

"Development in China: High Speed, High Rise, High Price"

p.84-91 Malte Selugga

HIGH SPEED >>>

Chinese build cities – and they build them fast! Qiu Baoxing, China's Vice Minister of Construction recently estimated that 2 billion square meters of floor space - nearly half of the world's total, is being built in China annually.¹ This would translate into more than 5 million square meters a day – an area equal to the size of roughly 680 average sized soccer fields. "A master plan for a project consisting of 300 single-family houses only took a team of five designers to finish in one night. (...) The detailed drawings for the entire project to be used as construction documents took fifteen days to complete," marvels Nancy Lin in the book "Great Leap Forward" co-produced by Rem Koolhaas. As much as foreign observers might be struck by the extraordinary speed of China's contemporary construction high-speed building production cannot be considered a new phenomenon in urban China.

THE TRADITION OF "FAST"

Chinese understanding of time in the build environment differs fundamentally from the European. Since in ancient China not so much the physical properties of a structure but its spiritual foundation deemed important, "a dwelling, or a public edifice such as a temple or pavilion, might as well be permitted to deteriorate almost to the point of collapse before receiving remedial attention."² In most cases dilapidated or old buildings were simply knocked down and replaced by a new structure. However, this "new" was not new in the sense of being something inspiringly different, but - bound to the very same set of ancient rules as the predecessor - this "new" was in effect a replica of the old, thus ensuring the continuity of the overall cultural value system. Like in pretty much all aspects of China's ancient society, not individuality and individual creativity but continuity and stability was aimed for. Over the millennia ancient Chinese, aiming on the one hand for social, cultural and thus intellectual stability while on the other hand cherishing constant physical renewability, developed a unique form of standardized construction. Apart from featuring a highly standardized architectural canon the usage of wood as prime construction material, which was, as Andrew Body pointed out, "light for its strength, cheap to transport, easy to work and to carve, easy to mass produce and to standardise"³ further increased construction speed.

Like buildings were rapidly erected, dilapidated, collapsed and were replaced with "new" structures, entire cities – especially the imperial capitals - were seldom blessed with longevity. With exception to Beijing after the end of the Ming- and Qing-Dynasty, most imperial capitals fell into despair or were razed to the ground after a dynastic change. New sovereigns build new capitals – and they build them fast. The construction of the basic building complexes of the city of Luoyang during the Sui-Dynasty (589-618), for instance, is estimated to have taken only one year – from

planning to completion. Not less astounding is the speed Ming-Dynasty Beijing was constructed. In 1406 Emperor Yong Le decreed the relocation of his capital from Nanjing to Beijing. In 1420 work was completed. Wu Liangyong specifies: "Fourteen years elapsed between preparation and completion, but the actual construction took only about three years."⁴

Inspired by the staggering speed the ancient built houses, villages and entire cities, many modern day leaders and planners aim to construct China's super cities virtually overnight. However much of today's and yesterday's understanding of planning might differ, high speed construction coupled with a buildings short life-cycle is thus without doubt deeply engrained in Chinese planning mentality.

HIGH RISE >>>

Visiting China, visiting its ever more numerous new super cities, one starts to wonder: What generates this enormous growth of the Chinese city? Where does this sudden demand come from? Will the current construction boom continue or has China's high-speed urbanization already surpassed its peak?

Whereas in 1978 the majority of Chinese still resided in rural areas and only a mere 18% dwelled in urban centres,⁵ by now it is estimated that around 40% of the total population lives in cities. Despite the fact that some of this dramatic increase might be blamed on the wonders of statistics, or on the fact that the definition of county, town and city as well as the definition of rural and urban population has undergone significant changes in recent decades, the estimated 15 million rural people migrating to cities annually speak a clear language. Whereas under Mao Zedong an anti-urban policy was propagated, millions of urban youth were send down to distant villages and industrial progress was envisioned without the creation of "de-humanising" massive urban agglomerations, post-Mao governments came to acknowledged that industrialisation and national prosperity was inevitably coupled with flexible labour markets only found in cities. After almost four decades of denying the cities importance to the well being of the nation, today they act as the economic motor, drawing in millions and millions of newcomers each year. Destructing existing bureaucratic barriers such as the *Hukou* system, a regit Maoist registration system once praise by many Western observers for its efficiency in controlling rural to urban migration and thus the creation of horrifying slums surrounding the cities, greater individual mobility – and thus labour mobility - is ensured today.

However numerous these newcomers might be, mostly earning minimum wages, living in dormitories, these millions – at least today – are not the main driving force behind the rapid expansion of China's cities. It is rather the "ordinary" city dwellers and their increasing demand for luxury that push the city's boundaries out into the fields and up into the sky. In the past 25 years living standards in the urban centers improved dramatically. Whereas the per capita living space in the urban centers had decreased under Mao's reign from 1952 4,5 m² to 3,6 m² in 1978 – it rapidly increased in the years following the introduction of Deng Xiaoping's open door policy to over 25-30m². This equals a more than 7-fold increase. However, since this statistic indicator (formulated in Maoist times as most residential units did not feature separate kitchens and bathrooms) does not include the floor areas of bathrooms, kitchens and hallways the real increase in per capita floor space consumption is even

more dramatic. Especially in the light of the one child per couple policy average household size inevitably decreased. Already in 2000 the average household size in the capital Beijing was only 2.9. Given that today all new residential units feature a bathroom and a kitchen, the real increase since 1978 is probably close to 10-fold! Consequently: where there was a single story house yesterday, there has to be a ten story building today.

However spectacular the increase in floor space demand is already due to the construction of large scale factories and adequate dwellings for the beneficiaries of the new wealth, another sector, virtually non-existent in pre-1980 times, even more drastically fuels the rapid growth of the cities: the tertiary sector. Under Mao the socialist economy relied almost exclusively on agriculture and industry. There was simply no need for the construction of office and administration buildings – not to mention administrative centers and CBDs. Yu Zhou writes: “After the early 1990s, Beijing seemed to emerge overnight as a service giant and international business centre. In 1980 the tertiary sector produced 26.8 percent of total output; in 1990, 38.8 percent, and it is projected to generate about half of total urban output by the year 2000”.⁶ It is estimated that by 2010 over 52% and by 2050 around 68% of the city’s work-force will be working in the tertiary sector. Consequently office towers, office parks and entire CBDs are virtually mushrooming out of the ground. Since nobody can estimate the real demand and local city district authorities – in constant rivalry with one another - all aim to build the highest and brightest business center, quite often to simply document their own personal political potency and ensure attention from somewhere up higher in the party’s hierarchy, the high-speed production of office space seems to spiral out of control.

Given the magnitude of change already having occurred in the past two decades, one starts to wonder if this incredible boom will continue or if it already has surpassed its peak. Even though it is unlikely that after the 2008 Olympics and the 2010 World Exhibition big urban centres like Beijing and Shanghai will continue to “grow” at the present rate, China’s cities as a whole will keep on expanding over the next decade or two. Lü Junhua, professor at Qinghua University, wrote in 2001: “It is predicted that by 2030 China’s population will reach 1.6 billion and the level of urbanization will increase to 55 percent.”⁷ More recent forecasts predict an even higher urbanization rate of more than 60% for the year 2030. Given that this would only roughly equal the urbanization rate of mid-19th century England and given that the average urbanization rate worldwide is predicted to reach 60% by the year 2030 as well, it is not unlikely that within the next two decades more than half of China’s total population will reside in cities. However, this does mean that China’s cities in the next two decades on top of the nowadays estimated 500 million city dwellers have to accommodate an extra 400 million people.

HIGH PRIZE >>>

On the one hand the achievements of the past three decades most certainly have to be praised and celebrated. There is probably no comparable time in human history where a country managed to overcome mass poverty in such a short amount of time and equip large parts of its urban citizens with a middle class living standard. On the

other hand, the magnitude of change and destruction applied to the Chinese environment and landscape for sure has no predecessor in human history either. As can be read in the news pretty much every day: Chinese cities feature the worst air quality, Chinese rivers and wetlands are polluted, China's forests have virtually vanished. In his book "The Art of Survival" Prof. Yu Kongjian of the Peking University explains that the underground water over use in the city of Beijing is 110 percent and that each year the underground water level drops by one meter. Consequently farmers of the surrounding areas neither can continue ploughing their fields nor breeding fish in adjacent fish ponds as many traditionally did. Deprived of their means of income some directly migrate to the city others collectively sell their land to developers who will build ever fancy residential compounds for the ever growing urban middle class.

However, it is not only the total amount of construction which is challenging China's ecological balance. It is also the size of each and every object constructed. Super size volumes like the Oriental Plaza in Beijing – often designed as cities within a single building complex – themselves cause serious problems for the city and the environment. As Jane Jacobs already pointed out in 1961: extra-large developments built up all at one time, be it single super size structures or an extra-large residential area, lack the power to provide a flourishing diversity in businesses as well as wide range of income-groups, lack the power to reinvent themselves and lack the strength to adopt to the changes of time. In regards to extra-large residential areas Jacobs concludes: "Neighborhoods built up all at once change little physically over the years as a rule. (...) The neighborhood shows a strange inability to update itself, enliven itself, repair itself, or be sought after, out of choice, by a new generation. It is dead. Actually it was dead from birth, but nobody noticed this much until the corpse began to smell. Finally comes the decision, after exhortations to fix up and fight blight have failed, that the whole thing must be wiped out and a new cycle started."⁸ The construction of extra-large developments thus shorten the life-cycle. Despite resting on a "cultural" foundation which can be, as documented above, tracked back for millennia in China, a short life-cycle in construction is neither economical nor ecological.

As China's economy barrels forward, housing prizes follow suit. Today affordable units are located further and further away from the urban center – and peoples' place of work. Since public transport in most Chinese cities is poorly developed people start to search for alternative methods of transport. With the introduction of the QQ – a small, cheap motorized vehicle, comparable to Ford's Model T and the Volkswagen Beetle - the foundation for mass car ownership is laid. Some analysts predict that nation wide there are about 130 million Chinese families financially capable and likely to buy a car in the coming 10-15 years.⁹

Many great ancient empires such as the first united Chinese empire under Qinshi Huangdi or the Roman empire owed a great deal of their strength to their advancement in infrastructure, to the construction of canals, bridges and roads. In modern times the development of many economic super powers equally relied on the construction of infrastructure coupled with the rise of the automobile industry. The economic ascension of the US as the undisputed world power after WWII was rooted

to a great deal in road construction and the promotion of mass car ownership. Similar to this, countries such as Germany, France, England and later Japan and South Korea founded great parts of their economic prosperity on the four wheels of the automobile. Today, in the hope to transform the nation into a world leading economy, it is China worshipping the God of Mobility. Consequentially the automotive industry in China has been designated a pillar industry. Zhang and Hu write "China's auto market has been heavily protected because the government has tried to make China's auto industry become an important driving force in bolstering China's economy. Driven by job creation and tax revenue incentives, local governments are often enthusiastic about developing a local auto industry."¹⁰ Like mass car ownership provided the basis to empty out America's cities and foster extreme suburban growth, today with the creation of a domestic car industry and mass purchase of automobiles China's cities will equally be subject to urban sprawl. Consequently the one thing that deemed sustainable about China's contemporary city is endangered today: density. The rise of the automobile under governmental patronage is threatening to deprive Chinese cities of their compact form and is nurturing the destruction of arable land.

Despite the fact that China is the forth largest country in the world, and some planners could indeed argue that China thus has enough space to accommodate large scale US-styled suburban paradises, it is important to note that two thirds of China's territory is covered with mountains, deserts and non-arable lands. With less than a third of the world average of arable land per capita land suitable for agriculture in China is to be considered an extremely limited resource. Since China is an ancient civilisation rooted in agriculture, villages, towns and consequently modern day cities are almost exclusively located in the heart of the farmlands. With the increase of overall living standards and the territorial expansion of cities China today is literally "eating" up its very foundation.

"Traditional ways of development have caused the near breakdown of China's resources and environment; and people's lives are in great danger". This is not a statement of a foreign observer but a statement of the Vice Minister of the State Environmental Protection Administration (SEPA), Pan Yue. Since environmental degradation starts to endanger the achievements so bitterly fought for, it comes at no surprise that even government institutions start to address the problem openly. Guo Xiaomin writes: "While the GDP growth rate in the past twenty years is impressive in most of Chinese cities, the annual loss caused by the environmental and ecological degradation is now between seven and twenty percent of GDP. This is equal to, or even higher, than annual GDP growth."

The Chinese government has an overwhelming task ahead. On the one hand, in order to guarantee social stability, it has to foster economic growth, document that China's economy is healthy and strong and that after all, everybody will one day get the chance to participate in the new wealth of the nation. Extra-large buildings such as the almost completed CCTV tower in Beijing or the Olympic stadium – however wasteful their construction might be - do have the essential function to constitute icons of hope for all those still waiting for their turn. In addition to this the government has to cater to the needs and dreams of the middle class, who demand increasing comfort and luxury.

On the other hand the very same government in charge of guaranteeing economic growth has to – in light of increasing environmental destruction - slow down the process of development. Once proud of being capable of instant city building – documenting that China had re-emerged and was to continue the great cultural legacy of the Tang-, Song-, Yuan-, Ming-, Qing-dynasty - celebrating the ever new and a short physical life-cycle of all structures, they now have to acknowledge that this very mentality has lead to tremendous waste of resources and needs to be replaced by a more sustainable approach. The deeply engrained “More is More” or “The Bigger - The Better” attitude, resulting in ostentatious super size apartments with 500 or even 1000 square meters, has to be abandoned. Most recent government attempts demanding that from June 1st 2006, homes smaller than 90 square meters must account for at least 70 percent of the total floor space in any new urban residential housing project, are a step in the right direction. In addition to this the Ministry of Construction has recently completed the groundwork for regulating both residential and commercial building energy consumption. However, compliance with new governmental rules, prohibiting the construction of new villa compounds and calling for more ecological methods of construction is relatively poor – if not non-existent - on the local level. Consequently, talking about sustainable development, building show-case environmentally friendly houses for the Olympics and coming up with new regulations is not enough anymore. The Chinese government has to actively monitor the implementation of their legal framework and raise environmental awareness among their citizens. As Pan Yue already pointed out, China has to abandon traditional ways of development and proceed down new paths, maybe new paths for all of us.

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 - 8 Ibid., p.229-230.
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