

Sino-French Seminar of Meeting the New Challenges of Territorial and City Planning

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Introduction Both China and France have a long history of urban and rural planning and governance, and lately the topics, such as urban and rural living quality, natural resources management, and natural and cultural heritage, have become the focuses of public policy that emphasizes improving people's living conditions and promoting regional harmonious development. Moreover, the above topics have been regarded as the most important points in the bilateral cooperation agreements between China and France concerning sustainable urban development. On Oct. 13, 2019, the Sino-French Seminar on "Meeting the New Challenges of Territorial and City Planning" was jointly held by the Department of Urban Planning, School of Architecture, Tsinghua University and the Cultural and Educational Cooperation Section, French Embassy – French Cultural Center in Beijing at the School of Architecture, Tsinghua University. About 20 experts from the political, academic, and professional fields of urban planning in China and France were invited to carry out discussion on four primary themes, which are "New Urban Planning Strategy," "New Territorial and City Planning Policy," "New Exploration in Urban Planning," and "New Talents Cultivation Pattern." As a medium support to the seminar, we collected some of the speeches and share them with readers in this issue.

Session One: New Urban Planning Strategy

Evolution and Transformation of Beijing City Master Plan



Shi Weiliang
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1. Introduction

Located in the north of the North China Plain, Beijing has a history of 3,000 years and has been the capital for 800 years: capital of the Western Zhou Dynasty and the early Yan State from the 11th century BC to 711 BC; Ji (Beijing) of Yan State in the Spring and Autumn Period from 770 BC to 476 BC; "Nanjing (Southern Capital)" of the Liao Dynasty since 938 AD; Zhongdu of the Jin Empire since 1151; capital of the Yuan Dynasty since 1272; capital of the Ming Dynasty since 1406; capital of the Qing Dynasty since 1644; capital of the Republic of China since 1911; and capital of the People's Republic of China (P. R. China) since 1949. Among them, the city of Beijing in Yuan, Ming, and Qing dynasties is amongst the most significant and outstanding representative of the Chinese capital typology. The old city of Beijing is also the core protection area of Beijing historic and cultural city.

The old city of Beijing is home to many cultural heritage sites, including three World Cultural Heritage sites: the Forbidden City, the Temple of Heaven, and part of the Grand Canal. In addition, there are 321 third-level cultural relics protection units and 360 registered cultural relics; 34 announced outstanding modern buildings and 658 listed

protection sites; 1,892 historic buildings on the candidate list, 10 industrial heritage sites on the candidate list; 33 historic and cultural blocks, of which three are Chinese state-level historic and cultural blocks; 10 historical river-lake systems; 6,159 ancient trees; and 332 intangible cultural heritage items. In general, the protection area in the old city accounts for about 40% of the entire area.

With the rapid urban development after the founding of the P. R. China in 1949, Beijing was home to 21.5 million resident population, with a GDP of 3,031.998 billion yuan and a construction land area of 3,574 km² by the end of 2018.

2. Evolution of Beijing city master plans

At the beginning of the P. R. China, Beijing saw the development of surrounding suburbs centered on the old city, forming a spatial structure of "decentralized clusters" and adopted the overall idea of "controlling the center and developing the periphery," which is followed till now and developed from the city proper to the municipal administrative area, then to the region. In the 1950s, following the plan of the Soviet Union's capital Moscow, Beijing formed a circular and radial layout with the old city as its center and functional zones in peripheral areas. Since then, urban fringe clusters have been developed on the periphery of the central city. In the 1990s, a "satellite city development" strategy was put forward, building satellite cities outside the central city. The 2004 version of the Beijing city master plan proposes a "new town development" strategy – creating new towns with more complex functions and a larger population based on the satellite city, promoting a "two-axis, two-belt, and multi-center" spatial structure. In 2017, the new version of the city master plan adjusted the planning

structure to have "one core, one central city, one sub-center, two-axis, multi-point, and one eco-zone."

In the recent decade (2004–2016), Beijing saw rapid urban expansion centering on the old city, with an average annual increase of over 20 km² in terms of urban-rural construction land and 570,000 in terms of resident population.

Along with rapid urban development, Beijing is also facing severe challenges and caught "big city diseases" including uncontrollable urban sprawl, traffic congestion, air pollution, skyscraping housing price, and jobs-housing imbalance. In 2014, President Xi Jinping proposed that Beijing must transform to cope with these "diseases," which were exactly what the new version of the city master plan should face and solve.

3. Transformation of new Beijing city master plan

3.1 Adjusting spatial structure and enhancing regional coordination

In order to implement the strategic development goals of the city and orderly reorganize urban functions, the new version of the Beijing city master plan proposes an urban spatial structure of "one core, one central city, one sub-center, two-axis, multi-point, and one eco-zone." Specifically, "one core" refers to the core area of the city, mainly consisting of the old city; "one central city" refers to the six central districts of Beijing; "one sub-center" refers to the newly-planned city sub-center in Tongzhou; "multi-point" refers to new towns in the plain area; and "one eco-zone" refers to the ecological conservation zone in the mountainous area, which is a green barrier for the entire city. At the regional level, the sub-center will provide new space for the urban functional needs of the citizens, and the Xiongan New Area will meet the spatial demands of the central government, forming a regional spatial pattern of "one core, two wings." The plan for the sub-center is characterized by the combination of water and city, blue net and green space, cultural heritage and modern life, to make it play a leading role in creating high-quality urban space. The sub-center will put emphasize on the development of administrative offices, business services, and cultural tourism.

3.2 Drawing bottom line and expanding green spaces

The Beijing city master plan proposes to further strengthen bottom line constraints and expand urban green spaces. Different from the previous mode of urban expansion, urban development now needs to draw bottom lines, especially the limiting standards to protect its ecological area and green space. Therefore, the plan delineates eco-

protection boundaries, urban growth boundaries, and restricted construction areas within the city. By 2035, the eco-protection area will account for 75% of the total land area.

At the same time, a city-level green system of "three rings, five rivers, and nine corridors" will be constructed. Specifically, "three rings" refer to the rings of urban parks, country parks, and forest & wetland parks in and around Beijing. Nine wedge-shaped green corridors connect the green space inside and outside Beijing, to improve ventilation and biodiversity. The city's forest coverage rate is expected to increase from 41.6% in 2015 to 45% in 2035.

3.3 Ceasing big city diseases in line with people-centered principle

To ease traffic congestion, priority will be given to public transport, rail transit construction, and building a pedestrian- and cycling-friendly city. The mileage of rail transit will increase from around 631 km to 1,000 km in 2020, and 2,500 km in 2035. The proportion of bicycle trips is expected to be no less than 12.6% in 2035.

Moreover, Beijing will further increase residential land and housing supply, increase the proportion of affordable housing, and protect the rights of tenancy. In the next five years, 1.5 million sets of housing will be supplied, of which 30% will be rental housing.

In terms of air quality, Beijing has stepped up its efforts to prevent and control air pollution since 2014 and achieved a remarkable improvement. The average annual PM2.5 level has dropped from 86 in 2014 to 42 in 2019.

In order to further improve the city's public services, the plan proposes to build a 15-min neighborhood service circle, namely, to ensure access to medical care, nursing, welfare, education, sports, and other activities within 15 minutes' walk from home.

3.4 Improving delicacy management and urban design

The master plan further strengthens urban design, including building an urban landscape-viewing system for appreciating the city, urban landscape, and historic sites. Urban regeneration is also enhanced. For example, the urban renewal project of Beijing Shougang Group's old factory area aims to build a cultural park, renovating industrial facilities that were originally separated from the city into new urban landmarks and urban space that can be accessed by the public. To further improve urban public space, the charm and vitality of the city will be enhanced through projects such as site utilization, water system restoration, and renovation of laneways and old communities.

Besides, it encourages to promote pedestrian-friendly streets and to make urban design guidelines for street renewal. This requires us to follow a design concept that gives priority to walking and cycling. In terms of collaborative planning and management, it encourages the participation of various groups, to realize co-governance by calling for duty planners and community planners participating in community building, and attracting more social forces by promoting activities. ■

City Region Challenges



Eric Huybrechts
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The large metropolitan area is becoming the dominant pattern of human settlements. Large city regions are the nodes of the global economy. They concentrate the headquarters of global firms, stock exchange markets, highest educated people, main industries, largest communication infrastructures. They are the main consumer and job markets and the place for innovation. Global metropolises are leading the economic world.

1. New challenges of the metropolises

The metropolitan expansion due to population growth and economic change spans the municipal delineations and links between urban and rural areas. The way they expand changes the analytic categories: the urban and rural dichotomy doesn't work when regular seasonal population flows from rural to urban areas, million of migrants converge to metropolitan areas each year, daily commuters from villages and scattered development around urban agglomerations participate to the economic development of metropolises. Then, metropolitan area should be managed at the scale of a functional territorial system that covers both urban and rural areas. State governments should renew their policies and administrative instruments to take into account the metropolitan fact.

The effects of the financialization of the economy have strong consequences on metropolitan areas. Financial assets find in urban investments a way to diversify the financial risks with long term benefits. They are focusing on specific products that are considered as secure: city centers, central business districts, gated communities, city water fronts, commercial malls, new towns, large infrastructure, water and transportation systems. They are crossing the local land and real estate markets, giving emphasis on speculative markets. The result is an

over speculation without relation with the real needs for employments and housing and the revenues of the inhabitants. It increases the prices of the land and real estate, evicting inhabitants from well-equipped central areas, displaced towards sub-equipped suburbs without jobs. Then local authorities should finance heavy public transport systems and provide new facilities and jobs in the suburban areas with extra costs. Although several tools regarding the affordable metropolis exist, they don't tackle the structural reasons of the effect of the financialization of a city's economy.

The international competition between metropolises requires high quality utilities and facilities, built environment, cultural life and innovation. It mobilizes huge investments, institutional and technical capacities to coordinate large urban projects on dense areas with conflictual interests on land, accessibility and quality of life. The fragmented institutional system of most of the metropolises makes implementation difficult. Their costs and size require stability and duration that stretch beyond the mandates of city managers, and then require institutions to inscribe in the medium and long range. A specific governance, other than the State, regional or local governments, should intertwine local, regional and national governments, and representatives of the civil society and the private sector. It should cover different areas like economic development, water management, mobility, housing markets, natural risks or energy with their related scales and respective governance systems.

Disruptive technologies foster behavioral changes. E-mobility revolution changes the way people are moving. E-shopping changes the logistic system with short distance delivering system, and reconsiders the existence of shopping malls. Autonomous cars are expected to make public transportation more flexible, reducing car ownership, offering new opportunities for reshaping public spaces and their standards. Smart grids optimize utility management and reduce costs. E-learning facilitates access to knowledge and will affect the size of universities and their correlated mobility. E-government changes the relations between citizens and the public administration and the elected representatives, easing public participation process. The public debate changes with better informed citizens and quicker reaction to decisions.

Metropolises are competing for attracting investments, headquarters and creative class. City marketing is becoming a key tool for supporting city development strategies together with branding the city through touristic features as culture, heritage, health industry, shopping and entertainment. To upgrade their positions, cities are implementing specific policies for tourism and identity that reshape their

physical features and land use organization. The historical precincts, opera houses, main cultural facilities, large shopping malls, luxury general hospitals or leisure parks are being identified as important facilities to produce vibrant cities and make cities more attractive.

2. Planning the metropolis

Managing the large scale is a main challenge for city and regional planners. The traditional "detailed development control regulations" and "master plans" are not well adapted to the large scale. The city planning instruments become more strategic, less regulatory, to foster a consensual vision of large array of actors. These strategic documents become essential when a decentralization process is engaged, based on the principle of subsidiarity when metropolitan or regional planning should respect the share of competencies between different levels.

Climate change triggers a strong reconfiguration on planning concepts. The reduction of GHG emission and energy consumption induces an opposite approach from before, regarding mobility in cities: from speed and access to new urbanization, now the dominant concept becomes less mobility with more accessibility in the proximity inside the existing urbanization. The urban renewal is the top priority better than the urban sprawl. A mix of functions and a social mix are key objectives against the separated zoning. Green and Blue grids are reaching high priority for managing flooding and heat waves. The Compact City concept requires new tools and processes to focus on urban renewal, fostering more participation with landowners, inhabitants and users. Tactical urbanism is one of the tools fostering urban renewal based on culture, recreational activities and mixed uses. The way to re-urbanize requires new processes based on a bottom-up approach.

With the increase of environmental concerns, the holistic approach from the landscaping methodology becomes more important in the planning processes. The economic forces, the mobility system, the demographic trends affecting housing requirements, the environmental constraints of flooding or landslides need to be articulated for a more harmonious implementation. Nature-based solutions in the city is prior to better balance the built-up areas, pollution and reduction of the risks. Nature-based compensation of land artificialization becomes a key objective to reduce the impact of urbanization of large metropolises.

Urban informality increases despite of the international agenda which focuses on "good design and planning," because of the low

capacity of planning tools to propose affordable access to the city (public services, housing, land and jobs) for a large part of the urban dwellers in developing countries. But most of the planners apply the planning concepts devoted to investors, land and real estate speculation without relation to the real social and housing needs of the population. Planners should devise new planning tools for making cities affordable in developing countries and integrate the dynamic of the informal settlements to be part of the plans and strategies.

Reconstruction processes will become more important due to climate changes that increase disasters and migrations, financialization of the economy that generates economic bubbles and global economic crisis, and the destabilization of the international order that will generate conflicts. Planning is a tool for rebuilding social links and institutions after a crisis and should take a stronger position in the reconstruction processes. New tools to position planning in the reconstruction of metropolitan areas should be reinvented.

The permanent structure of a metropolis is based on four basic grids comprising the physical structure of the city: Blue, Green, Grey and White grids representing the major landscape features including the geomorphology and water, green corridors and forests together with the main public spaces, streets or motorways, squares and railways, and key energy and telecommunication infrastructures. Several cities are operating drastic changes by reshaping their large infrastructure. For example, Seoul transformed a highway to recover a river in the city centre and the Paris Regional Plan restructured with green corridors and urban green grids. These large grids are the heritage backbone of the metropolis.

3. Complexity of metropolitan management

Most of the metropolitan areas are managed by hybrid systems that are evolving with their political contexts. The building process for establishing metropolitan institution requires both political will from the National States and an important dialogue process with local authorities to collaborate on the metropolitan bodies. Several countries recognize a specific status for metropolitan areas with specific definitions. It is related to their administrative and political frameworks, the specific geographies of each sector (sewage, watersheds, mobility, etc.) and the constant evolving governance system they are facing.

Facing the permanent changes of city challenges, city expansion, and governance systems of the metropolis, setting up technical capacities become crucial to support decision makers. A permanent technical structure devoted to metropolitan policies and strategies is necessary.

Territorial planning agencies have been implemented to develop and share knowledge, support public debates and decision-making with evidence based analysis, monitor territorial dynamics based on goals and indicators with frequent revisions, define strategies and policies, and include engaging digital technologies for the analysis of behavioral and physical developments. A multidisciplinary tool should be able to intertwine different sectors and mobilize different fields for each scale. Territorial planning agencies have different status as association, public administration, public owned companies, but all of them are nonprofit organizations. A global network of metropolitan and territorial planning agencies has been launched in 2016 during the Habitat III Conference in Quito and established in Paris in July 2017. Its main objective is to develop technical exchange between territorial planning agencies, to support the creation of new territorial planning agencies, to lobby in the international debates and to the national and local government for strengthening the role and status of territorial agencies.

4. Conclusion

The dominant human settlement pattern of the 21st century, the metropolis, is facing specific challenges related to its high complexity in a changing economic, political and climate context. The governance systems to manage the different services and areas of metropolitan areas require more collective intelligence. To support the public debates, the shape of metropolitan planning agencies evolve towards trans-disciplinary capacities and plays roles as platforms open to different actors. The management of metropolitan areas requires specific tools as permanent planning agencies to exceed the limits of the traditional territorial pattern and to provide high level capacities to make the metropolitan system agile to face the challenges of the changing world. ■

Session Two: New Territorial and City Planning Policy

Trend and Strategic Framework of Urbanization in China



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Currently, major changes in China's spatial planning and national planning system are closely related to its urbanization process and the

central government's mid- and long-term consideration of land use spatial patterns.

1. Major changes in the trend, spatial pattern, and driving forces of China's urbanization

1.1 Major challenges of China's urbanization in the next two decades

After 40 years of extensive land use, China is facing problems like deteriorating environmental quality, shortage of resources, and intense competition for resources. Although China has made great progress in urbanization, it still needs to improve the quality. Difficulties in attending school and getting medical treatment that Chinese people often complain about are closely related to the quality of the urban public service systems. China still sees an imbalanced territorial, regional, and urban-rural development. There was a quite large gap among China's east, central, and western regions in the past, and a rapidly increasing disparity between the north and the south in the past two years. The improvement of the human settlement environment is difficult to meet the increasing needs of residents, and the capability of urban governance lags the needs of the urbanization era. With the improvement of national education and literacy levels and the rising awareness of personal rights, the top-down administrative licensing-based urban-rural environment governance model that we were used to urgently needs to be altered to a co-governance model.

1.2 Overall anticipation of China's urbanization trend from 2021 to 2035

Looking forward, we anticipate the general trend of urbanization in 2021–2035 as follows:

- ① The priorities of urbanization will shift to providing high-quality urban services, improving labor productivity, and building an urban civilizational society;
- ② The urbanization growth rate will gradually drop from a currently rapid growth stage with an average annual growth rate of 1.2% to a medium and low growth stage with an average annual growth rate of 0.6–0.7% from 2030 to 2035;
- ③ The urban-rural relationship will be changed from city-led, urban-rural duality to urban-rural integration;
- ④ The urban spatial pattern will evolve from a single-city and administrative-level city development model to a model with an urban agglomeration-metropolitan area and a coordinated, functional, and networked urban spatial pattern;
- ⑤ The driving force for development will be shifted from investment-driven, export-oriented, incremental expansion, and traditional factor aggregation, to consumer-driven, innovation-driven,

incremental- and inventory-based, and innovation factor aggregation;

- ⑥ The development path will gradually change from non-environmental friendly development to eco-friendly development, from having a singular goal to achieving multiple comprehensive goals, from land-based development to people-centered development, from the development zone model to a high-quality development model integrating urban and rural areas, from the government's competition for profit to letting citizens gain the benefit, and from the minority-owned to the sharing of the whole society.

1.3 Major trends of China's urbanization in the next two decades

The prediction on China's population shows that the urbanization rate will continue to increase, but the growth rate will decline in stages. With the weakening growth inertia of the total population, China's population will reach a peak around 2030 and then gradually decrease. The working-age population already reached an inflection point in 2013 and will rapidly decline by 2027. On the contrary, the aged population will double and see three growth peaks. As a country with a large population, China needs to maintain a certain amount of rural population for rural area revitalization. Even at the peak of urbanization, there will be nearly 300 million people living in the vast rural area.

There are some key time nodes in China's development timetable: from 2020 to 2024, it will see an obvious decline in the growth rate of urban population; around 2030, it will enter a relatively slow urbanization stage; from 2045 to 2048, the urban population will not increase, perhaps even decrease.

The next two decades will see a relatively narrowed regional disparity in urbanization, and a progressively coordinated development spatial pattern of the eastern, central, and western China will emerge. Urban population will gradually concentrate in large cities and county towns. The economy will drive people to look for better development opportunities in large cities or megacities, whereas people with insufficient capability will settle in the nearby county towns. Comparatively, medium-sized cities will have more uncertainties. The proportion of the urban population in urban agglomerations will further increase, and its main role will be further strengthened. From 2025 to 2035, the urban population is expected to increase by 100 million, and about 70% of the newly increased population will concentrate in 19 urban agglomerations and two metropolitan areas.

The driving force of urbanization will shift from investment-driven to consumer-driven, from traditional factor aggregation to innovation

factor aggregation, from incremental expansion to moderately controlling the increase and optimizing the inventory. Urbanization will be changed from development led by some regions to balanced land development; from great importance attached to cities yet less attention paid to rural areas to urban-rural co-prosperity; from a single administrative model to a functionally differentiated network model.

2. The overall strategic framework of China's urbanization

To date, China's urbanization has gradually formed an overall strategic framework and full-scale spatial chain for the coordinated development of "urban agglomeration, metropolitan area, central city, small, medium-sized, and large city coordination, featured town, and rural revitalization."

2.1 Urban agglomeration

Urban agglomerations are the backbone of China participating in future international competition. Therefore, it is necessary to cultivate new international competitive advantages of urban agglomerations, promote coordinated regional development, and give priority to improving the quality of urbanization. However, China's urban agglomerations differ in development stages. Except for the relatively mature development of the Yangtze River Delta Urban Agglomeration, other urban agglomerations are in the development and cultivation stage.

2.2 Metropolitan area

With the guidelines for cultivating modern metropolitan areas issued by the National Development and Reform Commission in 2019, the metropolitan area will be the focus of China's urbanization work in the recent decade, whereas urban agglomeration will be a long-term goal for two or three decades later. There are 37 major metropolitan areas nationwide, with a population of approximately 58% and an economic size of 77% of the country. They are the most populous and strongest economic clusters in China now.

China has mature metropolitan areas along the coast, metropolitan areas still in its incubation period in the central areas, as well as developmental ones in the western and northern areas. Therefore, it has to adopt different development strategies based on local conditions.

2.3 Central city

A city's volume and size may not necessarily make it a central city. In our research, we made a comparative study of central cities in North America and the entire European Union, concluding that a large country like China with a population of over one billion and a land

area of nearly 10 million km² needs about 30 nation-level central cities to support its balanced spatial development.

The central cities are divided into three categories: core cities of seven major economic zones, which play the role of the economic engine; cities with special geopolitical considerations, which must be directly identified as central cities for geopolitical security and stability; and the strategic pivot cities at the provincial level.

3. Leading the transformation and upgrading of cities with the concept of people's city

In recent years, China saw changes in the value of urban development. If urbanization in the early stage of the reform and opening-up or the first 40 years were closely tied to industrialization, the purpose of urbanization would be providing support for the employment and development of industrialization and providing services for the gathered population due to industrialization. Comparatively, the development goal in the next stage will be more humane and diversified. This is especially true after the 19th CPC National Congress, at which the central government decided to adopt the concept of a people's city to lead the transformation and upgrading of Chinese cities. In this context, the key is to building a multi-objective and balanced system, targeting people's safety, comfort, health, and accessibility to opportunities for further development. It encompasses a healthy environment, human-oriented services, sharing and co-governance, and the pursuit of better space production and equitable allocation of spatial resources.

Based on this goal, the national planning system has seen a series of adjustments. Specifically, the national development plan serves as the dominant plan, the spatial plan serves as the basic supporting plan, and the special plan and sub-regional plan focus on physical infrastructure and the design of non-physical institution system at the same time. □

Evolution of French Territorial Policy (1949–2019)



Simon Teyssou
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Here we offer a brief description of French territorial policy since the end of the World War II.

In the urban system, the French Government classifies and ranks

towns according to their number of inhabitants.

In France, a town is defined as having more than 2,000 inhabitants. A small town has between 2,000 and 20,000 inhabitants. A medium-sized town has 20,000 – 300,000 inhabitants. Medium-sized towns are divided into three bands: 20,000 – 50,000, 50,000 – 100,000 and 100,000 – 300,000 inhabitants. A city has more than 300,000 inhabitants. French cities range widely in size. For example, 12 million people live in Paris against 2.1 million in Lyon, the second largest French city.

After the war, the State founded its territorial planning policy on the idea of progress. This was emphasized in central political discourse and as a way to impel action. Territorial planning was seen as a forward-looking instrument for modernizing in the medium and long term.

Gradually, changes in the social and economic situation came to modify this policy by shifting diagnosis and interventions from the central state planning level to a more locally anchored multi-scale network.

This happened in three successive stages:

- ① 1949 – 1973. This was the postwar reconstruction period, characterized by strong economic development and marked State centralization. A regional picture slowly formed.
- ② 1974 – 1990. This interval started with the oil crisis that heralded a subsequent economic downturn. This was when metropolization was first promoted, embodied in support for urban territories considered as economic catchment areas, and in the spurring of competition between regional urban centers.
- ③ 1990 to now. This period has seen a richer, finer-grained approach to territorial structures, with the idea of territorial resilience, and capacity for self-sufficiency of rural and suburban areas supported by local resources.

1. The postwar period: national reconstruction

Territorial planning on a national scale stemmed from the reconstruction policy, to repair the damage and disruption caused by World War II.

The central State emerged strengthened in the postwar period and set up the administrative foundations for national reconstruction. It took the opportunity to go further and undertake national territorial planning that would favor the balanced development of its regions and urban centers.

France thus entered a period of planned action by the State, which

would be felt in all areas with a reform of territorial government bodies, especially at regional and communal levels. A distinction was made between regions that needed a steering policy and those that needed a policy of support.

Medium-sized towns were enjoying new industrialization during the thirty years of postwar prosperity (1945 – 1975). They had large manpower reserves, sustained by a constant inflow from rural areas, such as in Clermont-Ferrand. They offered locations well-suited for major groups to implant new industrial units as the historical industrial sites were reaching saturation. The State's public policies provided aid to these medium-sized towns, which were bearing most of the French urban expansion and had to respond adequately to the needs of their new inhabitants for housing and public facilities.

Territorial planning was envisioned transversally, with all the government ministries being involved. The Delegation for Territorial Planning and Regional Action (DATAR) was set up in 1963, as a planning research body and driving force for proposals. It was placed at the highest level of government (the DATAR delegate was a member of the Prime Minister's cabinet), to monitor the advancement of annual planning policy implementation.

Relatively "light" in its structure and in the number of persons it employed, the DATAR was not merely a new government department. As a cross-ministerial entity, it acted on the principles of coordination and flexibility. Despite being a centralized body in a centralized State, it signaled a deep change in attitudes and a new strategic orientation: it was a public entity designed to work on a "mission" basis, and be able to address specific problems that arose at specific times and in specific places. "It is light-footed, eager to act, has its ear to the ground, is alive and alert, does not wait for initiatives but prompts them."

The DATAR acted as an innovator in the relations between the State and local authorities by facilitating direct links between local and central governments, and by developing networks of local and regional partnerships. This structure held a leading place in territorial planning throughout this period.

2. Economic recession and metropolization

From 1974, the economic recession adversely affected the still fragile territorial equilibrium. It caused a form of territorial dislocation, with an ensuing regional rivalry, whereas the strategy of the preceding period had aimed to spread economic growth among the regions, and so give the national territory additional

centers to balance the growth of Paris.

The process of metropolization saw the earlier planning vision wane. Rapid urbanization was occurring worldwide, with megacities expanding through the massive arrival of newcomers from fast depopulating rural areas.

In France, the economic disorders caused by the 1974 crisis profoundly affected the labor market. Industrial and mining areas declined, employment in agriculture collapsed, and the shift to a service economy gathered pace. Most jobs were in urban areas, which spread further with the combined development of land-hungry business parks and low-density housing. This process was intensified by continuous demographic expansion.

French public policy makers, keen to foster economic development, emphasized urban policies, granting cities State endorsement with various subsidies to enhance their competitiveness.

These policies were a response to the difficulties caused by population and business concentration in city areas, which resulted in: severe urban sprawl; significant increase in mobility; marked increase in pollution of various kinds; soaring land prices in the most attractive city areas.

Lastly, public policy makers addressed methods of governance.

In the 1980s, the State focused its action on supporting economic attractiveness perceived as necessarily linked to the spatial concentration of the strategic functions of the new metropolized production system. The State withdrew from medium-sized towns, which were encouraged to develop under their own steam, and work to find competing appeal in their own specific identities.

In the 1990s, the State nevertheless favored a policy of free association among medium-sized towns that wished to pool resources and carry out joint actions. The urban network policy was designed to overcome threshold effects, make economies of scale, and have local communities enter urban competition.

Today medium-sized towns are perceived by public policy makers as being generally resilient, despite widely diverse situations. According to their location on the map of France, they polarize their surroundings or are drawn into neighboring metropolized urban areas. In both cases, they act as inter-regional couplings.

These medium-sized towns have been undergoing suburbanization and a growth of residential economies, to the detriment of their town centers. This trend has meant more commuting. This situation raises the question of how well medium-sized towns can organize their surrounding areas, especially in terms of regulatory spatial planning (territorial public planning schemes in particular). At the European scale, this is known as polycentric development, the goal of which is a more evenly organized European territory offering a counterweight to the London-Paris- Milan-Munich-Hamburg pentagon. The aim is to encourage a model of interurban cooperation without spatial continuity.

3. Contemporary rural and suburban areas

Rural and suburban areas have seen a regain of fortune after decades of decline and negative representations – Paris and the French desert, the empty diagonal, etc.

Rural and suburban areas have become more appealing than towns, and are currently places of innovation and creativity. State-led public policy is now taking into account this territorial component consisting of non-concentrated spaces in development planning through the “Rural Agenda” mission. This mission seeks to include these spaces in a balanced development scheme for the national territory, away from the empty/full or immobile/dynamic dichotomies. The aim is for the State to start from the rural areas and their daily life, close to their inhabitants.

With the aim of reducing territorial inequalities, an action plan drawn up after consultation with a very large number of actors in the rural and suburban areas, steered by the Ministry for Territorial Cohesion and Relations with Local Authorities, is being implemented for communes with under 3,500 inhabitants.

The leading measures of the Rural Agenda are as follows:

- ① Provide or strengthen collective service offers in rural villages and suburbs: healthcare, commerce, leisure, venues for sharing and community life;
- ② Provide or strengthen access to mobility and web-based services for training and employment;
- ③ Provide or strengthen access to culture, as a vector of openness and outreach;
- ④ Transfer and extend entitlement to help and support for housing in very small communes, aided by the structures and institutions that implement it;
- ⑤ Provide specific support for youth;

- ⑥ Make rural areas drivers of the ecological model (resources, restrained consumption of space, support for agro-ecology, etc.).

4. Conclusion

Since 1985, decentralization policies have introduced the idea of concerted planning by the State and the local authorities. The European Community is also helping to carry forward territorial planning, from an infrastructure policy to priority given to local development. As the pioneering geographer Marc Bonneville wrote in 1993, “The reorganization of geographical space no longer works through an opposition between the center and the periphery, but has become network-based, redefining urban connectivity according to functional and cultural relations at different scales.” (Marc Bonneville, “Processus de métropolisation et dynamiques de recomposition territoriale dans l’agglomération lyonnaise” in *Métropoles en déséquilibre?*, Plan Urbain/DATAR/Agence d’Urbanisme de la communauté urbaine de Lyon, Paris, Economica, 1993.)

Session Three: New Exploration in Urban Planning

Exploration and Reflection on Territorial and Spatial Planning



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China’s territorial and spatial planning system is undergoing major changes, and it is planning an overall pattern of spatial development and protection in the new era by establishing a unified, scientific, and efficient territorial and spatial planning system with clear responsibilities. The new system includes five levels – state, province, city, county, and township, as well as three types of planning – master planning, detailed planning, and special planning. Among them, municipal and county master planning is not only the detailed implementation and specific arrangements of higher-level spatial planning requirements, but also the overall and comprehensive arrangement for the development and protection of land and space within the city and county. In addition, it is the basis for relevant special plans and detailed plans.

While making the municipal and county master plans, due attention should be paid to the following three aspects.

1. Transforming the objectives and models of spatial development and protection

Territorial and spatial planning must change its objectives to building a higher-quality, more efficient, more equitable, and more sustainable spatial development and protection pattern, to further modernize national governance system and enhance governance capabilities. To achieve these objectives, it is imperative to choose a new development model.

(1) High-quality urbanization

Its core connotation is forming an urbanization model which features balanced land development, urban-rural integration, and cultural prosperity, is green and healthy, innovative and smart, and inclusive and sharing, and has modernized governance.

(2) People-oriented

Focusing on the overall needs of all the people, it should aim at building a people’s city with a sound and sustainable environment, equitable and inclusive society, joint construction, and sharing and co-governance of all citizens.

(3) Green development

It should follow the principle of the harmonious coexistence between man and nature and pay attention to the compatibility of space construction, operation and management, and the ecological environment. Regarding the conflicts and contradictions between China’s urban-rural development & operation and the ecological environment, it should explore a green development model in line with China’s national conditions.

(4) Innovative development

It is expected to implement and support the national sci-tech innovation strategy, regional strategy, and industry strategy. It should focus on the construction of regional innovation center and innovation system, and lead the transformation and upgrading of cities with sci-tech innovation function system and sci-tech innovation function areas, to enhance the city’s innovation capability.

Meanwhile, it is also necessary to explore a new governance model.

(1) Promoting full-scale space collaborative governance

It is crucial to meet the three coordinated development requirements of urbanization: “relatively balanced regional development, coordinated development of small, medium-sized, and large cities, and urban-rural integrated development,” and to build an overall spatial pattern with “the leadership of central city, urban agglomerations as

the main body, metropolitan area as a unit, the county’s comprehensive development, and beautiful countryside’s revitalization.”

(2) Constructing a multi-level urban-rural governance system

With the participation of the government, market, society, and other stakeholders, the structural optimization and quality improvement of the spatial system can be realized through the coordination mechanism of interests, to achieve the objective of “good governance” in the city.

(3) Formulating differentiated policy mechanisms

The old urban area should focus on organic regeneration, while new towns should focus on the linkage between the increase and stock of construction land, and rural areas should comprehensively improve the human settlement environment. Guided by ecological management and restoration, the abandoned industrial and mining land consolidation should be orderly advanced.

2. Constructing a new spatial pattern with harmony between man and land

In line with the two perspectives of protection and development, territorial and spatial planning is carried out based on the premise and foundation of “dual evaluation” – evaluation of the carrying capacity of resources and the environment and evaluation of the suitability of spatial development, as well as current situation assessment. The “dual evaluation” is used to analyze resource and environmental carrying capacity, as well as strengths and shortcomings. Combining with local conditions, the historical changes and current situation of land development and protection should be evaluated from six dimensions: innovation, coordination, green, opening-up, sharing, and security, and be focusing on the three priorities of bottom line control, spatial pattern and efficiency, and livable quality. By “dual evaluation” and current situation assessment, we can comprehensively analyze the key issues, risks, and potentials of land development and protection.

On this basis, it should focus on the ecological, agricultural, and urban space of the whole country, with an aim to optimize the patterns of ecological space, agricultural space, historical and cultural protection pattern, and urban-rural development and utilization pattern, in order to coordinate the relationships between construction and non-construction space, between city and countryside, and between land and sea, and to realize the ecological co-governance, functional interaction, industrial linkage, traffic connectivity, equal facilities, and so on. In this way, it attempts to construct a spatial pattern of the whole country with a harmony between man and land.

(1) Ecological spatial pattern

It is necessary to identify the core natural resources and ecological factors and analyze important ecological function areas and environmentally sensitive areas. Then the protection pattern of natural resources and ecological elements should be built in accordance with the requirements of systematization and integrity. In addition, it is also crucial to define the objective, layout, and control requirements for the protection and utilization of important resources, determine the objectives and tasks of ecological restoration, and systematically carry out the improvement of mountains, rivers, forests, fields, lakes, grasses, and seas. In this way, it aims to build a shared community of mountains, rivers, forests, fields, lakes, grasses, and seas.

(2) Agricultural spatial pattern

It is imperative to follow the strictest farmland protection system, build an industrial system layout conducive to promoting integrated development of primary, secondary, and tertiary industries, and implement classified management and control requirements for three types of agricultural space, including basic farmland, arable land, and other agricultural spaces.

(3) Historical and cultural preservation pattern

The plan should clarify the general framework and specific elements of historical and cultural heritage preservation, including the goals, principles, scope, and requirements. The layout should highlight the historical and cultural spatial pattern and important cultural heritage areas with cultural attractions, attach importance to the integration of cross-regional cultural resources such as historical and cultural corridors, and strengthen the supervision of spatial pattern and important heritage elements.

(4) Urban-rural development and utilization pattern

It is necessary to take a comprehensive consideration of the current development level of cities and towns, urban development potential, and urban-rural development relations and modes. In view that regions differ in driving forces of development, different regions should adopt different guidelines for the development modes of industry-city integration and industry-town integration.

3. Improving the governance and conduction system which combines rigidity and flexibility

(1) Creating a various policy instruments-based, complete-cycle, and multi-dimensional supervision system

Considering both rigid and flexible requirements, spatial planning should combine various policy instruments including index, control

line, zoning, usage regulation, and directory, to improve its use supervision system. Among them, the relatively rigid one is control line, including the ecological protection red line, permanent basic farmland, and urban development boundary, as well as various sea area protection lines. It is necessary to scientifically delimit spatial control boundaries, to establish and improve classified supervision mechanism. Zoning and usage regulations emphasize the dominant function and flexibility of supervision. The main functions could be determined according to local conditions and focus on “function compatibility and transformation rules.” The functional orientation, way of utilization, and regulation requirements may differ in different zones.

(2) Forming a multi-dimensional planning conduction mechanism and control system, which extends “to the bottom vertically and to the edge laterally”

The lateral conduction should clarify key points and means of connection with special planning, comprehensively balance all spatial needs, and guide and restrict the implementation of strategies, the development and protection of bottom lines, the overall structural distribution of natural resources, and the physical geography. Running through the whole process of planning, review, and supervision, the vertical conduction aims to supervise and guide the lower-level planning by adopting four means including index conduction, control line conduction, attribute conduction, and sequential conduction, clarifying the requirements of rigid and flexible conduction, and establishing a rule-based conduction mechanism.

(3) Implementing variable supervision and conduction which conforms to the specific zone and classification

In terms of the ecological protection red line zones, the policy focuses on ecological protection, control, and restoration, building a technical management tool framework of “directory, boundary, and index,” establishing a list of authorities, laws and regulations, which clarifies “regulation requirements, obligation list, and responsibilities.” In terms of the rural area, it is necessary to combine rural land remediation and rural revitalization and explore more diversified rural land use types and control requirements. In terms of areas within the urban development boundary, the focus is to orderly control the land development process, optimize the urban spatial layout, improve land use efficiency, and ensure that public facilities be landed. With reference to the “unit plan” of regulatory planning, a differentiated planning guidance and control system can be built through the guidance of an ecological control unit, rural functional unit, and urban development unit.

(4) Establishing a national space information management platform with consistency at different levels and collaboration of relevant departments

The new round of territorial and spatial planning required to synchronously build a “one map” implementation and supervision information system which contains such functions as monitoring, evaluation, management, and decision-making. The new information system with consistency at all levels can realize data sharing and information interaction in spatial planning management, implementation, monitoring, evaluation, review and approval among governments and departments at all levels. At the same time, it should fully integrate traditional geographic information data and multi-source big data and explore and develop planning analysis platform and tools, to further support the scientific logic of planning.

Facing challenges in territorial and spatial planning in the new era, we need to work together with various parties and build a better human settlement! ☑

What Kind of Training for Urban Planners in the 21st Century? – Teaching “Urbanism” at French Universities



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Before presenting the challenges of urban planning today as we teach them to our students, it is necessary to explain the perimeter and the main objectives of these training courses.

1. Urbanism and urban planning training at French universities

In this text, we present the university training courses in town planning grouped together by the Association for the Promotion of Teaching and Research in Planning and Urban Planning (abbreviated into APERAU). The particularity of the training brought together by this network is that it is integrated into universities, while trainings in architecture or engineering, which also educates urban planners, are located in higher schools and are validated by specific, more technical degrees. Even if today the relationships between universities and engineering and architecture schools have been strengthened, they still depend on different ministries (Culture, Ecology, Agriculture...) while the ones I am talking about depend on the Higher Education and Research Ministry. Furthermore, the link with research and doctoral training is very strong in the university network of APERAU.

Even though this network was created less than 40 years ago (1984),

the concept of “urbanism” in France is older: it appeared at the beginning of the 20th century in a context which was very ambiguous: the period of progress and of cultural greatness, which in France is called the Belle Epoque, and the disaster of the First World War. So, if it is a “reformist” program linked to the democratic and republican experience, it is also the consequence of the strong urbanization of the 19th century. The industrialization and internationalization of western countries, which at that time had many colonies, was crossed by the values of progress, but also by the concerns of a century which will experience numerous catastrophes (epidemics, wars, economic crisis, etc.). But an essential characteristic of France compared to other Western countries (notably Great Britain and the United States) is to strongly associate territorial or urban planning and urban and territorial design. This link is possible because the public culture of town and country planning is strong. And this is the heart of the French concept of “urbanism”, different from “city planning” or “urban planning.”

For 50 years (1919 – 1969), this education only existed in Paris. But from 1968, when the French University was turned upside down, it developed in other important French cities and universities: Lyon, Lille, Aix-Marseille, Rennes, Bordeaux ...

The APERAU network, created in 1984, owes its existence to a very French history of higher education and town planning. But it felt the need to internationalize, in 1997 expanding to other formations located in French-speaking countries. It currently includes 22 training courses in France, 4 others in Switzerland and Belgium, 3 in America (in Quebec-Canada), 3 in Africa (Lomé in Togo, Constantine in Algeria and Rabat in Morocco) and one in the Middle Orient (Beirut in Lebanon).

2. Teaching content and objectives

The university anchor allows these courses to be interdisciplinary, it is the first criterion that must be observed. It means associating the social sciences in their diversity (geography, economy, sociology, anthropology, history, etc.). Knowledge of engineering, architectural design but also landscape, and law is also present. This importance given to interdisciplinarity is linked to the fact that urban planning problems cannot have a one-dimensional solution. Even if these problems are often formulated in a fairly sectoral and technical way (housing, transport, urban heritage, quality of the environment, economic development, etc.), the answers must be constructed according to several dimensions and always adapted. Thus, any creation of new housing will have consequences on transport, the territorial balance of the city, social life... The interdisciplinarity that we teach therefore

does not consist in juxtaposing different knowledge and methods, but in developing multiple views on the same object, the same problem. Its critical dimension comes from this.

In the short time of the master (2 years in general), students must therefore acquire multiple skills. This teaching is strongly oriented towards practice and the professional world, concrete experiences; it cannot be only theoretical. It has a very direct relationship to the field, to the physical and daily reality of cities, to the populations who inhabit or practice them. The “urban planning workshop” is the most emblematic educational form, since it is on this occasion that students, organized in multidisciplinary groups of 4 to 10 students, work on a site, with institutions and social actors, economic, territorial policies ... Often, they must respond to a real brief.

The urban planning workshop attaches great importance to diagnosis, a methodology that identifies a spatial issue, before setting the programming or project objectives. The concept of the project that is used in this training framework is ultimately quite different from that which exists in the architectural world, because it involves the translation of a certain amount of programmatic type data into propositions. What are the differences with engineering training? The differences with engineering education are undoubtedly to be found in the relationship established with politics: the urban planners we train in universities do not hesitate to take into account the political dimension of urban problems and planning.

3. What new challenges do we face at the beginning of the 21st century?

Several aspects of this teaching should be highlighted.

First of all, we insist a lot on the actor system, which has several characteristics:

- ① In France, the State is no longer the only organizer of urban planning. The world of town planning, which had developed under direct state control between 1940 and 1983, and more generally in a historically centralized country, has adapted to decentralization for several decades. Forty years after this change, the State is a public actor among the others: the municipalities, the regions, the agglomerations are other public actors, who have developed their expertise and their democratic legitimacy.
- ② Private societies (transport companies, developers, banks, manufacturers, etc.), whose role has always been important, must introduce into their action the general interest objectives that are contained in town planning. This requires control, regulation, tax

policies ... but also numerous exchanges between the public sphere and the private sphere, and the existence of a very important intermediate activity sector (development or social housing companies, agencies, public enterprises, business representative bodies, etc.). We must teach our students this institutional, economic and socio-political complexity.

- ③ The residents are more involved in all the processes. Even if the link between town planning and the Republic is old and places urbanism under the control of elected officials and representative local democracy, new forms of participation must intervene today. They include inhabitants and users associations, but also many social movements (defenders of the environment, heritage, some minority groups, disabled people; etc.).

The reality is that the city is produced by many actors, all of whom must agree to share their power.

Consequently, the tools are evolving significantly:

- ① Simultaneously, the belief in the efficiency of planning has decreased, with that of public interventionism. The urban planning and the project have become flexible, and are negotiated from an adaptable temporal or programmatic perspective.
- ② The metropolitan dimension has become essential. With the extension of cities and their peripheral sprawl, over entire regions, it has become essential to modify the perimeters of the intervention, or rather to always associate the territorial scales. This is particularly true in the Paris region, which must reorganize its system of governance.

The international dimension has become strong, even if the modes of regulation remain very national. The European dimension is obvious, but it is also the global dynamics that must be taken into account.

The objectives changed at the beginning of the 21st century:

- ① Since 2000 urban renewal has become a very important objective. This is both to consume less rural space (natural and agricultural), but also to prevent the city from disintegrating when industrial activities disappear (brownfields), or any type of change that risks creating voids. The densification of suburban areas and the urban fringe is an important objective.
- ② The big cities become both very unequal and maybe too attractive. Urban policies aim to maintain the equilibrium of the urban system, avoiding small and medium-sized cities to be devalued and abandoned, but also to make sure that social diversity increase in the metropolis (500,000 people and more). Social housing is a classic tool, but there are others such as equipment or environmental policies.
- ③ Major sectoral policies such as housing and transport remain

important, but more cross-sectional areas of intervention such as public space have emerged. This one is subjected to very strong pressures, in particular in the big cities, through the commodification logics or new technologies. An automobile is still necessary, but it must share the space with pedestrians, two-wheeled vehicles, or even public transport: it provides to planners a lot of work.

- ④ Finally, the environmental dimension is present everywhere and forces us to renew all urban policies, which must be better articulated with the rest of the territories. Productivism, which founded urban planning in the 20th century, is the subject of very strong criticism, and new questions arise more and more through which the challenges of sustainability are clarified: air quality, food cities, energy, bio-diversity... Cities must reduce their ecological impact, but also adapt to climate change and global warming, which will be significant. They constitute the living environment of most citizens, and must therefore be taken into account in affirming this dimension. This is the most important point of the transformations that we are experiencing, in France and in China. □

Session Four: New Talents Cultivation Pattern

Urban Planning Education of Tsinghua University Facing Challenges of the New Era



Wu Tinghai
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The discipline of urban planning has a distinctive feature, which is to adapt to the times. The profound socio-economic changes are what fundamentally affects the urban development and urban planning. Consequently, we can divide the development of the urban planning discipline in Tsinghua University into three stages: the first stage is from the end of World War II in 1945 to laying a foundation of urban planning discipline in the 1970s; the second stage starts after the reform and opening-up, which is a golden age of urban planning development; and the third stage is a new era in which professionals aim for better cities and better lives.

1. Foundation of urban planning discipline in Tsinghua University after World War II

1.1 Construction of a beautiful homeland and the birth of urban planning in Tsinghua

Due to the great disaster and huge damage of World War II to human

society, many people of insight at home and abroad began to think and discuss post-war reconstruction of cities in the mid of the war. The era after World War II was a golden age for urban planning in the world. Even before the end of the War of Resistance Against Japanese Aggression, Liang Sicheng was longing for rebuilding his homeland. Focusing on the national revival and construction, on Mar. 9, 1945 Liang wrote to Mei Yiqi, President of Tsinghua University then, suggesting that the university should establish a department of architecture. In July 1946, Tsinghua University established the Department of Architectural Engineering and hired Liang as the head of the department and Wu Liangyong as a teaching assistant. In the same year, Liang went to the United States as a lecturer and Yale University as a visiting professor.

In 1947, Liang gave a speech at the opening ceremony after returning to Tsinghua University from the United States, proposing the idea of “shelter for all” and expounding the social responsibility of architectural professionals. In addition, he also mentioned that the concept of architecture should be extended to the “physical environment.” In fact, the idea of “shelter for all” can be traced back to the 5th century BC when Lao Tzu, an ancient Chinese philosopher and writer, put forward the idea of “making people live in peace and contentment”; and the “physical environment” was a new concept proposed at the Symposium on Human Environment Design that Liang attended at Princeton University at the turn of 1946 and 1947. The architectural idea that is based on the broad sense of housing and the human environment is still very advanced nowadays, laying a theoretical foundation and a high starting point for Tsinghua’s urban planning education.

1.2 An initial stage of urban planning in Tsinghua at the beginning of P. R. China

At the beginning of the P. R. China, Liang proposed to rename the Department of Architectural Engineering of Tsinghua University to the Department of Construction, which consisted of architecture, town-village planning, gardening, industrial arts, and civil engineering. Guided by the idea of construction, the department gradually expanded and improved its disciplines, and attached importance to both the architectural design of individual building and the planning and construction of the building complex and even the entire town districts. In this way, architecture was given a broader meaning and task, of which “town-village planning” is equivalent to what called urban-rural planning nowadays. In the spring of 1951, the department set up a town design teaching group, chaired by Wu Liangyong. At the beginning of the P. R. China, China’s urban planning education followed the Soviet model. At that time, urban planning in Soviet

universities was just a specialized direction of senior architecture major students, which can be seen from the Moscow State University of Civil Engineering. In 1953, when colleges and universities were re-structured in China, Tsinghua University set up a special direction of urban planning for senior students in the Department of Architecture. The original teaching group of town design was renamed to urban planning teaching and research group, with Professor Cheng Yingquan as its chair.

At this stage, China's economic and social development had experienced ups and downs. After the first two five-year plans, China had gained valuable experiences and began to seek its own path from 1957 to 1960. Aiming for lessons of urban planning during the ten years since the foundation of the P. R. China, the Ministry of Construction and Industry organized Tsinghua University, Tongji University, Nanjing Institute of Technology (now Southeast University), and Chongqing University of Architecture and Engineering (now Chongqing University) to co-edit a textbook called *Urban and Rural Planning*, chaired by Wu Liangyong, which was published by the China Architecture and Building Press in 1961.

2. A golden age of Tsinghua's urban planning after the reform and opening-up

Since the reform and opening-up, China saw the largest scale of urbanization in the world. There were abundant opportunities for research and practices of urban planning in China. The discipline of urban planning in Tsinghua has made great progress and entered a golden age.

2.1 Creating the Sciences of Human Settlements

Facing the complicated situation of urbanization and urban-rural development in China, in the early 1990s, Wu Liangyong, Zhou Ganzhi, and other planning experts put forward the idea of "Sciences of Human Settlements." This idea is based on Liang's theory of a physical environment and the challenges faced during that era. Following the people-oriented principle, it consists of three pillars including architecture, urban planning, and landscape architecture, aimed at absorbing peripheral multidisciplinary knowledge to meet the needs of new urbanization and industrialization and to build a beautiful living environment. The *Introduction to Sciences of Human Settlements* published in 2001 elaborates the theory, and the *History of Chinese Settlements* in 2013 makes an in-depth discussion from a historical perspective. Wu drafted the *UIA Beijing Charter* in 1999, which also illustrated the Sciences of Human Settlements and broad architectural thoughts. The *Beijing Charter* proposes the idea that

"building beautiful and sustainable human settlements is the common ideal and goal of mankind," which has been widely recognized by the international community. What was specially highlighted was "back to basics," and providing people with a better environment and a better life, which is an essence despite all changes. The construction of beautiful human settlements conforms to the needs of the times, and meanwhile is applied in many national constructions. In 2011 and 2018, Wu won the State Preeminent Science and Technology Award of China and the honorary title of Reform Pioneer.

2.2 From the Sciences of Human Settlements to planning engineering practice

Under the guidance of the Sciences of Human Settlements, the Department of Urban Planning and Design in Tsinghua University has done a lot of innovative and pioneering work in accordance with national and social needs. The most typical one is the renewal of Juer Hutong and the research on Greater Beijing – the integrated development of Beijing-Tianjin-Hebei Region that has continued to now. Under the leadership of Wu Liangyong, the group published three reports on the rural and urban spatial development planning study for the Beijing-Tianjin-Hebei Region in total, and the fourth report is being published, which provides support for the planning and development of the entire Beijing-Tianjin-Hebei Region. Correspondingly, the department has carried out a series of planning studies in Beijing, Tianjin, Hebei, and other places, including the Xiongan New Area, Beijing Sub-Center in Tongzhou, and the Winter Olympic Games in Chongli County, Hebei Province.

2.3 Four features of Tsinghua's planning

After 40 years of development, Tsinghua's urban planning has obtained four characteristics. The first is a solid base on a high-level, comprehensive, and research university, which determined the size of students and education mode. The second is the scientific vision of Liang Sicheng's physical environment and "shelter for all," as well as Wu's Sciences of Human Settlements consisting of urban planning, architecture, and landscape. The third is first-rate students and teachers and its continuously improving planning education system. The fourth is leading scientific research in the field of planning and design. Tsinghua's undergraduate education of planning is "experimental" and implements a mode of small size plus fine training, and its planning research focuses on cross-disciplinary cooperation.

3. Prospect of Tsinghua's planning discipline in the new era

Contemporary China's economic and social development is undergoing

huge changes that would be marked in history. The report of the 19th CPC National Congress clarified that "the principal contradiction facing Chinese society has been transformed to a contradiction between unbalanced and inadequate development and the people's ever-growing needs for a better life," which has confirmed this significant change. From the perspective of urbanization, the urbanization rate of the national permanent population in 2018 was 59.58%. The *National Population Development Plan (2016–2030)* predicts that the total national population will reach about 1.45 billion in 2030, and the urbanization rate of the permanent population will reach 70%. After that, China's urbanization will gradually enter a stable and saturated state. The new situation poses new requirements for Tsinghua's urban planning education, namely, how to build a beautiful living environment under the background of high-level urbanization, and how to support a better life with beautiful human settlements.

Tsinghua's urban planning education in the new era bears a new mission. In 2018, teachers and students of the Department of Urban Planning and Design put forward a framework for the academic field of planning to meet the requirements for a better life and a better living environment. Guided by the theory of the Sciences of Human Settlements, Tsinghua's urban planning has laid a good foundation in historical study, cultural development, and urban design. In the future, it is necessary to further strengthen planning technology and spatial planning to form an academic field of planning based on the Sciences of Human Settlements, and to carry out corresponding personnel training, scientific research, and social contribution. In terms of planning education, we are working on the entire planning knowledge system, and are thinking about what to teach, how to balance professional education and general education, and how to balance Tsinghua characteristics and national requirements. At present, we are exploring how to establish a scientific view of time and space for a planning based on the theory of the Sciences of Human Settlements and the holistic thinking of "time, space, and human," to create a better urban-rural environment using planning and design and to carry out planning practices based on both history and future. □

Making the City of the 21st Century: What Changes for Trades and Professions? – A Sociological Reading



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How has the positioning of project management professions and

trades evolved over the last 20 years? What are the social factors that make it possible to understand the evolution of the practices and identities of the professions involved in the "architectural and urban factory?" What are the effects of these evolutions today? What are the sectors of insertion and the new knowledge that renew the practices of the professions of project management? To answer these questions, it is necessary to analyze internal tensions on the one hand, and external pressures on the other. Indeed, it is often thought that what makes professions evolve are external constraints. But we often forget that professional groups also evolve through internal tensions and debates.

1. The professional form

Classically, a profession is the specialization of knowledge leading to a precise and autonomous determination of the rules of the activity: the definition of an expertise; a long and higher level intellectual training which presupposes the existence of recognized schools and training; the existence of a higher level education system; the existence of barriers to entry for those who do not meet the previously stated conditions: the protection of a territory of practice.

This definition concerns many city professionals, a professional such as an architect is, for example, a guarantor of the quality of development and construction projects by virtue of obtaining a diploma, which is proof of this, and which "gives him or her competence" over a kind of reserved territory, very often by law. Thus, for example, in France, the 1977 law on architecture makes the use of an architect compulsory from a threshold of built area and prohibits the exercise of design by anyone who does not have the same training.

Numerous analyses have long considered the end of the "professional" form. From the 1970s to the present day, analyses describing an "endangered profession", incapable of asserting the singularity of its expertise, of "mutations and diversifications", of "heterogeneity of skills" are numerous.

These works express the difficulty of clearly grasping the contours of professional groups at the present time, in the face of an increased division of labour, a diversification of modes of exercise and a broadening of social recruitment. It is therefore the classic definition of a profession that is unsatisfactory. One observation must be made: in order to adapt, the professions must constantly negotiate and work on the boundaries of their profession (integrating new dimensions, following the evolution of markets, integrating all graduates, etc.).

These facts lead us to view the professions in cities and territories as groups whose form is subject to continuous “social work” in terms of positioning and investment. The questions are: how do these professionals maintain themselves today? How do they manage to be present in so many forms of practice and position?

It is to these questions that I try to answer with the double scheme of external pressures and internal tensions. We often analyze changes in the professions on the basis of external pressures (technological and economic changes, etc.), but we often forget that these pressures are combined with internal tensions linked to the state of the professions (demographics, age structure, theoretical debates, etc.).

2. The internal level: the profession

It should be remembered that changes affecting occupations occur at several levels that can be classified according to the classical definition of an occupation and its reproductive system (training).

In a reading in terms of a profession, to be a professional is to belong to a group which, in an authenticated manner, has the reserved right to exercise a particular knowledge in the professional field of spatial planning that it has acquired through long and higher level studies in specialized establishments to which access is reserved.

However, we are currently facing a reality in which the relationship between education and profession has dissolved. The disappearance of an integrated system, producing strong professional cohesion, has given way to a reality whose characters are, and the fragmentation of the stable definition of the profession of architect, and the opening up and increasing complexity of the training system.

On the teaching side, there has been an increase in the number of enrollments and a change in the structure of the workforce; on the professional side, there is a dispersion of graduates into positions that no longer necessarily correspond to traditional definitions of professional practice. This phenomenon became very visible in the mid-1990s.

First of all, there has been a certain “universitarization” of education: increase in enrollments; diversification of social profiles (relative democratization, feminization, etc.); opening up and diversification of educational provision. This in a context where positions and places in the world of “traditional mastery” have become rare. The consequences are: a diversification of courses; the addition of additional training (to delay access to a difficult labour market and to have additional assets, which is most often the case for women).

These professionals, on the basis of their training, have been forced to invest in other fields (urban planning, mixed economy, communities, architectural and environmental consulting, etc.) and wanted to resist a difficult period. The result is that they have broadened the scope of their integration and their profession. With these changes, a new division of labour began and professionals had to specify a specific skill, an expertise. The question has become: how to claim the status of a profession (a title) for everyone since the missions are so diverse. We can make the hypothesis that this is really a task that the professions have had to carry out on their identity (one title: now several positions and territories of practice) to preserve their place in the division of labour.

3. External pressures

The professions have also had to deal with external pressures: relations with other project management professions on the one hand, and new development issues on the other. The two are linked by a simple mechanism: as soon as a new issue arises, there are always new professions that claim to enter the field of project management and make it their speciality. This is also a factor of change.

In order to understand this, we must remember that the space of the urban and architectural factory is a space of interdependence, a space in which trades and professions define themselves by each trying to claim a territory.

The first of the visible elements that are essential in the reorganization of processes is “inter-professionality”: the number of specialities and expertise mobilised alongside traditional skills (architects, engineers, companies) is now extended: designers, lighting designers, landscapers, urban planners, video artists, sociologists, economists, etc. The configurations of actors and the modalities of their relationships are changing. In short, there are more people in the space of project management, a space to be shared. These transformations in fact confirm the hypothesis of an explosion and fragmentation of “traditional” missions and the multiplication of “specific engineering.”

In fact, the project management space is becoming a place of negotiation: the place of each individual is no longer given by a qualification, a title or a protected market, but is discussed with each project. In this space, there is a division of labour between the trades involved in the act of building, where each must also do “professional work” in order to maintain, if not extend, his or her place. In other words, the space of project management is also a space in which territories of professional action are defined among themselves.

The professions that cohabit in this space do “professional work” to maintain, if not extend, their place and mission in the building production processes. In this sense, it is more accurate to define the notion of project management as a relational whole; a field of struggle or force within which it is the relations between the elements, and their dynamic principle, that dominate.

Generally speaking, the search for predictability and “quality” on the part of the project owners and the evolution of regulations combine to encourage a recomposition of the landscape of architectural and urban project management professions. The aim is to “control costs, deadlines and quality.” This desire on the part of clients has been the basis for the development of a new professional world of “assistance” and consulting. Thus, today it is common to see the need to associate professionals in the fields of ergonomics, environment, social engineering, acoustics, lighting, etc., in construction tenders.

These evolutions are thus manifested today firstly by the splitting up of certain missions, their fragmentation, but also by the invention of new positions based on traditional training in project management. For example, the roles of programmer or assistant to the project owner correspond to specialisations in specific stages of construction. Other functions, such as those of communication or management, may be taken over by professions that are unusual in the field of project management (ergonomists, consultants, ethnologists, etc.).

Finally, the opening up of the project management process places the project management professions in a singular situation of redefining their area of intervention. In this game, some professions are positioning themselves towards missions upstream of the building production process while others are refocusing on specific missions.

4. Prospective conclusion

Many factors of change have been identified since the late 1990s and 2000s. Depending on the analysis, they place us either in an “end of cycle” or in an “acceleration.” In both cases, we have to face it in order to adapt our training courses.

First of all, the “neoliberal turn”: this is a time when urban policies have left an increasing place for private actors in the governance of cities. The phenomena of generalized competition between cities for their attractiveness, the development of territorial marketing, cultural offers and events, now form a standardization of globalized urban action. These are new technical and economic balances of power that now place city professionals in the face of very powerful private ur-

ban operators, present at all levels of urban production: from planning to property management to urban services.

Next, the environmental transition. The notion of sustainable development arrived on the urban policy agenda at the end of the 1980s. It was the basis for the birth of new professional figures now present in the fields of urban and architectural production (consulting and research professionals, environmentalists, researchers, etc.).

The broad definition of the concept of sustainable development leads to the decompartmentalization of disciplinary knowledge and questions training: should we, for example, allow a world of professionals specializing in these issues to develop? Or should we think that the environmental issue is now at the heart of all professional practices (engineers, architects, landscapers, urban planners, etc.)? The question is that of a choice between knowledge specialization, at the risk of fragmentation of expertise, or general education at the risk of incompleteness.

The third factor is the “participatory turn.” It implies a new relationship with users in which the division between the scholar and the layman is questioned. This new requirement blurs the old reading, which is based on a triptych of “project management, project control, enterprise.” Between these actors, a new world has developed: urban and architectural programming, consultation consultants and specialists, consulting activities and project management assistance, etc.

Finally, globalization. This has led to an international circulation of models and ideas, to the formation of a “star system of architecture” linked to the dynamics of “global cities.” This dynamic is nowadays criticized for its effects on territorial inequalities with segregation and gentrification dynamics. Here again, it is a challenge for the training of city professionals: we train our professionals with an almost obvious and central reference to metropolization, but we can also legitimately think that the moment of metropolises will, at some point, take on a different voice and that the question of defining new territorial balances will occupy us. ■