed to design the center area, designed Nansha as a ‘hub city’ based on his criticism of the ‘lack of planning’ found in Hong Kong, Guangzhou and other cities in Pearl River Delta. He noted:

‘All around us, cities seem to suffer the same disease; disconnected and haphazard growth justified by hypothetical urban planning which favours the spread of development over a wide territory. In most cases, these isolated interventions contradict the concepts of global town planning. This disconnected growth, made up of fortuitous aggregations, transforms the suburban area into a gigantic puzzle, the key to which remains totally unknown. If we focus our attention on the present situation in Asia, we will have to admit that this disease which characterizes western cities has here found especially favourable ground; one with strong economic growth and little experience in terms of urban planning’ (Bofill 2003).

Thus he proposed that Nansha be developed as a large hub city, connecting cities in the region both by land and water. This function will be the characteristic of this new city, which guarantees its identity as “a city of the future with the knowledge of the past”. Through this strategy, he has tried to avoid the mistake of reproducing the mismatched gigantic puzzling cities like Hong Kong, Macao and Guangzhou.
The proposed structure of Nansha is as follows. It is divided into three development areas: preserved ecological area with rich agricultural fields and river network and a site for "comprehensive harbor-related industry area." The other area will not be only for industrial park but also for regional service centre such as space for living where what “not just a community” is supposed to be located. The planning area consists of about 796 sqkm of which about 575 sqkm is land area. The key development is about 212 sqkm consisting of a conference and training center, hi-tech office park, and residential community of about 1036 units. The first phase of the development was completed in 2002. The ensuing two phases will be development for further offices. Its projected date of completion is 2008.

The idea of developing Nansha came from Fok Ying Tung, a Hong Kong businessperson. Tung wanted to develop Nansha as ‘a hi-tech city’, which promised “a new kind of prosperity” (NSITP 2003). Further: ‘At Nansha Residential Community, residents living area extends well beyond their luxurious apartments. We have created a neighborhood, where tenants can dine in style, take care of errands, enjoy walking with family and friends to charming shops, sidewalk cafes and restaurants in a pleasant ambience – all just steps from your door at Nansha Residential Community.’ (Nansha Information Technology Park 2003).

There is however a paradox in this development. On the one hand Nansha is advertised as a junction band designed as a hub city, thus its key function is connection. But on the other hand, in its focus on the production of community, a separation is created between social groups. This paradox is precisely the basic characteristic of the Pearl River Delta spatial development that most Chinese urban planners, I would argue, fail to consider, or merely acknowledge as a “problem.” Based on the results of our field study, it is clear that the development of the Pearl River Delta cannot be separated from the incremental development undertaken by ordinary people. The “villas” of rural peasants are growing along with, if not faster than the development of the key areas. Even in the very strict bordered areas like Shenzhen and Zhuhai’s industrial zones, the “leaking” of incremental development by ordinary people is visible. In nearly every industrial site, behind the row of factories, there are sites for farmers to build their villas accommodating both workers and new economies. This may produce the relationships that McGee and Lin have exposed, of the interlocking between urban and rural, global and local.

Nansha is merely one of many such postmodern global trends in creating enclave places. It is relatively new area and now many construction projects are still in the process of completion. A new harbor, new express and highways, apartments and shopping malls are all newly built or under construction. However the ‘sophistication’ of Nansha planning will soon be ‘disrupted’ by the presence of this incremental development. Here we are confronted with divergent constructions of identity. In the official, legal vision, Nansha planning is developing an ‘imagined place’ where wealthy, ‘modern’ and ‘global’ societies are constructed. It is an imagined place because it is built in the midst of non-place environment. It is an imagined community because community is developed where traffic and mobilization run at their highest pace. However, in the incremental and unofficial vision that will inevitably develop, Nansha surroundings presumably will continue to
recycle old symbols and traditions through “vernacular modernization” forming a new vernacular identity (see the next section). The surroundings will be more “localized” places where the pace of life will slow down. Interface between both places will be very crucial. In this regard, Bofill’s plan still contains a key deficiency. Creating Nansha as the hub without also creating an interface between the core and its informal periphery will reproduce “social enclaves” leaving the area vulnerable to both social and spatial tensions and conflicts.

Vernacular Modernization and New Society?

Thus it is imperative that the relation between the production of space and the mutation of society is interrogated. Two previous examples illustrated a production of space and identity that were arguably formed mainly by global processes. However, since the huge population of China also needs a huge supply of space, the Chinese “create” their own unique system to cope with the problem. Especially in the Pearl River Delta where demand for space is increasing rapidly, subsequent mass production of space, which is standardized, cheap, quick and flexible are the main characteristics of the development done by ordinary people.

Standardization is believed to be one of the most important characteristics of modernization, also known as Fordism, resulting from the Industrial Revolution. This appeared in Germany in the production of housing as siedlung, the mode of production of standardized cheap housing that emerged in the 1920s and during the post World War II reconstruction in 1950s. Architecturally speaking it was a moment when standardization became a synonym for modernization in space production, modern planning and design as well as modern urban life. In this latter issue, in the West, it was perceived to be impossible to dwell “in place” in modern life. The phenomenon is almost an entirely urban occurrence as these were the areas most affected by the devastation of the war. The pattern that occurs in the Pearl River Delta however has presented rather differently. The process of standardization occurs at almost every level: from the planned apartments to the vernacular house built by peasant in rural areas. “Modernization” is applied not only by the planning and architectural offices and building contractors using modern technologies and techniques but also by rural peasants. Vernacular modernization is a proposed term to decipher this informal, incremental and partial modernization carried out by the ordinary. This phenomena is perhaps a result of two phases of modernization – firstly under Mao and secondly in the current open door era – that have created a rupture in architectural tradition. Traditional Chinese architecture is based on the evolutive traditional system of construction as well as stages of apprenticeship to become a master builders. A more informal network system of the “ordinaries” has responded rapidly to sudden development and the need for massive production of space. Traditional work methods are “unskilled” in the modern context, or unable to adapt to new systems of construction. Thus the old system of constructions, skill and craftsmanship found in classic and traditional Chinese architectural tradition is beginning to disappear. The peasants’ skill of engagement with new materials and techniques could not match the pace of development. The new vernacular architecture that has grown amidst this modernization somewhat has developed its own techniques, which

Fig. 20: buildings on the main road near Wanggang
are generally of poorer building construction although nonetheless innovative and adaptive to the modern techniques and materials.

The speed of this development — the incremental and informal — is amazingly quick and quite flexible. The exemplary case of this flexibility can be seen from the development of the “villa” of the urban village. During our visit, we realized that this type of alternative development can be found almost everywhere, virtually wherever “official” development is occurring. As an example we visited a building construction site in Wanggang village, located in the suburb of Guangzhou. Concrete and brickwork had just been completed, with façade and mosaic work still underway. Some of the workers were completing the brick and mosaic works. A female worker, who was actually a wife of one of these workers did the cooking for the whole group. The group resided in the construction as it provided a dry floor and secure roof; they constructed a temporary room for sleeping and cooking in one of its four floors. They would move as soon as the work was over into another construction site. As has been indicated, mobile telephones play as an important role in this process. In places like Wanggang, where urban-rural distinctions are blurred, telephone numbers in the form of graffiti, stickers, painted and any other sort of informal announcement abounded. Some of these telephone numbers offered services in building construction, well-digging, concrete works, mosaic works, plumbing, roofing, digging and foundation works et cetera. Thus the owner of the lot, when he or she needs to build a house, could easily manage the whole construction through telephoning these nomadic worker units. Further it could be “managed” not at once but rather by a step-by-step process depending on the availability of money and needs.

Wanggang Village is a cluster of peasant people who according to the new land reform could live on their “own” land. Their territory is divided into four main areas. The first is area where the investor runs their factories. These factories are built and owned by the community of Wanggang. The investors merely rent them out for an agreed period of time, which can be prolonged, customarily indefinitely. The second area is farmland. The Wanggang people were originally farmers and some continue to work in this profession. Crops, rice and fish are the main products of this agricultural sector. However since the area was engulfed by industrialization, the agricultural sector remains small, there is no massive production on agricultural product anymore. The third is business area, shops and market place, located along the main road and the fourth is the residential area.

The whole settlement is composed of a gridlock of houses. The lots, ranging in size from about 60 to 80 sqm, are mostly rectangular. Each lot contains a house of three, four or more stories — sometimes referred to as the “villa” model. Houses along the main street (Lu) have the option of using the ground floor for economic activities, including sewing services, shop, beauty salon, garage, electronic repairs, billiard and gaming centers, telephone cell shops, et cetera. The first floor and above are use for housing. Many owners build houses with more space than their family needs, renting the remainder of the space to migrants working in the factories, especially married workers. Wanggang cluster has two per-

![Fig. 21: Wanggang Village - village structure](image-url)
perpendicular Lu, and perpendicular to these Lus are
four or five xiang (alley). These xiang are more
like a space in between the houses, no more
than 3 meters wide at the ground level and nar-
rower at the first floor level since many of these
houses extend the first floor beyond the width
of the ground floor. But xiang indeed functions
as a street as the space in between houses that
is not xiang is used for the drainage and sewage
system. In this small alley space, people conduct
their outside activities from chatting with neigh-
bors, nursing babies and children, repairing bikes
or motorbikes, washing, children playing et ce-
tera. It is an exterior living space, an outer ‘leb-
ensraum’. At the height of the hot and humid day,
a shaded space produced by these rows of adja-
cent houses becomes a perfect place for these
daytime activities. In this climate, exterior space
is organized in accordance with its importance,
equal to that of interior space. Some lots inside
the cluster remain empty, meaning the lots have
not yet been built on by the owner. These “open-
ings” create contrast scenery in the midst of the
densely built houses, but are mainly left unused.

Architecturally speaking, Wanggang houses are
neither modern nor traditional although many
refer to them as villas implying the new trend
in Chinese architecture. They are not like most
“modern” buildings produced by socialist ideol-
ogy. The latter are a full copy of the Western
product – via Soviet Union – rather than ad-
aptation of local architecture. They are bulky,
free standing, “pure utilitarian” building. These
qualities are in direct opposition to the local
architecture found in monuments, temples and
vernacular architectures that is formed by spatial
composition between interior-exterior, ornamen-
tal and wooden tectonic vocabularies, as well
as embodying various systems of symbol. Villa
houses however may employ a combination of
both features often exhibiting eclecticism and
individual preference. The spatial arrangement
displays neither modern division of use such as
the communal kitchen exercised during the Mao
era or ‘Western’ based space arrangement which
emphasizes on the division of private and public

Fig. 22: vernacular modernization in Wanggang
usage of space, nor the Chinese tradition which is based on the fluidity of function (Knapp 1989). The villa displays rather both degrees of arrangement. New elements of spatial division based on function are present in the individual house but at the same time the use of xiang resembles the traditional undifferentiated use of space.

The whole settlement and the intimate use of xiang produce a kind of “place.” Here presumably people have consecrated what Augé calls the ‘anthropological place’ using not only new forms and modern systems but also ‘recycling’ the old one. Tradition is reinvented in new places. Old symbols and ephemeral edifices are used to strengthen the presence of (new) territorial notions. Tao’s three deities or Cai Sheng Ye, the "money guardian deity", or other house and village shrines are reintroduced to protect the inhabitants and to secure their happiness and prosperity. Old notions of territory are recalled and implanted in this new territory, creating homes and localities amidst ever changing world and global processes.

Projecting Identities

There are two major forces that form Pearl River Delta urban landscape. The first is the flexibility of global capitalist entrepreneurs together with authority that shapes insular ‘places’ whether they are the ‘real’ places of mobile and mobilizing factory space or the ‘imagined’ place of Nansha community. The other major force is the informal and incremental development involving incomplete features of modernization and its creative adaptation carried out by the ordinary. It has been demonstrated that both forces have their own (often opposing) trajectories, and thus may collide, thereby producing both spatial and social problems.

Castells postulated the notion of resistance identity may be developed in the context of the rise of a network society in the course of globalization. In the Power of Identity, he distinguished three forms and origins of identity. Legitimizing identity is introduced by the dominant institution of society, to extend and to rationalize their domination. Resistance identity is generated by actors or subjects who are devalued and stigmatized by the logic of domination. It builds trenches of resistance and survival apparatuses on the basis of principles that differ from those who are the dominators. The last form is project identity, which builds a new identity that redefines the position of the dominated and seeks the transformation of the overall structure of society. In network society, Castells maintained that legitimizing identity, which leads to or “produces” civil society is in the process of disintegration. Only communal resistance can produce project identity as the main potential source of social change and thus resist the dominant interest enacted by global flows of capital, power and information. However not all resistance may result in project identity. The other trajectory is to transform resistance into “communal heaven in heavenly hell” (Castells 1997). In this instance, subaltern subjects who dwell in dormitories and people who “live” outside the enclave may congregate in an imagined community whose purpose is to resist the “authoritative” subjects. Thus, here, identity hinges not on the notion of the Chinese against the Other (the West for instance) but rather on the degree of internal suppression that stems from exacerbated development and modernization. Questions of defining who is Chinese, or what constitutes Chinese-ness are now entirely subjugated to the issue of modernization and its attendant products, social class and separation. Paradoxically, the socialist modernization project itself must be critically examined. Architecture, urban design and planning are used to “cement” this production of differentiation and domination, some of which is by deliberate intention of the designer, planner and/or authority. In this case, I would argue that architecture and urban planning should develop new vocabularies which can operate as a “line of flight” out of this situation. In certain specific cases, however, vernacular modernization exemplified in the unique form of architecture of the Pearl River Delta may presumably be a fruitful site of project identity leading
to the creation of new Chinese subjects. This ar-
chitecture functions to resist the dominance of
state and capital and also project a new social
identity interlocked between rural-urban, so-
cialist-capitalists restructuring. It is the task for
urban planners and designers to make provision
for this incremental development to continue its
trajectory and at the same time redirect it into
better living quality.

I would suggest that to re-integrate this vernacu-
lar modernization into the larger framework of
the Pearl River Delta planning is the key factor
to sustainable development of this region both
environmentally and socially. Some pilot projects
which include this vernacular modernization to
create improved quality clusters of villas may
prove to be a more effective method than method
than creating new “key projects” frequently used
in planning bureaus in this region. Injecting this
kind of form of development in spatial—planned—
enclave both in industrial sites and factories and
communities may also well strengthen the link
between social groups and at the same time form
an integrated spatial composition. As this chap-
ter attempts to demonstrate, these new “hybrid
places” are emerging in the midst of non-places,
as is the new Chinese rural-urban society.
Detlev Ipsen

Report on the Gruenderzeit

The Gruenderzeit is a historical period in the last third of the 19th century when many new companies were established in Germany. This is a report on the current development in the Pearl River Delta which is to some extent comparable to the Gruenderzeit in Germany. It is not only the global business which one finds in the Delta, but thousands of small and medium sized businesses which are part of the outstanding economic and social development in the Delta. This short report, written during my visits in the last four years, presents an image of the every day social and economic life.

The taxi takes the traveller to the Chinese border where he makes the final part of the journey on foot, unless he wants to generously pay a driver whose car has license plates from Macao as well as from the Province of Guangdong. Directly at the border lies Zhuhai, one of the new special zones of the province Guangdong in South China with new generously constructed broad streets, factories and hotels as centers of the business world. At least on this Saturday, everything seems rather quiet, the streets like an extremely oversized suit. At a hotel I meet Thomas Sch., an entrepreneur from Guangzhou who has come to pick me up. We have lunch together with his niece and her friend, as well as the driver. The following two-hour drive takes us through an area with a string of larger and smaller factories, shops, newly constructed residential buildings, several wooden farmhouses, rice fields, vegetable patches and highway junctions; a mixture of agriculture and industry in a landscape resembling Veneto. This similarity has its origin in the comparable topography, a southern alluvial plain, but it is mainly due to the deconcentrated mixture of urban residential buildings, businesses and rather traditional farming methods. The closer one gets to Guangzhou, the more frequently islands of eight- to ten storey residential settlements appear: signs of the approaching metropolis.

The tannery Dewei is both workplace and living quarters for Thomas Sch. and Chris, his wife, who comes from Taiwan. The business lies on the territory of the village Wanggang in Guangzhou. Behind the factory buildings, intensively cultivated farmland begins where rice, pulse, lettuce, leeks and onions are grown alternately. Each farmer has only a small patch of land, often with a tool shed close by, which is also used for breaks. Several farmers spend the night there as well in order to protect themselves from thieves. Interwoven in this farmland are islands with factories, barracks for the workers with limited residence permits and sheds for construction workers. Sporadically, four- to five storey residential buildings have been erected, some of which are vacant save for the first floor where the owner lives. Small businesses dominate the villages. At least on this Sunday afternoon everything seems to radiate rural calm, disrupted only by motorcycles honking loudly. A bicycle transporter delivers an unfamiliar sweet to several customers; the sweet is stored in glass containers and filled into the customers’ bowls which they carry with them. With a soft tune the vendor announces himself and his goods.

Guangzhou makes me anxious. Not because its structure is particularly unclear; not because it doesn’t possess distinct features and points of reference. The Pearl River is a clear inner-city land- and boundary mark. And it is not as if one feels threatened or scrutinized in an unfriendly way. It is only the symbolic distance of the language and its signs. One cannot assume that somebody might know a few words of English here, and only the names of the main streets are transferred phonetically into Latin characters. The cultural distance between Europe and China finds its symbolic expression on the Qingping market. Not only is it foreign to our food culture to find snakes, small cats, tortoises and worms at a food market; the strangest aspect is the large
number of live animals. While walking through the market with its different stands, there is a lot of slithering, crawling and squirming on the tables and in tubs; chickens, piglets and fish gasp for air, cats stare vacantly from within their cages, and every so often a tortoise has to be caught and put back into the selling basket.

Next to the live animals there are the dried ones. To bring the animals to the market alive or to dry them: both are reasonable methods of conservation in the hot subtropical climate. Foreign to us is not the function, but rather the method which illustrates the inevitable connection between food supply and killing. In addition to that, there is the culturally different form of evaluation of food: to us, the live cat is cute and cuddly, the dried starfish a souvenir of a holiday by the sea; neither belongs in the soup. Thus, the foreignness is a distance of values and methods. The city demonstrates the technical distance between us with conservation methods as an example, the symbolic distance of the visual and acoustic description of the world and the different value allegories become apparent by means of the dried starfish or the kitten. The distance of values in the phenomenology of the city is initially illustrated not in the complex religious system of classification or the view of the world, but rather in the pragmatism of the relationship with nature.

I try to document the firm Dewei. It is often too dark to take photos, but the opportunities for acoustic recordings are unlimited. A symphony of work emerges. Light dictates the photographing, the aesthetic of light and shadow creates a visual world which is independent from the functional processes and which focuses on details rather than capturing the whole.

The logic of tanning is the refinement of the skin. The raw tanning (Blue Wett) is divided in order to generate thinner layers of skin suitable for further processing. Bumps are removed from these skins with machines using the most delicate blades. Finally, the skins are dyed and smoothed (actual tanning processes) in large revolving barrels before they are pressed with large ironing machines. After drying they are fixed into a stretching device in order to reduce shrinkage caused by the drying process to a minimum. The product is sold only by square feet. The company has approximately 300 employees, most of which are unskilled workers. With only a few exceptions they work with a limited residence permit and live on the company premises in worker dormitories. The skilled workers come primarily from Brazil. The management group’s average age is 24.

Fig. 23: tannery in Wanggang Village/Guangzhou
The skins are purchased from the USA; they are the best due to industrial livestock farming. There are no tears in the hides resulting from injuries involving fences, thorns or wasp stings as they are common in cattle hides from Brazil or Argentina. Also, the quality of the US skins is further enhanced by computer-controlled nutrition and exact slaughtering dates. Hides are in abundant supply; every day 80,000 cows are slaughtered in the US. The raw tanning is usually performed directly at the slaughterhouse.

The skins are transported to the company in containers and trucks. The tanned skins are delivered mainly to companies in Guangdong, e.g. shoe factories which produce shoes for well-known brands like Adidas. These shoes are then marketed in the US and the EU.

Where do the hundreds of thousands of people who live in Guangzhou as floating persons come from? What is their driving force – is it poverty or the will to advance to a higher standard of living? These are questions that only an in-depth study can answer, but a journey can sharpen one’s perception.

We drive to the hometown of Chen who works as a nanny for the factory owner Sch.. On the highway, the first few kilometers through the industrial landscape pass quickly, but the trip is interrupted frequently by the many tollgates. We rarely see any villages, but we do notice agriculture and industry, four-storey residential buildings, factory buildings, several old houses. After 150 kilometers we approach the first village near the highway. Farmers are harvesting rice. With small threshers operated by foot the recently cut sheaves are threshed and then put out on the street to dry.

After 189 kilometers a village being remodeled as seen in Apulia or Serbia in the 1970s. In front of and between the old houses, new, larger houses are built. Money flows into these villages and is invested in better housing.

After 200 kilometers the highway ends. So far we have paid 70 Yuan in toll. How much is that actually? The conversion into EUR (ca. 7 EUR) doesn’t make sense. Taking the income of a well-paid skilled worker as a standard (800 Yuan, the average wage is around 500 Yuan), the highway toll for this trip would be 8% of his monthly salary. If we compare this to a well-paid skilled worker in Germany, with a monthly net income of 1,500 EU, the toll would have been 120 EU. Would that worker have used the highway?

After 200 kilometers we exit the highway. The next 70 kilometers are asphalt federal roads, for the last 30 kilometers we drive on a well frequented unpaved lime road, but the development of an expressway has already started on several sections. During the last 100 kilometers we haven’t seen any passenger cars, only small trucks and buses are out there. One-axle hauling stocks pulling small cramped trailers are the universal means of transportation for people, animals and objects of all sorts. To the right and to the left of the road there are fish ponds over which elongated chicken coops are built. One part of the chicken excrements is eaten by the fish; the other part of it is packed in sacks and sold as manure. The higher planes of the valley are dominated by bamboo which is cultivated as a “wood field” and supplies simple paper factories with raw material.

After 275 km we reach Quigang, a country town with 50,000 inhabitants. Half of the population works as floating people somewhere in or around Guangzhou. The city has a small fish market, and a couple of farmers sell cabbage and fresh onions.

Joineries and timber mills are the main businesses. On the following day, the mayor tells us about his dream to build a large paper factory which would process the wood that grows on the 3,300 ha (8154.63 acres) forest belonging to the community. He has made all the calculations already: 250t of wood are to be cut each year. Each ton generates 300 kg of paper, resulting in
75,000 kg per year. Each ton of paper earns 4,000 Yuan, that’s 300,000 Yuan per year. Considering that, who would hesitate to invest the ridiculous amount of 10 million Yuan? Or who made false calculations here? After all, the mayor already drives the most expensive Toyota Land Cruiser.

The migrants have visibly and tangibly invested their money in new houses, however useful those might be in the future.

Chen’s husband and her two children together with the grandmother live in a house in the outskirts. Her husband is a joiner as well, but business is not going well it seems. Thus, the generated income is used to expand the house. Comparable to the merchant houses of the 16th century, the work room serves as dining room as well. Here, the rare and foreign visitors from Europe are served tea and coffee, which Chen brought along from her boss’s house.

Mr. S. is an entrepreneur, and today he is both my escort and host. Accompanying us is Prof. W., a professor of German language at the University for Foreign Studies in Guangzhou. Mr. S. speaks neither English nor German; however, he is in close contact with Frankfurt. In the context of the partnership meetings, a friendship with the former head of the city council has developed, the linguistic backbone of which is Prof. W.. This guided city tour came about because Mr. W. wanted to do me and a visiting lecturer from Paderborn a favor. Another reason was that Mr. S. felt obliged to Mr. W., because Mr. W. was helpful in arranging that Mr. S.’s wife could show one of her paintings in a Frankfurt exhibition on Chinese painting.

The first stop is the city mansion of Mr. S.. The mansion is located in a densely developed residential district beyond the Pearl River which is enclosed by a wall. Directly neighboring this district, where horses grazed only five years ago, there is a large residential settlement which continues to grow toward the south. The city mansion has three levels with three rooms each. Several years ago, Mr. S. bought this mansion for 500,000 Yuan and invested another 200,000 in its renovation, which currently equals approximately 80,000 EU. Neither Mr. S. nor any of his family members live in the house. There is only a woman who cleans and feeds the dogs on a daily basis; she earns 450 Yuan with free board and lodging, as Mr. S. points out, and an allowance in addition to that.

Upon Mr. S.’s invitation, we take our lunch at a restaurant adjacent to the four-lane arterial road. The diner is packed; workmen and small entrepreneurs have their lunch here. The owner
knows Mr. S. well because he comes here whenever he visits his nearby factory which he does about once a week. We are seated at a simple table with stools. We have Chinese spicy stew, a stuffed carp, the braised giblets of the boiling fowl and a kind of fish ragout. This is accompanied by filled pasta squares and sweet pancakes. Since the colleague from Paderborn declares that he does not like Chinese popular cuisine, he has tofu casserole instead, while Mr. W., Mr. S. and I thoroughly enjoy our meal which apparently pleases the owner a great deal.

Mr. S. produces school uniforms in his factory. Approximately 40 seamstresses, among them two men, are employed here; they sew together the pre-perforated textile pieces using simple electric sewing machines. Presently there are only 17 seamstresses in the small factory building as the employees work in two shifts. A supervisor keeps an eye on everything. Some of the workers are relatives of Mr. S., and one of the supervisor’s sons works as a seamstress as well; his wife, whom he met in the factory, sewing right next to him. They are paid by the piece.

In the adjoining building of the densely developed industrial park the fabrics are pre-cut with an electric cutting machine. On the top layer of the fabric, the individual pieces of the school uniforms are marked with needles and chalk. Each layer has 51 sheets of fabric, 12 to 15 sheets are cut every day. The roughly 600 pieces are also sewn every day, which comes to about 15 garments per seamstress per day. Mr. Wang mentions that he spent 300 Yuan on the school clothing for his daughter’s school enrollment this year. Thus, it is possible that a seamstress generates in one day what he/she earns per month.

Today I have a discussion with the planning department of the city of Guangzhou. Assembled are the city’s chief planner, a representative of regional planning from Guangdong, a geographer, an executive architect, a political representative and an interpreter. The composition of this group guarantees a minimum of controversial subject matter. The reluctance is intensified by the fact that the new Master plan for Beijing has not yet been approved (which is why I am allowed to take a look, but don’t receive a copy of it). The average age of this group must be around 35, the chief planner (great Master) is 38 years old. At least I find out that the planning authority has 500 employees, 100 of which are certified architects and planners; I am also informed that they are in charge of everything from permits for individual buildings to the Master plan (most buildings, however, are planned by private building contractors). Landscape planning, drawing-up maps and conducting research is performed or commissioned by the authority as well. I also learn that plans are always set down for a period of 15 years, that the first Master plan was drafted in 1980 and that it was revised 14 times.

The overall planning is in the hands of the planning authority, while the "City Structural Commission" makes the fundamental decisions on investments, plans the traffic system and is in charge of monitoring. Operational planning is then carried out by a field office in the respective district. Guangzhou has 10 districts. There is a rough estimate which states that, along with the planners of the individual building contractors, there are 400 architects and planners building the city. At present, they are dealing with 2,400 building applications. The processing of the applications is handled in a flexible manner; although certain zones are designated High Tech Industrial Zones, one falls in with the requests of entrepreneurs if they prefer a different location and there are no serious objections. The second Master plan envisions the main development for High Tech industry, up-market residential quarters as well as international transport and communication along the Pearl River toward the east, while the north is selected for residential development. In the far north, a new airport for 20 million passengers annually is being planned; it will be linked to the city via subway. What will become of the area of the old airport is undecided as of yet; the Master plan, which is supposed to be effective until 2014, has no specifications in that context.
Everyday Life

Guangzhou Main Station

Density

Neighbours

Street Scene

Construction Workers
The new airport, however, shall be completed by 2001 (in fact it will be in function in 2005, so we have to notice that even the Chinese high speed urbanization knows delay).

The historic district is supposed to be torn down and turned into a service center. The hundreds of thousands of people who live and work there are supposed to move to the new residential quarters in the city’s north, which are yet to be built; but how this shall be done remains uncertain. Although the compensation for a demolished apartment is 5,000 Yuan/sqm, a significant funding gap remains to the required 250,000 Yuan for the purchase of a simple apartment. It is said to be a general problem that although the city of Guangzhou has an influence on the planning of individual communities in the surrounding countryside, a large number of towns and communities do their own planning; thus, the development of the regions must be labelled as spontaneous.

After the discussion we have dinner on the authority's expense account; it costs 1,500 Yuan for four persons which exceeds the monthly salary of a Chinese university professor by 300 Yuan. VIPs don't dine in the main dining hall, but in a small extra room equipped with a sofa, a TV and the customary round glass table. The abundant dishes in small and large bowls are placed on this table until it is overloaded. The host turns each newly served dish toward the guest who serves himself before the table is turned again. Today’s meal consists of quail broth, fish, snake, crawfish, pork, seafood, nuts, spicy vegetables and ravioli. The Master, as he is called here, eats hardly anything due to his health, and leaves us early because of urgent business. Later, the driver picks me up, and I ride home with the interpreter. He is the friend of one of the planners present, and, to his great dismay, is not remunerated for his services. He is in need of money because his studies at the state university cost 10,000 Yuan in tuition, and a scholarship, as he points out, is reserved for party members only. However, he is neither a party member now, nor does he want to become one.

The factory is very often more than a place of production in China. It’s a work and living space providing housing and facilities for the workers to spend their free time. In fact we know this type in Germany as well. The factories in the 19th century often were constructed as integrated place, as a so called “Ganzes Haus”. Currently, the factory area contains five classes of accommodations.

First class: the entrepreneur and his wife, their two children, the two nannies and I, as their guest, reside on the ground level of a two-storrey house. Generally, six people share 160 sqm, which is less than the average distribution per person in Germany. There are two bathrooms and three toilets, a spacious kitchen with two well-stocked refrigerators (one for food, one for beverages), a large living and dining room, a bedroom for the children, a room for the nannies, a guest room and a separate “wing” for the married couple. In front of the house there is a terrace, a large swimming pool, a light wood-frame house for the evening entertainment of the technicians, including a soundproof room for the leisure-time band. This is where the entrepreneur and his wife, the managers and the technicians take their (free) lunch and where they meet in the evenings for drinks and conversation. A large refrigerator supplies free drinks. On the other side of the pool, there is an almost completed guest house with two one-room apartments which will accommodate business partners in the future.

Second class: The leading technicians and permanent guests, such as the entrepreneur’s niece and her girlfriend, live on the first floor, in apartments that are considered too small because the single households have turned into families. A new residential building is at the planning stage.

Third class: The single executive employees (average age: 23) live in small apartments on the top floor of the workers’ dormitory.

Fourth class: The workers live, divided by gender, in the workers’ dormitory – five persons each in a
room of about 12 sqm, which is more space than the law requires, and more than is generally offered. Although they are very cramped, the rooms don’t seem to be run down.

The workers’ house contains a canteen as well where the workers are fed three meals per day which are paid by the company. The workers can monitor the quality of the food by checking the publicly posted shopping list/receipt of the kitchen. Kitchen and dining hall are furnished rudimentarily. In a farther section, there is an after-work house with an open structure which was built two years ago for a New Year’s party, but which is rarely used now.

Fifth class: The urban village is currently constructing new factory buildings, which will be rented by the company when finished. The construction workers live in temporary sheds at the far corner of the buildings. After the ceiling has been put in, they sleep in bunk beds in the factory buildings which receive a hint of privacy by the surrounding mosquito nets. Some of them have their wife and children with them, and the food is prepared on open hearths. The bed frames are grouped together like sheds to resemble small villages. Here, everybody works around the clock since the workers have the status of independent sub-contractors, which means that they have to pay conventional fines if they cannot keep the deadline for the completion of the building. The construction company does not belong to the manufacturing company.
Balloons in the Sky. Rethinking of Phenomena in a Fast Developing Society

After a period of time being away from China, I came back to find the country even more dynamic than unexpected. From August to October of 2003, I happened to have spent time successively in Beijing, in Guangzhou, in the Pearl River Delta and in Shanghai, where I did landscape studies in general and had discussions with numerous people on China’s development, especially with my colleagues doing their field trips in China from the faculty of Architecture, Landscape Planning and Urban Planning at the University of Kassel, Germany. As a Chinese occasionally in and out of the country, even myself was astonished by the phenomena of multi-civilization of the most developed areas to attract flows of capital, of migrants, of desire, of opportunities and of culture.

As anyone would have his or her cultural shock when entering another country, I did have the experience of it each time I visited Europe or the United States where everything seems to be solidly modernized. The shock in my view is just a kind of thinking and rethinking of conflicts of cultural value. It can be as well an exercise of a bitter imagination of denial or acceptance of a new value system. But this time, this happened to me when I set feet back on my own land, since I was deeply confused by the sharp contrast of people’s attitudes towards their life goals between the developing society in China and the developed society in the West. What then can be used to describe the phenomena in a developing country like China? Coffee drinking may be of help. With cups of coffee for one or two weeks boiling my thinking, a new term suddenly occurred in my mind: Balloon. Yes, with countless balloons in the sky, a vivid picture of a certain social phenomenon is unfolding: numerous people are pouring into the urban agglomerations in coastal areas like the Pearl River Delta and others where the economy is galloping ahead of the hinterland.

It is really an unprecedented vista in China’s history, something that one could hardly imagine not so long ago. The balloons of different size, different color, and different materials are flying in different height and density in the sky, under which people are shouldering and jumping in different postures so as to get hold of them, in excitement or frustration.

The balloons are opportunities for development. Generally speaking, they benefit people in results of their economic or social achievements. To be specific, they can be jobs, income, housing flats, automobiles, ladies or men’s fashion, newest models of mobile phones or computers, etc. And for some people, they can also imply chances of social status, promotions and fame, which in turn bring them even higher standards of living. Why do people need so much? Are they crazy? The answer is definitely not. After a long time of deprivation in history, maybe from the prosperous Tang Dynasty which was over 1000 years ago or later from early Qing Dynasty over 300 years ago, China pales in comparison with the so-called industrialized countries. Now in the past two decades, the reform and opening up policy toward market economy has brought about tremendous capacity of productivity, which may be more than the total volume of productivity achieved in thousands of years before that. Not only ridding themselves of starvation or poverty, but also in a sense catching up with some of the developed countries where the industrial revolution broke out hundreds of years ago, people have all the reasons to be wild with joy when they get reach of the balloons they have never envisioned before. In so doing, “self-fulfillment” has been the most popular saying throughout the country.

While it is positive on record, everything has its negative side. The balloons are attractive but
they can easily be pricked. Knowing very little of the real value of the balloons, the activity of balloon-chasing, to many people, means just risk-taking or agonies in life.

On the one hand, it is easy to find in many cases, some self-conceited or publicly regarded social lions fall and crumble with bloody heads when climbing too high on top of roofs or trees for bigger balloons, taking no care of social rules of the game. These are usually some of the corrupt officials or bankrupt entrepreneurs with irrational desire. On the other hand, with balloons in minds, never before in China’s history has there been so large a migrant population moving from rural to urban, from inland to coastal areas. Most of them are regarded as farmers-turned-workers joining in the force of industrial construction, among whom, a majority does drag small balloons and has improved their lives but still a large number find life hard in a new value system and life style they have never experienced in the past. In addition, some people in this transitional period not only dream of beautiful balloons day and night, but even take action to produce small balloons in order to reach bigger ones.

For higher profits and bigger money, they earn money with production with faked brands or conduct their business by cheating. In a larger sense, some even destroy environmental resources in exchange for their own benefits, regardless of the punishment that nature may impose on mankind. Thinking and rethinking of these balloon desires, people have again all the reasons to be distressed, to be deeply concerned and to take action against them.

Like the American dream, the balloon landscape may, I think, just belong to the special period of time in growth. While any social phenomenon has its cultural basis, it will also be embedded into a future value system. When I went to do the landscape field work with my German colleagues in Shenzhen in October 2003, one of China’s first Special Economic Zones, instead of searching for the original fishing village which has been taken over in the past 20 years by a forest of new buildings as a result of a relentless expansion of urban construction, I was reading carefully from the faces of people rushing around in the streets the impressions of various anxieties. The time and space condense make possible production of balloons and the accessibility of that goal depresses people as well. Needless to say, to contemplate in a fine yard and enjoy landscape architecture, to stop to think and to judge is even a luxury to many capable balloon-catchers. Where are then the serenity of life attitude and the humanistic spirits in the nation from ancient times?
Over 2000 years ago, China’s ancient sage Lao Tse said in his Tao Te Ching “Retrospect calls for reaction” while presenting to people an ideal type of kind of social life with a harmonious picture as “Work joyfully after peacefully settled”. Times over times when rethinking of balloon phenomena in China’s growth period, I found myself often in a crossroad with arrows of “win” or “lose”. Indeed, if we do not think much of sustainable development for our future life, we would lose what we have got sooner or later. This has already been proved in history from the changes of world civilization in the once developed countries.

Put it aside the temporal or continuous phenomena from philosophical imagination, China is still on the way of accelerated development. The imbalanced income between people and development between regions inevitably bring about the balloon landscape. As a matter of fact, right in Shenzhen or many of China’s other big cities, no matter where you stop, within 20 to 30 square kilometers, you will find easily civilizations of agriculture, industry and information society. The two decades of change have witnessed an exceptional process of modernization, industrialization and urbanization in world history. Therefore, it is really right time and place for observation, for studies both critical and constructive and for new establishment of academic schools. Like the emergence of Chicago school of urban sociology about 100 years ago, the studies shown in this book will also explore the way of thinking of urban and landscape planning. It may not yet be a new school of planning science but it will at least help people understand more or less the joyful work and the peaceful settlement in the country from present to the next dozens of years.
Herbert Glasauer

**Building the City as a Whole: The Dongguan Immigration Museum Could Tell the Hidden Story**

We are gliding softly along a new highway. Colourful flowers and tastefully trimmed bushes on the centre strip accompany us on our way to Dongguan. On the right hand side, green bushes have been skillfully cut to form Chinese characters, welcoming visitors – if you are able to read Chinese.

Dongguan, about 60 kilometres southeast of Guangzhou, is located in the eastern section of the Pearl River Delta. It looks like a town built only recently. Almost every building seems to be new, looking as if it were finished yesterday. Houses of about 5 to 7 storeys, covered by saddleback roofs, alternate with high-rises of international style, set between urban villas on generously sized private lots. The soft pastel colours remind me of the current colours of the European summer women’s fashions. Several elements of the facades and objects in the urban space allude to a European style. Old fashioned lanterns reflect a type of European urbanism, reminiscent of former centuries. Wide pavements along downtown boulevards invite one to stroll in the shade of thousands of palm trees. Everything looks very new and very clean, in contrast to the light grey sky and the smog that covers nearly the whole Pearl River Delta, day after day.

I had already heard that Dongguan had about six million inhabitants. Therefore, I was prepared to arrive in a very busy city. However, rather the opposite was true, and only very few people could be seen in the numerous urban places. Only a few people were strolling along the meandering paths in wonderfully arranged green parks, on the golf course, and riding in small boats on a small lake in a well structured park. Spacious urban places have been constructed with excellent materials, decorated with art objects, benches to rest on, and abundant palm trees. Not many people were visible in the urban places, and the majority of them were working, cleaning the area, improving the artistic flower arrangements, cutting bushes geometrically, etc.

But where were the rest? Where were these six million people? While discussing future strategies in the planning bureau of the city of Dongguan, I got the answer: About 4.7 million people, about three quarters of the population, are migrants (The exact proportion between local people, labourers from other parts of China and migrants is not easy to find out, because different sources deliver different numbers). And migrants are there to work. They have not travelled thousands of kilometres to stroll in the shade of Dongguan’s palm trees and relax in the parks and urban places. They have moved to Dongguan to work and earn money in the factories and they are presumably not interested in hanging around the urban places. 4.7 million migrants mean at least thousands of factories which I had not yet seen. In former times, industrial production was focused on shoes, clothing and toys. Later, as a result of the division of labour between Hong Kong and Dongguan, industrial production shifted to a concentration on electrical products.

I was totally confused. What I had seen up until then and what I had heard during the discussion in the planning bureau stood for two absolutely different realities. Surely, I had seen residential areas and streets with pavements, a city centre, and wonderful recreation areas. But mainly, according to the information I had received, Dongguan is an agglomeration of factories, or more correctly, an agglomeration of industrial zones, spread over an area of 2,465 square kilometres, three times the size of urban New York City, and nowadays, including 32 towns. Some of these towns accommodate up to 600,000 inhabitants, who are nevertheless invisible. All of it started in the 1980s, with about 30,000 people
scattered in the eastern part, between Guangzhou and Shenzhen. Dongguan, what is it? Is it a city or is it a factory? Actually, in a European sense, it is more like an ensemble of factories with associated residential buildings than a city.

I had a second confusing impression. All these residential areas, these wonderful streets with their sidewalks, the villas and the park areas, all this does not look like the home of migrants, or the ‘habitat’ of working people with low incomes. So, where do they live? All of the millions of migrants working in Dongguan live in dormitories in the industrialized areas. The physical appearance of Dongguan, which I had observed during our short trip, does not match the social reality of the city. The image of Dongguan as a nice place to live for well-paid middle and upper classes hides the true story of Dongguan, home to millions of low-paid migrants with insecure futures.

It reminds me of the beginning of the immigration of southern European workers to German towns and cities. Until the middle of the 1970s, they were also invisible because they spent their time working and sleeping behind the walls and fences of the factory sites. Only on weekends could you watch some of them sitting in railway stations, sadly looking at the trains heading for destinations in southern Europe. But, times are changing! In Germany, the formerly invisible migrants are, nowadays, can no longer be overlooked. Also, the presence of their children and grandchildren is unmistakable. They can be seen nearly everywhere. You can notice their appearance, different from ours, and their different clothing and culture. You can listen to their “strange” languages and music. Nowadays, the existence of the cultural difference is part of everyday life in German cities.

The invisibility of Dongguan’s migrants also reminds me of the brutal housing, working, and living conditions of migrant workers in Germany in the 1960s and 1970s. They carried out the hard and dangerous jobs nobody liked doing, living in crowded and filthy dormitories, separated from their loved ones. I therefore implicitly appreciate the aim of Dongguan city officials to improve the living conditions of its migrant workers. And, I also appreciate the aim to reduce social inequality between the household registered local people and the migrants. In remembering the importance of the struggle against discrimination and suppression in Chinese history, equity, the ideal of the French revolution, and the basic idea of a social welfare state, it is to be demanded. Therefore, it is not acceptable that two different “valuable” groups of people are living together in Dongguan, and that, in the calculation of the necessary urban facilities, migrants only add up to 60 to 80 percent compared to the registered local people. It is not the Chinese government’s opinion that the migrants, also Chinese, mainly coming from the north-eastern parts, are less valuable than the Chinese in the southern parts of the country. It is the Chinese government’s belief that the migrants will go back home — sooner or later. This was also the conviction, or should I say pie in the sky attitude, of various German governments, and actually, to a certain extent, still is the hope. They refused to accept the reality that Germany had become a country of migrants more than 40 years previously — neglecting the fact that millions of migrants already lived here, setting up houses, establishing businesses, opening restaurants, starting families, and having children who are also starting. The “face” of those migrant workers in Germany has changed. They are no longer the foreign workers of the 1960s and 1970s. Personally and culturally, they have changed. Their actual identities are no longer those they had when they first began to migrate. And also the attitude of Germans has changed. Spaghetti, espresso, pizza, doner kebab, etc., and the preference for southern flair has become part of German’s everyday culture, like potatoes, some centuries ago. Together, with the migrants, Germans have established a new kind of hybrid identity.

What will happen to the Chinese government’s belief that the migrants will go back home? How will Dongguan’s cultural diversity look in
the future? It is a human and social duty to provide equity to the Chinese migrants and improve their working and living conditions. But is this adequate, is it enough? Does is measure up to what all these millions of migrants have done for Dongguan? Without their professional skills, the strength of their muscles, their commitment, their courage to leave their homelands, and their bravery in fighting the loneliness of being strangers, the city of Dongguan would barely be anything, or at least not as economically effective and wealthy as it has become. The migrants are, in a certain sense, the “founders” or the true heroes of Dongguan. In the history of countries and cities, heroes are awarded with monuments. Where are the monuments for the migrants of Dongguan?

Surely, monuments are often somewhat old-fashioned. But how about a museum? A museum of immigration would not only be a symbol of recognition for the work the migrants have done, and still continue to do for Dongguan. A museum of immigration does not have to be a sign of a social attitude towards people of lower income, or a kind of paternalism. A museum of immigration would give them a human “face”, would make them visible in a historical sense.

The idea of a museum of immigration in Dongguan may seem absurd. I am not thinking about a classical kind of museum, I am thinking about a museum as one or more places, living places of cultural discourse and exchange. Examples of such places already exist on Ellis Island, in front of New York (NYC 2005) or in Toronto where the Oral History Museum (Multicultural History Society of Ontario 2005) demonstrate the role of immigration and ethnicity in shaping the culture and economic growth. And, also in France and Switzerland, the discussion about the necessity of such a museum of immigration is already underway.

There may be two different arguments opposing a museum of immigration. First of all, that, even nowadays, museums still denote places of the dominant and prevailing culture, the culture of the well-educated and well-paid people of a society. Therefore, it has taken a long time for the culture of the working classes, and also the culture of women, to find a niche in being seen as an important part of history, and of the development of the everyday life of a country or a city.

The second argument could even arise from the migrants themselves. From an individual point of view, the process of migration is often experienced as a type of constraint, combined with the hope to return home to a better future. The real experience of millions and millions of migrants all over the world is however different. The experience is that there is no way back home. It is the experience of the neglect and prejudice received as a migrant, and the experience, in the end, of falling between two stools. This feeling of “guilt”, of not being able to accomplish what one had hoped for, along with the experience of being treated as an underdog, may result in the wish, as a migrant, to conceal one’s status and history.

Even in Germany, where the discussion about the necessity of a museum of immigration arose from a small group of intellectuals of the Turkish community at the beginning of the 1990s, the voices against such an idea were too many to be ignored. Nowadays, with some decades of distance to the beginning of immigration, the situation has totally changed and the movement to establish such a museum has grown and found a lot of support (Documentation Centre and Museum on Migration in Germany 2005). There is a parallel development amongst different groups of the 15 million refugees who entered West Germany after the Second World War. Also, in this case, with a distance of half a century, the same discussion can be found about the necessity to make the experience of escape, the experience of having to leave one’s home, visible. There is also a certain amount of urgency to have this museum of immigration constructed because the first generation of migrants has already retired and will not live eternally. And, at the same time,
there is still the fear of a lot of native Germans who deny that their great-grandparents and ancestors were also "strangers", and that such new "strangers" have spread out, their distinctness negating what is and will be forever true.

A museum of immigration in Dongguan could show the places where the migrants come from, tell their stories, relay their anxieties, their hopes and their courage. It could show where those foreigners first put their feet on the ground, how they lived in the beginning, improved their housing and living conditions, and got anchored. It is not only necessary to tell the story of migration, it is also important who tells it. The migrants themselves should be invited to fill the museum with their experience. Telling one's own story is part of becoming settled. Thus, a museum could be a living testimonial of the migrants' substantial contribution in building up Dongguan. The "Dongguan Migration Museum", as a collective memory of the various stages of arrival and of being far away, formed by the variety of the voices of the multitude of places within the area of Dongguan, seems to me not only important for the citizens of present day Dongguan, but also for the future citizens of Dongguan, who will be living at a time when the migrants, their children, and their grandchildren have become citizens, too.

Keeping in mind the experience of countries with a longer history of immigration, I think it will be the children of the first immigration generation, who will be able to tell the stories of their parents and grandparents. Thus, the first step in creating a museum of immigration should be to celebrate the "places" and "times" of the foreign voices. A regular celebration of migrants could highlight the cultural diversity of those strangers. It would be an opportunity to expose their cultural and everyday habits, how they dance, how they sing, what they eat and drink, and how they dress. This annual celebration may be a first small step for the local people and the migrants, the shy strangers on both sides, to get in contact, to establish a collective future of diversity.
Gu Guowei

The Introduction of Housing Market Operation in Shenzhen

This chapter is primarily concerned with providing a general picture on the housing development and housing market in Shenzhen. Firstly a general introduction of the housing market in China as a whole is explained, then the city of Shenzhen is introduced. The remaining parts of the chapter are devoted to the analysis of the Shenzhen housing development and the housing market. Due to the availability of the pertinent information, the emphasis is put on how the housing product is developed. In the final part, the governmental management departments and their main responsibilities are introduced.

General Introduction of the Housing Market in China

In the national meeting of the Chinese Communist Party in 1978, the reform policy was officially introduced as state policy. From then on, the Chinese society experienced a fundamental change. The economic system had been turned from an absolutely centrally planned economy to a mixed planned and market-oriented one. The market economy that had been banned and illegal before turned to be encouraged and protected and was finally put into the recently amended constitution. Thanks to the policy change, the Chinese economy and the society as a whole made a great step forward and the living standard and the image of the country have been gorgeously improved.

Real estate was completely a new concept to the generations of the “New China”. It began to take form in the very early 1980s. Due to its vigor, attractiveness and contribution to the society, it grew breathtakingly in a little more than twenty years and quickly became so important that it stood out to be one of the mainstays of the Chinese economy. With regard to housing, it also experienced a top-down change. Housing, like other goods, had been a complete welfare product of the state before 1978. With the reform progress and the development of a real estate industry, it was transformed into a commodity and became more and more important to the society. In the last twenty years, the prominence of public housing has been withering, while private housing has been blooming. Nowadays the proportion of the former in the housing market is much less than the latter.

In China, all the housing belonged to the state before 1978, so the housing was 100% public housing. With the advance of the economic reforms, from 1978 to 1996, the market share of public housing got smaller and smaller. Although there are some debates on what the proportion of private housing really is, its share is probably not less than 70% in the cities (public housing in China only exists in cities, there is no public housing in the countryside) (Peoples Daily 2004). Pushed by a series of policies enacted, like the government’s encouragement for urban citizens to buy a house rather than continuing to rent a flat in public housing, and by the market growth, private housing gradually took over public housing, especially in an economically active city like Shenzhen. Since 1996, the year in which the government stopped the practice of distributing the housing freely to civil servants, private housing has been in a more dominant position in this city.

There is a three-tier structure in Chinese real estate market. The first-grade real estate market is defined as land market. The second-grade real estate market is defined as new building market (it is called first-grade housing market). The third-grade real estate market is defined as old building market (with regard to housing market, it is called second-grade housing market, namely second hand housing market). Given that all the land is property of the state and the state does not sell the land, so the land market is actually a
lease market. The methods of land-letting were in the past mainly “agreement transfers”. But in the recent years, the methods of auction and tender have become more and more popular in most big cities. In the housing market, generally speaking, the first hand housing sector is more active and rule-abiding and the transaction volumes are bigger than that of the second hand one.

As concerns the supply side of the housing market, the dominant role is played by the developer, namely the real estate company. The developer is responsible for everything the development process requires. He secures the finance and acquires land through various means and then organizes, manages and cooperates with all the participants, like the design company, the construction company, the materials supplier and others to conduct the process of housing development, and finally sells the product.

Housing is divided into many types such as commodity housing, economical housing, low-profit housing, facility housing etc. Of course, commodity housing is the most eminent one, which can be further divided into the types of low storey housing (less than 4 storeys), multi-storey housing (5-7 storeys), low high-rise housing (8-21 storeys), high-rise housing (21-30 storeys), super high-rise housing (more than 30 storeys or higher than 100 meters), townhouse (usually not more than 4 storeys and from better quality), villa (detached, single-family housing).

On the demand side, for most ordinary people, housing is purchased mainly for living or for improving the living condition. However in the recent years the investment and speculative purchasing has become more and more prominent. Among the age group of the housing consumers and would-be consumers, young people under 40 are the main force which is due to many factors like the change of the social conception, the increasing buying power, the pursuit of better living conditions and so on. There is another noteworthy phenomenon in the housing consumption. Quite a lot of housing is bought by people who are not local residents of the city in which they purchase. They come from the surrounding cities and regions. These people usually have a strong desire to purchase housing in good locations and they possess a strong capability in term of finance. Another characteristic of purchasing is that most of the housing purchased is accomplished through mortgage, no matter in first hand housing market or in second hand housing market.
The City of Shenzhen

Shenzhen is a southern coastal city in China. It is located in the south part of the province of Guangdong on the east bank of the famous Pearl River, one of the richest and most developed regions in China. The city is adjacent to Hong Kong, the former British colony and one of the most competitive regions in the world. The excellent geographical location brings tremendous benefits to the development of Shenzhen.

The city of Shenzhen was set up in March 1979 and in May 1980 it was conferred the status of a “special economic zone”, the first of such special areas in the nation. In fact, the municipality of Shenzhen is composed of two parts. These two parts are physically separated by a fence and are very different in economic, social and other terms. The law is even not the same. The core part, the special economic zone is dubbed “in-boundary area” and the place outside of it is called “out-boundary area”.

Shenzhen has a short history of less than thirty years to date, hence it is one of the youngest cities in China. Miraculously in less than three decades, Shenzhen has been changed from a neglect small border town with a mere population of 314,100 to a vibrant, exciting and rich big city with a total resident population of over 6 million.

In 2003 Shenzhen possessed titles as the Chinese city with the highest gross domestic product (GDP) per capita, one of the cities with the best economic efficiency, the highest average income of the dwellers, the highest export value of trade and 1/7 of the total volume of export and import, the fourth of GDP and the third of financial income among all the large and medium cities in China.
The Real Estate and Housing Industry in Shenzhen

The commercial Chinese real estate development model was actually originated in Shenzhen (Wang, Z. 2005). In 1980 the first real estate company in China – Shenzhen Real Estate Company – was established in Shenzhen. In the following year, the city witnessed the set-up of the first property management company in China – Shenzhen Property Management Company (Luo 2005). Given the geographical vicinity to Hong Kong with its highly developed real estate and property management, and the fact that property development was virtually non-existing in the mainland, the Hong Kong influence was understandably huge and the development model was widely copied. With the rapid expansion of real estate development from Shenzhen to other parts of China, the influence was tangible everywhere.

The development of the real estate industry in Shenzhen has been pretty successful, it has been grown steadily and has been lead the way of industrial development in China for the last twenty years. In recent years real estate industry has been one of the pillars of the city economy (Deng 2005). It is not an overstatement to say that the dramatic change from a fishers’ village to a famous metropolitan city in such a short period of time is to many extents the contribution of real estate industry. It did its job well.

<table>
<thead>
<tr>
<th></th>
<th>Beijing</th>
<th>Shanghai</th>
<th>Guangzhou</th>
<th>Shenzhen</th>
</tr>
</thead>
<tbody>
<tr>
<td>history (years)</td>
<td>more than 1000</td>
<td>200</td>
<td>more than 2000</td>
<td>less than 30</td>
</tr>
<tr>
<td>permanent resident population (million)</td>
<td>11.5</td>
<td>13.5</td>
<td>6</td>
<td>1.7</td>
</tr>
<tr>
<td>GDP per capita (US$)</td>
<td>3910</td>
<td>5697</td>
<td>5899</td>
<td>7228</td>
</tr>
<tr>
<td>average yearly income of the employed (US$)</td>
<td>3089</td>
<td>3330</td>
<td>3444</td>
<td>3894</td>
</tr>
<tr>
<td>export &amp; import (billion US$)</td>
<td>68.5</td>
<td>112.4</td>
<td>41.5</td>
<td>117.4</td>
</tr>
</tbody>
</table>

Fig. 35: a comparison of four big cities in China as respects the major economic and social indices

Fig. 36: the ratio of real estate production value to the GDP of the city

Fig. 37: the sold area of commodity housing from 2002 to 2004 in Shenzhen
As in other countries, the real estate could be divided into residential real estate, office real estate, business real estate, industrial real estate etc. The classifying of the Chinese real estate is not different from that of other countries. But in China the residential real estate is the most popular form of property development and has been played a more important role and occupied a more outstanding position. The majority of real estate companies that are engaged in real estate development are involved in residential property development. Compared with the development of other types of real estate, especially that of the office real estate, which experienced violent fluctuation, housing development has been enjoyed a consistent growth in the past decade.

Thus, if we agree that the real estate development contributes a lot to the economy and the society, we should also agree that residential real estate is the real hero. It is even so in Shenzhen. The sales of housing development in Shenzhen in 2002 are listed below (from municipal statistics):

- Finished housing construction: 8.9 million square meters
- Housing selling areas: 7.4 million square meters (including pre-selling)
- Housing income: 5.4 billion US Dollar
- Housing selling areas: 8.1 million square meters
- Housing pre-selling approved: 6.9 million square meters

Due to the scarcity of official data, we cannot list the exact numbers concerning the housing development in the city in the past decade. Yet we could still get a feeling about what the housing industry did from figure 37 which shows the change of one of the essential indicators of the development: the sold area of commodity housing. Maybe it is worth to point out that one of the inevitable outcomes of the advancement of housing development (actually of all real estate sectors) in Shenzhen is that the price of housing is also among the highest in China.

The Process of Housing Development

The process of housing development is very complicated. Usually a specific “project company” will be set up to deal with all the matters of a housing project development from feasibility study to property marketing. When the project is completed (in most cases it means the project is sold), the life of the company is finished. It will be dismantled completely. The concept of a “project company” might be initiated in Shenzhen. So although there are a lot of arguments about the disadvantages of this kind of company in real estate development, “project company” is still widely used in the industry in Shenzhen.

The sole task of the “project company” is to consummate the housing project (here we only discuss housing development, of course any type of real estate could be involved). It is a real estate company. In order to accomplish the job, it requires all necessary support from all sides of the company, including the organizational support.

The typical structure of the “project company” is organized as shown in figure 38.

The structure of the company is quite simple and the prime two function departments which are directly related with housing development are the department of supports and the department of engineering. Their chief responsibilities are as followed.

The department of supports

The main tasks of the department are to serve and support the construction of the project by cooperating with the related government departments and public utilities companies and others to make the project going forward and suitable for use.
To get government approval of the project by obtaining the “four certificates”. The construction of any real estate project must be approved by the government. The four certificates are law-binding and issued by the local government and are the necessary documents to prove the legality of the project. The four certificates are (1) State-owned Land Usage-right Certificate; (2) Construction Land Planning License; (3) Construction Engineering Planning License; (4) Construction Engineering Building License.

To settle the issue of public utilities by signing the necessary contracts with the utilities companies to get the guarantee of supply.

To settle the issues which are related with land like the factory-moving, resident-moving, old building demolishing, old utilities facilities handling and so on, if these matters have not cleared after acquiring the land, to make the land ready for construction.

To cooperate with the government departments which are not directly involved in the project, but with equal importance like the departments in charge of public security, urban sanitation, community affairs, family planning, etc.

The department of engineering
The department of engineering is the unit which is wholeheartedly engaged in the task of constructing and completing the project. This department is the core of the company and plays all the functions the project demands and therefore always occupies the bulk of the resources of the company.

There are definite and specific task-groups in the department. Each person or group is responsible for a specific assignment. Each assignment needs different expertise, so it is clearly defined and each works independently. The head of the department is responsible for the managing, cooperating and directing of the works of all members.

Construction work. To oversee the works of the various construction companies. The construction of the real estate project is always a huge task. It rarely happens that one construction gorges up all the works of the whole project. It is common that several general contractors work together, or one after another, to finish all the works. Usually, there are general contractors who are in building construction work, equipment installation work and decoration work.

The head of the department is focusing on Fig. 38: the typical organization structure of project management
three factors, i.e. construction quality, building security and time schedule. The main method of conducting his work is to hold the regular project meeting in which all participants in construction are compulsory to attend. This is a very efficient and important meeting. He is also in charge of the liaison work with the design companies and the construction supervision company. It is required by the regulations to have the construction supervision company to supervise the works of project construction. This kind of company is specialized in many sides of building construction and its staff helps developers to make sure the project is going properly. They could be responsible for the works of quality, cost and time schedule of the project. But in most cases in Shenzhen, they mostly are given the responsibility to exam the construction materials and equipment, and to control the construction quality.

2 “Strong-electricity” work. To supervise the works related with electricity supply like lighting, equipment operation, etc. Electricity can be divided into two classes in China, “strong-electricity” and “weak-electricity”. If we use a more precise method to define it, the former is the electrical work which is, in China, above 220 volt and the latter below 220 volt.

3 “Weak-electricity” work. To supervise the works related with audio and video telecommunication like TV, internet, telephone, alarm, etc.

4 Water work. To supervise the works related with water supply and water conducting. Water supply is referred to providing pure and drinkable water. Water conducting is referred to draining off used water and rain water. Each has its own duct and equipment system.

5 Gas work. To supervise the works related with gas supply.

6 Construction materials work. The construction of a real estate project needs hundreds or thousands of materials and semi or finished products. But most of them are in the hands of the contractors. However, the developer will often have his own material man who monopolizes in three vital materials, reinforcing bar, cement and wood because of the importance of these materials. These three will be purchased and delivered by the material-man directly.

7 Cost work. To supervise the works related with construction cost control. In China this person can be called cost engineer or quantity surveyor. The Chinese quantity surveyor is somewhat different from the English one. The former involves calculating not only quantity standard, but also price standard. And the cost calculating principles and methods are not the same. His works are embodied in three ways, general calculation, pre-calculation and finished calculation. By checking and negotiating the three-calculations which are submitted by the men from the contractors, the costs of each item of the project and therefore the whole cost can be determined.

Fig. 39: the general process of housing development
After the “project company” is put into place the development process begins. It is intricate and time-consuming. There are several ways to classify the process, like the very simple four-stage classification (Codman and Austin Crowe 1983), the eight-stage one (Mills et al. 1991) and five-stage one (Ratcliffe and Stubbs 1996: 200) Here, we introduce the process based on the practice in the City of Shenzhen.

**Investment decision**
The investment decision is based on market research. The significance of sound market research cannot be stressed too strongly. In light of the characteristics of the housing market, there are two types of market research. One is the market research of investment. The other is the market research of product.

**Land acquisition**
Any housing commodity is built on a specific piece of land and that land becomes an integral part of the commodity together with the above structure. Thus land acquisition is the vital part of the development process. In China, all the land belongs to the state and it cannot be sold to anybody. But the land (essentially the land use right) can be leased to anybody qualified for a period of time. As for residential development, the lease time is seventy years in maximum.

There were several methods for developers to obtain the land for development in the past like free-of-charge allocation, agreement offer, competitive bidding and public auction.

**Government consents**
As foregoing mentioned, the development of any property project has to be approved by the government. The following documents are needed in the process of the development of the housing project: Real Estate Property Right Certificate, Construction Land Planning License, Construction Engineering Planning License, Construction Engineering Building License, Housing Commodity Presale License etc.

**Project preparation**
In light of the process of the project, we may classify the project preparation work into three stages. The first one is before the investment decision (i.e. land purchasing) was made. The second one is after the land purchasing and the registration and before the government consents application. The third one is after getting some critical government consents and before the construction of the project. In each stage, the preparation work is focused on the main task of the stage. After the job is done, it moves forward to another stage.

**Property construction**
After obtaining the “four certificates” (i.e. Land Usage-right Certificate, Construction Land Planning License, Construction Engineering Planning License, Construction Engineering Building License), the developing company can officially launch the project to begin the comprehensive construction works.

**Property marketing**
It is legal and commonly practised by developers to sell the housing property before it is finished. It is called “pre-sale”. Pre-sale plays a very important role in the capital-chain to the developer, so the developer tries to do everything to make it successful. In many cases, if the housing project is welcomed by the market and the market strategy is well designed and conducted, the property could be sold out 50% or 60% before it is finished and the money returned from the pre-sale could easily sustain the operation of the project. The sale continues after the delivery of the property.

In Chinese housing market, except from a few big development companies, the housing property marketing is usually handled by special property marketing companies, or property agents and the selection of the agent is through the form of competitive bidding. They sell the property single-handedly or together with the marketing force of the developer and get the commission accordingly.
Facility management
The last process of the whole housing development process is facility management (also called “property management” in some countries). Facility management is referred to as the management behavior conducted in the specific areas, common areas within the scope of facility management and of the common affairs of the property owners, management groups and management personnel (quoted from “Chongqing Facility Management Ordinance”).

After completion of the construction and passing the government checking, the housing can be delivered to the customers. Then the facility management work begins. Facility management is conducted by the facility management company which is employed by the owners or Owners’ Committee. However, at the early stage, before the establishment of the Owners’ Committee, the facility management is overwhelmingly done by the facility company which is appointed by the developer and which is in most cases its “son company” or “relative company”. And it may continue to do the job after the forming of the committee.

Period fees
Period fees are the fees for the activities of management, financing, marketing and others which are related with the housing development and which occur during the period of housing development process (Fang 2004).

Taxes
In China, the housing development company should pay taxes on conducting property development business. They include business tax, city maintenance construction tax and added education fees. The taxes could reach as high as 27% of the housing price (Zhong 2003).

Profit
Profit is the difference between income from selling the housing and other business activities and all the costs related with the housing development. The housing development is different from time to time and from company to company. In media, there are fierce debates on the issue of profit rate in the housing industry. But everyone agrees that the industry’s profit rate is high compared with many industries in China. “It is usually 5% in America and other developed countries. But it is averaged 15-20% in China, or even 50%.” (Zhu 2005)

It seems that the structure of the housing price is clear and simple. However, the setting of it is far from that apparent and straightforward. Many factors exert influence the housing price. It is beyond the scope of this chapter to discuss the great details of these factors. Categorically, they could be sorted out into macro-factors and micro-factors. The macro-factors enclose the supply-side influence, the demand-side influence, the influence of market investment and speculation, the influence of government’s urban development policies and the influence of the third-grade market of real estate. The micro-factors take in the influence of the property itself, the influence of project profit and the influence of development scale of the project. Additionally, the factor of project financing, mainly loans from the commercial banks, is essential inasmuch as at least 55%
of the development financing is from the banks (China Real Estate Financing Report 2004) which includes land loan, development loan, mortgage loan and cushion money.

The setting of housing prices is relatively easy to explain. There are many ways to classify the methods of price setting in the discipline of marketing. Here we make the classification as cost-plus pricing, competitive pricing, market-oriented pricing and selective pricing (Stanton 1978). In the Shenzhen housing market, as well as in any housing markets in China, the dominant method is competitive pricing. It seems that any other method never existed in the housing market. When deciding the price of a housing project, the developer takes always the competitive projects (usually the neighboring ones) as the reference. “That one is 8000 RMB/square meter.” “So we must set it at 8100 RMB/square meter.” “The costs? It has nothing to do with the costs.” (The costs are actually around 3000 RMB per square meter.)

The Demand Side of the Housing Market

The paucity of reliable data, particularly historic data in the Shenzhen housing market makes it very difficult to have a careful examination of the demand side of the market. Hereby, we select the following points to undertake a preliminary discussion.

| Average yearly income of the employed (US$) | 3894 |
| Average disposable yearly income of the employed (US$) | 3365 |
| Average yearly consuming expenditure of the employed (US$) | 2387 |
| Engel coefficient (%) | 31.6 |

Fig. 40: income situation in Shenzhen in 2004. The exchange rate is 1US$ = 8.2 RMB (the Chinese currency).

The population structure
Shenzhen is a big city. The official population is about 6 million (permanent residents and temporary residents in 2004). If the floating population is included, it reaches 10 million or more (this figure is revealed by the Shenzhen Public Safety Bureau). Shenzhen is also a young city. So it is pretty understandable that the dramatic increase of the population is mainly due to immigration. Therefore Shenzhen is really an immigration city. One of the most outstanding features of this kind of city is that the young population takes up the bulk in the population structure. The average age of the people was 25 in 2000 (Li, S. 2005) and only a little more than 29 five years later (Feng and Zhang 2005). The age group of 20-29 was 66.38% of the total population in the year 2000 (Li, S. 2005). We have already shown that in the housing market, among the housing purchasers, the young people are the major force. It is natural to conclude that it might be more the case in Shenzhen. A lot of young individuals and couples move to Shenzhen, a new city to them, and they need to have a living space. The best and the most acceptable way to satisfy the demand for a safe shelter is to buy a flat. This creates the tremendous and effective demand in the housing market.

The income
Shenzhen is one of the richest cities in China. The official statistics show that in 2004 the average yearly income of the citizen ranked first in the four cities of Beijing, Shanghai, Guangzhou and
Shenzhen. So the purchasing power was also the strongest. The annual disposable and Engel coefficient verifies the situation further.

The price and affordability.
Compared with other major cities in China, the housing price in Shenzhen has recently been in a relatively stable position. Given the rapid economic growth and the high living standard in the city, the housing price is comprehensively lofty. The chart in figure 41 illustrates the pattern of the price change in the last 4 years.

With regard to the affordability of the housing price, usually we apply the ratio of the average housing price per suite to yearly family income to deliver the judgement. If the index is between 3-6, we think, in developed countries, it is affordable. In developing countries, the figure might be a little bit higher. The historical data on how many family units are there in Shenzhen and how much the family earns is not available, and how big the standard suite should be is debatable, so we do not have a clear picture of what the situation of housing affordability is in the city. But maybe the parameter of the average yearly income of the employed to the housing price shows something important.

The below table indicates that, for a person who is employed, his annual income is merely enough to buy 5.5 square meters of housing. If he wants to live in a decent house with a floor area of 100 sqm, he needs to work at least 18 years to fulfil his goal. In Shenzhen some developers develop one kind of special housing project named “mini-housing project”, a one-bedroom flat with 40 square meters of floor space. Even such a small apartment requires the employed person to work 7.3 years to buy, without any other expenditure. The conclusion is that the housing price is very high in Shenzhen.

The outside purchaser
Shenzhen is located in the area of the Pearl River Delta which is one of the richest regions in China. Shenzhen is also an energetic and exciting city. So it attracts a lot of people who live in the nearby provinces like Hunan, Hubei, Jiangxi, Fujian, Guangxi to houses in the city. These people often got rich in recent years so that they have strong purchasing power. This is one influential force in the Shenzhen housing market.

As mentioned before, Shenzhen is bordering Hong Kong. Given that the Hong Kong people are way better off than the mainland Chinese (actually Hong Kong is one of the richest regions in the world) and they are also an important group of customers in the Shenzhen housing market: “Shenzhen is the first choice for the HK people who are interested in purchasing and investing in property in the mainland”. (Lin 2005) It was estimated that in 2004, 13% of housing in Shenzhen housing market were purchased by the people from Hong Kong (Wang, H. 2005). This is another

<table>
<thead>
<tr>
<th>year</th>
<th>Average housing price (US$/square meter) (1)</th>
<th>Average yearly income of the employed (US$) (2)</th>
<th>(2)/(1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>466</td>
<td>3164</td>
<td>6.8</td>
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<td>2002</td>
<td>695</td>
<td>3425</td>
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<td>717</td>
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<tr>
<td>2004</td>
<td>770</td>
<td>3894</td>
<td>5.1</td>
</tr>
<tr>
<td>Average</td>
<td>662</td>
<td>3554</td>
<td>5.5</td>
</tr>
</tbody>
</table>

*Fig. 42: the ratios of average yearly income of the employed to housing price from 2002-2004*
influential force in the Shenzhen housing market. "HK people are one of the biggest investment and consuming groups in Shenzhen real estate market." (Li, X. 2005)

The Governmental Management of the Housing Market

In China, housing market and housing industry are to same extent strictly controlled by the state. This hasn’t actually something to do with the system of market economy or the former centrally planned economy. Government management is not only necessary but also beneficial to the healthy development of the housing market and the industry. It is sure that government participation is critical, and only the government departments have the means and the ability to govern the market and the industry. In managing the operation of the housing market and the housing industry effectively, many governmental departments are empowered to deeply involve in the whole process of housing development. The main governmental institutes which play major (not all) roles in the management are as follows.

Planning and Land Resources Management Bureau

The main responsibilities for real estate management include

a) To organize the city’s general plan, city land use general plan, district plan, sub-district plan and plan-map; To organize and make the specific plan for mining resource protection and reasonable development, city’s infrastructure, and to cooperate the specific plans made by other municipal bureaus; To organize the early stage preparation works for the infrastructure projects invested by city’s land development fund and municipal government finance, and to be in charge of the planning of the city’s infrastructure projects, planning management of temporary land use; To be in charge of the city’s urban planning design and management.

b) To organize and make the city’s land use annual plan and land development annual plan (including commodity pre-sale plan), and to execute after due approval.

c) To be in charge of the comprehensive arrangement and use management of the city’s land development fund, and to organize and collect the land transfer fee and land usage fee.

d) To be in charge of the making, executing and managing of the city’s land requisition plan.

e) To organize and manage the city’s state-owned land-use-right transfer work; to organize the tendering and auction of state-owned land-use-right, and by law to sign the "state-owned land-use-right transfer contract" with the land offer acceptance side; to normalize land trade acts.

f) To be in charge of the city’s land-origin and surveying works, and to establish the city’s land-origin management system, and to make the land-origin general map, and to supervise the changing situation of the city’s land right ownership and land status.

g) To be in charge of the site-setting of the construction project, the project’s design focus, engineering design and planning check-and-accept.

h) To be in charge of the city’s commodity housing pre-sale.

i) To manage the registration work of the city’s real estate right, and to mediate the disputes occurring in real estate right.

j) To direct the works of the filing and information management in the city’s urban plan, infrastructure, land and real estate.

k) To supervise the city’s land use development, planning regulation execution and real estate development acts; to be in charge of the supervision of illegal building and illegal land use.
l) To exclusively make and issue the contracts, licenses and certificates in planning, land, mining and real estate.

m) To arbitrate or to provide arbitration recommendation to the municipal government for dispute in housing demolishing and setting compensation and in land right disputes.

Construction Bureau
The main responsibilities for real estate management include

a) To select the organizational forms of the land development and land development units, and to be in charge of the land development appropriating and supervision.

b) To be in charge of the determination of the land development general calculation, pre-calculation and final calculation, and the schedule management, quality examination and completion check-and-accept in land development.

c) To be in charge of the organization and direction of construction tendering of the city’s construction projects, and to issue the “operation license”.

d) To be in charge of the official examination of construction organization design for big projects in the city.

e) To be in charge of the comprehensive cooperation of the construction of the projects in the city, and to direct project site management, and to mediate the disputes between developer and contractor.

f) To be in charge of the following-up management (including use function, construction standard and scale, whether or not abided by the approved plan, design scheme in works) of the projects in the city.

g) To be in charge of the city’s engineering quality and safety management, and to investigate and deal with the against-rule construction acts in the city.

h) To organize the completion check-and-accept of all the projects in the city and to issue “completion check-and-accept certificate”, and to participate the check-and-accept of the community planning.

i) To be in charge of the qualification examination, registration, paper-issuing and management for the construction company, general contractor, decoration company, prospecting, design and construction supervision companies in the city.

Conclusion
Shenzhen is a young and exciting city. In less than three decades the city has grown from a small fishers’ town to one of the largest and richest cities in China. The housing industry has also developed from scratch to one of the pillars of the city economy. It is not true to say that the housing market in Shenzhen is the biggest in China. But it should not be disputable to claim that the Shenzhen housing market is the most matured and advanced in China. The achievement is great. However many problems remain to be solved. The most severe problem of the housing market might be the housing price affordability and the order and the enforcement of the law. Many research works on the market still need to be done, especially on the demand of the market. Shenzhen housing industry has been in the forefront in the housing development in China. Hopefully it will be still so in the years to come.
Meicai He

The Water Household as an Example of Ecology in the Pearl River Delta

The Pearl River, in the south of China, is one of China’s seven major rivers and China’s third longest river. The Pearl River basin is a complex of four water systems: the Xijiang River, the Beijiang River, the Dongjiang River and rivers of the Pearl River Delta (PRD). They are connected to the South China Sea by eight estuaries: Humen, Jiaomen, Hongqimen, Hengmen, Modaomen, Jitimen, Hutiaomen and Yamen.

The PRD is the third biggest river delta in China. Geomorphologically, the delta consists of three sub-deltas formed by sediments, namely, the Xijiang, the Beijiang, and the Dongjiang Deltas. The process of sedimentation continues today: the delta is extending seaward at a rate of 40 meters per year. The PRD has an area of 26,820 sqkm, densely covered by rivers. The site of PRD is very low and flat, there is little topographic variation. Site elevations range from 0.3 to 1.3 meters above the mean river level. The highest elevations on the site are along the levee, which is approximately 4.0 meters in height.

Due to its high and rapid economic development with nationwide top ranked growth rates over the past decade (14.7% per annum during 1990-2000), the Pearl River Delta is challenging serious ecological environmental problems resulting from overpopulation (population density is 1,490 people per square kilometre), rapid industrialization, urbanization, and overuse of natural resources (especially water) that could curb its economic and ecological sustainable growth in the near future and potentially threaten the health of PRD’s 40 million people.

The Crisis of Water Ecological Environment

Bad water quality

According to the statistics from Guangdong Environmental Monitoring Station, 20 (or 60.6%) of the total 33 river-sections included in a provincial regular monitoring programme reach standards (lower than or up to Environmental Quality Standard for Surface Water GB 3838-2002 Grade III). 39.4% are not up to standards (beyond Grade III), which means four of ten litres of water in Guangdong are undrinkable. All the 7 river sections running through urban areas do not reach the standard. 8 river sections or 24.2% of the total are of Grade IV or V. 15.2% of all are even worse than Grade V.

These rivers have been badly polluted: Longgang River, Pingshan River, Foshan River, Dongguan Waterway, Guangzhou Section of Pearl River, Shenzhen River, Jiangmen River, Qianshanhe Section of Pearl River. Their water quality hardly reaches Grade V. Among them, water quality of Shenzhen River and Foshan Channel were under the Grade V in the whole year. Water quality of Guangzhou Section of Pearl River is of Grade IV except in the flood season (in June and July).

Rivers inside the city have been a sink of urban waste water and garbage and some even stink. Organic pollutions, especially oil, are the major water contaminations in Guangdong.
Fig. 44: grades of the water quality in Guangdong Province

Grade I
Suitable for water sources and national nature reserves mainly

Grade II
Suitable for first-class protection zones of concentrated surface water for daily use, habitat for rare species of aquatic creatures, and fishes and shrimp’s spawning districts

Grade III
Suitable for second-class protection zones of concentrated surface water for daily use, districts where fishes and shrimp’s live through the winter, migration water, aquacultural areas, and swimming areas

Grade IV
Suitable for districts of water for general industrial use and places of entertainment where people have no directly contact with the water

Grade V
Suitable for the agricultural use and general landscape’s requirement mainly

Fig. 45: river pollution in the Pearl River Delta
Water in 7 of the total 16 cities, or 43.8% of all included in the Guangdong provincial regular drinking-water-monitoring programme reach the standards (lower than or up to Environmental Quality Standard for Surface Water GB 3838-2002 Grade III). Among the 8 cities in PRD, only one city – Zhuhai City, reaches the standards. Major items that exceed are bacteria and organisms. Drinking water in Guangzhou City has the most items that exceed Standard in 16 cities, which is followed by Shenzhen City and Foshan City.

**Shortage of Water**

**Huge water consumption**
A report that the Water Conservancy Department has announced recently shows that annual total water consumption has been increased progressively for many years continuously. As for Guangdong Province, the increases progressively range about 5% every year, remain high and become the first rank in the whole country. In 2002 there are 44,703 million cubic meters of supplying water (not including the 750 million cubic meters in Hong Kong and Macao) in the whole province, among them the surface water source account for 95.2%, the underground water source account for 4.6%, and other sources of water supply account for 0.2%. The agricultural water consumption accounts for 56% of the total water consumption, that of industrial use 27.1% and domestic use of water 16.9%. The whole province per capita comprehensive water consumption reaches 569 cubic meters, urban resident’s daily water use is 450 liters per capita and day and the daily water use of people in the countryside is 162 liters per capita.

**Qualitative and seasonal shortage of water**
PRD abounds in water resources. The amount of fresh water per capita in PRD (16,042 cubic metres) is 6.9 times of the national average amount, and 1.5 times of the international average amount (Yang 1999). But the distribution of rainfall and water resources is imbalanced in this region. The average flow in the dry season (from October to the end of May) is 80.3 billion cubic meters which accounts for 24% of the annual flow. The urbanization degree in the PRD is incompatible with the water distribution. Water resources in the east are less than that in the west. The Xijiang Drainage Area in the west of PRD abounds in water resources. The annual flow of Xijiang accounts for 238 billion cubic meters (70% of all flow of the Pearl River). But its population density and industrialization degree are both low. On the contrary, water resources in Beijiang and Dongjiang River Drainage Area (in the north and east of PRD) are much less. The annual flow of Beijaing and Dongjiang accounts for 39.4 billion cubic meters (20% of all flow of the Pearl River). But its population density and industrialization degree are both higher. With the social market economy rapidly growing, the water demand increases accordingly. Many districts

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<tr>
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<th>water consumption</th>
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<td></td>
<td>urban areas</td>
<td>countryside</td>
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<tr>
<td>Beijing</td>
<td>243</td>
<td>237</td>
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<tr>
<td>Shanghai</td>
<td>642</td>
<td>406</td>
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<tr>
<td>Guangdong</td>
<td>569</td>
<td>450</td>
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<tr>
<td>Pearl River Basin</td>
<td>539</td>
<td>394</td>
</tr>
<tr>
<td>China</td>
<td>428</td>
<td>219</td>
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<td>Germany</td>
<td></td>
<td>130</td>
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*Fig. 46: comparison of the average water consumption of urban residents (litres per capita per day)*
face water shortage now, especially in the dry season. The areas with surface water shortage include Shenzhen City, Hong Kong, and Macao. Surface water needs to be transported from rivers or reservoirs 30-50 kilometres away to these areas. In addition to that, waste water which was let out without any treatment has deteriorated water quality of many rivers, resulting in having water that can't be used and aggravates the water resource crisis (Yang 1999).

**Reasons of Water Pollution**

**Priority on rapid economic growth**

The national and provincial governments continued priority on rapid economic growth often conflicts with and undermines efforts to protect the environment. The environmental problem of the PRD is mainly a result of the traditional development pattern – paying more attention to the growth of economic efficiency, excessively pursuing the economic quantity, but neglecting the environmental benefits. The relationship between the economic development and the environmental protection is handled badly. In a certain degree, the economic growth is established at the cost of consumption of the resources and the ecological destruction.

**Domestic sewage is the major source of water pollution**

Population boom and the improvement of living standards are stimulating water use and domestic sewage discharge. Urban domestic use is 300% increasing from 1980 (6.0 Billion Cubic Meter (BCM)) to 1993 (24 BCM) (Wang; Ouyang 1999). Domestic sewage is 262.3% increasing from 1990 (1,100 million tons) to 2001 (3,986 million tons). Domestic sewage has exceeded 75% of total wastewater discharge.

**Very low capability of municipal wastewater treatment**

The PRD area is the most environmentally polluted region in China, in which water pollution is the striking problem. Because the industrialization and urbanization degree of the PRD are higher than in other regions, the discharge of industrial waste and domestic sewage is bigger. The amount of PRD wastewater is 34.1 billion tons, accounting for 70% of the whole province Guangdong. Among them, domestic sewage is 24.1 billion tons, accounting for 70%, but only 25% of the domestic sewage is treated. The proportion of non-industrial sewage to the total waste water has soared from 1980s 24% to 2001s 78%, it increased by 12% every year. Major contaminations are nitride/phosphide, Biological Oxygen Demand (BOD) /Chemical Oxygen Demand (COD), bacteria, metals and chemicals. Every day, 8.6 million tons of household waste water flow into rivers and lakes in Guangdong. The four cities, Guangzhou, Dongguan, Shenzhen and Fuzhou produce 7.1 million tons (82.6% of all the province) of such effluent (Guangzhou alone two million tons, about 23.3% of all the province). But the province is only able to treat 1.85 million tons of non-industrial wastewater each day (about 21% of the total). Compared with Shanghai’s 62%, Jiangsu Province’s 42%.

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<tr>
<td><strong>Total volume of wastewater discharge (million tons)</strong></td>
<td>2512</td>
<td>3817</td>
<td>3714</td>
<td>4189</td>
<td>4341</td>
<td>4287</td>
<td>4475</td>
<td>5114</td>
</tr>
<tr>
<td><strong>Overall domestic sewage</strong></td>
<td>1100 (44%)</td>
<td>2124 (56%)</td>
<td>2122 (57%)</td>
<td>2935 (70%)</td>
<td>3164 (73%)</td>
<td>3139 (73%)</td>
<td>3335 (75%)</td>
<td>3986 (78%)</td>
</tr>
<tr>
<td><strong>Overall industrial effluent</strong></td>
<td>1402 (56%)</td>
<td>1693 (44%)</td>
<td>1592 (43%)</td>
<td>1263 (30%)</td>
<td>1177 (27%)</td>
<td>1148 (27%)</td>
<td>1140 (25%)</td>
<td>1128 (22%)</td>
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*Fig. 47: quantity of wastewater discharge in Guangdong*
and Zhejiang Province’s 30% of wastewater treatment rate, Guangdong is lagged behind other economically advanced provinces and cities in China (U.S. Consulate General Guangzhou 2000).

Polluting factories of foreign investment
In the PRD, the threat to the environment comes not from the industries of the major cities in the region but from the rapidly growing small cities and towns and from rural industrialization. Hong Kong and Macao are the major sources of foreign investment in the PRD. Mostly due to large inflows of direct foreign investment initially in low value-added manufacturing, and more recently in higher value-added manufacturing, as well as in services, some of their polluting industries, such as tannery and dyeing, which are becoming increasingly costly to operate because of tightened environmental controls, have been moved to the PRD. Some industrial enterprises in Guangzhou have also moved to the countryside for similar reasons.

Rural enterprise’s pollution
Rural enterprises, as the main part of rural industrialization, still have main characteristics like a dispersed lay out, low techniques, big consumption of resources and heavy pollution to the environment. On the other hand, the selecting of locations for rural industrial districts lacks scientific planning. They are often located either in residential areas or above-water head. And blind large-scaled development of industrial districts has wasted much land and caused serious soil erosion. After the factories dive into production, the methods and equipments against pollution lack. Wilful discharge of waste water, waste gas and the waste cause serious environmental pollution. “Rapid industrial development in the small cities and towns has produced a large amount of industrial waste, creating problems that are often beyond the capacity of the local authorities to handle” (The United Nations University 1996).

Pollution of agriculture
Agriculture remains an important component of the economy in Guangdong Province. Agriculture runoff is one of the major sources of chemical contamination. From 1986 to 1989, the market of chemical fertilizers in China increased by 40%. It was estimated that more than 170,000 tons (142,000 tons in wet season and 30,000 tons in dry season) of total inorganic nitrogen were discharged into the Pearl River per year through surface runoff and soil erosion (Chi-Chiu 2000).

In 1992 each ha (10,000 sqm) farmland applied 55.5 kg of pesticide (in kind quantity) in

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**Fig. 48: quantity of wastewater discharge in Guangdong II**
Guangzhou, where highly toxic pesticide occupied 20% to 30%. Applying fertilizer nearly 1t (effective component)/ha is separately higher than national and international level 2 times and 6 times, in which nitrogenous fertilizer accounted for 70% (Yang 1998). A large amount of nitrogen usually remains in the soil and erodes through the rain-wash, dissolving and entering water bodies through drenching.

**Soil erosion**
The farmland in PRD has reduced in area (by 48.37%) from 578,767 ha in 1989 to 298,803 ha in 1997, urban or built-up area has increased in area (by 47.68%) from 137,768 ha in 1989 to 203,458 ha in 1997. During those 13 years, the farmland reduced by 27,749.3 ha, accounting for 29% of the total farmland (Weng 2002). The forest’s area becomes smaller and smaller. The forest only occupies 22.3% (excluding bush forest) and is mainly distributed in the low mountains, the hills of PRD’s outer edge and the orphaned earthen mounds and hillocks in the deltaic plain. Per person there is 0.04 ha forest, only reaching 36% of the per capita level in the entire province.

In the recent years, the woodland has been reducing as a result of the urbanization, the construction of development zones and real estate fever. Because of the reduction of the wooded areas, unreasonable development and misuse of farmland, cutting the mountains, quarrying and felling trees by mankind and because of abundant rainfall in the PRD, the deep knoll hump is extremely easy to erode soil, especially in rainy seasons. The entire area of soil erosion is 816 sqkm (Yang 1999). According to the Shenzhen City statistics, the area of soil erosion of the whole city counts 185 sqkm, which occupies 9.1% of the city’s territory. Every year, the silt from the land territory to the bay of Shenzhen reaches 1.78 million tons.

**Influence by the tide**
The site of the PRD is very low and flat. Site elevations range from 0.3 to 1.3 meters above the
mean river level. The average tide fall is 0.86 m to 1.6 m high, and the maximum tide fall is 2.29 m to 3.36 m high. The built-up PRD area is obviously influenced by the tide because of the crisscross of rivers and dense cities and towns. The average distance among the cities and towns is approximately 10 km (Wang, Zhengwu 2003). The circumfluence during the flood time diffuses contaminations. Therefore, pollution may bring disaster to all four directions.

Strategies of Sustainable Water Ecology Development

With the economy growing and urbanization advancing, water ecological problems become conspicuous and have set back PRD’s sustainable development. PRD should learn from its past, the experience of developed countries and avoid the way of “pollute first and treat after”. It should be turned from simply pursuing the economic growth to a coordinated development of the population, resources and environment. It’s important to reasonably utilize resources, control the environmental pollution, improve environmental quality and keep the development strategy in the ecological balance (Planning Commission of Guangdong Province 1996).

Water is life. Among all ecological factors, water is the most important factor promoting or limiting the survival and development of man and nature. Water sustainability can only be assured with a human-ecological understanding of the complex interaction among environmental, economic and social/cultural factors and with comprehensive planning and management grounded in ecological principles. A city’s wealth should not be measured in economic terms alone. Social and environmental capital is also important (Wang; Ouyang 1999).

The PRD as a rapidly growing industrial economy facing constant demographic pressure is confronted with a lot of development challenges. Environmental problems caused by industrialization and urbanization are major challenges to PRD’s sustainable development. Waste water and severe qualitative-shortage of water are the two most conspicuous problems. A development planning of a maintained ecological balance should be worked out regarding the following actions.

Carry out water-saving policy and efficiently recycle water.
The amount of domestic waste water in Guangdong Province has increased annually by 12% during the years from 1990 to 2001. If water-saving policies were not adopted or if water was not efficiently recycled, PRD would have to treat 11 times the amount of todays domestic sewage to reach a target sewage treatment ratio of 70% in the year 2010. If the treatment charge is RMB 0.7 (about 0.07 Euro) per ton, RMB 134 million (about 13.4 million Euro) is needed per day in the PRD then. The expenses on buildings and on the operation of sewage treatment facilities will be considerable. For the time being, only 25% of industrial waste water in Guangdong is recycled, much lower than the ratio of 75% to 85% in developed nations. Therefore water-saving and environmental friendly industries should be encouraged, better structure of water utilization found, and the ratio of recycling of water increased. Domestic water supply should be restricted within a limit; use of water beyond limit should be charged more.

More investment
To improve the water environmental quality in the PRD, the input in environmental protection should be increased first and pollution control ability should be improved. The focal point of work is to build sewage and garbage treatment facilities. Investment in environmental protection should not be less than 3% of the GDP to reach the target of treating 70% of the sewage in Guangdong Province in the year 2010. Two ways of fund-collecting: One, impose duties on environmental and ecological protection. Two, attract private and foreign investment in municipal environmental projects by affording preferential policies and subsidies. Thus, the government is not the only one to invest in municipal environmental projects.
Establish a PRD administration committee
Cities and towns in PRD could benefit from each other or restrict each other. For a long time the cities and towns in the PRD have been having their own water resources planning because they belong to different political divisions. As a result, both the water supply systems and sewage systems affect each other. For example, Foshan Channel, which connects Beijiang River and Dongjiang River, receives on its way industrial and domestic waste water from Foshan urban area and that of Nanhui City as well as of a few other towns – Guicheng, Yanbu and Pingzhou. Water quality in Foshan Channel is often low (beyond Grade V). It has a bad impact on water for drinking and for agricultural use in Longxi Village and Haizhong Village of Fangcun District, Guangzhou City. It also spoils water quality in Panyu District, Guangzhou City. Longgang River and Pingshan River locate in the upper reaches of Huizhou City’s drinking water resources. But the water is most badly polluted where rivers meet.

Therefore, it is a must to work out a development strategy suited to local conditions. An administration committee could play a role in establishing harmonious relations among all districts. All involved cities and towns should coordinate with each other while carrying out those important projects which will influence other cities. It should be avoided that water supply and drainage systems of different districts affect each other. Monitoring of water quality where cities meet should be strengthened. Both rewards and punishment measures should be carried out.

Establish a water resource protection zone
A water resource protection zone should be established where population growth and industries which pollute should be controlled. With the economy growing and urbanization advancing, new water resource protection zones should be established, where farmland exploration should be limited, vegetation is protected and farmland pollution is prevented.

Improve the rivers’ self-cleaning capability.
PRD, which has a wide range of water regions and water-front, is a sub-tropical coastal region with a concentrated water network. Conditions in the PRD make it easier to practice natural ecological projects. Make full use of the abounding water resources in PRD to strengthen the rivers’ self-cleaning ability: The cost of waste water disposal in PRD, where lots of rivers converge, is less and its profits are greater. More investments in ecological projects in PRD are recommended. For example Panyu District, the total land area of the Panyu District is 1,313.0 sqkm, of which approximately 65% or 852.3 sqkm is land and 35% of 461.5 sqkm is made up of watercourses and external water regions (Hugentobler et al. 2002).

Natural ecological projects and ecological water-front planning will put their stress on utilization of natural rivers. The ecological functions of the water-fronts should be resumed and improved and diversity of aquatic life and life chain should be maintained and protected. Thus, water-fronts improve their self-cleansing ability, and the quality of water environment raises. Hydrophytes should be planted in the water-fronts. Main hydrophytes introduced will be hyacinth, duckweed, water earthnut, reed, broad-leaved bulrush and so on. They will supply efficient purification against the following pollutants: Ammonia nitrogen, phosphorus, toxicant, heavy metal etc.

Rectify the waste-water-drainage timetable
The site of PRD is very low and flat. The circumfluence during the flood time works against the diffusing of the contamination. So, it’s necessary to set a good waste water-drainage timetable and prevent drainage during the flood time. It will do well to the improvement of the water quality in PRD.
The residents in the Pearl River Delta are of great diversity since the early 1980s. Apart from those who are household registered as local people, both urban or rural, there are millions of migrant workers coming from inland provinces all over China. At the very beginning, they were regarded as floating population in coast areas and later on, people would like to name them as peasant-turned-workers as a new force influencing China’s process of industrialization and urbanization. The migrants moving from the rural to urban, from the hinterland to coastal areas, are doomed to be experiencing life change from physical to spiritual aspects. Due to the time they are outgoing from home towns or villages, the migrants, as a social group, actually can not simply be considered objectively and subjectively the same. From investigations or related studies in the 1980s, 1990s and early of this century, one can easily figure it out that some characters, such as their motivation of going out, their life style, their future expectation, are varying from time to time. But they, again as a social group, inevitably as usual have a lot in common. Their social status, for instance, has never changed.

In one of my studies concentrating on population movement and spatial development, I designed and did, as a part to analyze their life and values in the destination area, some interviews with migrants working in a leather factory named Dewei company in an urban village situated in the north of Guangzhou in the year of 2003. Dewei company with German investment was founded in 1995 with only 17 working staffs at the time. There is a set of rules and regulations for management in the company, such as production, safety, rewards and punishment, welfare and so on. Each worker is trained to understand them before employed, since some of the regulations are very detailed, for example, the disciplines are divided into kinds of oral and written warnings, disciplinary warning and firing. The rewards can be scored by managers and chiefs or by yearly assessment of work efficiency as they begin to do this year. After years of development, there are now 570 working staffs in the company, with only fewer than 20 being Guangzhou household registered people. Migrant workers from inland provinces take 70% of the total while about 30% of the migrant workers are from rural areas outside the PRD. Most of the migrant workers are from the countryside but a small number of them from towns or small cities. Those employed without Guangzhou household registration are demanded to buy social insurance of retirement, unemployment and injury, and the household registered people from Guangzhou should buy medical insurance as well.

Although what I cited here may only be one part of the status quo of the newest generation of migrants in present China, the cases are always very vivid and real pictures of a certain type of population in the PRD and thus can be used as an interesting contribution to the project as well. Since this chapter is entitled Voices of the Migrants, I do not intend to analyze the migrants values or behaviors in urban areas, instead, I would rather show to readers their life stories with first hand raw materials from over 10 interviews. For better understanding of the real picture of their experiences, all what they felt and thought about will be recorded with their expressions in the original in the following aspects.

The migrants with different background may have different attitudes towards the reality of their lives. In order to have a clear comparison between each of the kind of them, I am also presenting here their feeling and attitudes in nine categories such as background, ways of moving, motivation of move, attribution of life, achievements from urban experience, social networks with home and destination, expectation in the future, etc.
General Backgrounds of the Migrants Group Interviewed

(Miss. W aged 23, junior middle school educational background, from a rural village of Chongqing, Sichuan Province, now working in a workshop of Dewei) After quitting junior school study, I stayed at home helping my family with house work or pig-raise.

(Miss. L, aged 21, from Wucun county, Zhanjiang District, Guangdong, Graduated from a junior professional school majoring in English. Now working in the overseas purchasing section) My family lived in the rural areas when I was young, in the late 1980s we moved in the town place and my father then changed his job from plantation to small business. I have three siblings, two of my brothers are out as migrant workers in Shenzhen after graduation from high school. The younger sister is still home carrying on her school study.

(Mr. T, aged 23, from a village in Leizhou City of Guangdong, graduated from senior middle school and now working in the production workshop) I am from the poor countryside. My dad and mum both plant canes and we could not make ends meet in life before the three children went out working. I have got one sister and two brothers and all graduated from middle schools. I am the eldest and I was the first to come out. Following me, they come out one by one because there is not any chance for making a living home on that tiny piece of land.

(Mr. W2, married and aged 35. After graduation from senior high school, he was coming from Puyang of Anhui Province with his wife after working in his hometown for some time and now working in the production section of Dewei) My family live in Puyang town in Anhui Province. My parents have been working on educating people for years. They have got seven children with 2 married, 3 working out on business between cities within the provincial boundary and the youngest one now studying for his Ph.D in the USA after getting his MS in Physics from Chinese University of Science and Technology. I was home doing some small business with my jobless wife before I came out. I have a son and a daughter, both over 10 years old and in middle schools. The life in my original local area was difficult, little arable land in the countryside and business is hard in towns due to the low purchasing and consuming level. There you can find technicians working with income of just about 300 to 400 Yuan. Yet we needed money for the kids in school. We as a couple have been working away from home for over 7 years, leaving children under the care of their grandparents.

(Mr. Z, aged 28 and from a mountain village of Yuanling County of Hunan Province. He has been away from home as a migrant for six years. Before employed by Dewei in March of 2002, he worked as a security guard for a bank in the city of Guangzhou) My village is in a remote mountainous area. People there used to specialize in gold washing and plantation. In the late 1980s, because of the construction of a water power plant, arable land was inundated and the village moved to a higher hill. There was a certain sum of funds for the movement of villagers but the arrangement was just scraping the bottom of the barrel. For survival and development, most of young and mid-aged peasants are out for jobs. Before I was out in 1997, I tried to survive home with chicken feed but failed to make ends meet for life due to shortage of knowledge since all the hundreds of chickens died of some strange disease.

(Miss. S, aged 21, originated from Liuyang City of Hunan Province, graduated from department of computer science of Changsha Railway College. Now working in the QC section of Dewei) My family lived in the countryside when I was young, later we moved from rural to urban place. My mum is a teacher and my dad is a worker. My younger brother is a migrant worker now in Shenzhen since he ended his senior high school study. When I was at my first year at college, I
was told that Guangzhou is a good place for fortune makers, I began to have a dream of it. When I did my fieldwork in the last year at the college, I worked with computer editing for three months in a newspaper Liuyang Daily. It was my father’s arrangement for he wished me to become a reporter after I got my BS. In fact, that was a stable and enjoyable job in a state own unit. Both my parents were happy as well if I could work there and stayed with them. But only for a short period of time, I found it boring with endless editing. I couldn’t stand it.

(Ms. Ye, aged 34 and worked in Dewei for over two years. As a part time student majoring in EMBA at Zongshan University, she used to be a migrant herself and later successfully turned to be a household registered resident in Guangzhou) I graduated from a professional college in Jiujiang City of Jiangxi Province in early 1990s and got my BA later from Jiangxi Normal University. I had worked as a teacher in different cities in Jiangxi before I started my migrant life to South China in 1995. I did some odd jobs when I first went to Hainan. In 1996, I went to work in one of the MNCs in the Pearl River Delta and then transferred to Siemens in Foshan, where I worked for 5 years and accumulated experience of human resource management. With the working experience, I got my position here in Dewei two years ago and later became the Chief of Human Resources Department of Dewei.

Motivation of Outgoing from Home Area to Guangzhou

Four years ago, a villager introduced me to Guangzhou for a factory job. I came and tried several kinds of work in shoe-making or handbag-processing factories. At the beginning of last year, I was employed by Dewei, curing with all these semi-products of leathers now. The reasons why I went out are simple. On the one hand, I can have more life experience and get to know what city looks like. On the other hand, I can earn some money to relieve my family burden of income. Besides, the arable land is small with limited farm work for surplus workers like me. The whole young generation of three people in my family have all come out. One is in Chengdu, capital of Sichuan working on small business. My younger brother and I are here in Guangzhou. But he earns income by giving people lifts now with a two-wheel motor. The job can be just a stint while he considers it as better than being in a factory, since the income is higher (DW Case No. 3).

In fact, I didn’t have to work so far from home since my family life in the village is not bad economically, but I would like to experience the world outside and I couldn’t wait any longer (DW Case No. 1).

But I don’t come for money, I come just to learn new things (DW Case No. 2). I like a more vigorous life with pressure, even competition. And my dream was a saleswoman or something else in the PRD, or even more, I can make a tour of life while work around the country. I have been happy since then, for I am in the right place, where the life is really a challenge with capable people even walking faster than those in the hinterland (DW Case No. 5).

It is not easy, going out and toiling in a place unfamiliar, but urban areas like Guangdong really provide people with various opportunities, compared to my hometown area, it is really modernized here. I came out just for this (DW Case No. 3). So I was out mainly to realize myself and the farm work was no longer heavy to keep me home (DW Case No. 8).

Ways of Moving

When I was 16 years old, I graduated from junior middle school and stayed at home jobless. Then a good news was passing to me from my sister that a leather factory named Dewei Company needed workers. I went with her in 1998 (DW Case No. 1). Right after my leave from high school, I jumped into the labor market in Guangzhou and found a job first in a joint venture company Gong-
guan, where they paid me 500 Yuan per month with free food and lodging. One year later, I came to work here through an introduction of a good friend (DW Case No. 4).

Four years ago, a villager introduced me to Guangzhou for a factory job. I came and tried several kinds of work in shoe-making or handbag-processing factories. At the beginning of last year, I was employed by Dewei, curing with all these semi-products of leathers now (DW Case No. 3).

Many of the inhabitants, rural or urban, are out to seek better jobs. Without certain educational backgrounds, they have to get in touch with some middle-men who run business in labor markets or ask for information from the earlier outgoing guys. For those college graduates, things turn to be much different, they go directly to Guangzhou or Shenzhen, if they choose to work in Chuangsha, the capital city of Hunan, there are possibilities for them. The time when I got my diploma, I left home and spent about 15 days in Guangzhou labor market. Then I was employed by Dewei (DW Case No. 5).

With no way to make a living there (home), I came out directly to a relative in Guangdong. I got my first job as a guard just by elbowing me in the crowd of people. As a security guard in a bank, I could earn 400-600 Yuan and if there was an extra working shift I could even get over 1000 plus some other welfare. Later when the bank turned to be an enterprise with reform, I was transferred to the labor service company affiliated to the bank, where my income became less and unstable, thus I came to work here last month in Dewei through a friend’s introduction (DW Case No. 9).

**Attribution of life in urban area**

Now I usually work 8 hours a day, five days a week. If there is an extra shift, I also work on Saturdays. Since the government made a time limitation of working hours, we don’t work overtime often (DW Case No. 1).

The factory buildings and land are rented from the local village. We have some welfare policies for the staff who has worked here long and we prepared dormitories with 4 people in one room and 8 people in one as well as a dining canteen for them. There are also arrangements for their holiday life. There are never discriminations of sex, place of origin and age. We try to raise workers income each year (DW Case No. 11).

I have been happy since then, because I am in the right place, where the life is really a challenge with capable people even walking faster than those in the hinterland (DW Case No. 5). My work isn’t heavy, 8 hours each day with almost no call-back work shift. It is not boring but we have to be very careful and attentive since there was a training before post with detailed explanation of the operating rules. Our products are in ISO standards, no piece of them can be passed in low quality. As I have been a careful girl with strict family education, I am easy to get accustomed to my job. The pressure comes right from skill learning as we should learn to do tests to tell the quality of leathers, which are going to be used for shoe making or surface of certain automobile parts. We prepare reports and do management and control of product quality according regulations (DW Case No. 8). Guangzhou is on its fast development track, the transportation for instance, improved so much in the past two years, our country village can never emulate with it. I am happy with the government’s support to all the investors who in turn give us bowels for life. But I am not satisfied with some policies to constrain our stay. We come out to make money, yet we have to pay every month 20 or 30 Yuan as temporal stay fee. It is unfair to us migrants, I hope there will be changes of it sooner or later (DW Case No. 4).

The disciplines with German way of management are strictly observed. I feel depressed with fear of making mistakes and being fired. But that
doesn’t mean everything here is impartial. The section heads, for example, are so powerful that they can decide in which position you have to work. We usually have to take care of the relationship with them in order to get a position with lower intensity of labor or higher payment. This is sometimes unfair (DW Case No. 8). I got to know my wife when working as a migrant. With primary school education, she is a migrant herself used to work in a shoe-making factory, but out of job now. As a married couple, we rent a room outside the factory for 100 Yuan per month. We spend weekends together, cooking or walking around in the streets. We don’t have money to afford further study and enjoy urban life as others. Life is difficult, nonetheless, it’s a family (DW Case No. 9). We are happy with the prosperity of Guangzhou. Take the traffic system as an example, now we get to downtown with only one or two Yuan, while in my hometown, everything is slow, it takes long time and over 4 Yuan to get into town from the suburban area. The service there is bad, too, sometimes the driver told me to pay 3 Yuan when I entered the bus but they charged me double when I got off. This never happens in Guangzhou (DW Case No. 6).

Achievement from the Urban Working and Life Experiences

I can get 500-600 Yuan payment each month, with the overtime emolument, sometimes I can have 800 Yuan. Apart from that, I think I’ve achieved a lot. First, I learnt to deal with the world of people. When I was in my home village, due to lack of social experience, I was very intimidated and even got blush-faced when talking to others. But now I’ve changed myself with receiving numerous calls from morning till night. I can tackle many kinds of guys. Second, I see the importance of learned skills. In our company, there are many levels of positions, the educational background and experience are two key indicators for promotion. To study is to have everything. I will urge my brother to do better in school till his higher education. Third, I get mature while suffering from loneliness and helplessness, things here in the city are much more complicated that in the countryside, I am now getting used to urban life, but how hard it was at the beginning. Finally, I would rather go back home if I can get a same job like this. But I have to say there are more opportunities outside, this is why there are always people out and few back (DW Case No. 1).

I gained a lot of life experiences from my stay in Guangzhou. The most important achievement is the change of my personality. I used to be outward and individual centered. Now I found that life is not as simple as it is. People in the large city are considerably shrewd as unexpected. I have to learn to understand all kinds of people and save social capital as well (DW Case No. 5).

What I have achieved in the last several years of migration life can be summarized as the following. The first is the change of my life attitude, I understand now it is necessary to have healthy feeling of self confidence, never get lost of myself. Secondly, I raised progressively the perception of self-protection, of course this includes my understanding of environment and people concerned. Finally, I learnt to do my plan from long-term view and to tackle all the present life and working things step by step. The large differences between Guangzhou and my hometown or village are the sharp differences of the way of thinking (DW Case No. 8).

For the time being, what I achieve most is to get to know more people and through them to understand more of the world. With my improvement of mandarin, I feel ease now to express myself and communicate with others. Besides my contacts with migrants from my home area, I am facing the superior, the colleagues, the customers or even strangers in the street everyday. The people I meet and tackle here are much more complicated than those in my home area. The world is consistent to them. Without coming out to know them, I would never get to understand anything of the world (DW Case No. 10).
Embeddedness in the Local Society

I am originated from Guangdong, so the life (such as language or food) for me is a small piece of cake and I have many friends and schoolmates anywhere. I often meet with them so life is not dull. But in this company, most people are from inland provinces, I have to speak mandarin with them and found myself outside the region. We don’t have much advantage over others (DW Case No. 2). It was easy to get used to life here except the lack of spicy food. I like enjoying urban life, on weekends, I always go shopping or sightseeing with colleagues, hometown friends or schoolmates. I am keen on looking around in the supermarkets here (DW Case No. 5). We don’t have as much recreational life as urban people, but my wife comes and cooks for me each weekend and holiday. We talk over dinner what happened in the work and spend somewhat boring but good time together. I have got a habit of buying and enjoy reading the local newspaper Guangzhou Daily with one buck each day to know the world near and far. We rarely go shopping, instead we want to save every penny for the kids’ future education (DW Case No. 6). I am interested in the dynamics of Guangzhou and I like it. But in the huge metropolis, we sometimes feel a lack of sense of safety although the public security situation is better than before. I hope that the city administrators can have preferential policies not only for the improvement of investment environment but also for the living conditions of human habitation (DW Case No. 7).

The weekend life is usually colorful with tours to parks and mountainous landscape resorts in the PRD. The activities are sometimes organized by the company, sometimes by appointments between hometown people here, colleagues or new friends I get to know when attending night schools in the city. In recent time, I took some courses at a night school named Science and Arts for some senior professional college diploma. For each course people pay 400 to 500 as training fee. I can on the one hand improve my knowledge of English and Computer application, on the other hand have a better understanding of the urban society (DW Case No. 8).

But without any experience and feeling of urban life, I was intimidated and nervous as well. In the year of 2000, I was brought to Shenzhen to work in an electronics assembling plant by two villagers who were out there earlier. I was shocked by everything upon arrival.

Too many vehicles, too many buildings, too many colorful people and too many commodities, I was so scared when passing across the streets since they told me migrants were often hit by trucks. The work was also surprising, the assembling line was huge and without stop. The local dialects and food were especially different from that home. I was depressed and dizzied for months and slowly I learnt to adapt myself to surroundings. I learnt to work like a machine with machinery line, I learnt to use money, to make arrangements of life and to get in touch with people. With two years of stay there, I became more aware of a lot and more experienced and decided to gain more (DW Case No. 10). As I have been in Guangzhou for years, I have got many friends here or, I think my lifestyle turns to be more of the kind here (DW Case No. 9).

Social Ties with Homes

I am indeed home sick. After we installed a phone at home last year, I phone my family once a week. Each time we talk only a few minutes as the cost of a long distance-call is high. I go home only in Spring Festival holidays each year, but I failed to go back this year due to the difficulties of getting a ticket. Yet I saved money with that failure (DW Case No. 3). The kids also miss us, but each year when we go back to have the family reunion, they would sometimes look upon us as strangers because of the long time of disconnection. Yet they are sensible and they know that we work outside for them. As parents, we are pleased and relaxed with that. There is usually one call between us each week for only
a few minutes for the sake of high expenses for long distance calls (DW Case No. 6).

Although I don’t have to send money back, I contact my home village very often. I tried to keep close tie with my family, first by letter writing, then I wrote less and called them more. On all the festivals and my parents’ birthdays, I usually send symbolic money or other things back to express my love to them. The only back home tour each year is the time I compare the life here with my hometown. The living standards rise a little each year but slow changes are taken place with slow pace of work and life style. All the outgoing people of the villages are telling to their home staying relatives what happens outside. Judging from the houses newly built, it is apparent that the money and new sense of life influences the rural home area a great deal (DW Case No. 8).

In the first two to three years, I posted money back, 2000-3000 Yuan each year, because my father was a patient with mental illness and my mum was in a difficult life situation. As time passed by, I sent home less and less. Now I only send to them about 500 or so since I have family here to support myself and they have to survive by small savings (DW Case No. 9). I often contact home and the usual way is a telephone call. My family is considerably well off so I don’t send money back. I used to be very home sick but now I am independent (DW Case No. 10).

**Social Network in the Destination Area**

I am originated from Guangdong, so the life (such as language or food) for me is a small piece of cake and I have many friends and schoolmates anywhere. I often meet with them so life is not dull. But in this company, most people are from inland provinces, I have to speak mandarin with them and found myself outside the region (DW Case No. 2). To make life more pleasant, I found a room near the factory with rent of 130 something. In the room I often meet with all sorts of friends, some are former schoolmates, some come from the hometown and some new ones I get to know at spare-time school in Guangzhou (DW Case No. 7). The migrant life is never stable so we make friends but few are very close. In our company or as I was told by migrants from other factories, rarely there is a successful marriage case between migrant workers even if they sometimes fall into love. This is similar to the university students dating, for the final departure for respective places can hardly be avoided (DW Case No. 8).

**Expectation for Future Development**

I expected that it would be good to stay in Guangzhou, but when I am here I found more of life pressures, because of severe competition. I have got a tentative plan for the future. Now I have registered by self-payment in an adult training program. My hometown is warm and nice for life, but I am used to rosy pictures here in the big city. I’d like to stay here rather than going back. I don’t even want to go to small cities in the PRD, except Shenzhen where people can also have opportunities like here. Most young people in our town are now out for jobs, with only children and kids home. Yet my parents hope one of our kids would live with them, they especially hope my sister will compete a position as public servant in my home town where she can enjoy stable
life. As for me, I am destined to seek for my life in Guangzhou, if possible and necessary, I even plan to spend money to gain my household registration here (DW Case No. 2). It is not easy going out and toiling in a place unfamiliar, but urban areas like Guangdong really provide people with various opportunities, comparing to my hometown area, it is really modernized here. I come out just for this. However, working out is not a life long deal, I hope to save more money so that I can run a small business in hometown as I go back. I don’t want to stay here for development but I still show my interest in the city. I am expecting its prosperity, with that I can share benefits as a migrant as well (DW Case No. 3). I seldom go out visiting the city, instead, I stay in bed to have a rest or reading some newspapers. I sometimes spend time thinking of future life, but always no resolutions. I may stay in Guangzhou or find myself in other cities, or I may go back finally. It is my wish to become somebody home. In my village, many people don’t have to run out.

Economically their backgrounds are better and they make big money by planting season fruits. We didn’t have any saving. When I have startup funds in the future, I am interested in plantation as well. Besides, my parents need at least one of the kids living with them (DW Case No. 4). Compared to income in hometown, we may earn more but we spend more. The future development, I think, is decided by opportunity. In my county, there are people going back to run small factories with capital raised from migration work. But personally, I want to be open-minded. We don’t have to be constrained by region. If there are more chances outside, as we all know that it is obvious people develop better in Guangzhou or the PRD than in hometown, why do we have to go back? In the years to come, the household registration system may be nothing. So I don’t care where to be, but I do stress on where to have free development (DW Case No. 7). I don’t know if it is enough I take home this little technology or just working skills learnt here and to invest for a new factory is even out of my imagination. It is not easy to survive and develop home, I am sure, yet it is rootless outside. There are people in our company who bring family with them, but life is difficult I can tell. What are the important things for me now, is to learn more and experience more, if capable, it doesn’t matter to develop home or in other places (DW Case No. 8). I am puzzled thinking of the future. I am getting old and will never be able to compete with the young newcomers in the field of study. I have a great life pressure, too. It is almost impossible to develop back in home area, since there is nothing that can be taken for granted as market resources as I understand. By trading in the local town fair, I might be able to earn next to nothing. I plan to have my wife learning some handicrafts making and then try some small business here in Guangzhou by myself someday. This is a large and vigorous city with countless opportunities. I can survive here. At present, I hope the management of Dewei can be improved to provide us with better welfare, for example, we hope to enjoy more kinds of social insurance. At the same time, I like to think of the city of Guangzhou as my hometown and to have best wishes for the city (DW Case No. 9).

I have no way to think of the future and it’s difficult to plan. I don’t know if I should go back or swaying outside in the urban area. But I am aware that no matter where to be, I must be confident and capable. I regret that I didn’t study hard enough to get to university graduate level. If so, there is certainly larger space for development. I love to be here in Guangzhou, yet this is not my home. My home province develops very fast as I know, so I will probably find a job in some medium sized or small cities in Hunan Province soon or later (DW Case No. 10).
Guangzhou Planning Trends: The Striving for the ‘Figured’ Metropolis

Having been a southern Chinese provincial capital far behind North-Eastern Chinese industrial cities in its national relevance 25 years ago, Guangzhou is today one of the richest municipalities in China and in its self-conception one of the two most important cities in the Pearl River Delta besides Hong Kong. With its 10 million population and its regional administrative and economic core functions it strives for international importance, too. This chapter tries to show how the city’s goal to become an international metropolis is reflected in its strategic urban planning and gives a critical view of Guangzhou’s current urban planning philosophy. But firstly this article starts with delivering insight in Guangzhou’s urban history and its rapid transformation following the open-door policy reforms.

The Once Opened City Gets Opened Again

Guangzhou is a city with a long and important history. More than 2200 years ago the city was founded under the name Panyu at a crossover of three major trading routes. For centuries Guangzhou was the capital of the southern Chinese kingdom „Lingnan“ (which means “south of the mountains”). During the Wu dynasty (222-280) the city was named Guangzhou. In the first millennium, Guangzhou ascended to an important international port during the Tang dynasty (618-907). Guangzhou was the starting point of the „marine silk road“, the major trade route between China, India and the Middle East. Many foreign merchants lived in the city, at times the foreign population rose to 10,000.

In the 16th century European sea powers pushed into the attractive trade with China. The first trade agreement was closed with Portugal, which established a constant trading-post and colony in Macao in 1553 and held a trade monopoly with China for over two centuries. During the Qing dynasty (1644-1839), whose first half is regarded as a time of prosperity in the Chinese Empire’s history, Guangzhou’s port was the only Chinese port open to foreign traders. But as a consequence of losing the Opium Wars (1840-42) China had to give way to British pressure and opened several ports to European powers and the USA who established so-called “concessions” – half-colonial foreign outposts on Chinese soil. In Guangzhou foreign trading offices – strictly separated from the Chinese city – were founded on the artificial Shamian Island in the Pearl River in 1860. Under the name Canton, the city became known in the western hemisphere.

After 1949, as a consequence of the Maoist policy of cutting China off from world trade and foreign influences, Guangzhou lost its international relevance. The city kept its foreign trade port and held the annual international Canton fair, but was actually downgraded significantly to a southern Chinese administrative center and an industrial site of minor importance. Following the Maoist slogan to transform consuming cities into producing ones, industrialization was pushed in the 1950s and all city functions classified as “consuming” were neglected or, like private commercial activities, even fought against. The traditional Chinese city was densely populated with crowded streets and vital busi-
ness activities. The Communist Party’s hostility towards private entrepreneurship and the ideal conception of collectivization changed Chinese urban landscapes radically. Owners of shops, restaurants and workshops were forced to close down their businesses, especially during the Cultural Revolution. City centres became desolate. In 1957 Guangzhou had 38 shops per 1,000 inhabitants, in 1978 there only were left three (Vogel 1989: 203). An author remarked polemically that one reason for the ubiquitous use of bicycles in Chinese city centres was that pedestrians could not see or do anything in the streets except going to work (Leeming 1993: 135). Guangzhou’s city centre was - in addition to its function as a residential area - mainly to meet administrative and political functions.

The neglect of urban infrastructure in the Maoist era is substantiated impressively by some figures: In the beginning of the 1950s there were 29,000 telephones in Guangzhou, in 1984 there still were just as many. In 1950 two bridges connected the northern and southern banks of the Pearl River; until 1984 no additional bridges were built although urban traffic had increased heavily. Except from some housing for party cadres in the East of Guangzhou and the danwei-housing for workers adjacent to factories there was hardly any housing built in the period from 1949 to 1979 (Vogel 1989: 197). As a consequence, the living space per capita decreased continuously since the 1950s and reached a record low of approximately 4 square meters per capita in the late 1970s (Junhua et al. 2001: 22). By 1980 most houses and dwellings were in extremely poor condition due to the fact that tenants neither had the money for renovation nor the ambition to invest their working power in government-owned buildings.

With the inauguration of the open-door policy by Deng Xiao-Ping in 1979 the situation improved slowly. But compared to the rural communities in the Pearl River Delta which quickly took the opportunity the new reform policy offered them, Guangzhou was like a “tired old man” (Vogel 1989: 196). While rural communities were immediately able to build factories on their community-owned land and villagers were allowed to possess a small piece of land and to build private houses there, Guangzhou citizens suffered from the lack of space and the absence of a legal basis to be proactive since all urban land and all buildings where state-owned. The city was densely populated and had the burden of an outdated heavy industry, an ineffective administration and a lack of capital to invest in the urban infrastructure. In rural communities it took only some village leaders sticking their heads together to find an agreement for investment while in Guangzhou investing was complicated by a complex multi-level bureaucracy (Vogel 1989). The metaphor of the “old, tired man” threatened to undermine the 2000 year old cultural leading role of Guangzhou as Southern China’s most important metropolis. The open-door policy and the establishment of the first Chinese special economic zone (SEZ) in Shenzhen lead to an increasing flow of information from Hong Kong. The British colony Hong Kong and thus the western world came into reach. Younger people orientated themselves to the more western influenced lifestyles of Hong Kong residents; they wanted to dress and spend their leisure time like them. But during the 1980s development dynamics spilled over into the City of Guangzhou and began to change it dramatically. Supported by economic reforms like the abolition of the prohibition of private businesses and a pragmatic city administration that could act more autonomously from the province and state due to administrative reforms, private entrepreneurship emerged rapidly. Countless shops, small restaurants, markets and all kinds of businesses sprouted out all over the city. The Chinese from abroad played an important role: About one third of Guangzhou’s population had relatives who had left Guangzhou towards Hong Kong or overseas years ago. The city government decided to partially return their once expropriated property, in order to gain capital for the renovation of houses now occupied by the expatriates’ relatives (Vogel 1989).
High Speed Urbanization in Guangzhou

In the 1980s the processes of “high speed urbanization” (Ipsen, also in this volume) and “hyper-growth” occurred in Guangzhou as in other parts of the Pearl River Delta, which was presented impressively to an interested western public by Rem Koolhaas on Documenta X in 1997 (Chung et al. 2001). In Guangzhou it started off – driven by foreign investment mainly from Hong Kong – in shortest spatial distance to Hong Kong. In the eastern corner of Guangzhou’s Huangpu district the Municipality’s first special economic zone, called “Triangle Economic and Technological Development Zone”, was established and a new deep water port was built. This launched the rapid urbanization of the adjacent rural areas in Huangpu district: housing, commercial areas, industrial zones and infrastructure facilities like schools were built.

The following years Guangzhou’s urbanized area grew primarily in east-west direction along the Pearl River. With the modernization of the Baiyun airport, which is situated in the north of the city, another axis of development occurred along the north-bound arterial roads. New bridges across the Pearl River were built and gave impulses to urban development in the city districts south of the Pearl River. Housing has grown almost exponentially since the 1980s. The average living space per capita more than doubled from 1980 (3.8 square meters) to 1993 (9 square meters) and has quadrupled from 1980 to-date, when Guangzhou citizens average living space has reached about 16 square meters (Vogel 1989: 193; L.P. Lammas 2002).

“High Speed Urbanization” is also reflected in the growth of Guangzhou’s built-up area. In the 5-year period from 1984 to 1989 it increased 22%, in the following 8 years it increased another 50% (Weng and Yang 2004). The city’s economy reached double-digit annual growth rates. It took less than to decades that Guangzhou developed from a relatively poor city within China to a city with one of the highest per capita incomes.

Fig. 53: the development of Guangzhou’s built-up area 1960 to 1997
The rapid growth of the city lead to several municipal reforms to adjust the city limits. Until the year 2000 Guangzhou-City area was limited to the grey dyed city districts in figure 54, 6.2 million people lived there in 2001. The three core districts Liwan, Yuexiu and Dongshan had a population of 1.4 million. Population density reached a high value of 3600 inhabitants per hectare in the core districts (Demographia 2004).

Panyu and Huadu were incorporated as new municipal districts in 2000. Conghua and Zengcheng followed later, but became so-called “satellite cities” of Guangzhou. A planned step is to merge the eight central city districts and the northern part of Panyu to one metropolitan district.

Guangzhou’s Migrant Population

Approximately 3 of the 10 million inhabitants of Guangzhou are inner-chinese migrants, who came as cheap workers mainly from the adjacent northern provinces into the southern Chinese boom-town. In the numerous urban villages – 2002 there were 138 of them (Hugentobler et al. 2002) – the migrant population is about 50%, in some they represent the majority (Chan 2004). The Chinese household registration system (hukou) doesn’t allow the people a free choice of residence. As far as migrants don’t enter the city illegally, they will get a temporary stay permit, but this permission generally hampers or prohibits the access to the city’s facilities like medical care or schools. The rigorous restrictions of the household registration system were eased for smaller cities in 2001. Further hukou-liberalisations are to follow according to government plans (Wang 2002). How far the government will go in reforming the law has to be awaited, since it fears a massive and uncontrollable influx of people into the large cities.

Migrants’ housing conditions are neither officially evaluated nor well researched yet. Chan made a non-representative survey in 2004. His interviews with migrant workers on their housing conditions show that about 50% live in rented accommodation, mainly in private-built housing in the urban villages. About 25% live in dormitories, which are owned by their employers on factories’ premises. 16% of the interviewed migrants fall into the category of “spontaneous living”, which means they are de facto homeless and spend the

Fig. 54: administrative division of Guangzhou municipality in 2003 (left) and planned administrative division (right)
night in shelters or building shells on construction sites or in houses, ready for demolition. 5% stayed at their friends’ or relatives’ home. What migrants have in common is that their average living space is much smaller than the average living space of Guangzhou citizens: an approximate value of 4 square meters per migrant can be derived from Chan’s survey. This is only a fourth of the registered Guangzhou citizens’ average value (Chan 2004, L.P. Lammas 2002).

Urban villages with a high proportion of migrant population are often a thorn in the side of the municipal governments, since they are considered as pockets of social misery and breeding ground for crime. Due to their self-organised structure urban villages are less controllable by public authorities than other parts of the city. In a Chinese newspaper article on a police raid in an urban village in northern Guangzhou it says: “(...) Jiangxia Village was notorious for its high crime rate. Although it covers an area of only 2.5 square kilometers, it has a migrant population of 30,228, 10 times the number of permanent residents. The rented houses have become dens for gambling, prostitution, illegal clinics, and unlicensed household factories.” (Shenzhen Daily 2004) Recently the provincial government is considering to allowing the provinces’ migrants equal access to medical care and to schools. This would mean a major improvement of the migrants’ position (Caixiong 2004).

Planning the “Figured” Metropolis

In 2002 the Municipality of Guangzhou in close collaboration with universities and Chinese planning experts worked out the “General Strategic Plan for Urban Development of Guangzhou”. The plan is regarded as a pilot project in China’s planning circles and is the follow-up of the formerly masterplan, that formulated aims in urban development in a sense of a centrally planned economy, which proved to be inapplicable in the new market economic environment (Guangzhou Urban Planning Bureau, o.J.).

The strategic plan outlines the spatial development goals for the next 50 to 100 years to come and is therefore in its long-term perspective similar to great European extension plans of the 20th century like van Eesterens plan for Amsterdam in the 1930s. The plan has three main topics: land use, the eco-system of the city and the city’s traffic development.

„Extending south, prioritizing north, advancing east, connecting west“. This guideline characterizes the main strategy for the future development of Guangzhou Municipality: Extension in every direction. Guangzhou shall transform into a polycentrical metropolis with 12 to 15 million inhabitants. The planners acted on the assumption that there is a clearly hierarchic town system in the region, in which Guangzhou and Hong Kong play the crucial roles. The development of four new city centres is projected orientated along two major development axes. The “historic” east-west axis along the Pearl River and a new north-south axis, which connects the Tianhe-Centre in the east of Guangzhous historic city centre via the university town which is currently under construction on an island in the Pearl River via the new town “New Guangzhou” with the projected gigantic deep water port Nansha in the very south of the municipality. The south of Guangzhou is the designated focal area of future developments. Every projected city district has certain economic functions, in general they shall develop as centers of future-orientated industries and as research and development centers. A relatively new issue for Chinese plans is the inclusion of measures concerning the protection of the environment. This includes the planning of ecological zones and the implementation of a wide meshed grid of green axises. Half of these axises are orientated along the main courses of the rivers. Some of the green axises cannot be assessed as axises with city wide ecological functions since they are discontinuous and can only be perceived from an aerial view, in Tianhe for instance.
With the theoretic concept of the “space of flows” and the “space of place” Manuel Castells tries to conceptualize the logic of urbanization in times of globalization into a spatial theory. According to Castells todays networked information societies are expressed in two parallel spatial paradigms: the space of flows and the space of place. The first paradigm relates to the spatial logic of late modernism: the networked but broken urbanisation patterns of a global society and a global economy. It’s the dominant organisation pattern of the city, which connects its parts to the world: airports, central business districts, highways, railways, endless commercial areas along arterial roads. These parts of the city, the spaces of flows of information, traffic and goods can be characterized as a constant process without an elusive shape and form. The space of flows concentrates the city’s crucial functions and the city’s economic power.

The space of place is the historically fixed antipode to the space of flows. The space of place relates to the contained territory of the local “lebenswelt”, the grown culture of a city and their neighbourhoods. The dominant spatial development trend in many metropolises is the extension of the ahistoric network of the space of flows. As a consequence more and more scattered, segmented places occur, that are not connected to each other (Castells 2000). The current planning philosophy in Guangzhou can in my opinion serve as practical example for Castells theoretic frame. The structures of the space of flows are extended and strengthened while there is only minor importance attached to the space of places. Following I am going to exemplify some of the main principles of the plan to support this thesis.

Guangzhou’s main target is to become an international metropolis within a couple of decades that is competitive in comparison to other international metropolises. Urban planning’s contribution to achieve this aim is the expansion of traffic infrastructure and the building of modern towns and city extensions which have all a certain economic main function. Making the city internationally competitive plays a significant role in the strategic plan. This orientation on economic growth is not new, for more than 20 years Guangzhous city policy has had its main focus on generating economic growth and attracting foreign investment. But the new strategic plan is not that one-dimensional. The planners are aware, that the city has to offer a healthy environment and life quality, if it wants to compete successfully with other cities. The way to achieve this – so suggests the plan – is to develop large scale projects. Every one of them fills the area of a medium sized European town. They are the model projects for the years to come and shall produce an international charisma by symbolizing the success and the modernity of Guangzhou as a state of the art 21st century metropolis. These projects subdivide in different categories:

At first there are projects to extend the traffic infrastructure of the city and to accelerate traffic. The new Airport in Baiyun/Huadu, north of the city has been opened recently, in its surrounding a logistic hub is planned. A new deep water port on the southern edge of Guangzhou is also planned. Due to its central position in the Pearl River Delta it is to become one of the two most important ports of the region besides the port of Hong Kong. A new harbour town, Nansha, is to be developed as add-on. Furthermore a well-functioning grid of highways and the extension of the metro line system shall solve traffic problems. Second there are mega projects that are to boost the knowledge-based economy in the city. The concentration of several universities on a 45 square kilometres sized Pearl River island to “an information port linked with the information era” (Guangzhou Urban Planning Bureau, o.J.) is one example. Recently completed projects are the role models for the municipality: the Tianhe-Center for instance. Its southern extension, Zhuijang New City, is currently being developed. Such urban mega projects are a demonstration of success and competitiveness of the city, which is typical for cities in the asian-pacific rim. Especially in Asia skyscrapers are symbols
of wealth and a prosper future. At the end of the 1980s the ten tallest skyscrapers in the world were situated in north America, today eight are situated in Eastern- and Southeastern Asia and six in China (thereof two in Hong Kong and one in Taiwan). Even as ecological and sustainable labelled projects are planned as mega projects, for instance Pearl River’s Sea Gull Island in the south of Guangzhou, which is to transform into a “top large scale modern tourist area of ecosystem and culture” (Guangzhou Urban Planning Bureau, o.J.). But beside those projects limited to the creation of whole new spatial structures, there are also projects in Guangzhou that take old structures as basis and potential for urban development. The partial renewal of the old city district of Guangzhou is an example, even if they primarily target at the strengthening of the old town as centre of commerce and entertainment and less at attracting it as vital residential district. This is actually not only an exclusive trend in China but also in North American and European cities. The predominant tendency in urban planning and in the production of space does not aim at creating places and landscapes as vital
"usual-life" areas, it mainly focuses on the marketing of places (Ipsen 2005). What kind of space is to be produced by the strategic planning could in my opinion be called the “figured” metropolis following the reflections of Christine Boyer’s “figured” and “disfigured” cities. According to Boyer the figured city is “composed as a series of carefully developed nodes generated from a set of design rules or patterns. It is fragmented and hierarchized, like a grid of well-designed and self-enclosed places in which the interstitial spaces are abandoned or neglected” (Boyer 1995, cited in Graham and Marvin 2003: 211). The strategic plan directs the attention to the figured city, while the future of existing urban structures and landscape structures, like rural enclaves in the city and the rural-urban-industrial patchwork on the edge of the city remains in clouds.

The intention of the strategic plan is to integrate the geographic features and qualities in the urban development. This is true for the large scale: building a port on prominent site to gain competitiveness or utilizing the qualities of the Pearl River for inner city waterfront development. But the existing qualities and potentials one can find on the city edges or on the often small but numerous “rural enclaves” in the metropolis seem undiscovered. The blurring rural-urban structure with its typical patchwork of small towns, industrial zones and agriculturally used land for instance. The acceptance of these spatial structures and their careful further development could strengthen the existing small scale social and economic networks. Urban mega projects are developed regardless to existing structures, they create new ones. As the Tianhe-Center was built some urban villages had to disappear. There are actually some projects trying to deal with the potentials of urban villages but they seem to be the exception in Guangzhou (Hugentobler et al. 2002). I would plead for a dual-track strategy in urban development which focuses besides the development of urban mega projects on the further development of the “usual-life” places in the city, like the urban villages. A strategy only concentrated on mega projects threatens the spatial diversity.
and therewith the uniqueness of Guangzhou urban landscape. A reversal of Deng Xiaoping’s famous saying should be a guideline to urban development: „Take a look, than take a step”. Urban villages for instance could be considered as places provided with a various economic structure, since small businesses can establish easily based on working networks. Urban villages are also an important provider for housing, especially for migrant workers. To integrate the given structures of urban villages as development potential in the urban planning, a more selective strategy than the established large scale zoning has to be implemented. Urban development on this scale should involve the residents to be successful and sustainable. An important question is how urban villages can develop as identity-forming cells in the urban fabric, not only for their residents but also for the whole city. How have urban renewal programs for urban villages to be designed to make use of their qualities and assure them? Interesting contrasts could be created between metropolitan mega projects on the one hand and the world of the urban villages on the other hand. The acceptance of large scale developments without regard to existing urban structures and social networks runs the risk of great failure. European and North American planning history generated numerous examples of failed urban development projects due to the resistance of citizens against the demolition of their grown neighbourhood environment.

What features the urban landscape in Guangzhou has to offer becomes apparent when zooming into a bigger scale. The figure shows the northern part of Guangzhou, the southwest of Baiyun, where the urban meets the rural. The different features of landscape and infrastructure have influenced the pattern of settlements, i.e. settlement concentrations along arterial roads or along water streams. Excluding Mount Baiyun, more than 50% of this area’s urban landscape is non-built-up area: water streams, fields, fishponds. The settlement area including the traffic corridors represent about 35% of the total area.

Fig. 57: Baiyun urban landscape
How could further growth be organised considering the given characteristics of the urban landscape?

The three images show in an experimental manner three ways to organise urban growth by utilizing the given features of the urban landscape. In these examples the settlement areas proportion increases from 35 to about 40%. The dark dyed rectangles represent sites of 5 and 10 ha, which could for instance provide housing to a couple of thousand people and help solving a task which is in my opinion crucial towards a sustainable urban development in Guangzhou: the (spatial) integration of Guangzhou’s migrant workers who are recently “second class” inhabitants. Their labour has helped to build the city, now it would be time to give them a chance to settle as equal citizens.
Gang Li

The Narrow Corridor

Currently, a greater Pearl River Delta (PRD) economic zone is emerging that includes many cities especially Hong Kong, Guangzhou, Dongguan and Shenzhen. After cooperation and development of nearly twenty years, Hong Kong has partnered closely with the PRD cities with mutual dependency. Hong Kong replies on the PRD for its most convenient and reliable major hinterland, while the PRD needs Hong Kong for its economic development. Together with convergence of economic management systems and economic operation mechanism Guangdong Province - Hong Kong economic integration is gradually becoming a reality. However, there are some issues worthy of attention during the course of development, in particular, the problem of the emergence of the so-called Road City and Road Economy. No phenomenon has received more praise and abuse than Road City.

This article is concerned with the past, present and future of the Guangzhou-Shenzhen Corridor – a rapid urbanizing region of singular interest in that it links two metropolises: Guangzhou and Hong Kong. The chapter concentrates on the so-called “Road City” (or Road Economy) phenomenon in the area of Pearl River Delta (PRD). It focuses on the driving forces behind as well as on the possibly rational solutions. Landscape is the assessment tool in this article. Put another way, although this author admits that local development involves a lot of factors meanwhile diverse assessment systems, landscape approach is the master key in the process of resolving “Road City” problems because such an approach has been neglected from time to time in China. Ignoring landscape has led unnumbered problems in PRD especially in the corridor along the 107 state road from Guangzhou to Shenzhen.

Regional Description

Stretching between Guangzhou (Guangdong Province’s capital city) and Shenzhen Special Economic Zone, this 200 km long ‘corridor’ accommodates some 13,000,000 residents (Dongguan and Shenzhen) as well as numerous natural and cultural resources. At its northwestern end lies Guangzhou whose invasion of the surrounding area is almost complete. Some 200 km away to the southeast lays Shenzhen. The city of Dongguan lies roughly in the center, its future increasingly susceptible to influences and pressures generated by its capital city neighbor, SEZ Shenzhen and Hong Kong. A number of other urban settlements of varying size are located within the corridor, contributing significantly to its cultural, social, economic and environmental attractions.

Before the completion of the Express Way from Guangzhou to Hong Kong, 107 state road acted as the unique land route connection between the two cities. Their cross-border operations have been mainly facilitated through subcontracting networks among manufacturers and through links with trading houses that are frequently small in size. The state road provided all kinds of handi-
ness and possibilities because of its cheapness and accessibility.

In the process of explosive development, the towns and villages along the 107 state road experienced and are still experiencing the so-called “rural-urban” transformation procedure. The amount of towns and population increased hurriedly, continuous built-up areas, even the “super towns” and “super villages” emerged extensively. Most of these villages contain 50 thousand populations and their GDP are higher than 100 million RMB. Normally the super towns achieve more than one billion RMB GDP with 100 to 300 thousand populations.

Responsibility for the management of the corridor and its resources is shared at present between city and township governments. No single instrumentality or instrument is currently concerned with the corridor as a whole, or with providing a framework for co-coordinated corridor planning. Meanwhile, improvements in transport are reducing travel times, bringing settlements closer and facilitating the commuting option. Metropolitan populations at both ends of the corridor are increasingly searching for alternative recreational and residential opportunities both inside and outside its bounds.

**Development Process**

The economic integration between PRD and Hong Kong is mainly derived from economic benefits, not governmental agreements. In the late 1970s Hong Kong’s manufacturing industry confronted the prodigious pressure on high land price and continuous costs increase. At the same time China’s open-door policy offered a great quantity of inexpensive labor force and cheap industrial land. Most Hong Kong’s manufacturing companies established their production bases within the PRD especially along the 107 state road. Up to middle of 1990s this kind of division displayed primarily as small- and medium-sized enterprises. The establishment of Hong Kong factories has made that region the largest recipient of foreign direct investment in China. Most of the investment is concentrated in producing light industrial products, primarily for export to Hong Kong and third countries. In addition to direct investment, Hong Kong has been an important middleman in raising foreign capital for China. At that time the so-called footloose industries and labor-intensive industries are the most important candidates for the growing towns and villages along the state road.

After the reform and opening up policy adopted in the Mainland China, economic cooperation between Guangdong Province and Hong Kong has been progressing rapidly. Currently there are three stages, and their cooperation, models, drivers, roles of government and effects are summarized in the following.

First of all, we have to admit the fact that economy, government and policy in Mainland China dominate the city development, therefore the developments of Road City and Road Economy also have experienced three stages:

**1980s—1992**

The cooperation model of “Three modes of processing and compensation trade”, “store at the front and factory at the back” inevitably contributed to the emergence of Road City. Lower land price, cheaper labor price and good accessibility of the area along the old 107 national Road from Guangzhou to Shenzhen attracted more foreign investment compared with other towns and villages. A lot of industrial buildings and industrial areas were built in this period of time by local township governments even villages. Primary Road City shape formed.

**1992—1997**

With the acceleration of industrialization and modernization throughout China, Hong Kong investment by major companies expanded rapidly and consortiums grew rapidly. Traffic system connecting cities, towns and villages were established, Road City developed from band pattern into net pattern. Nevertheless the individual
land use shape maintained – “Store at the front and factory at the back” along roads.

1997—2003

After the handover, Cooperation between Guangdong and Hong Kong developed at deeper levels in all aspects including trade, investment and finance. Cooperation in fields of technology development, education and training, production manufacturing and capital market initiated. These situations led to an upgrade of land use in Road City – building density raised, the division of land use functions became more and more exact within cities, industrial areas were more and more classified.

From 1997 the corridor underwent a transformation. After 20 years of attempt and running-in, this spontaneous and scattered popular economy co-operation required a more rational and organized environmental, traffic and spatial system. The production division penetrated further into the hinterland of the PRD, the corridor itself upgraded its status. From then on, the local governments began to pay great attention to the construction of industrial areas in the corridor area. Meanwhile a great amount of budgetary funds were used for the improvement of environment and traffic system. However planning system and governmental pace were still behind the developmental reality. On one hand wider roads, more grassland and public facilities emerged unceasingly, on the other hand inexhaustible floating population and rapid development of transport demands evermore asked for more construction.

The establishment of the “Closer Economic Partnership Arrangement” (CEPA) in 2003 is a milestone in further development of the corridor. How to integrate the land use, traffic system and function division within the corridor is still an important task, in the meantime information services, tourism, commerce and trade along the corridor demand more concern. Central and local governments concerned lay down a serial of measures in order to grasp this great chance:

- Guangdong Province decided to invest 100 billion RMB in the construction of “one-hour living circle” which can connect Guangzhou, Hong Kong, Macao and Shenzhen with high efficiency;
- Government will put emphasis on nine preferential areas so as to establish development cores in haste, this behave can preliminarily establish the frame of the cities’ function division;
- Shenzhen government’s “within city” expressway system planning etc.

The PRD has undergone and is undergoing a profound process of economic restructuring through with agricultural production has become diversified and commercialized and rural industry has expanded dramatically. This process is distinct from what has taken place in North America and Western Europe where economic restructuring has been centred on the growth of the service sector and high-tech industry. The process of agricultural diversification and rural industrialization in the PRD has resulted in a shifting focus of economic development and urbanization from central cities of the region (in this case, Guangzhou, Dongguan, Shenzhen and Hong Kong) to a zone outside and between major metropolitan centers (the corridor), the emergence of the extended metropolitan zone has been the result of the increased population (floating population) and expanded production facilities originated in the countryside. What has taken place in the corridor since the reforms is, therefore, an “urbanization of the countryside” in which peasants of the region “leave the soil but not the village” (Litu Bulixiang) and “enter the factory but not the city” (Jinchang Bujincheng). A derived outcome of this process has been an intensive mixture of industrial/agricultural or urban/rural activities therein, making it a zone of what the Chinese have called “urban-rural integration” or “urban rural interlocking”.
The Present Condition Summarization of Road City & Road Economy

Economy
After opening and reformation, the open/ export-oriented countryside economy was set up in Pearl River Delta area while the closed natural economy being broken. There were gigantic changes of production structure. The obvious features of enterprises there are processing with provided material, processing with provided sample, assembling with the given accessories and parts, or compensation trade. And these became the main part in the economic development. Meanwhile it also caused the waste of industry resource, the problem of pollution, the weakness of tertiary industry, the imbalance of industrial structure and so on. Road Economy, dispersed economy, single-product economy became the barrier of the development. In addition, many new cities around Pearl River Delta Area are formed by the pure agricultural country towns. During the process of opening and reformation, government paid much attention on the accumulation of the economy. Pearl River Delta Area has achieved some successes on the basis of “rural-urban” transformation procedure. But in the future, they must have continuous research to adjust the direction of the development. Dongguan as an example:

Dongguan has been one of the most developed areas in PRD recently. It has an area of 2,465 square km. 15.26 million permanent residents and 5.5 million floating population. During these years, Dongguan put the basic construction on the first place. The government invested huge money on it. In 2000, GDP achieved 488 billion with the revenue of 104 billion. The total exports achieved 17149 billion USD. It got the third place among all major cities. The total numbers of foreign investment enterprises are 14 million. (Most of them are processing with provided material, processing with provided sample, assembling with the given accessories and parts, or compensation trade) With enormous increasing of floating population, some defects have been exposed gradually.

Floating population
There is a growing tendency these days for many people who live in rural areas to come into and work in a city. This problem has caused wide public concern in most cities all over the world. An increasing number of experts believe that migrants will exert positive effects on the construction of cities. However, migrants may inevitably bring about many negative impacts. Without migrants the rapid development of PRD is inconceivable. At the same time, they are putting pressure on population control and social order because of not only their quantity but also their quality. It must be noted that improvement in agriculture seems not to be able to catch up with the increase in population of rural areas and there are millions of peasants who still live a miserable life and have to face the danger of exposure and starvation in China. As planners we have no ability to change it. Many migrants think that working in a city provide them with not only a higher salary but also the opportunity of learning new skills. We must take into account this phenomenon rationally and place more emphasis on migrants lives. Apart from their hometown and relatives, they couldn’t catch sight of any familiar face and have to suffer from homelessness. That’s the reason why the establishment of a new social tie between migrants appears so important to them. Mobility – for migrants living in cities is a dream. They work in factories and they live in dormitories. Sooner or later they will leave this city. They are temporary, better environment means nothing to them so they have no interest in improving it. Great efforts must be done to make migrants stable. When they are willing to stay in cities longer and think as a city as their home, they will be a strong driving force for the improvement of environment.
The effect of urbanization
It is an inevitable outcome that the development of industrialization has given an impetus to the development of urbanization. In order to change the situation, Guangdong Province took Dongguan as a city to construct. This is a change of mind – from economic based development to city overall development. This change focused much more on the environmental development and focused much more on the development of the living standard. It is a good opportunity for the Road City. During the last period, industrial development along the 107 State Road grew very prosperous. But at the same time, the ignorance of the urbanization put it behind industrialization.

Accessibility
PRD is the most developed economic region, which benefits from the open policy. Chinese local researchers regard PRD as a city group. Along with economic integration, more contacts have been established in the region. PRD will be one of the most successful links of industrial structure, basic facilities and transport organization within the region. The corridors along 256 State Road were in the advantageous position. They will have a brighter future when 256 state road and Shenguang Express cross the town.

The border situation to Hongkong and Macao is one main advantage of Guangzhou, Dongguan and Shenzhen. It is also the advantage of road city and its road economy. Export-oriented economy can be developed due to the good transportation condition. After handover, the interiors of China have more contacts with Hong Kong and Mainland China. Road city can utilize Hong Kong and Mainland China as two windows to import advanced technology and more effective industry.

Difficulties
From the 1980s to 1990s, many enterprises settled in PRD and that caused so-called Road City Phenomenon directly. The structure of the productions is in a mess. After the mid 1990s, the overall planning of the region began to put on the right track.

The urbanization of the PRD is different from the rural-urban transformation in Zhejiang and Jiangsu Province because of the floating population. This part of population will be transferred along with the labour-demand of the society and the economy.

First unplanned development and self-construction in the PRD caused scattered distribution of the city and an development zoo. Coordinated basic facilities were not being well equipped. Ecological environment has been destroyed seriously. The major urban tasks like the provision of municipal administration, transportation, garbage disposal, living service facilities for the residence and the struggle against pollution, haven’t been managed yet. Second, the land in the country belongs to the government. Peasants didn’t use the land according to the regulations. Third, because of the value-added land, the compensation costs for the households who relocated due to building demolition are higher and higher. The obstruction for house moving is becoming harder and harder. It is difficult to build the new residential quarters. These reasons make the city under the disorganized state of the affairs.

Some cities possess a harbor, airport, railway, highway and tunnel, all five means of transportation. To emphasize the outward transportation is the requirement of establishing effective modern cities. The transportation is the carrier of the logistic and the crowd. But what’s the misunderstanding for this kind of cities?

During the early days of the economic development, local government took the shortcut to form the corridor along the state road. Every coin has its two sides. In PRD, this format destroyed the environment hurriedly. These cities hadn’t been built according to the standard planning. These regions are so-called points of economic increasing. But actually, they are not the suitable places
for people to live. As a long-term plan, neither the highway nor the state road should cross the city.

**Problem 1**
The development is limited by the hinterland. The area of PRD itself is not big enough. The space of expansion is faced with serious obstruction. The cooperation with surrounding regions is not thorough.

**Problem 2**
Buildings and residencies are separated and fragmented by roads.

**Problem 3**
The development of the small towns is under the scattered backward management. There are a lot of disordered and unsystematic villages forming the situation of “villages in the town”. These villages are constructed by the country-oriented method. In Dongguan, some towns have the scale of medium size, but due to too much floating population, it is impossible to cope with the cumbersome management.

**Problem 4**
Road Economy is in vogue. The feature of the country construction is very crude. “City doesn’t like the city. Village doesn’t like the village.” At the same time, local history and environments are disappearing, thousands of machine-made buildings and residences can be found everywhere.

**Problem 5**
Low-grade industry development caused the difficulties of reforming. Though the industrial development in PRD has a good basis, current industry can’t keep abreast of the times. Because the new economy relies on skills and capital an upgrade of production is needed.

**Problem 6**
Possible extensive development as a consequence of much consumption of land resources limited the intensified development.

**Problem 7**
Traditional outdated modes of thoughts and the organization limited the development of the cities. The industry of Road City developed hurriedly, but the urbanization is far behind the industrialization. Census registered system brought many negative impacts. The migrants faced much pressure like employment, social insurance, education and medical problems. All these factors influenced the stability of population.

Due to the reasons of dividing a country into administrative areas, each town did things in its

![Fig. 60: the narrow corridor](image)
own way. That caused repeated construction and wastage of resources and limited the intensified development.

Planning Principles
Along side the national road 107 (changed to state road 256), the pattern of the land-use is various and the geographical forms also show their characteristics. So the definition of the research scope must be closely related with the Road, and the Road should be made the most important standard to improve the area concerned, based on the knowledge that development of the city-extension area is originated from the road.

The road network suffers continually from ambiguity. On the one hand, the presence of traffic networks and their traffic flows offers accessibility and makes a contribution to economic development. While on the other, its presence and its traffic flows cause fragmentation. The current status of the advanced road network has opened up new possibilities for many people in terms of accessibility. Still this road network and its traffic flows have also produced negative effects on local inhabitants and the surrounding flora and fauna. These impacts go much further than the physical destruction of habitat produced by road construction. Roads create barriers and additional disturbance that in turn cause fragmentation of the landscape and its population. This is currently an important issue. Once populations are separated into smaller subpopulations, the chances of extinction of these subpopulations increase. This is due to the higher susceptibility of smaller populations to ‘regular’ fluctuations. This idea is also presumed to be valid when populations, separated by roads, become subpopulations. Due to fragmentation, the edge effects also increase. Its environment, further diminishing habitat quality, will therefore affect more habitats. The survival of the population will depend on the connectivity of the landscape.

1. Strategic (the whole corridor) Planning: of particular importance is the need to recognize the changing economic patterns in the corridor.
   a) The aim of strategic policy should be to maintain diversity where it exists and to promote it where it is lacking, for example:
   - Housing expansion can be planned in relation to employment expansion within the town or built-up area; and
   - New development for housing or economic activity can be located within settlements that have a high level of diversity, or to exploit the use of existing or planned public transport services.
   b) The degree of specialization and the size of the required catchments population determine the position in the hierarchy of provision, and this in turn determines the hierarchy of centers:
   - Town or city center;
   - Suburban or district center;
   - Neighborhood center; and
   - Other local activities.
   c) This hierarchy of non-residential activities – which minimizes the need to travel – can be seen in many inherited urban structures, and is identified in many development plans.

2. Local (Township) Planning: we have to protect traditional environmental resources, and ensure good environments are not swallowed up because of poor planning.
   a) A broad structure designed to reduce the need to improve the environmental quality, at the regional or town development plan level, can easily be undermined by poor layout and design at the local level. The principles so far discussed therefore need to be applied at the local level, and related to decisions in development plans and the detailed layout of individual developments.
b) Density is an important influence on the need to travel. Both the length of car journeys and the share of journeys made by car are lower in high-density areas. Residential densities should be planned to take advantage of proximity to activities, or to good public transport linking those activities.

c) In belt-city, public facilities are small-scaled and wide-spread thus to minimize the risks of road-crossing of the people and the reliance on the traffic.

d) The public buildings which involve the use of the mass should be set up at the particular areas and at the same time being supported by the public transportation system, green-building and non-motor traffic line.

e) The benefit of mixed use will be realized only if access between activities is convenient and of high quality.

f) Site layout and design should ensure convenient and attractive access for people arriving on foot, by bicycle or by public transport. On the layout, the positioning of freight-transport and passenger-transport should be balanced, the dormitories are encouraged to build in nearby and business activities like the flats over shops should also be adopted. So walking is the priority.

3. Transport

a) In order to complement a land use policy which reduces the need to travel, three principles can be followed:

- Increase the accessibility of developments for pedestrians, cycles and public transport;
- Plan and build facilities which increase the relative attraction of environment-friendly modes of travel such as cycling and walking; and
- Restrict the development of transport facilities which have the opposite effect.

b) In all but the smallest towns, high density neighborhoods and villages, it is impossible to arrange land use so that most trips can be made on foot. Activities serving local needs should ideally be within walking distance, but for other activities serving a larger catchment area, public transport will take over.

c) Characteristic of the transport system of the corridor:

4. Environmental Planning

The environment issue is neglected in the present land regeneration mechanism. The excluding of public participation and research organization in the project development solely inoperative between government and private business can not guarantee the sustainability of the development and the solution of the social problems. To realize the benefits of environment and the landscape, a new mechanism is necessary.

According to environmental planning projects for the whole city (i.e. Leicester) an independent charity should be established to promote the corridor’s environmental status.

5. Flats over shops

a) as well as reducing the pressure for housing, the creation of flats over shops can help combat a number of problems arising from vacant space;

- the waste of resources;
- disrepair, often accelerated by lack of use and cost to remedy.

b) letting flats over shops can also improve the security of the business by the presence of a tenant above the premises deterring would-be thieves.

c) It is inappropriate to let the small-shop being reduced to the black back street, where the big factories and big enterprises occupy the façade position. Turning it around, if the small-shops are
pushed forward and lined alongside the streets, the intimidation atmosphere will be greatly enhanced and the amicable social order of close relationship between people can be established. Good neighborhood relationship can reduce the criminal acts. "Workshops behind stores", "flats over shops" can keep the region’s vitality 24 hours in a row.

6. Facilities
   a) Play areas and local parks are important local facilities which should be accessible by foot and at a distance of no more than 400 meters, equivalent to 5 minute walk. Quality is crucial, if the facilities are inadequate, users will tend to go to another park, which increases the traffic pressure.

   b) Providing a variety of public facilities in a central location, which is accessible by public transport and pedestrians. It has been suggested that libraries and theatres can be seen as town center anchors.

Case Study - Humen Segment
Geographic location
Humen town is located at the mouth of the Pearl River and at the crossing point of the economic corridor of Guangdong, Hong Kong and Macao. Humen town, situated on the southwest of Dongguan, is also a beautiful natural harbor, where the Pearl River’s main sailing line to the sea passes. The town enjoys the excellence of land and water traffic and possesses 26 km of sea line. At present there are four ports for passengers and goods in the region, of which the annual operating capacity of goods-port of Hongye has reached 1.2 million tons. A vertical traffic web derived from passenger-goods-port, Guangzhou-Shenzhen-Zhuhai- Express way and 107 state road also has been established.

Outward economy
Being the first in the nation in year 1978 introducing the company of “san lai yi bu”, Humen, at of the end of 1997, became home of more than 1400 joint-ventures, bringing with it the investment of about 750 million us dollars. Garment industry is the head industry in Humen. There are more than 600 garment companied in the town and the yearly turnover exceeds 7 billion RMB. In recent years, Humen has been concentrating on the development of IT industry. In 2000, the industry output value reached 3.3 billion RMB, 45% of the gross industry value of the town.

Beginning from the 1990s, Humen took the IT industry as the new economic growing-point. To date, there are more than 110 IT joint ventures doing business in the town, with the annual production value of 1.62 billion RMB, 30% of the gross value of the whole town. Out of the 32 towns and 14 hundred IT companies, Humen has a 10%-plus share. IT industry has become the shining point in the economy of Humen. Thus, the town pays more attention to its further and wider development in the coming years.

Agriculture development
Humen town develops the agriculture in the mould of industrialization, hence the materialization of the specialized production of five sub-industries of fruit, high-productivity rice, sea-food, vegetable, breeding and manufacturing along the road. The agriculture, forest, livestock farming and fishing industries are managed in the ways of zoned operation and unified administration.

Government development objective
To further develop the port Humen and take the port as the vanguard, the town will be built as a highly advanced modern coastal city. In content, it is an international manufacture base, a famous business place. In space, it is a modern seaside city. Thanks to the state council’s official ratification of port Humen as a first-class port in June 1997, it can conduct direct passenger and goods traffic with foreign ports.

Detailed Introduction
The research area is concerned on the northwest side of the exit of Taipin in Guangzhou-Shenzhen express. The construction sites are basically ex-
Fig. 61: the Human Segment - present situation
tended along the state road. Due to the limitation of hills on both sides, its depth is less than 80 metres. On the east side of the area is the five-forked road exit, which connects expressways, Shenzhen and the Humen bridge. The north side of the state road is mainly the workshops in the form of flat-over-shop, store-in-front-of-factory. Few factories scattered near both sides of the state road. The masters of the workshops usually live with their families. Most of the workers of the factories and the apprentices of the shops are single young men. They mainly live in the dormitories offered by the workplaces and some of them live in the shared accommodations which in most cases do not contain own toilets and kitchens.

Except from a few hardware workshops, the so-called store-in-front-of-factory does not have an independent working capacity. Its backward factory is to most extent warehouse to store the products from other business partners. In another word, they are actually the diversified sale units, not the manufacturers.

On the south side of the state road are mainly factories and office buildings. The east tip of the south side is the relatively busy business block. Being different from the land pattern of the north side, here the masses of the buildings are big. So the redline setback is bigger accordingly. The leisure places therefore are capable of being created.

In the questionnaire surveys conducted to the local residents and the flowing population, we found that people are somewhat satisfied with the conditions of the outward-traffic and social order. But not so with the environment and the leisure facilities. The typical reflections are that noise pollution is severe, no entertainment on holidays is offered and that the children’ schooling is difficult. At the same time exist the dangers caused by the traffic. One person complained that the nature communication between the two sides of the road was totally blocked by the endless vehicle-flow. The most serious problem is that the local population does not embrace a feeling of assimilation. Most of them said that they do not have a long run residing plan.

Planning Conception

1) Originated from the above analysis to the general situation of the area in question, the general planning objectives are

- The emphasis of the planning design should be put on the improvement of the environment and the ensuing public facilities.
- The establishment of the convenient liaison between the two roadsides.
- The construction of the palatable neighbor atmosphere to strengthen the relationship between the local residents and eventually to form a new and solid social connection.

2) Planning undertaking

- To separate in parallel the lands of the two sides into different zone to reduce the bilateral interference.
- To make full use of the hill to melt the residing into the green environment
- To adopt the disposition of courtyard style to strengthen inner-accumulation of the people
- To build the air-corridor to improve the communication of the two road sides
- To separate the passenger and goods traffic lines from that of the border passing.
The rapid economic growth in the Pearl River Delta created one of the most spirited marketplaces in the world and lifted individual incomes leaving behind a patchwork of post-modern spaces and landscapes. In this chapter I am going to outline the character of these unique landscape patterns and will make some proposals how they can be used as source for new Landscape Modules in a greater system of networked green spaces.

In the last twenty years, the People’s Republic of China was under a socioeconomic transformation to complete the revolution led by Mao Zedong half a century ago. Since the „Open Door“ reforms of the early 1980s, the Chinese economy has grown faster than ever in history. More than 50 golf courses have been built in Guangdong province alone in this time, and scores of theme parks vie for the booming domestic tourism trade. In Beijing, whole districts of ancient courtyard housing have been bulldozed for megamalls and office towers, while just north of the city a park named „Old Beijing Mini Landscape“ promises to return visitors the „long lost dreams“ of their past. Within its gates the entire historic center of the capital has been lovingly recreated, even as the real thing is razed.

On the outskirts of nearly every major city, sprawling gated communities have been built, complete with splitlevel single-family homes, lawns, and twinbay garages. The private automobile has become one of the definitive status symbols of the New China, and the manifold environments associated with the motoring life have made a strong appearance.

Highway construction has become something of a national pastime, and even sections of the Great Wall have fallen to make way for new roads. A six-lane „super expressway“ now stretches the length of the Pearl River Delta. Massive regional shopping malls are planned for its interchanges.

Combined with the wholesale demolition and redevelopment of older cities, these new spaces and landscapes constitute the most visible legacy of China’s „second revolution.“ They are also among the least understood aspects of contemporary Chinese culture, particularly in the West. In the past years there have been a numerous count of books and research papers about the urbanization, housing, infrastructural, transport or ecology issues.

The fast and seemingly uncontrollable growing of landscape and urbanized areas in the Pearl River Delta demands for new visions and planning instruments. It’s getting more and more impossible to structure this area with only urban planning instruments.

Landscape should be seen as a new method of town arrangement, as well as a chance for its transformation. The open and built up structures within are more and more merging into one another. The form of the modern town is changing into an undirected labyrinth with constantly changings.

The borders between the urban and open space merges and overlaps. The town enters the landscape and vice versa. Town and Landscape therefore can be defined as inseparable entities connected in a new coexistence, for which new terms were recent invented like landscape urbanism.

It is the question of the coming future to set up new modules for this urban landscape, to search for new identities within old structures, for lost pictures and new concepts in this emerging situation. By dissecting the landscape elements into concepts I will try to set up new identities, new possibilities and new modules for this hybrid landscape of old and new landscape patterns.

Gunter Wehmeyer

**Design of New Modules in the Urban Landscape**
Landuse Change and Rapid Growth

Rapid rates of economic development have had lots of impacts on the residents and the landscape. In China, as in most developing countries, a rise in income leads to an increase in the consumption of luxury goods such as meat products. This increased demand for meat often accompanies an increase in basic dietary standards, raising the demand for grain production both for direct consumption and for livestock feed.

The rise in grain demand can be met by expanding or intensifying production. The possibility of expanding production is constrained in the PRD by the increasing demand for space by a burgeoning transportation network and residential, industrial and commercial construction. The net effect is a reduction in the amount of land available for agricultural production.

Between 1979–81 and 1989–91, approximately 4% of total cropland and 6.5% of total forest cover in China were converted for other uses. The Chinese Academy of Sciences estimates that 333 000 ha of farmland are converted to industrial, commercial and residential uses each year. Others estimate that economic activity in the 1990s will result in the conversion of 3 to 6 million ha of agricultural land into urban areas. A recent study indicates that development has spurred accelerated land conversion in one county of the Guangdong Province. However, reliable area estimates of landuse change for a large part of the Delta are not available and the driving forces behind the land-use conversions are not well understood. Official statistics on cultivated land and land-use are probably biased due to tendencies to overestimate production and underestimate the amount of cultivated land.

A number of change detection techniques have been developed over the last 20 years. They include image differencing, image regression, image ratioing, vegetation index differencing, principal component analysis, change vector analysis, postclassification subtraction and vegetation index differencing.

Historically, the Pearl River Delta has been a region of relatively little land conversion and population growth. Land-use patterns and agricultural practices in much of the Delta have remained constant for hundreds of years. In the last two decades the rate of urbanization and land conversion from rural to urban land has been unprecedented. Given the economic growth that has directly improved the living standards of most citizens in the Delta, urbanization rates of more than 300% between 1988 and 1996 are not unexpected, but still impressive.

However, since most of the conversion of land is from agriculture, rapid urban development has potentially serious implications for a number of issues, including regional food supply and biogeochemistry.

Urban Villages

Despite situating in the city proper, the “urban villages” keep many characteristics of their rural origin. These characteristics mainly fall into three categories.

The first difference can be seen in land use system. According to law, all the land in cities is owned by the state, while those in rural areas are collectively owned. During the process of urbanization, the state may take over the use of farmland, but it cannot take over the land on which farmers built their houses to live in. As a result, despite that the “rural villages” are now located in cities, the land for residence is still collectively owned.

The second discrepancy is in the system of social management. According to law, neighborhood committees are the grassroots government of the urban communities, and government supports their budget. But in rural areas, the villagers’ committee, a self-government organization, is the managing body. Management of the villagers’ committees is financially supported by villagers themselves.
The third discrepancy can be seen in the household registration system, which is related to the land-use system and social management system. It is a common sense that the old household registration system is a stumbling block hindering the process of urbanization and that farmers’ change of profession can be realized by the change of their household registration from rural areas to cities. However, what is interesting is that even though “villagers” in the “urban villages” have already acquired urban household registration ever since their farmland were taken over, they remain the status as “villagers.” For them, the status of “villager” is far more important than an urban household registration, since the status of “villager” enables them to be shareholders of the immense collective economy based on villages, which separates them in term of economic power from ordinary city dwellers and the immigrant workers who rent house to live in the “urban villages.”

That may be the reason why these former farmers now prefer being “villagers” instead of being urban citizens. Actually, a balanced price based on market exists in the income rate of urban land.

Sometimes, the phenomenon of the income rate decreasing or house rent disappearing may be seen because of government’s mandatory factor. But this can be compensated in other forms or indicated as the government’s cost. Given the situation that land price is soaring and eight-story building is the highest building according to government regulation, “villagers,” in order to seek maximum income from the land they own, try to take the best use of the village’s space. That could be the reason why the “urban villages” have become architectural crowded-built buildings. Previously, the collective income of the “urban villages” came from some collective-run mills, stills, paper-making factories, brickyards, tea-making workshops, stone manufacturing factories and garment-making factories.

But the situation has been changing in recent years as a result of the rise of price in labor force and land use and the decline of the labor-intensive industries in cities. Nowadays, major income of an “urban village” comes from the collective-owned real estate. The managing body of the collective economy is the “economic association,” under which are several “economic unions” with their independent accounting units. A village’s social and economic life is usually supported by a special network based on family or blood relations. Though located in cities, the “urban villages” are no exception.

Efforts were made in the past long period by political and social reformers to break the old social network in villages, replacing it with modern administration and management. Though living in the city proper and leading a modern life, the “villagers” maintain a social network based on family and blood relations. Therefore, the “urban villages” or “village communities” are completely different from the neighborhood communities and unit-based communities in cities.

**Wanggang Village**

Wanggang Village in the south of Guangzhou City is an example of the those urban villages. The village consists out of a rectangular grid of houses (around 60 to 80 sqm) in the back, the forefront is covered by several shops, small factories, services and restaurants. If you step from the main street (Lu) into the housing grid by leaving the wider Lu, you enter the narrow and small streets inside (Xiang).

No aesthetic and harmonious factors were considered in the architectural design. The houses were built one by one by individual household. Between the buildings, some seven stories and some eight stories, are lanes 1.5 to 2 meters wide. The upper section of the buildings above their third fl oor stretch out from both sides of the lane to nearly join each other. Therefore, the
lanes are nearly covered and the buildings almost join each other in the upper parts.

Although the living conditions and environment is low, there are still businesses in the villages. Flanking the narrow and dark lanes are shops and grocery stores standing closely side by side.

Behind the housing grid lies the farmland as a separator between the villages.

This open space can be a chance to function for several systems to formulate new landscape units within the "old" farming use.

This search for new Landscapes and Landscape Units provokes also the development of new design tools, a landscape that is created by active use and active communications. In my drafts I try to start a sequence coming down from the superstructural landscape within the Pearl River Delta over Bracketlike connections between built areas, Transitions and Borders to the yet still typical form of urban villages. Those could be one example to design new landscape modules in a greater system of networked green spaces.

The starter points will be the surrounding farm area around the urban village, what I call the “Outline”.

The “Outline” of the grown landscape will be the interface to the grown builted grid of urban villages. This is were lines of movement are running between new and old places, between housing and open space, between networked urban green spaces, between voids and holes. The Outline should even more grow to become a border between the urban villages, cultivating the farmland as some leftover sort of cultural landscape.

My concepts envisages that the Outline is upkept and the difference not blurred, I think this difference is the true potential for this landscape and also the economic and sustainable development for this area.

The Outline should be strengthened as a circulation open network space, linked to the existing green space areas and to the growing green spaces within the Urban Village itself.

This space pattern, created by extensive farming, will be continued with a new open space quality for the inhabitants of the urban village.

Along the Outline I identify so called „starting points“ of further urban green structures. Those may be complementing corridor structures, also accesses to new open spaces.

Such developments will contribute to a consolidation of Structures.
At the same time, the second use of the Outline will be the “Face”.

The Face will be used as new places for urban gatherings, recreation places, sports areas, children playgrounds.

It will become its very own special uniqueness. The Face will attract people from the “inside” to the “outside” and the other way round. Energy will flow from the Face to the inner part of the urban village, the “Inclusion”.

The Inclusion will be the place for new sustainable used small green spaces. The missing sewage structures and huge environmental problems in mind, here I see the chances for small interventions combining both:

The luxury of “interior” green spaces with new sustainable possibilities. This could be sewage treatment plants on one open left piece within the housing grid.

Those systems can be used up to a maximum of 50 people. It could be just small areas of green grass fields. It could be an amplification for a better climatic environment within the urban village. It could be playgrounds for kids, Tai Chi training places for older people, small planting areas for flowers, places for the barbecue on weekends....

Fig. 63: “Outline”
Fig. 64: “Face”

Fig. 65: “Inclusion”
Urban Landscape Pearl River Delta: Looking for Identities

Preliminary Remarks

As western planners and architects we are used to considering town planning and architecture only when we try to understand the characteristics and identities of new areas. We study the peculiarities of the area and the buildings, which give us an insight into current problems and possibilities and point to new tasks for planning and design intervention in the area to be developed. Knowledge of local, urban and region building culture is the basis of integrated and sustainable planning.

Structural change, suburbanization and shrinking European cities and regions have helped us to seek new images other than those of the compact city within development areas and those of open countryside outside. We are learning to see spatial configuration as a whole. The development and landscape areas are read as urban landscapes. We start with the spatial breaks and transitions of these landscapes, with the undefined of spatial development, with the emptiness, with the simultaneity of motionlessness and movement and with the contradictory unity of landscape area and urban area. We are becoming more daring, are discussing the qualities of interim cities and are embracing more radical concepts and unusual working methods. We are eliminating the conceptual division between planning and design, between building competence and technology. And we are attempting to harmonize, in various projects, social-spatial quality, ecological intelligence, innovative technology and design standards.

The Pearl River Delta - Urbanization without Design?

At the start of our excursion into the Delta, however, we were dramatically confronted by the limitations of our traditional western planner’s view. Not only did we find that the depressing three-dimensional reality consisted of well-known horror pictures of uncontrolled building growth, for which we were to some extent prepared: tower blocks crammed together, vertically dense living quarters, landscapes and urban quarters cut by streets full of emission gases, uncontrolled industrial areas destroying the environment. Even more depressing in the Pearl River Delta is the lack of distinguishable urban characteristics, identifiable spatial structures and places to put sustainable planning and design. The first impressions of High Speed Urbanism are too powerful to see details by which we can orient ourselves. At the beginning of our study project I suggested that there are no spaces lacking identity and that we would find them in the concentration areas. But how do discover them the spatial characteristics that can be further developed as “urban landscape”.

Featureless Town Planning?

Despite all “bigness” the design of individual urban quarters and architecture lacks the strength and individual expression necessary to form distinct areas. Constructionally they can hardly be distinguished from each other. There are only a few special architectonic indications at the most important places which seem to do their job, such as urban cultural buildings (e.g. the concert hall, Guangdong) or particular tower blocks (e.g. in the new business centre of Guangzhou or current projects of the planning for the Olympic Games and the centre development in Beijing. They are giving rise, also in co-operation between Western and Chinese architects, to new vigorous architectonic forms of language which are able to create new areas in an urban context (e.g. the Chinese TV building of Rem Kohlhaas planned by the government). But in the cities of the Pearl River Delta there is architectural and town planning uniformity, and the few historical traces still remaining in older cities, such as Guangzhou and Zhongshan, are too sporadic and inbuilt, de-
spite attempts at conservation. The postmodern blends of new urban architecture in the centres, the uniform residential areas of the developers and the faceless shells of commercial buildings, which are being endlessly multiplied, continue to be utterly exchangeable.

To get to images, a mental map of the character of the Delta as living space, as planning space and design space there have to be clearly different approaches from those of mere architecture and housing areas.

**Spatial Structures and Planning Models of Growth - Chaos and Rationality**

The current shape of the housing structure in the Pearl River Delta shows at first sight, in terms of geometry and planning, growth in circles and lines, the former around highly concentrated centres and the latter as belts along traffic infrastructure facilities. So far spatial planning motifs to deal with new housing areas in the region have reacted to these growth patterns with the classic and abstract model of axes and centres. Thus, in previous years the originally very hierarchical centre concept between the three most important agglomeration centres of Hongkong, Shenzen and Guangzhou was already modified and adapted to the real development with decentralized concentration areas, such as in Dongguan, Foshan, Zhongsan and Zhuhai. The housing structures and infrastructure facilities of the last 15 years now form an ellipse-shaped framework along the hills around the Delta plains. The spatial texture seems chaotic, because it has emerged and has not been planned. At the same time it is the expression of the rationality of the growth of an exploding capitalist production system. The significant factors for the large-area morphology are landscape structures, e.g. the rivers, topography, the coast. Landscape planning as integral component of a sustainable regional and urban development is, however, as rare as creative attempts to deal with the multilayered spatial structures of the Delta as urban landscape. Also in individual areas the Delta is principally characterized by the features and formations of the existing cultivated landscape and only marginally, mostly as a result of extended infrastructure, by a controlled housing development in centres and axes. Network housing formations as „grown“ structures have emerged, a patchwork of special places and random urban shapes, modular, leftover open space elements and newly built artificial landscapes. The concept of sustainability in the context of official spatial planning is limited to the individual demarcation of protected areas („ecologically sensitive areas“) or the programmatic requirement of envi-

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Fig. 66: housing axis, industrial corridor Shenzen-Guangzhou

Fig. 67: quarries, building materials, landscape elements
ronmentally appropriate urban technology, in the Delta especially relating to water management concerns. It is indisputable that the growth dynamic of the past ten years will not continue at the same rate and that the tasks and understanding of planning have to change if the Delta is to develop in future as viable economic and living space.

**Changing Understanding of Planning: More Robust Framework for Unspecified Developments**

In view of the current environmentally destructive consequences of urbanization and motorization, three pragmatic bases for a future viable spatial development can be named. They will be found to recur in all planners' concepts in various ways.

1) Extension and rebuilding of sustainable landscape and urban technological systems as an integral component of urban and regional development;
2) Priority extension of public and track-based mobility and transport systems;
3) Fewer concentrations and rebuilding of housing areas as equally valuable strategies in addition to centres development and growth.

In general terms, it is the aim of sustainable spatial development to create a balance between the requirements of economic growth, consumption of resources and the social and aesthetic of living spaces. The future development dynamics in the Pearl River Delta and their spatial requirements in principle cannot be forecasted. They are unspecified. It is thus the job of planners to design spatial structures which are able to create a robust framework for very different scenarios and spatial changes of urban landscapes. In terms of concrete places, times and programmes interdisciplinary models should be formulated and designs worked out. In view of the ceaseless urbanization currently occupying space in the Pearl River Delta, albeit with partially reduced concentrations, it is important at the present moment to ensure that there are cultivated landscapes, open and public spaces and to develop them further - as a precondition for an evenly-balanced holistic cultivation housing and landscape. The spatial shape for this is provided by the Delta itself, which can be characterized as threefold overlaying of

- the geomorphological structure of the Delta (rivers, coastal hills, plains, water, soil ...)
- the pre-industrial housing and landscape structure of the agrarian cultivated and river landscape and the sites of historical cities and villages
- the spatial patterns of housing agglomerations, infrastructure facilities and landscape rebuilding of the industrial boom of the past 15 years, as sketched out above.

It is the job of planners to learn how to interpret these specific structures with their various layers and hiatuses, to formulate them programmatical-ly as holistic urban landscapes in various scenarios and to design images and ultimately feasible plans on various scales. This means a different understanding of planning in several respects:

- The starting position is no longer one of linear economic and housing growth that can be controlled in its basic aspects, but rather one of undetermined, discontinuous development processes that contain possibilities of re-urbanization. The larger the housing area, the fewer the practical possibilities of a comprehensive planning. For planning this means that the smaller the scale, the greater the planning possibility.
- Projects and planning will be promoted simultaneously on various levels.
- Housing development is considered and interpreted, independently of scale, simultaneously as „from within“, building and utility
structure, and „from outside“, landscape and open space structure. Housing and landscape are understood, on a large and small scale, as equal value elements of a spatial structure called „urban landscapes“. Thus, landscape and open space form the continuous structures that create a framework, while housing and infrastructure represent the rather short-term elements.

- Motifs are developed for which are there no models. In addition to taking over the European/American planning repertoire, other urban and landscape architectonic configurations and projects emerge and are designed.

- Finally, the principle of sustainability is to work out future plans and designs for urban landscapes and, in an interdisciplinary way and in dialogue with actors and citizens, to carry out projects as a process. For such a comprehensive approach of spatial planning and its implementation the concept „planning culture“ has been developed in Germany and the rest of Europe.

The following indicators of new plans and spatial images for the Pearl River Delta are examples to be discussed further.

**Regional Scale - Examples of New Spatial Types**

Spatial structures, networks and places that characterize the Delta are worked out as a first analytical working base in layers. Important elements include:

- the hillsides, the river courses, the fertile plains, the coastal zones, the urbanized areas, the bands of infrastructure, the centres and the historical remains of earlier cities. With their multifarious spatial qualities they constitute the pattern and identifiable basic shape of the Delta as a whole and those of the regional divisions. New spatial categories can be interpreted and
developed from them, such as water areas, border areas, transition areas, flow areas, growth areas, protection areas and can extend the planning repertoire.

Traditional planning on a regional scale distinguishes first and foremost two categories of spatial types: built-up and unbuilt-up, in other words, housing and cultivated/nature land. As a first pragmatic planning step for a different repertoire for the Delta a new third category is conceivable: "urbanized landscape areas, in which housing and open space, of whatever sort, so to speak preserve the balance. Very simply, instead of two mutually exclusive alternatives there would be three regional planning zones:

Zone A: predominantly built-up areas

Zone B: predominantly unbuilt-up areas

Zone C: built-up and unbuilt-up areas in equal measure

If zone C has been so far understood as an interim stage, as the pre-stage of housing, or is an urban misconception such as sporadically developed periphery, its own space quality as a border and transition area will become an object for planning. Its spatial characteristics are to be identified and cultivated with innovative planning skill. As typical growth structure in extremely varied ways, e.g. synthesis of town and village, it most strongly characterizes the shape of the Delta. Other similarities to new types of use can also be detected. Here the principle of the small grain mixture, especially of living and working, including industrial production and agriculture, has established itself as a structure-forming principle. The built-up areas of the "shoe-city" of Guandong, for example, can be characterized in German planning terms as 100% mixed.
Fig. 72: fertile lowland and concentration areas

Fig. 73: structure of border areas

Fig. 74: three regional zones
Urban Scale - Examples for New Urban Identities

Historical centres that provide an identity in the cities are almost entirely lacking (except for Guangzhou, Macao and Foshan). „Floating people“ (migrant production workers) and „floating administrators (constantly changing administration and political staff) make urban identity on an everyday basis in the consciousness of the population difficult. Hitherto, the aims of urban planning have been principally economic improvement: extending technical infrastructure to guarantee industrial estates (streets, harbours and airports), new construction of commercial centres and increasingly also building of representative cultural institutions. An additional planning task was to ensure housing supply with extreme building concentrations, corresponding to the growing need. In planning consciousness the concentration space „city“ is centre-fixated. Recently, there has been an extension of public spaces with urban and leisure parks, and there are housing areas on the edge of the city with modest concentrations and more ambitious planning - preferably for the more affluent members of the middle to upper income groups. Nevertheless, distinguishable identities can be read from the urban districts only with some difficulty. Two new planning tasks for the development of spatial identity on the urban level could be sketched out as examples:

1. The design of identifiable urban districts, areas with an identity of their own that might be future residential areas, arranged around existing places with social meaning, e.g.
   - factories as the centre of new working quarters
   - village centres interwoven with the growing cities
   - markets and supply streets of the old residential quarters in the cities

2. The cultivation of „modular housing circle“ around and between the urban centres (Zone C), as extension of the scattered suburban structure in a quality urban landscape on an urban scale. Here the system of public spaces is to be mainly cultivated. One of the most interesting site planning questions will probably be what sort of open space typologies other than the classic European parks and squares there are. In Southern Chinese cities large-scale leisure parks, roads with shaded alleys and building-related residential areas seem to offer a lot more social space qualities than green spaces and urban-residential areas in Western town planning.

3. The networking of discrete areas via spatially conceivable public spaces, whether characteristic road systems, landscape elements or streams and rivers.
Fig. 75: isolated concept of a newly planned residential district south of Guangzhou. Everyday developer planning.

Fig. 76: transformation as networked system of districts. Gang Li, Diploma thesis, University of Kassel 2004.

Fig. 77: transformation as networked system of districts. Gang Li, Diploma thesis, University of Kassel 2004.
Local Scale - Examples of New Places

Planning and projects become manifest in actual places. Forms of building design and open spaces emerge, which are cultivated as a new design repertoire. For example, from the orthogonal grid plan of „urban villages“ as extended villages of the building collective a housing type of its own, found only in China, can emerge, which is interwoven in modular fashion with the fields of intensive agriculture round about. This is a small-scale, locally feasible, unmistakeable building block of the urban landscape. It reflects history and the present and thus creates spatial identity.

Another example would be the extension to or rebuilding of factory plants with appropriate and quality housing. The proximity of housing to the workplace as large-scale spatial quality of a sustainable residential area is further developed here as a guiding principle - assuming a residentially compatible production. In this way suitable housing and living spaces could be created in close proximity to the workplace and supply establishments, as spatial prerequisite to make the „floating people“ sedentary as new city dwellers.

Planning and Designing in Dialogue - Master Plans as Process

At on-site landscape conferences and design workshops it was possible to work out sustainable future images and planning strategies for the Pearl River Delta, creatively and based on planning knowledge. The following working principles apply:

- Working out and comparing various concepts to choose one for further development and implementation
- Concrete projects that will be realized
- Planning and design targets are on different scales - regional, urban and local, and mediation between them is necessary

Experts involved work basically in interdisciplinary groups, in which politicians and administrators participate

There is a complementary dialogue in public fora with citizens, investors and interested members of the public.

Through a continuous process a variety of thematic and spatial master plans will emerge for the Delta, and this variety can supplement, fulfill, modify or alter formal planning.
Fig. 80: workers’ dormitory of a tannery in Guangzhou - current situation. Yun Duan, student’s project work, University of Kassel 2004.

Fig. 81: design for a tannery’s dormitory. Rebuilding of a dormitory and new building for accommodation. Yun Duan, student’s project work, University of Kassel 2004.

Fig. 82: design of a new workers’ dormitory. Yun Duan, student’s project work, University of Kassel 2004.
Themes and Model Projects to cultivate Spatial Identities - Examples

The following multifarious tasks, spaces to be shaped and design themes for the development of the Pearl River Delta as urban landscape that could be the subject conferences and workshops can be mentioned here:

Water and housing growth
Designs to harmonize housing development and sustainable water management

Residential quarter for floating people
Model project on housing development for the staff of a factory
Industrial harbour and river landscape
Designs for transition area: integration of sites for harbours and heavy industry into the river landscape in the southern estuary of the Pearl River in Guangzhou

Dongguan - model town of an urban landscape
Networking of open space islands, urban quarters with different identity

Fish breeding and leisure parks
Business and leisure spaces as equal value elements of the urban landscape

Industrial harbour and river landscape
Designs for transition area: integration of sites for harbours and heavy industry into the river landscape in the southern estuary of the Pearl River in Guangzhou
The corridor - landscape superimposition on the industrial belt between Shenzhen and Dongguan
Landscape bridges link the mountains with the sea and articulate the corridor

Mobility, transport and building of cities
Transport system as integral component of the shape of housing and landscape

East - West Peace Park
Sketches for border area: large-scale nature park in still sparsely populated area in the border territory of Shenzhen and the New Territories of Hong Kong
„Rivers and mountains let me find peace”
Regional plans for an urban landscape: modular elements and network systems
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