

TWENTIETH CENTURY
CHINESE ARCHITECTURE :

Examples and Their Significance
in a Modern Tradition

by

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ABSTRACT

If one were to seek a unifying factor in this relatively short period of a modern Chinese tradition, it might be surprising to find that amidst the jolts of passing out of a feudal era into the twentieth century, the ancient principles of yin and yang still provide the jagged thread with which to attach the modern Chinese culture to the ancient one. This integration of opposing forces causes the pendulum to swing in any cross section of both material and non-material form. Although this idiosyncratic leitmotiv is often to be found locked in a state of contradiction (the antithesis), the principles nevertheless provide a flexible structure and the leeway for change; as Chinese history has proven that rigidity most often results in decline and defeat. Moreover, it has provided a base for the growth of knowledge, readily adapting to the Marxist and Maoist methodology of dialectical materialism in this modern era.

The need for the Chinese to determine "what is modern!?" for themselves underlies their twentieth century progress. For architecture, the question has been no less dual than for any other application, as 'modern' is both ally and adversary. Even in my most sophisticated revelations of coming to terms with what is currently being built in China, I still boil all of the hundreds of tangents in my mind down to the simplest exclamation, "How did this happen?!". The question of a break with the past follows soon thereafter, which may be an inherent trait of modern architecture itself (the question, not the schism). The rupture of buildings from their environment, nonetheless, is the supreme irony of the modern Chinese predicament. The 'skin' of the building may provide this intermediary for the Western 'object,' but it is simply a tailored suit of the wrong size for the Chinese.

This thesis will attempt to demonstrate both misalignments and alignments resulting from the emeshing of a Chinese conception of architecture with other modern

conceptions. The investigation will run concurrently with the argument for continuity in a modern tradition of built form on the Mainland, in maintaining the yin-yang principles of integrating opposites. Three themes traverse the crossroads of modern-western and modern-chinese, with regard to architecture; and therefore underlie this document: the role of history (and with it, theory); the role of art (and the art of architecture); and the role of the individual (and with it, the profession). The role of nature is a priori.

Although architecture may manifest in the 'object,' it begins and ends with the subject. Da Vinci's ideal man remains, to my mind, the quintessential diagram of European man's thoughts and striving. If we were to contrast this with a modern day video of a billion people on the deck of an enormous ship, on an even larger and shifting sea, we would immediately see that the problems are of an altogether different substance. The centering of the Asian individual alongside his fellow man is not a question of setting a single diamond; rather, it is perhaps more analogous to stringing a strand of freshwater pearls, carefully knotted after each one.

It is not my intention to be definitive in writing this document. If I may borrow an element of Chinese architectural detailing, the clues which I am attempting to structure will form at best, a latticed-screen view of gaping holes, perhaps to cast a few fine shadows. By doing so, it is my hope to be consistent with the Chinese tradition to build at least as much with void (if not more) as with solid; as this is what I admire most about the Chinese sensibility. It is also my wish to syncopate this assemblage with a modern multi-perspective; for as we who live in the present era all know, it is no longer a matter of finding a single spot in any one time; but rather a matter of maintaining an equilibrium in the choices of many times being presented to us, all at once.

Thesis Supervisor: Julian Beinart
Title: Professor of Architecture

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F O R E W A R D

As the material on which Shanghai rests is totally unconsolidated-- silt from the surface to about 20 feet, sand to 300 feet, and gravel mixed with sand and silt to about 1000 feet,-- it presents serious problems for building. These problems have been overcome by floating the taller buildings on concrete rafts in order to provide a stable foundation adequate to support structures which would otherwise sink into the alluvium. Before this method was experimented with in the buildings of the new Shanghai Club in 1910, large buildings had been set on wooden pilings driven into the silt.

It was the achievement of the architects and engineers that made it possible to change the skyline of Shanghai with skyscrapers. Shanghai's twenty-storeyed hotels and public buildings, erected during the 1920's and 1930's float on their concrete rafts in this jelly-like subsoil.¹

Reinforced concrete pilings have since proven to be a more efficient means of dealing with unconsolidated soil. The virtual absence of a written history, either chronological or otherwise, marks the topic of Modern Chinese Architecture as similarly dispersed or scanty terrain. To dig deep into its substance, when so little has been written for its foundation, would require the thoroughness of a book. To hope to anchor a set of postulates instead, within waters whose only certainty is that they are deep; seemed only to invite arbitrariness.

I do not read or write Chinese, and even if I did, inaccuracies would be inevitable, as the scarce and incomplete documentation of China's modern architecture is often veiled with a more significant message: the political overtones of the day. Architecture as an issue fades in and out accordingly in its recent history, as its slight degree of autonomy is as changeable as are other priorities vying for the number one spot. Notably, these are economic issues which cause a much larger pendulum to swing; between heavy industry, light industry, and agriculture. There are, nevertheless,

synchronizations in the timing of the development of modern architecture with these issues, as they are inextricably related. In view of these circumstances, the accumulation of data available for this thesis has been quite like the experience of simultaneously listening to several records; all of them skipping.

A format of case studies arose as the most viable method with which to hope to catch this slippery fish. The question then became; how best to approach the cases with some consistency. Material and non-material factors were initially conceived of to set the stage for their study. Instead, they were to become the body of the thesis. In the absence of a written documentation of China's modern architectural development, the gravitation toward a treatise became inevitable. The 'factors' grew to provide a more honest method with which to probe and examine a variety of cross-sections: slices of a substance whose nature is somewhat unknown, uncharted. I refer to this means of access, metaphorically, as the 'concrete raft' approach.

While working with the factors, it became increasingly clear that the case studies would have demanded a degree of presumption, in lieu of a substantial background; which would have been inappropriate. Indeed, this runs against the very grain of cross-cultural study, in which assumptions must be made, whereas presumptions are only to be made with caution. Furthermore, although the method of case studies is certainly at its richest when it defines strategic anchorings to issues which are brought forth, precisely due to their study; even in Western use such an avenue can be inclined to deformation, in an effort to force an amalgamation between the example and its issues. The reading of a building as a text is often one such instance of this; when performed at the exclusion of broadened parameters, it is in effect, an over-reliance on the artifact, and convincing only within its confined limits. Such a

cul-de-sac is not characteristic of the case study, but it is nevertheless tied to its inclination, as a method, to treat the artifact very much in terms of itself: as an autonomous object. It must here be noted that both of these terms: autonomy and object; are 'foreign' to Chinese Architecture, and this brings us to a point which is essential to understanding the advent of Modern Architecture to Mainland China.

Although it will be demonstrated that a certain degree of autonomy is necessary in order for architecture to 'flourish' in this day and age, it is also to be noted that just as the Chinese have been insistent upon finding their own way through 'the forest' of modernization, so too will the degree of architectural autonomy likewise have to be calibrated by the Chinese themselves. This will occur, however, only against the context of its early-twentieth century invention by the West, which is only now beginning to be challenged. Gothic cathedrals are considered exemplary of an era of great 'building,' to question the validity of 'total' autonomy. In the West, 'quasi-autonomy' has been suggested as an alternative,² a lesser degree of which, will undoubtedly be better suited to the Chinese situation.

Directly related to the rise of autonomy (in the West), is the issue of aesthetics, which will also be discussed in the segment on theory. Although they are not one in the same, aesthetics and 'the art of architecture' are often placed within the same arena. 'Architecture as an art' has been the source of much heated debate since Liberation, on the Mainland. It is a particularly pressing theme for public buildings, causing such controversy, that it has been abandoned for periods of time. This is perhaps one of the reasons why so few attempts have been made to write about Architecture, prior to the 1980s. It is, however, more noteworthy that the Western conception of historiography

is foreign to the Chinese scholar, prior to this century, as are our concepts of architecture and the architect. Moreover, indeed there has not been the time in this tumultuous century, for the consideration of modern historiography during the course of a fragmented architectural development.

Housing is an exception to this, although again, particularly in the last decade. Planners have helped to chart its course more consistently. I must apologize that I have left the issue of housing as architecture, as separate as is possible. To treat it as a mere appendage to the architecture of public buildings would have been unjust. To have included it in any other way would have caused a great centrifugal dispersion to this already amorphous thesis topic. Housing raises very different sets of issues with regard to architecture and its privatization. Indeed, it warrants its own undivided attention.

Instead, there are correspondances in the timing of architecture with urban form, with industrialization, with the policies of the day; which strongly suggest a continuity in a modern tradition, and as is also the case in the West, this continuity includes its ruptures. These are the consistencies which I seek to draw forward on footings both of art and science, within a segment of architecture which is public and non-domestic.

Dualism is to be distinguished from the aforementioned extraction of consistencies. Rather, it is a trademark, a special characteristic, an omnipresent trait. The constancy of dualism colors paradox into Chinese architectural principles: dilemmas, dichotomies, dialectics, in theory; symmetry juxtaposed with assymetry, solid and void, half-half proportions; in practice. This is an intrinsic pattern throughout China's history. In this respect, urban form and planning is well-situated, straddling both the city and the countryside, striving for a symbiotic relationship: `ruralize

the city, 'urbanize the country.' Imbalances in this policy are at the crux of the nation's planning. Controversies currently center around the question of 'de-urbanization,' and the long and short term effects of its promotion. Flexibility provides safety valves for Chinese national planning, (a characteristic which has been contrasted with their Soviet predecessor's rigidity); however, as is the case in any nationwide endeavor, it is balance which is sought, as there is no infallible solution.

Whereas China has identified her own urban leitmotiv, she has not yet achieved this success in architecture. Lack of priority, lack of time, and lack of autonomy, have all contributed to this. Instead, there has been a tendency to just blanket her modern architecture with simplifications labelled 'Western' and 'Chinese,' from the beginning. (Let us not forget 'Sino-Soviet' later on, in the 1950s.) I am not convinced, however, that such a nomenclature: neo-European and neo-Chinese; summed up the early-twentieth century issues then, any more than 'Western-modern' and 'Chinese-national' do now. These terms are treated as the sore and the remedy, all occurring in the same locale. In this sense, they do more to camouflage the issues, than to reveal them. Certainly, her approaches to both architecture and urban form do share the tension of polarization, of dualism; but in the instance of urban form and planning, her means of access has, to a large degree, become her own invention. By contrast, it has only been within the last several years that China's architecture is reaching a point of coming into its own being, with some constancy. The irony of this, is that a new wave of 'western transplant' buildings are also an advent on the Mainland. Whereas these joint-venture projects do provide educational opportunities, as well as satisfying a basic necessity; they also renew the sense of distraction, which allows the Chinese to avoid coming to grips with their own sense of design, when for the first time in many years, it is openly being

encouraged. Moreover, these joint-venture projects are often 'more Western than Western,' and epitomize a shallowness of design which has little to offer apart from encouraging an imitative approach. It is only comforting to find the word 'vulgar' repeatedly applied to these new projects, (particularly hotels); and yet it is still unquestionable that this rich exposure of building technologies is of benefit to the Chinese experience.

Nevertheless, many of these glittering joint-ventures are but decoys; decoys of true Western Architecture, and decoys to the Chinese who go hunting for ducks and come home with birds. For these new projects are in the same 'twilight zone' state as were former western-transplants, a century ago. Two statements, which are equally true, can be made about them: 'They are neither Chinese nor Western.' 'They are both Chinese and Western.'

Issues which are of a more intrinsic nature to the traditions (both modern and ancient) of Chinese Architecture must be brought forward, so that the decoy of 'Western - Chinese' no longer solely occupies the limelight. Undoubtedly, this will be related to reaching a comfortable degree of architectural autonomy, suitable to the Chinese condition. Only then will the emergence of her own leitmotiv, her own flourishing, occur. Repeatedly, bids are placed that the peasants will be the ones to find this way. They have been in the best position to take advantage of rural democracy,³ and thus are essentially the first to dip their fingers in the autonomous pot. The peasants also have the richest memory of the building tradition.

Needless to say, however, one must understand that the issue of autonomy is quite adverse (as is capitalism) to the Communist Party. In a nation with a billion inhabitants, there is an inherent tendency to limit the scope of decision and individualization, rather than to encourage its

proliferation. Even within a confined range of choice, repeatedly, it is consensus which is sought. It is appropriate that such heed be taken, given the extent of the situation. The Chinese acrobats are experts on balance; but finding a balance within the range of architectural autonomy will require more than expertise. It will also require much experience, the willingness to make mistakes, time, and just plain good instincts; all of which the Chinese are rich in resource.

If a more flexible degree of architectural autonomy will find its own course in time, it is the question of the object which remains. Herein lies the conflict. The 'autonomous object' is one of the package deals from the West. If the former element can be addressed, then the latter, which has been embraced to the point of being virtually smothered to death: (the box, the box), should be equally, if not moreso, palatable. Ironically, it is this element that is far from reconciliation. The following excerpt addresses this specifically:

The autonomous object, set in opposition to nature, emerged during the 'Modern Movement' as the predominant approach to architectural form; reflecting a change in the ideology of a society, and more specifically, the position of the individual within that society. (This opposition occurred to varying degrees, but the relationship remained one which was exclusive, even when juxtaposed.)

This overt treatment of architectural form as an object as such, is however, in direct conflict with principles of both traditional and classical Chinese Architecture, whose concerns moreso lie with the creation of outdoor rooms. (An example which attests to this, is the treatment of corners in domestic and classical complexes, which invert on the architectural form itself.) This stance can be regarded as inclusive and yielding to nature, again, in a range of from subtle to bold degrees. (One might call this 'engaged,' versus the above 'juxtaposed.') Moreover, there is continuity within this range of postures, in which architecture and nature are reciprocally related: from the relentlessly ordered symmetry of her classical architecture,

to the opposite extreme, in which architecture becomes virtually subjugated by nature.⁴ (And it is ironically at this point that the pavilion emerges, which is not the sole, but nevertheless a rare instance of the 'object' in Chinese architectural tradition. The pagoda is another such instance, but it can be attributed to Indian origins.)

Simply stated, this fundamental conflict makes the current adoption of a modern 'image' unacceptable, because it is not only the issue of the label on the bottle, but of the 'bottle' itself.

Furthermore, a 'Modern' treatment of the form is an obstacle to the continuity of the very rich Chinese heritage, based on principles of yin-yang, in which the relationship of solid to void relentlessly intermingle.⁵

Recent projects from the "Jianzhu Xuebao" (Chinese Architectural Journal) strongly suggest that this Chinese sense of design: that of integrating solid and void-- has not been lost by the Chinese hand. The one concession, however, is indicated by the absence of a pure or primary form as void, as had been the case particularly with both Imperial and domestic courtyard design. Pure geometries have become linked to solids, but they are arranged in series, clustered or in rotation; and use of the diagonal is often the first suggestion to set the objects in motion. Void is thus, created by default; but it is the integration of the two which is instrumental. The inability to distinguish solid from void at a glance, is indicative that a true Chinese sense of design is present in many of these new proposals. Furthermore, if symmetry is absent, (which it rarely is), proportions of one to one will instead provide a 'built in' sense of balance (as in free plan); as the Chinese are amongst the few peoples on earth who can make use of the half-half proportion successfully, to enliven design rather than to mute it.

These observations begin to suggest just some of the factors with which to critically examine modern Chinese architectural design. Perhaps it is also why a Western monolithic building with a Chinese hat, is thus far, among the most

offensive renditions of modern Chinese `solutions.' It has essentially used the dignified form of the West (the object, pure form, the skin); in combination with a Chinese element which is used to intermingle the void of Chinese architectural form, so successfully with its adjacent structures: the roof; and bastardized them both.

N O T E S

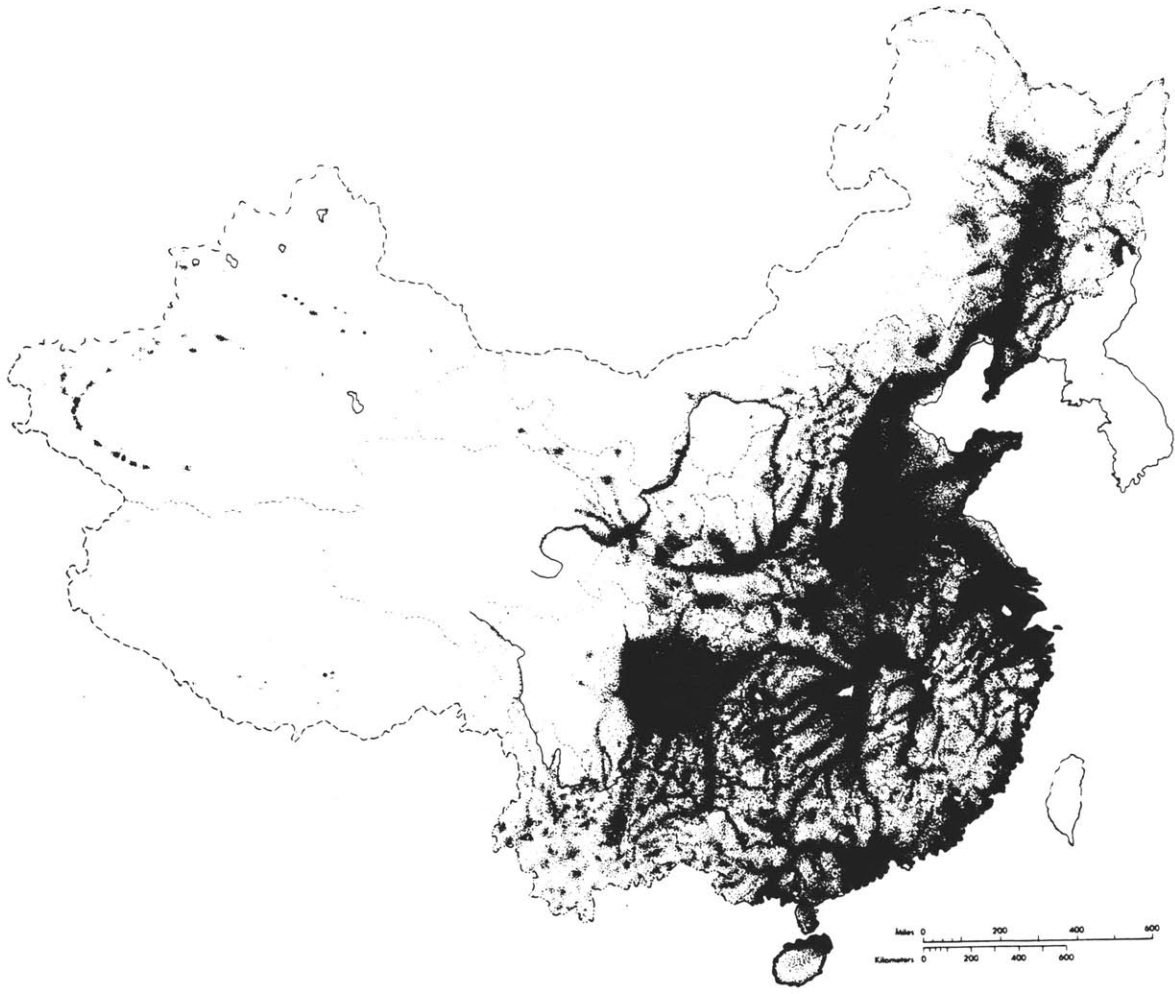
1. Gin-Djih Su, Chinese Architecture: Past and Contemporary, (Hong Kong: The Sin Poh Amalgamated, 1964), p.130; quoted in Rhoads Murphy, Shanghai--Key to Modern China, (Cambridge, Mass.: Harvard University Press, 1953), p.31.
2. as suggested by Stanford Anderson.
3. This is Tunney Lee's suggestion. Its discussion will be resumed in the segment on materials and technologies. (Tunney Lee is currently department chairman for Urban Studies and Planning at M.I.T..)
4. as is the case of Chinese Classical Gardens.
5. Karen Marcus, "Objections to the Object," (unpublished, 1986).

A M O D E R N H I S T O R I C A L S K E T C H 1842-1911

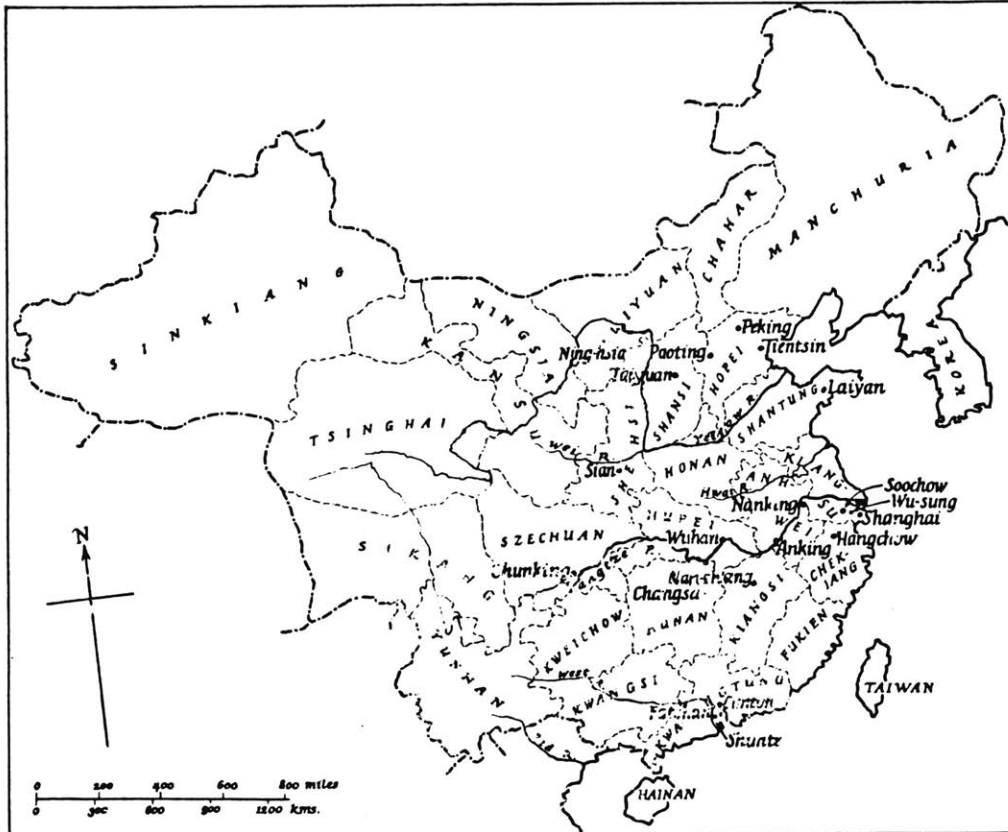
The Treaty of Nanking remains the most conspicuous mark of Western intervention on the Chinese Mainland. It was the first of its kind, during the period of the Opium Wars (1839-1856) with its corresponding 'unequal treaties.' Although trade had been ongoing some two-hundred years prior, and had been officially signalled by the Manchu Court in 1760 with the opening of Canton as the sole trade port; the significance of the Nanking Treaty is its regard by many (both Chinese and Western) as having set the tide for irreversible Western intervention, and for the subsequent demise of the final dynasty, itself of foreign rule by the Manchus. With these, the modern era of China was irrevocable.

When the British penetrated as far as the city of Nanking--tragic pivot of China's modern history--the Court surrendered and signed the Treaty of Nanking in 1842. Treaties with England's collaborators, France and the US, followed swiftly. It took the Chinese people one-hundred years of struggle to break the grip of these and subsequent treaties, which they call the "unequal treaties." Most Chinese today regard 1839 as the point at which their modern history begins, and their consciousness of the war remains acute.¹

Amongst the terms of the treaty were the following concessions: the legalization of trade at four ports in addition to Canton; Hong Kong was ceded to Britain by the Manchu Court, which also paid an indemnity; foreign merchants and government agents were allowed residency in treaty ports (these became the well-known legation quarters);² and missionaries were given the right to buy land and open schools. Extraterritoriality soon became an added insult to this injury. It stipulated that Westerners were to be tried by their own governing laws and courts on Chinese soil. This was a provision of the Treaty of Wanghia, signed with the Americans in 1844, which further extended any new concessions automatically, to each of the Imperialist nations, under the 'most-favored-nations' clause.

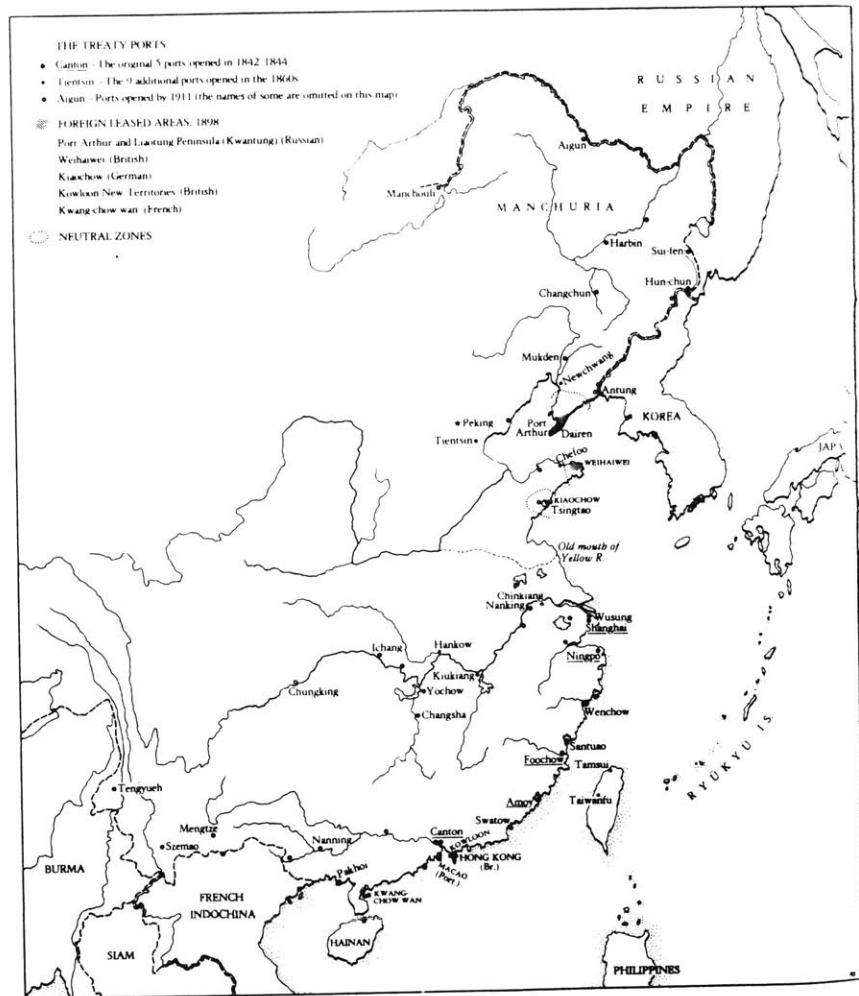


*Répartition de la
population : chaque point
représente
5 000 habitants.*



The British and the French launched the Second Opium War in 1856, at a time when the Manchus were already preoccupied with internal matters: The Taiping Rebellion of 1851, an anti-dynastic revolt which had resulted in the establishment of the Taiping capital in Nanking in 1853. This second war was to culminate in the surrender of the Manchus at their court in Peking. The Treaty of Tientsin (1858) and the Peking Convention (1860) granted the Imperialists precisely what they had been seeking: inland access to the markets along the Yangtze, as well as diplomatic representation in Peking, enabling direct contact with the Chinese central government for the first time. Eleven ports were added to the original five, which

included locations in Taiwan and Hainan Island.³ Opium trade was also legalized. Soon thereafter, Britain and France intervened in the civil War, and the Taipings were defeated by 1864. Mao Tse-tung describes this alliance between Imperialism and Feudalism as the main feature in pre-revolutionary China.⁴



FOREIGN ENCROACHMENT ON CHINA

A Chinese modernization program was initiated in 1861 by Prince Gong, who came to power at that time. Among the projects instated with this program of limited scope, were foreign language institutes, an arsenal, a shipyard, and machine factories. These created the demand for Western scientific learning. Through the years which followed, mining projects were added, shipyard companies were founded, and students began to be sent abroad to study engineering and military science. (The construction of rail and telegraph lines began late in the century.) This program came to be known as 'the self-strengthening movement.' In terms of modernization, it is characterized as moderately oriented toward defense, as its major interest clearly lay in the restoration of social and political order.

A popular slogan of the 1890s was, 'Chinese learning for the essential principles; Western learning for practical applications.' Between 1872 and 1876 when some 150 students were sent abroad (the majority to the US, but also to France and Britain), the intention had been for Chinese learning to remain the foundation, with Western education to supply new



THE CHINESE EDUCATIONAL MISSION TO THE UNITED STATES.

pragmatic aspects. A fifteen year duration had been planned for the students program, but they returned prematurely in 1881, when it became evident that 'modernization' was overtaking the primacy of Chinese learning.⁵ Thus began the



Chinese students' baseball team ("The Orientals"), Hartford, 1878.

dialectic between 'Chinese' and 'Western,' from which many versions, both complementary and contradictory, would subsequently stem.

In the meantime, although she had dominated her son's reign since the 1860s, the Empress Dowager Tz'u-hsi officially came into power in 1875; an event which is far more indicative of the times. One of her high court officials, the scholar-administrator Li Hung-chang, was to play a key role during her administration. In collaboration with his colleagues, restoration was sought through the application of Confucian moral and political principles, encouragement of economic

recovery, and a select use of Western technology. Regional equilibrium was attained as a result of this effort, which while helping to maintain dynastic control, did little to strengthen it to its former status. The conflict between the dynasty and modernization was growing.



LI HUNG-CHANG ON HIS WORLD TOUR, 1896.

One example of this was the obvious contradiction of the popular slogan, which coupled the educative system of societies generally bound with bourgeois revolution; with the Chinese feudal superstructure. This made for an awkward and unsuccessful attempt at matching science (foreign technology) with a political structure which was not undergoing any modern transformation of its own.⁶ The Ch'ing Court continued to extend privileges to the Imperialists, inhibiting the rise of a merchant class, while maintaining the feudal format. The effect of this was to injure Chinese business interests.⁷

Rivalry among the Imperialist powers was also growing by the final decades of the century. This further induced what was termed 'melon-splitting fever,' as separate wars began to be waged against the Manchus, resulting in the declaration of 'spheres of influence' by the end of the century. The Yangtze was predominantly British; Russian interest was in Manchuria, Mongolia, and the northern treaty ports; the Germans were chiefly in Shantung Province; while the French retained their hold in the south, bordering her Vietnamese conquests. This condition, in which one nation's interest was said to predominate over others was in direct contradiction with the 'most-favored-nations' clause.

Of all the nations, Japan was the most aggressive. Having defeated the Chinese in a six month war in 1894, she annexed Taiwan, took control of Korea, and expanded claims in

Russia's slice of the melon: southern Manchuria. The following year was to mark yet another threshold in granting privileges to the Imperial powers. Japan became the first to be given the right to build factories in China. Coupled with this, came the right to move products from these factories, duty free, within China. Under the 'most-favored-nations' clause, the last five years of the century became ones of extensive foreign investment. Railways, mining, cotton and other light industries, expanded greatly; while foreign banks became established.

This virtual 'defeat' of the Manchu Court gave rise to two forms of a Chinese bourgeoisie: those who chose to ally themselves with the foreign capitalists; and those who were primarily concerned with domestic affairs: the national capitalists. This latter group was to become the instigator of a drive for independence, one of whose key members was Dr. Sun Yat-sen. It was he who made the important distinction that China's status of a sub-colony was quite different from the full colony status, for example, of India. In the latter instance, in spite of being exploited, there were benefits from the stability of a single foreign administration. By contrast, the Chinese status, in effect, further undermined her internal political unity. The tension between internal lack of stability and external pressure augmented with this fragmentation of her domestic and foreign economies.

In an effort to appease the growing contradictions in the Imperialist economies, The Open Door Notes of 1899 called for open markets in all of the treaty ports, as well as for the maintenance of China's territorial and political independence. This request came from the US, who wished to return to a cooperative policy and prevent the 'melon' from further splitting wide open.

In the meantime, internal conflicts were once again putting pressure to bear on the Manchu Court. The Boxer

Rebellion erupted in 1900, this time in the northern province of Shantung. This anti-Manchu movement arose in objection to drought conditions, heavy taxation, and the recruitment for the bitter defeat of the 1894-95 war with Japan. The Imperialists saw this new threat as an opportunity to renew their alliance with the Court.

The Empress Dowager also saw the potential of this threat, and succeeded in diverting the rebellion instead, to an anti-foreign movement. Placing her bets on the Boxers at the height of their aggression, the Empress declared war on the



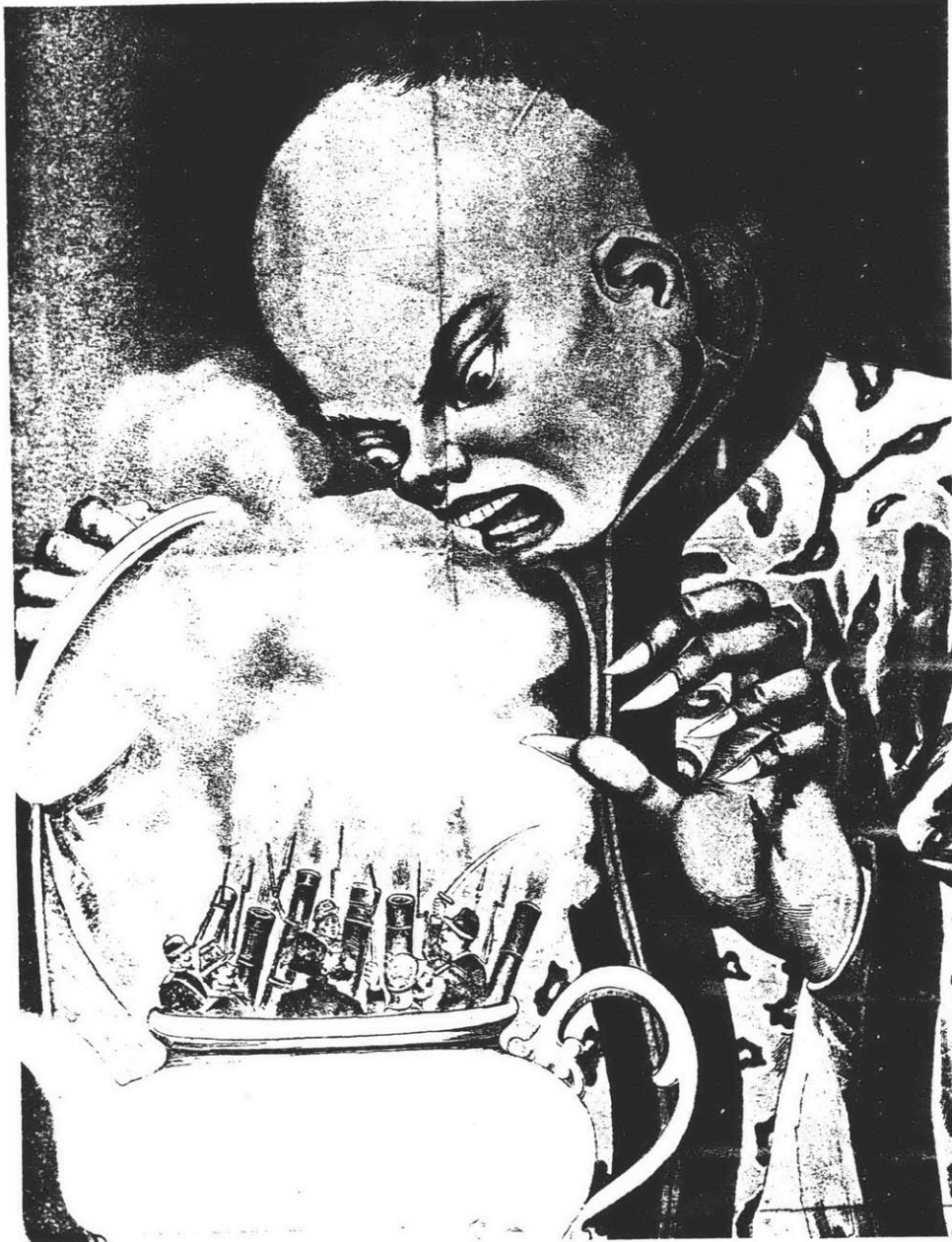
After the Boxer Incident, the Empress Dowager had to conciliate the foreigners. Here she is photographed with ladies of the diplomatic corps, who stand close about and over her, Western fashion. The Empress holds hands with the American minister's wife, Sarah Pike Conger, who had survived the siege of the Peking legations and was now deeply impressed by the Ch'ing ruler's "womanly tenderness" and "intuitive ability."

foreigners. The foreign armed forces, however, defeated the Boxers; at which point the Empress again changed her tune,

repudiating the rebels, favoring the victors; thereby re-establishing relations with the treaty powers.

With the increased tension, the Court tried to appease the growing Chinese bourgeoisie by initiating educational and institutional reforms. Permission for provincial assemblies was granted, and the move toward a parliamentary government in 1906 (at the initiative of the Japanese model) was made in the hopes that the provincial governments would restore a loyalty to the dynasty. As constitutionalism arose, so too, did nationalism. The Empress died in 1908, and by 1910, the weakened throne was petitioned by the sixteen new provincial assemblies, to set up a national parliament.

In the meantime, provincial economic conflict was reaching a peak over railway building. The 'rights recovery' movement arose early in the century, to demand redemption of foreign railway lines and companies, which had been contracted in 1898, despite an effort to prevent this. Access to purchase loans and concessions back from the foreigners became available. The financing of provincial Chinese projects strengthened the growing Chinese bourgeoisie. In 1910, the Manchu Court tried to nationalize the newly acquired provincial railway projects. This became the final straw in undermining Chinese interests, as it was regarded as essentially selling China to foreign bankers, with the Court to swallow up the profits in the transaction. Revolution broke out in the summer of 1911, and the dynasty was replaced by a republic based in Nanking.



The concessions were not officially relinquished until 1943 by military decree from the Japanese, who were occupying China at the time. They did this in an effort to mobilize Chinese support, facing the adversity of the recent Nazi defeat, and Allied success. A "committee to receive the concessions" was appointed by Wang Jingwei and his Shanghai administration whereby, one by one, seventeen nations relinquished their rights, signing with their favored Chinese government of the time.



woodcut of the mid- 1930s

B A C K G R O U N D

A glance at the position of the arts in Chinese feudal society begins to reveal the complexities of its transition to the twentieth century. This in turn offers insight into a part of the dilemma which architecture faces today. There is little or no resistance to architecture as an art in Western thought. With the increased use of the term: architectonic, in reference to the science of modern architecture, aesthetic value has been left in a key position for referring to the building's art; along with other design values, such as form and composition. The former value (aesthetics) is like a fish out of water in Chinese architectural principles; whereas the latter values more readily translate into the Chinese classical sense of symmetry and balance.

Calligraphy, painting, and poetry have always been considered the great arts of China. The brush, paper, and ink were the media which made them interchangeable. The craftsman never emerged as a man of social consequence, as he did in Japan. Painting was the creation of the class of scholars, who also constituted the governing class. The very nature of the written Chinese language requires a knowledge of calligraphy. Those who were most well-versed in the fine arts were also, as a result, those who were closely associated with social status. Furthermore, as written language had for centuries been a sole underlying factor among a diverse people, the script had long been the principal instrument for maintaining domestic order and international prestige. Moreover, it is noteworthy that literacy long served as an emphatic line of demarcation in the social strata of feudal society.

Among artists who were not scholars, the earning of wages provides the distinction for their categorization. The professional who earned a wage was frowned upon, due to the association of the arts with scholarship. The amateur was therefore, the remaining alternative. Sculptor, musician,

craftsman and performer took the artisan's role. (Actors, on the other hand, in spite of their service to the Court, were given the status of social outcast; along with beggars, prostitutes, and soldiers; all of whom were not allowed to participate in the Imperial examination system.)

The introduction of European arts began in the late seventeenth century. This was at a time of European admiration for the principles of government of the 'Middle Kingdom,' which inspired the writers of the Age of Enlightenment. In the arts, two waves of Chinoiserie (from the initial encounter, and again at the height of the eighteenth century) were to demonstrate the influence of the Chinese on the European. This impact was of far greater magnitude than the converse, at the time. Western influence had been confined to the Court since the arrival of the Jesuit missionary, Matteo Ricci, in 1601. By and large, the arts and techniques of the West were regarded as mere curiosities. Painting was the exception, as efforts were made to master the Western techniques of shading and perspective in the interest of achieving greater realism.

The Manchu Court, itself newly arrived (1644), had little developed culture of its own, with a background as warriors and horsemen. Contented to allow the traditional patterns of the Chinese to persist, initially they leaned heavily on the Chinese official class, with sincere admiration for their culture. The intelligentsia, on the other hand, began to pose a threat to the regime, particularly with their consideration of the eighteenth century new thought. The Ch'ings became rigid in their resistance to change, clinging to the most reactionary forms of Confucianism. The arts and literature became increasingly drained of vigor, stifled with the decline of the old civilization. (In architecture, the Ch'ing style is considered the stage of 'finality' and 'rigidity'.)

With the establishment of the new republic in 1911,

youths took to literature and the arts to express their disdain for the antiquated feudal system of suppression. In seeking new artistic expression, they instinctively looked to the West from whence the spirit of change had originated.

For a short time after 1911, students and scholars were able to indulge in the ideas and methods of Western arts, science, and literature, as never before. The political and social evolution of the day were reflected by the conflict of values at the time. The dilemma which faced them was three-pronged: whether to discard tradition and adopt Western techniques, compromise and search for a blend of the two, or remain adamantly Chinese in pursuit of pure tradition. If this was an underlying dilemma for the forty years of civil strife which was to come, then it was to be further complicated with the introduction of Marxist methodology in the arts, subsequent to the founding of the People's Republic. Roots to prepare for this advent, however, were already beginning to sprout.

Modern art began to find its validity in relating the hopes of the people, as the enthrallment of the West began to subside. Ideological content overtook interests in 'aesthetics' and 'representation.' A strong leftist movement arose among artists and writers during the Kuomintang years. This was due to the growing awareness that there was a need to construct a new approach to the problems at hand. Most of the new intelligentsia were educated abroad, or received a Western-style education domestically. Not only were they an infinitesimal minority, but they were also an urban phenomenon. The rural majority, on the other hand, could not yet read or write their own language, let alone another's. Development of 'foreign methods' within China meant little to those who had no access to it, whatsoever. Yet the position of the professional artist found no validation, which had also been its feudal disposition. Its association with the heights of scholarship confined it to academic employment. This continued

impasse for both the rural amateur and the urban professional essentially conditioned the arts to maintain their prior status. Of greater significance, however, is the indirect affiliation of the arts with the limited spectrum of the foreign bourgeoisie on the one hand, and with the feudal elite on the other; a position that would put the arts in checkmate for many years to come. (This must be understood in terms of its impact on architecture, as well: taboo.)

Artists and writers were united with the masses during the Sino-Japanese War of 1937-45. This common struggle was depicted by the intelligentsia, as nationalism abounded. The initial idealism, however, was soon overcome by cynicism, as topics of corruption and human suffering increasingly predominated. By 1943, over sixty plays were banned by the Nationalist government, on the grounds that they were pro-Communist.⁸ In February of 1945, a manifesto was presented to the Chungking government, signed by 300 leading intellectuals:

"... in internal politics, we have not achieved unity; in the government there is only corruption and bribery...cultural and educational fields suffer from restriction and oppression ..."⁹

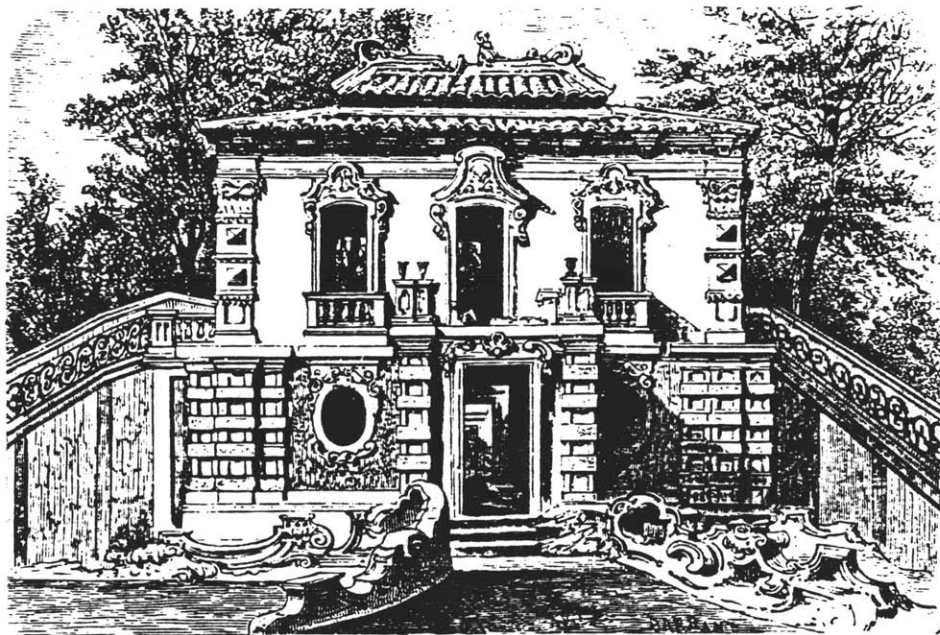
Although the Chinese curiosity for European culture was limited, the first foreign architecture in China was constructed during these two initial periods of exchange, which brought the term 'Chinoiserie' to Europe. Gaining the confidence of the Emperor, the German Jesuit, Adam Schall was authorized to found the first church: Nan Tang (Church of the South), at the end of the seventeenth century.

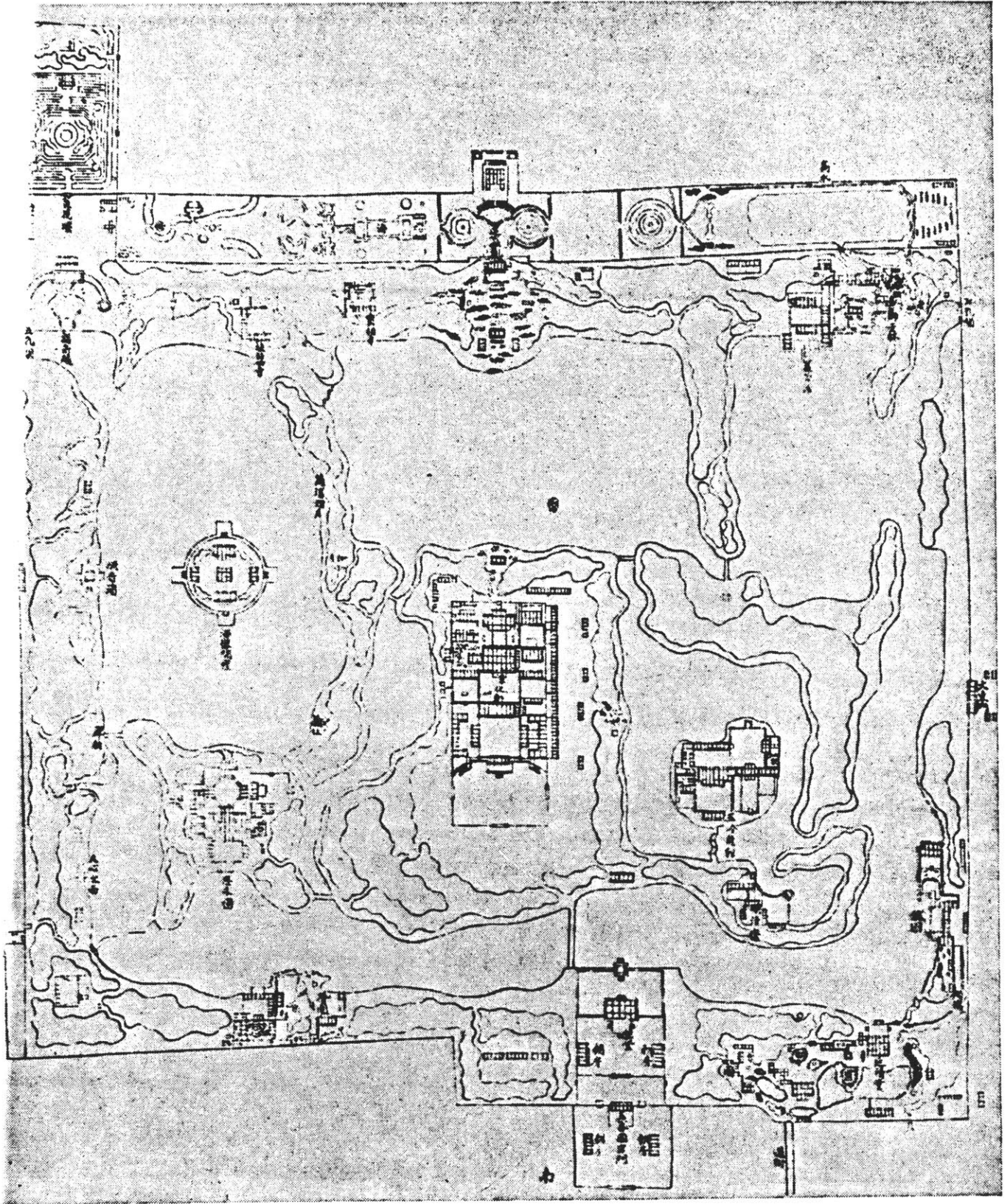
A second project was instituted during the mid-eighteenth century, this time by invitation to contribute to a large imperial garden. Yuan Ming Yuan (the Garden of Perfect Brightness) was originally conceived as an estate for number four son, by the second Emperor, Kang H'si. (1709) The garden grew to comprise nine islands by the subsequent reign; and under the fourth emperor, Ch'ien Lung, its scope was enlarged to a ten mile circumference. Forty scenes were there replicated from scrolls of gardens from all over China, which included over 3000 buildings.

宣武门内
天主堂
在北京
的天主教
耶稣教堂
中，最古老的是宣武门
内天主堂。这个教堂是
意大利人利玛窦在明朝
来华传教时所建。俗称
南堂，现在是天主教徒
活动的主要场所之一。

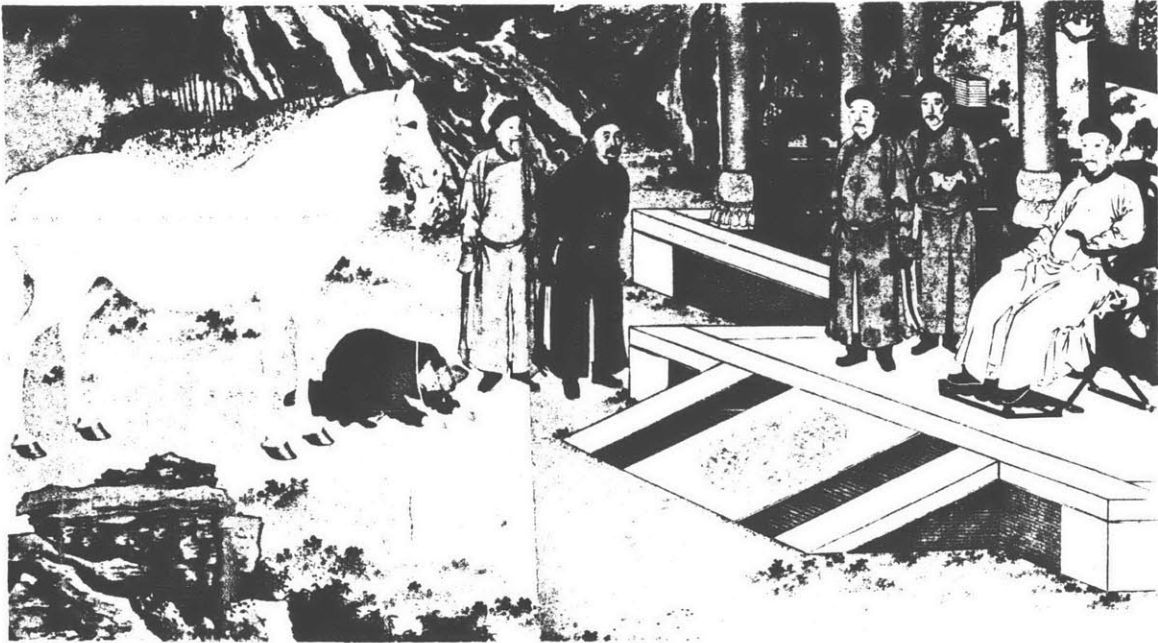


« L'église du Sud », réouverte au culte depuis quelques années. (p. 98. Zhongguo de lüxing)





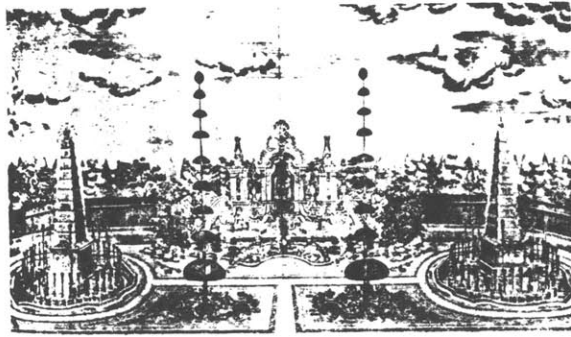
Plan of the Ch'ang Ch'un Yüan (The Garden of the Long Spring), afterwards joined with the Yüan Ming Yüan. The northern section of this garden contained the European palaces.



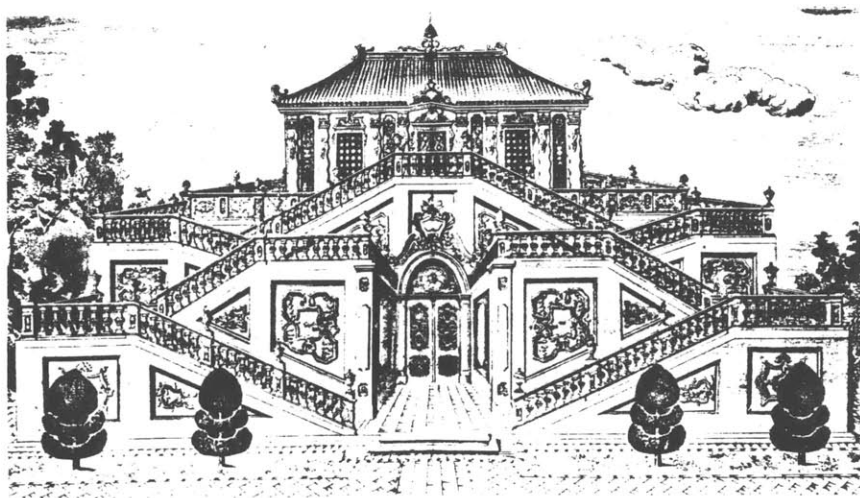
EMPEROR CH' IEN-LUNG RECEIVES MONGOL HORSES. *Painted by the Jesuit lay brother G. Castiglione (Chinese name: Lang Shib-ning, 1688-1766), who reached Peking in 1715 and was court painter to three emperors.*

The Emperor commissioned several Jesuit missionaries to design a 4 sq. km. 'European' ensemble for the garden in 1745. Fathers Giuseppe Castiglione and Jean-Denis Attiret designed the buildings, which are affectionately termed 'Rococco with Chinese notions.' False windows, stone lions, slightly curved roofs, and an overall sense of quaint phantasmagoria gave these structures their style. Father Pierre D'Incarville, a botanist, designed the adjoining gardens; while an astronomer, Father Benoit, took on the task of designing fifty fountains over a twelve year period. The complex was completed in 1760. (Letters written by Father Attiret describing the fantastic setting were first published in a Paris journal in 1749. These became published throughout Europe by the 1870s.)

The declaration of the Second Opium War in 1856 brought pillage to Peking in 1860, by British and French troops. Yuan Ming Yuan was razed by fire at that time.



JESUIT ARCHITECTURE AT CH' IEN-LUNG'S SUMMER PALACE. *This European engraving (ca. 1786) of the Hall of Peaceful Seas (Hai Yen T'ang) shows Chinese-style tile roof surmounting pilasters and "Chinese rococo" details, combined with Western perspective and staircases reminiscent of an Italian villa.*



Finally, a brief word about the architect will complete this introduction. Prior to this century, architecture as a profession, did not exist. The 'master builder,' instead, was a mason or carpenter. We are reminded:

Whatever claims may now be made for the existence of Chinese architects in the Sung or Ming periods, we may have no compunction in saying that their significance **as architects** was no greater than that of their counterparts in midieval England at about the same time. The professional position and aesthetic role of the architect as he had developed in Europe between the fifteenth and nineteenth centuries was something quite foreign to Chinese conceptions.¹⁰

Into the twentieth century, he brought with him, a knowledge of the standardized construction techniques of wood, stone, and brick; to be added to the newly industrialized Western techniques of steel, iron and concrete.

The training of the builder was by apprenticeship with the master builder. Taught by memory and years of experience, he would then join a guild. The best group among the guilds was appointed by the Emperor, to build for his Court.

NOTES

1. Frederic M. Kaplan, Julian M. Sobin, Encyclopedia of China Today, (New York: Eurasia Press, Inc., 1982), p.63.
2. Michael Gasster, China's Struggle to Modernize, (New York: Alfred A. Knopf, Inc., 1983), pp.12-13; cites an example of the scope of these quarters: Foreign settlements in Shanghai by 1928 measured 5,584 acres, and had a population of 833,000. The French Concession added another 2,500 acres, and 297,000 persons. Some 96.5% of the concession population was Chinese.
3. Gasster, p.12. Eventually more than eighty cities were opened to trade, seventeen in which foreigners were allowed to reside, own property, teach Christianity, and be governed by their own laws.
4. Kaplan, Sobin, p.64.
5. Gasster, p.18.
6. This is in contrast to the Meiji Restoration of 1868 which granted leadership to its newly risen capitalist class, through the creation of investment capital and by restrictions on Western activities.
7. This was to change with the turn of the century. Laurence Ma notes a derivative the reversal of this pattern:
(Quoted from: Laurence Ma, Edward Hanten, Urban Development in Modern China, (Colorado: Westview Press, Inc., 1981), pp.10-11.)
It was here [in the treaty ports] that the Chinese entrepreneurs adopted modern investment and management systems which ultimately led to the establishment of a new economic sector patterned after the Western model.
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The juxtaposition of an essentially alien polity in the Chinese urban political culture in the late 19th and 20th centuries is not fully understood. Neither is the significance of the internal administration of the settlements with relation to the growth and change of the treaty ports.
8. A.C. Scott, Literature and the Arts in 20th c. China, (Great Britain, 1965), p.7. I am indebted to this source for this background.
9. Ibid., p.8.
10. Richard Harris, "Miscellany," Architectural Review, CVIII, September 1950.

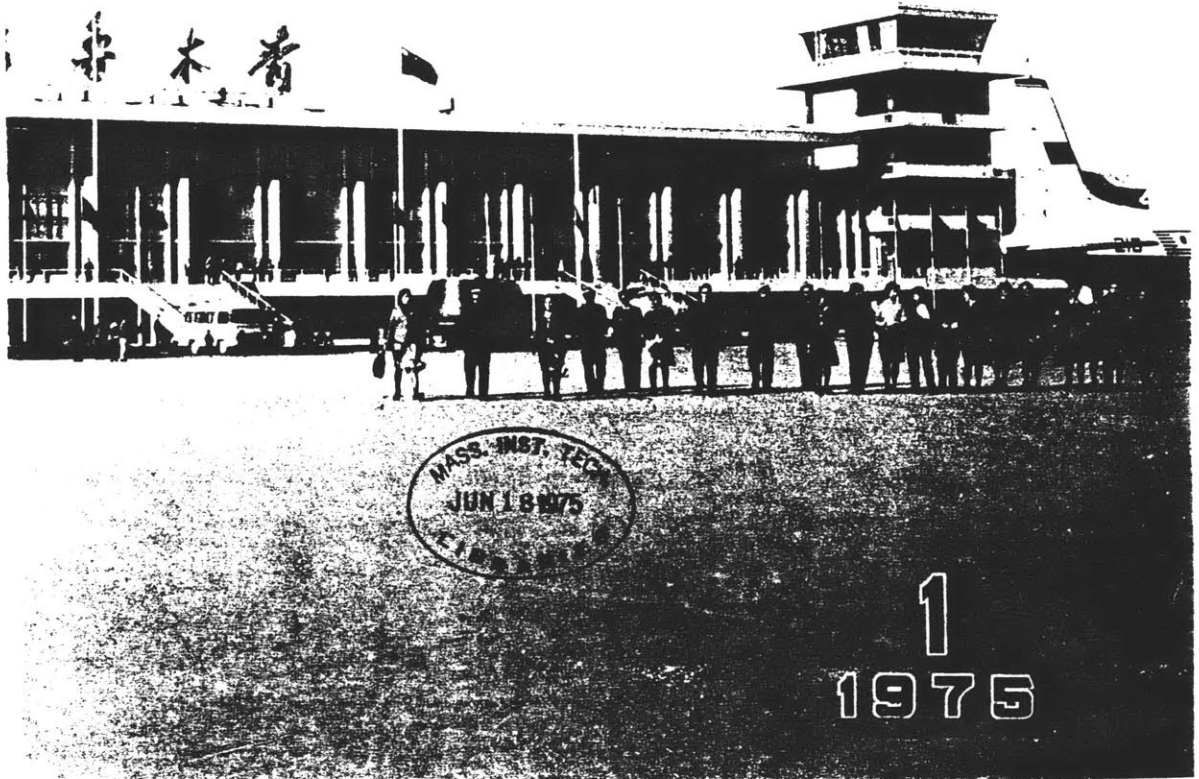
PART ONE

C O L L E C T I O N S

Here then begin the material and non-material factors which I have referred to as 'cross-sections,' pontoons, for the 'concrete raft' approach.

In truth, these are just collections. My effort has been to try and find the best places for that which I have rummaged, accumulated, and sorted through; in the hopes that some of it will end up where it belongs, at this point in time. At worst, they will include misconceptions. At best, they will bear the mark of good collections: ordering devices determined as much by what they comprise as by their choice to exclude. I have tried with utmost earnest to treat the material fairly.

建筑学报



E D U C A T I O N a n d t h e R O L E o f t h e A R C H I T E C T

In the United States we make heroes out of people who distinguish themselves, while at the same time being suspicious of anyone who claims a denial of self-interest. In China today, and this is a very basic point, it is quite impossible for the individual to alienate his self-interest from that of the group, or to advance his own welfare at the expense of the group. Decisions necessary for the national interest are made centrally, but decisions made about what work to do and the organization of daily life are made within the very smallest group in a decentralized manner.¹

The Imperial examination system remained in effect until 1905, having prior to that, last been restructured in the fifteenth century, when the rulers of the Ming Dynasty brought the mastery of the Confucian classics back to being the central prerequisite for all candidates.

With the rise of Imperialism during the latter half of the nineteenth century, sustained contact with the foreigners' institutions had begun. By the end of the century, Protestant and Catholic missions had succeeded in establishing a sizeable network of schools. This was the basis for exposing the Chinese to the Western educational model.

Initial efforts for modernization, in terms of the West, were primarily in the interest of military defense. (As early as 1847, students had been sent abroad to study Western technology.²) Chinese officials were certainly cognizant that educational reform was needed, if only for that purpose. Even the Court administrator, Li Hung-Chang, who upheld Confucian principles, had advised the Emperor to emulate Japan in her borrowings from the West in 1872; but the suggestion received little support. Individual efforts on the part of the Chinese to set up schools based on Western models, instead, took varied form in the last decades of the nineteenth century.

By the end of the century, a leading radical reformer from Canton, K'ang Yu-wei, would offer a reinterpretation of the classics, to accommodate Westernization. It was clear to him that Confucianism could (and would have to) include progress in its principles. K'ang went so far as to challenge the validity of the classics, in the interest of making room for their reform. His younger colleague, Liang Ch'í ch'ao, would carry on the advocacy of educational reform as the key to modernization, once the century turned; in opposition to Dr. Sun Yat-sen's revolutionary stance. Liang received a modern education in Japan, and went on to employ the doctrine of Social Darwinism to compare China's development in the context of world history; thereby laying the foundation for a modern reappraisal of Chinese history, outside of the Chinese classics. He adhered strongly to the ideology of Chinese nationalism in his conviction that it was a moral "renovation of the people" through popular education, which was needed.³

With the founding of the new republic in 1911, the government instituted its own educational system. Designed by the German-trained Minister of Education, Tsai Yuan-pei; it borrowed extensively from Japanese models. Confucianism was thus de-emphasized. Moreover, it was during this time when the first flux of Western learning began, as restrictions were lifted with the fall of the dynasty.

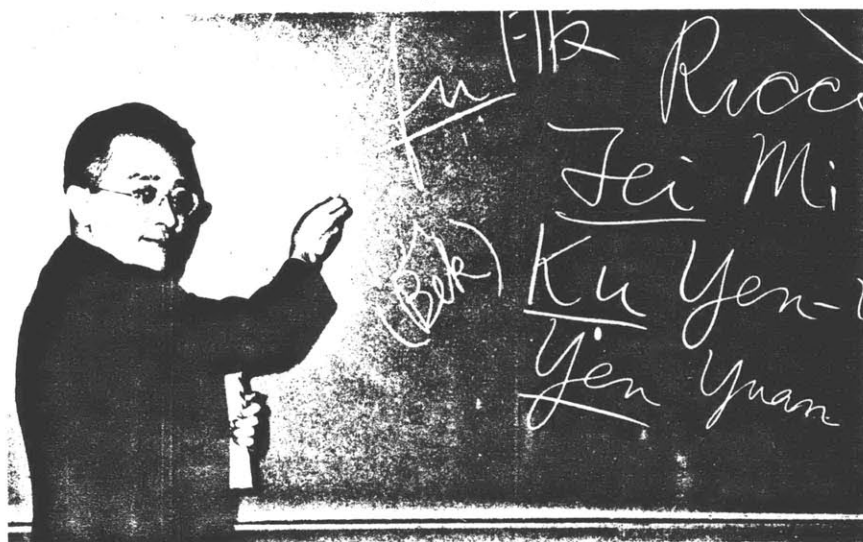
The tide of the May 4th Movement of 1919 would create the next milestone: initiating the pattern of tying education to politicization. The student movement originated in Peking in objection to the terms of the Treaty of Versailles at the Paris Peace Conference.⁴ Strikes and boycotts soon spread nationwide. The political potential of the students did not go unnoticed by Mao Tse-tung, as he considers this the beginning



left to right): Ts'ai Yuan-p'ei, Minister of Education; Huang Hsing, Army Minister; Sun Yat-sen

of the revolution.

The indignation expressed by the movement became the more immediate impetus for a 'Chinese Renaissance.' The events of 1919 had coincided with an ongoing cultural modernization, instituted by intellectuals whose patience had worn thin from the warlord years. It was led by Dr. Hu Shih, China's leading advocate of linguistic and educational reform at the time.⁵ Hu had studied at Columbia with John Dewey, America's most prominent educator of the same era. Between 1919 and 1921, Dewey lectured in China, showing unreserved support for the May 4th Movement, while advocating increased specialization and the lengthening of programs. In 1922, the Nationalist government issued a new comprehensive plan for education, which marked the shift from Japanese to American influence.



Dr. Hu Shih in 1946, at Cornell University, lecturing on the history of Chinese philosophy. He was China's ambassador to the United States in the early war years 1938-1942.

Foreign influence in education was fundamental to the rise of a new profession in China-- that of the architect-- who began to practice profusely in the treaty ports, subsequent to the 1894 war with Japan. A European architect who built on the Mainland, early in this century, talks about this advent and its mood, once the proliferation of foreign investment had begun:

Du mouvement, des changements, de l'excitation: voilà l'atmosphère des grands centres d'affaires en Chine. Cette atmosphère demande que l'architecte sorte de la voie ordinaire. Elle le pousse à tenter des expériences pour arriver à la solution des problèmes multiples qui l'attendent. Et c'est ce point de vue qu'il faut considérer les oeuvres des architectes dont nous nous occupons ici. On ne leur trouvera pas de dénominateur commun, pas de lien qui les unisse.⁶

Prominent firms at the turn of the century included Athinson & Dallas, Palmer & Turner, Leigh & Orange, and Spence & Robinson; who not only built prolifically in Shanghai and Nanking, but also in Hong Kong. Architectural practice also often included surveys, real estate management, as well as brokerage for the import of building materials.⁷

The year 1911 initialled another metamorphosis in the trade. Restrictions lifted from the Court and the exuberant embracement of the West inspired new sets of roots for the modern Chinese architect. Training experience began in the Western architect's office, but it was formal education which more substantially made the means of the Western profession available to the student youths, by the 1920's.

The first wave of Chinese students who studied architecture and civil engineering abroad, began to return home in 1921; most of them having received funding from the boxer indemnity fund.⁸ These included Kwan Sung-sing (Tsinghua 1919, M.I.T. 1923); Lu Yen-chih (Cornell 1924); Robert Fan (Saint John's, Shanghai, 1918; U. Penn. 1922); Shen Chao (U. Penn. 1925), and Chu Ping (Tsinghua 1923, U. Penn. 1927). Collaborations among these architects, as well as individual efforts, were to become the backbone of the 'Chinese Renaissance' movement in architecture, late in the 1920's. (see illustrations of 'Chinese Renaissance' in Part II., 'Examples and Their Significance.')

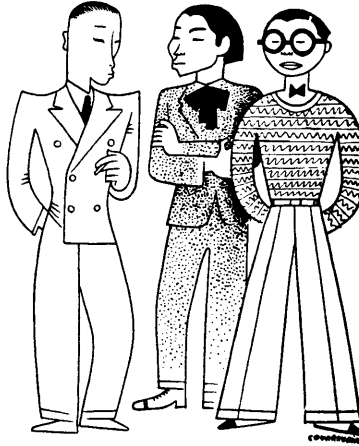
A second wave followed shortly thereafter, returning in 1928, which are referred to as the 'best vintage' of

Chinese architects,⁹ as many of them remain eminent today. Among them were Liang Ssu-ch'eng and his wife, Lin Hui-yin, (both educated under Paul Cret at U. Penn.); and Liu Dunzhen (educated in Japan); all of whom would go on to help found the Chinese Architectural Research Society in 1930. Other notable figures of this select crop, also educated at U. Penn., were Yang Ting-pao,¹⁰ Ch'en Chih, Lee Yang-on, and Channcey Wu. These architects would go on to become the foundation of research, education, and the practice of architecture itself. Several other students returned from France at that time as well; and a third crop returned from studies at U. Mich., just a few years later, among which was the author of one of the few comprehensive references on contemporary Chinese architecture, (in English), today.¹¹

Prior to the impetus of the Chinese Renaissance movement, however, (in architecture, this began in particular with the planning of the new Nationalist capital in Nanking in 1928); the awkwardness of foreign training in an essentially foreign conceived profession made for a difficult situation for the Chinese architect. Earlier in the century, this became manifest in the production of buildings, by the Chinese, which were essentially Western. It was the government who hired the Chinese architect who returned from Europe or America, and asked him to build in a Western manner. The limited selection of private clientele consisted of inhabitants of the concessions, well-to-do Chinese generals and political men who sought foreign police protection. Villas were constructed for this segment of the Chinese bourgeoisie. The task thus set forth by the administration, needless to say, did not address housing; and it is therefore, more or less accurate to say that the modern architect worked for the aristocracy. This would cause conflict for many:

After his return from his studies, he devoted himself to education and research work ... he joined the Society for Research on Chinese

Architecture in 1931, as soon as he arrived in Peking from northeast China, where he had taught at university. At that time, he said, many people persuaded him to do designing work; but he declined because of his prestige and interests, and also because of his "reluctance to bow to the wives of government officials or the bourgeoisie for a mere increase of five percent in the designing fees."¹²



Returned students from Britain, France, and the United States

This initial role of the Chinese architect was determined by his Western education, on the one hand, and by the expectation for him to build European style, on the other. His choice of affiliation was defined early on, according to the foreign country's specialty. France was the number one choice in training for interior architecture, and the applied and decorative arts. The United States was considered best for principles of architecture in relation to the technical sciences. It had the added advantage of a shorter and more homogeneous heritage of architectural styles, which was less cumbersome to grasp than their European counterparts, (laden with a rich, but nevertheless, often contradictory lineage). This made the American education more suitable for the Chinese architect, himself of a largely secular, and moreover, continuous tradition. England and Germany were thus classified behind the US in education.¹³

The decision, from the start, was a collective effort, as it was usually the whole family who paid for tuition and support. The education was lengthy, often five years, and it occurred at a time when the Chinese youth was in an intense stage of development, with the thirst for Western knowledge to make his capacity for its absorption, profound. Returning home, connections had to be made to get a business off the ground, and it is here where this affiliation came full circle. He became a member of the American Club, or the French Club, and it was this association with his country of affiliation, which understandably, initiated his profession.



The American Club

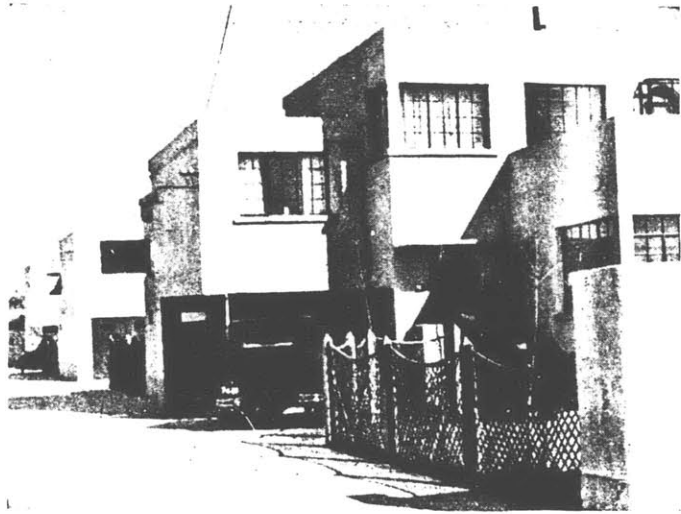


The Shanghai Club

The Shanghai Club.—The fame of the Shanghai Club and its reputed "longest bar in the world" is international. It is located at 3 The Bund. A British institution, other nationals are admitted to membership.

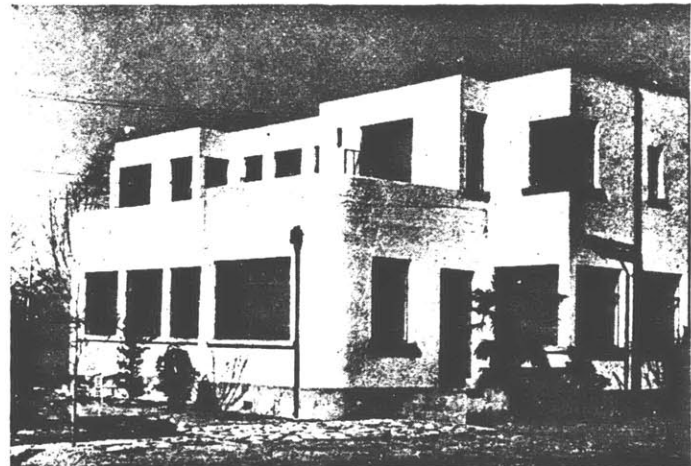
The consequence of all this, however, was expressed in the aforementioned statements about these buildings: 'They are both Chinese and Western. They are neither Chinese nor Western.'

Chinese architects who learned their lessons well provided accomplished designs of the Western style. The work of Ede Fozien-l'ing attests to this. (illus.:Fozien Ede) The building program was a key determinant in this choice: hotels, apartment buildings, banks, department stores, villas, and of course, factories; all clearly beckoned for the Western style. Only government administration, and other civic buildings called for a national style. Other compromises to include a Chinese sensibility, were notably in interiors, as Chinese motifs were well adapted to the decorative arts. This occurred both on the part of the Chinese and Western architects, not only because of the pleasing intimacy of the Chinese detailing, but also due to craftsmanship, which supported this aspect of



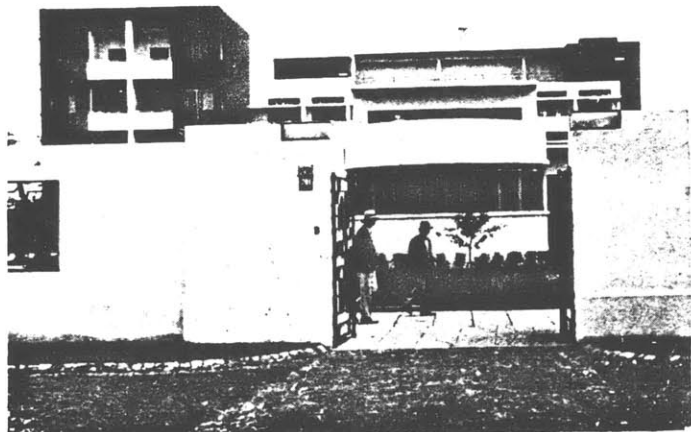
VILLAS JUMELÉES.

FOHZIEN EDE, ARCHITECTE



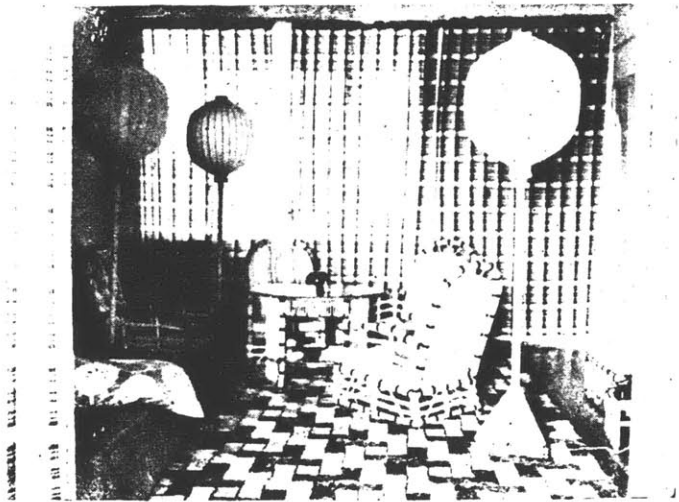
VILLA JUMELÉE.

FOHZIEN EDE, ARCHITECTE

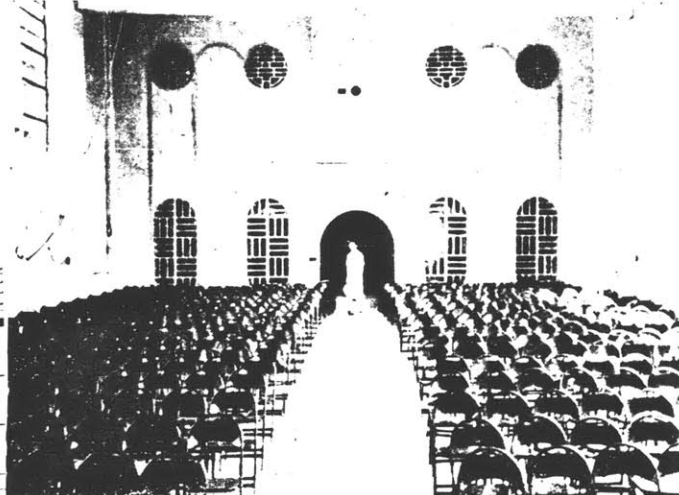


MAISON DE REPOS.

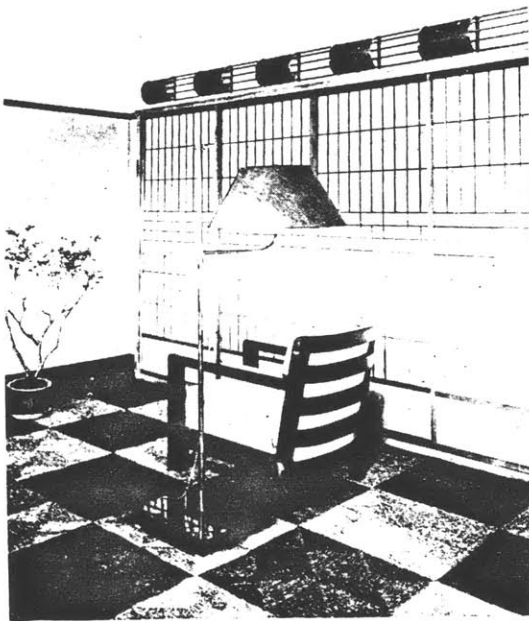
FOHZIEN EDE, ARCHITECTE



SALON A SHANGHAI. ARCHITECTE : R. HAMBURGER



« HOME » DE GARÇONS A SHANGHAI. HAMBURGER

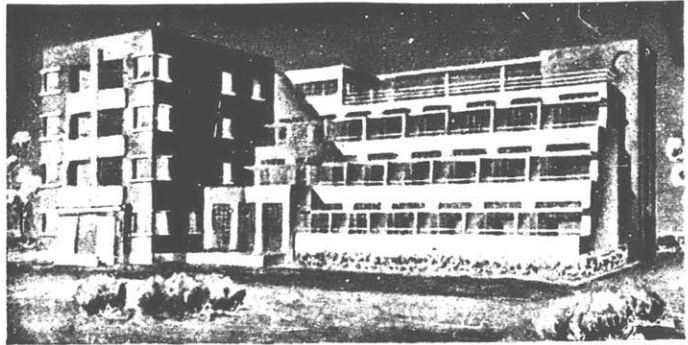


ECOLE A SHANGHAI.
HAMBURGER, ARCH.



SANATORIUM A SHANGHAI. ARCHITECTE : FOHZIEN EDE

the trade. The mastered materials were largely determinate of the construction methods employed. Nevertheless, a true Asian sense of design was not present in these early projects.



SANATORIUM A SHANGHAI. FOHZIEN EDE, ARCHITECTE

A word on the organization of practice is also helpful to bring to focus this picture of the profession in its initial stages, which operated on the basis of trust, in the absence of a more formal network. Work was highly specialized, as was the nature of the guilds. The bamboo carpenter, the wood carpenter; each would tend to his own specific task. In general, the relationship between the contractor was described as good, but there were many reasons for unreliability on the part of the workers. The site manager also lacked a certain professionalism in his task, as it was nepotism, and not skill, which determined his position below the contractor. This was out of pure necessity, as the handling of all funds was through this man's hands.

Finally, it is the worker whose position must be addressed. The qualified worker would assume a long apprenticeship to learn his trade, beginning at a very young age. The day's work would last a full ten to twelve hours, and would therefore, proceed at a slower pace. Payment was said to be around \$8 US per month, along with free rice and a place to sleep, on site. Work was considered a basic moral foundation by these men. Unskilled labor was usually undertaken by children, who also put in longer days, and even longer weeks. Restrictions of unemployment for children under ten were not respected, and their pay was about a buck per month. Last but not least, we come to the infamous 'coolie,' or unqualified worker, whose pay between \$5-7 per month was well earned, as it was his crucial role to perform whatever work the qualified

worker would not undertake, that which was considered below his dignity.¹⁴

By 1930, some sixty or more Chinese architects were in practice, and by 1950, it was estimated that the figure had increased to over 200, both foreign and domestically educated.¹⁵ (The Department of Architectural Engineering at the National Central University in Nanking was founded in 1927. Others followed, but the eminent Tsinghua University's department was not founded until 1946.) These architects were responsible for extensive post-war construction, as well as for the building up of interior provinces, such as Szechuan, Kansu, Yunnan, and so on.

The return of Gropius's students (Henry Wong, Wang Ta-hung, and Arthur Kun-shuan Cheang), would introduce a new wind from the West in 1945; but the Japanese occupation far overrode its advent. The earlier influx of students during the twenties, whose training was largely Beaux-Arts based (notably with Paul Cret at U. Penn.), thus came to be the predominant force in education, practice, and in theory. This lasted through until the 1950s, at which time aid from China's northern neighbor would make a bold imprint on her architecture and education: the Soviet version of Marxist methodology. (And increasingly, the former role of Western 'pragmatics' in education, would gravitate toward its antithesis; whereby its association would become almost exclusively, with theory.) The new methodology was first, however, instituted by Mao Tse-tung.

Dominating themes which were to forge Chinese educational reform originate in his essays, published in January 1940, entitled: "On New Democracy." Mao therein set forth the three main characteristics of the new socialist methodology: national, scientific, and popular. The first of these: national, comprised a two-pronged thrust; to instill pride and patriotism on the one hand, and to resist foreign

oppression in all of its political and cultural manifestations, on the other. This became the basis for placing political study at the focal point of education: to support the Chinese commitment to revolution, through the teachings of Marxist-Leninist ideals.

'Scientific' was to become a major theme, a fundamental objective of Mao's approach. Dialectical materialism was the key process with which to identify the objective facts of any given situation for Mao, as for Marx. This 'scientific' methodology became the basis for the unity of theory and practice, which was to be at the crux of all subsequent Communist reforms, by Mao (delineated in the 1937 essays: "On Practice"). From this principle came his well known statement in reference to dialectical materialism: which in opposition to "all feudal and superstitious ideas; (it) stands for truth from facts, for objective truth and the unity of theory and practice." Ideas which could not be put into practice, and thus had no political justification, thereby became mere 'theories.' Contradictions which arose from the dialectical process, such as socialism and imperialism, agriculture and industry; moreover became the very substance of Mao's "continuing revolution." Their process of conflict, from struggle to polarization, to a new unity; guaranteed its perpetuation.

Amalgamation of the universities was first proposed in 1950, (and was subsequently instated in 1952). Its aim was to increase efficiency, particularly in engineering, medicine, --the sciences; as well as in teaching. At the time of liberation, twenty-one foreign-run missionaries existed in China. The dispersion of this resource was said to maximize this training, while the reorganization of curriculum was to address new directions in education; for example, that of manufacturing.¹⁶

In primary and secondary education, goals were more

fundamental, as the basic necessities of literacy and arithmetic skills needed to be tended to. This feature of the theme: 'popular,' was upheld in the 1949 Ministry of Education announcement, guaranteeing the availability of educational facilities to the masses. The announcement alluded to the discouragement of the privileged urban elite. A new educational system was instated in 1951, by Premier Zhou En-lai, consisting of a centralized uniformity of political - ideological education, as the basis for all five levels proposed in the new structure.

Soviet influence began soon thereafter, with the first Five Year Plan (1953-57). Their new approach became the new model, although its emphatic adaptation to the Chinese condition was significantly present; as this was to be the Chinese leitmotiv from then on. Students were sent to the Soviet Union, and teams of Soviet advisors and technicians arrived on the Mainland with their suggestions for a revision of teaching methods. Russian became the foreign language of the schools, while thousands of teaching guides and texts were translated from Russian to Chinese.

The Soviet educational policy focused on the development of China through vocational and technical education, which meant a restructuring and expansion of middle schools and higher education. In addition, the long term program of the elimination of illiteracy was targeted, and the simplification of the Chinese language became the means to increase its accessibility.

The principal aim of the Soviet program was somewhat in contrast to the Chinese perception of the problem. Their intention had been to concentrate on the quality of the teachers in higher education, with an emphasis in the lower levels on training the huge skilled labor force needed for industrialization. Their solution to combining the intentions of both approaches, was to embark on a program of 'comprehen-

sive technical education, whereby primary schools were integrated with local economic enterprises. Natural sciences remained at the core of the curriculum. The program epitomized the principle of 'uniting Soviet experience with Chinese practice.'

In 1957, Mao's essay: "On the Correct handling of Contradictions Among the People," was to propel the program one step further. By August of the same year, the sending down of cadres ('xiaofang') began; to combine education with labor, theory with practice, and 'expert' with 'red.' (The aforementioned "On Practice" elaborated on this, specifically.) Since the founding of the Chinese Communist Party (CCP) in 1921, the role of education in aiding the transformation of society had been called for. In the inland provinces secure from military attacks during the thirties, early educational reforms were to become the models for the post-liberation policies. Schooling was integrated with everyday life, and education was used in promoting nationalism and the revolution. Curriculum consisted of short, intensive courses; and practical training. This was in sharp contrast to the former "dead-book" learning," whose heavy reliance on memorization was adamantly rejected by Mao. Local needs were said to respond to local conditions, as this was to become the backbone of the founding of the communes (November, December 1958), subsequent to the announcement of the Great Leap Forward in May 1958.

The policy of uniting theory with practice became encapsulated in the Great Leap Forward's slogan: "walking on two legs." On the one 'foot,' schools began to be self-supported through factories and communes, and on the other, there was increased emphasis on productive work for both students and teachers. This ran concurrent with the "General Line for Socialist Construction," which advocated self-initiated efforts to increase production. Thousands of schools proliferated the nation, extending to areas which had pre-

viously not been reached. The thrust to increase production was upheld by their high degree of flexibility in scheduling.

The Soviet withdrawal in the summer of 1960 depleted the nation of many of her staff. Consolidation of the schools resulted with the sudden lack of funds and teachers. A general disruption followed in education, but this is more so attributable to the years of drought from 1959 to 1962, and the plummeting Great Leap policy. Formal education became streamlined in an effort to compensate for the overall shortages. Of greater import, however, was the emphasis of practical knowledge over theoretical study, due to the gravity of the situation at hand. At this time, English was first introduced into the curriculum on a large scale.

The recovery by 1963 was to witness the confrontation of an ongoing development of two conflicting lines of methodology. 'Red' and 'expert' increasingly continued to clash, as Mao sought out a means to thoroughly contradistinguish the Chinese policy from its association with the Soviet, and other party members' methods. Liu Shao-qi had become the President of the People's Republic in 1959, and his assessment of the Great Leap Forward was that of an economic and political disaster. His 'revisionist line' became known as 'techniques-in-command,' which maintained that productive forces determine productive relations. The superstructure of ideology and culture was to ensue as a result of this relationship. Specialization was advocated for this 'expert' line, and industrial economy was considered paramount, in conjunction with 'capitalistic' expediency, to provide a means to this end. In education, this translated to a 'double-track system' of training an expert corps on the one hand, through advanced studies and professionalism; and on the other, on-hands training of agricultural and industrial workers and technicians, without the prerequisite of advanced studies.

This policy was, needless to say, quite contrary to

Mao's adamant efforts to discourage an urban elite, which thereby increased the society's hierarchical gaps. Mao held steadfast to his platform of dialectical materialism, in his 'socialist line' of 'politics-in-command.' The interest to extend education to the greatest number possible was reflected by his view of the relationship between human motivation and human consciousness, which were to be transformed integrally with modern technique and large-scale production. Thus, it was the dialectic between productive forces and productive relations which were upheld as the superstructure, in a state of flux, and indeed, not occurring as a result of a pre-determined or primary force.¹⁷

The call to 'turn intellectuals into laborers and revolutionaries' began in 1964, and a massive 'xiafang' (sending down) of some 300,000 educated youths ensued to rural and undeveloped areas. A year later, a plan was announced to reinstate a half-half work-study program, as had been the overall approach of the Great Leap; but the compromise was overshadowed by the events of the following year.

The Great Proletarian Cultural Revolution of 1966 was to have a far-reaching impact on education, and on architecture in relation to it. It began as a literary and historical debate over a play written by the Vice-Mayor of Peking, Wu Han. The play focused on the unjust dismissal of a Ming Dynasty official who had fallen out of favor, due to his outspoken criticism of the Emperor, satirizing Mao's dismissal of a defense minister in 1959. In May, members of the philosophy department at Peking University put up a big character poster (da zi bao) in criticism of the suppression of debate over this issue. August would witness the posting of Mao's own da zi bao, accusing:

"some leading comrades from the central down to the local levels" of acting contrary to Marxism - Leninism, of adopting a "bourgeois reactionary stand," and of opposing the working class, thereby

symbolically endorsing the Red Guard.¹⁸

Several days later, the Chinese Communist Party called upon workers, peasants, soldiers, and intellectuals; to put 'politics-in-command,' in their "16 Point Decision."

In June 1966, the CCP had abolished, and had temporarily ordered the closing of all higher institutions, to prepare for the new enrollment. Within months, however, the whole school system would be virtually shut down. The Red Guard embarked on its fanatical 'study Mao Tse-tung thought' campaign, while the nation's researchers, teachers, and administrators were 'sent down.' By early Spring of the following year, the CCP ordered resumption of classes in schools, and when they resumed in 1968-69, it was within a restructured system. 'Revolutionary Committees' were established within the schools to make decisions and assume management. This reflected the new 'three-in-one combination' of revolutionary teachers, students, and local workers or peasants. Moreover, it was indicative of the decentralization of educational administration, which is an overall trademark of the GPCR years.

May 7th cadre schools¹⁹ were established at the same time, in remote rural areas, whose motto of 'plain living, hard struggle, self-reliance' was basically another way of expressing-- manual labor for all those who have committed political errors.

The schools' curriculums were revamped at the exclusion of exams and grades. Productive labor was substituted for study time. The universities were not to re-open until 1970, with new standards for admissions. These became the 'open door' admissions, in which political attitudes and work record were the key criteria. Exams also adopted the 'open' book format, as memorization had emphatically been removed from its former association with education.²⁰



The grave absurdity of the early Cultural Revolution years, which yielded the virtual shutdown of not only architectural education, but also, to a great extent, debilitated the building industry itself; was nevertheless to have a noteworthy effect on the organization of practice. This began with the 'Open Door Education' system, which promoted the collaboration of teachers and students on state projects. During the 'post' Cultural Revolution years (1971-75), this translated to 'three-in-one combinations' doing 'on-the-spot' design. This method of practice involved construction workers, technicians, and revolutionary cadres; who collaborated on

production, construction, and design. It was essentially a measure to ensure mass participation and mass benefit. Whether this actually worked or not, at the time, is another story. Its principles have, nonetheless, largely become adapted to everyday practice and research; which will be discussed presently.

By 1975, with the announcement at the Fourth National People's Congress by Zhou En-lai, to achieve a modern industrial state by the year 2000; debates at Tsinghua University intensified, citing academic standards as too low and in contradiction to the new plan. With the death of Mao Tse-tung in September 1976, the denouncement of the Gang of Four would immediately followed suit. They were accused of distorting Mao's goals in education, through their 'two estimates,'²¹ which pushed the open door policy to the extreme: "The wider you open the door, the better; the longer you do physical labor, the better."²²

The national examination system was reinstated in 1977, replacing the recommendation system.²³ Thereupon, academic study was upheld, primary over political study and manual labor. Deng Xiaoping was restored to all posts, (having been removed from them by the CCP, subsequent to Zhou's death in January 1976) and thereafter, specialization became the key to the realization of the 'Four Modernizations.'²⁴ Competition thus, again became promoted for motivation, in the interest of raising academic levels; and the status of intellectuals was restored in order to accommodate their instrumental role in the modernization program. Post-graduate education was also re-instituted and expanded at that time, which is fundamental to the nation's research.

Despite the devastating impact of the Cultural Revolution on architecture and education, some of its policies were to have beneficial after-effects. A broadened base of education was one of these. Alternative means of instruction

were to become integral with the earlier system, which had been an urban phenomenon. Examples of these include the 'July 21' colleges, which are either factory or commune run; and TV courses, which also help to increase accessibility. Correspondence courses similarly began to take on a more practical aspect, related to the needs of rural life, whose contents had, prior to the GPCR, been considered divorced from practice.²⁵

In architectural education, 'real sword and real spear' thesis design was to become the favored method for student-teacher collaboration. The knowledge of design procedure is thereby introduced to both the architecture and engineering student, at an earlier point in their education. This method, in essence, promotes the integration of research and design. For example, the Architectural Design Research Division of the Department of Architecture (which is part of the Research Institute) at Tsinghua University, consists of professors, instructors, engineers, technicians, and a few draftsmen. It often takes on state commissions for design, which provides members of the department with 'real sword, real spear' work. The division also provides supervision to post-graduate students, as well as to professors, for their research. It is, in effect, a three-in-one base organization, of teaching, research, and design.²⁶ An observation is also made that the building design teams, besides incorporating more systematic research activities, are thereby also able to more effectively address regional design issues.²⁷

At the risk of taking back everything which I have just said in favor of the GPCR policies, however, it must be noted that 'real sword and real spear' design began as early as 1958,²⁸ as did the offspringing of schools, with the Great Leap Forward's programs.

A word on the organization of practice in the late seventies does help to clarify the intentions of a more

comprehensive, collective, and non-individualistic approach. Its aim is systematic, to accommodate the undertaking of construction on a large scale, from stem to stern. Increased efficiency, however, is often over-shadowed by top-heavy, or clogged systemic administration.

The building design institute assumes a multi - disciplinary approach, ranging in size between a few dozen to 2000 members, (accordingly with the size of the sector for which it is responsible). The organization comprises four categories, the first of which is programming service; which in addition to receiving orders from the state or collectives for work, and verifying their requests (ie: loans and land acquisition); also determines the plan of procedure and division of labor, for the project to be undertaken. At the core of the institute is the 'atelier,' also known as 'department,' consisting of two-thirds to three-quarters of the personnel. From this, teams are created, and assigned to the specific projects, beginning from site survey. For an institute of some 500 persons, the department would number from 50-80 persons, including engineers and specialists, but mostly architects and draftsmen.(60%) This would then translate to a team of a dozen or so members, consisting of two to three each, of architects, draftsmen, and engineers (which includes specialized engineers). General services such as archives and library, photographic facilities , and so on; (accordingly with the scale of the institute) constitute the third category. Last but not least, the Party Committee is a force in the institute structure, comprising a department for the direction of political studies for the institute members.

The hierarchy thus translates somewhat as follows: work is allocated by the programming service to each atelier, which in turn delegates the project to the team. Before beginning design, an in depth investigation is conducted, often to include actual work experience for the proposed

building's use. Generally, it is consensus at any range of levels, which is sought in determining the final design; consensus to encompass compromise amidst any number of proposals. (The design for Mao's Mausoleum, for instance, began with entries from some thirty-six cities and provinces nationwide.) The power of veto is held by the direction of the atelier, as well as by the institute; to impose for reasons of security or function, as well as for political 'breaches of character.' The most important projects also summon other divisions, such as the Bureau of Urbanism, in their decision making processes. Design work by the individual only occurs in the case of very small programs.²⁹

"China is short of architects," is declared in a 1981 article, which estimates that with China's world's population of one out of five, her world's-architects population is only one out of fifty. The author cites the limited scope of the profession as the crux of the overall problem, in its lopsided emphasis on technical aspects at the expense of problem solving creativity. More specifically, Gutheim scrutinizes the organization of the building industry, maintaining that in spite of the design limitations in terms of standards of quality, a higher degree of collaboration should be attainable between the architect and the builder.³⁰

Paul Sun echoes this sentiment in 1985, moreover declaring the basic problem: that architecture as a practice does not exist. His criticism recalls the opening quote of this segment which touches upon the individual versus the collective endeavor. Sun spoke of a backwards hierarchy in the architectural process of management, which begins with those who control architectural materials, (followed by the contractor, the structural engineer, the architect), and ends with the planner.³¹

The allocation of work to construction enterprises by territorial designation, delineates the system's imposition.

(Design institutes are not given this choice: all construction in each district must be done by the assigned company.) These enterprises are large-scale, typically undertaking four to five projects simultaneously. The Bureau of Construction in Peking comprised six such companies in the early sixties, one of which was specifically designated for heavy industry only.^{3 2}

By 1983, however, this began to change with the Systems Reformation of Design Institutes. Symposiums were held at a nationwide building conference in March of that year. A summary of the speech by the eminent Dai Nianci cites design quality as the overall aim of the reformation, specifically targetting technical improvements and scientific management, enlivening of thought for the designer, promotion of initiative and creativity of workers; in short, an increased overall efficiency.

Differentiation between administration and enterprise is cited as an important aspect of the reform. Whereas building laws and regulations are to govern building design, (thereby strengthening administration); the new design institution is to be run as an enterprise. The discussion of provisions for this advent included income division by specific proportion (between state, the institution, and the individual); choice of design institute, (versus the old system of designation by district or department); and the apportioning of power to the architect in determining design projects. Design contracts and increased coordination between planning investment and architectural design were also topics of the symposium.^{3 3}

The prospect for decentralization is evident in this proposed reformation, as are individual initiative and individual incentives. In short, they are signs of increased autonomy for the profession.

A pilot organization: The Architecture Design Group;

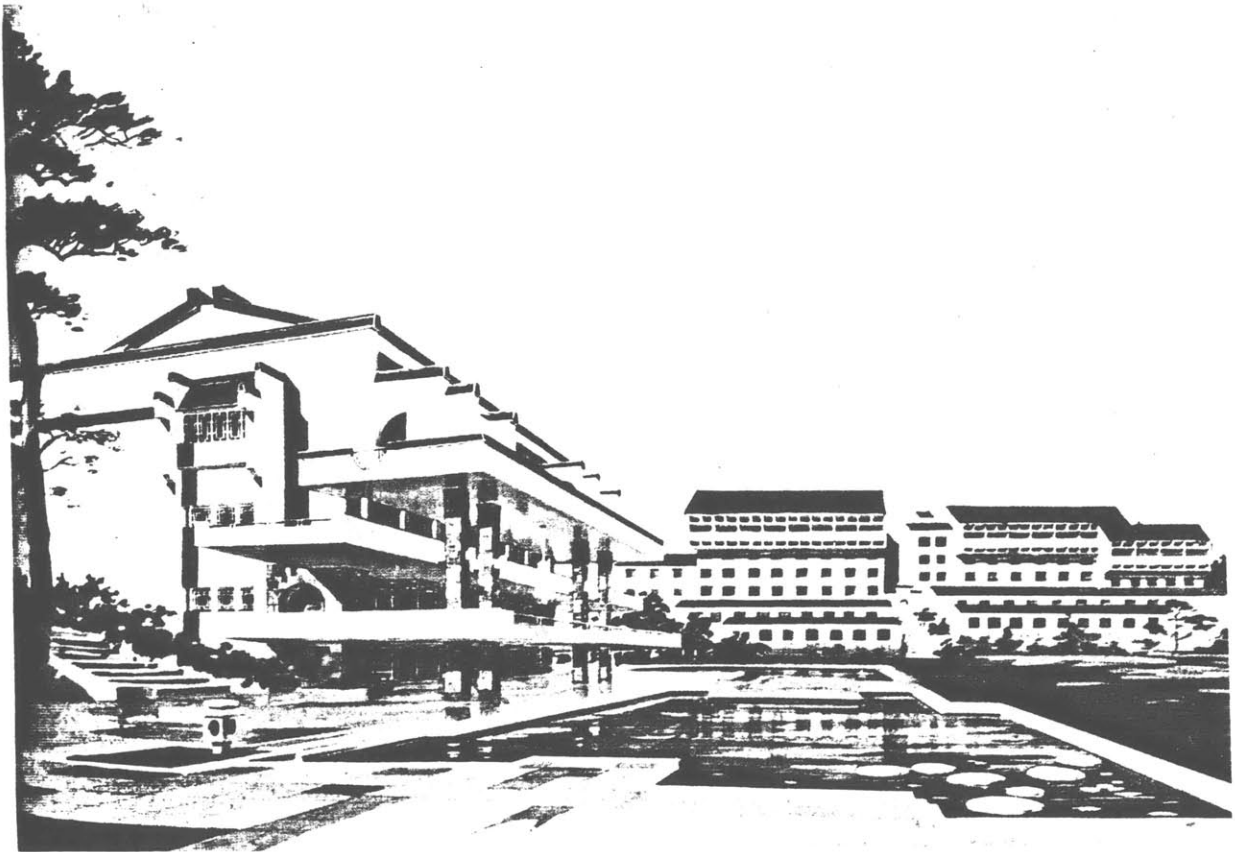
reflects the scaling down of the architect's practice. In contrast to the building design institute's atelier, the enterprise consists of thirty members, in which only architectural design is handled. Structure and engineering are allocated to other organizations. Having been in practice since 1984, it assumes sole responsibilities for profits or losses, although it is still considered a government enterprise. Another of the group's distinctions is its encompassing of management as well. The aim of the experiment is to raise the level of design, as well as the designer's initiative, thereby increasing profit and efficiency. Furthermore, "the guiding principle of design followed by the group is to emphasize individuality in suiting the particular project in the particular environment."^{3 4}

The undercurrent of architectural education is also repeatedly addressed in the "Chinese Architectural Journal," during the 1980s. The continuing over-reliance on Beaux-Arts methods is criticized, while emphasis is placed on looking ahead to embracing technology in education. The broadening and lengthening of programs are also advocated. Prior to the GPCR, departments of architectural engineering typically offered six-year programs. This dwindled to three by the early seventies. By 1978, this had increased to four; and in 1982, the Department of Architecture at Tsinghua offered a program of five years duration. Specializations of broadened scope were validated for thesis topics, but specific program accomodation for landscape, interiors, and so on; otherwise did not exist. It is moreover significant that the call for theory and history are being made in the 1980s, not only in the interest of formal education, but also with regard to practice.

Internships provide another alternative to the route of formal education. Supplementary training through either night courses or during leaves of absence for full-time study,

is often pursued. Although this avenue will, needless to say, require perhaps twice the amount of time to become an architect, it is one more contribution to alleviating the shortage.

In February of 1986, the accepted design of the "Home for Architects and Builders" is published in the "Chinese Architectural Journal;" which indeed, signifies the embrace-



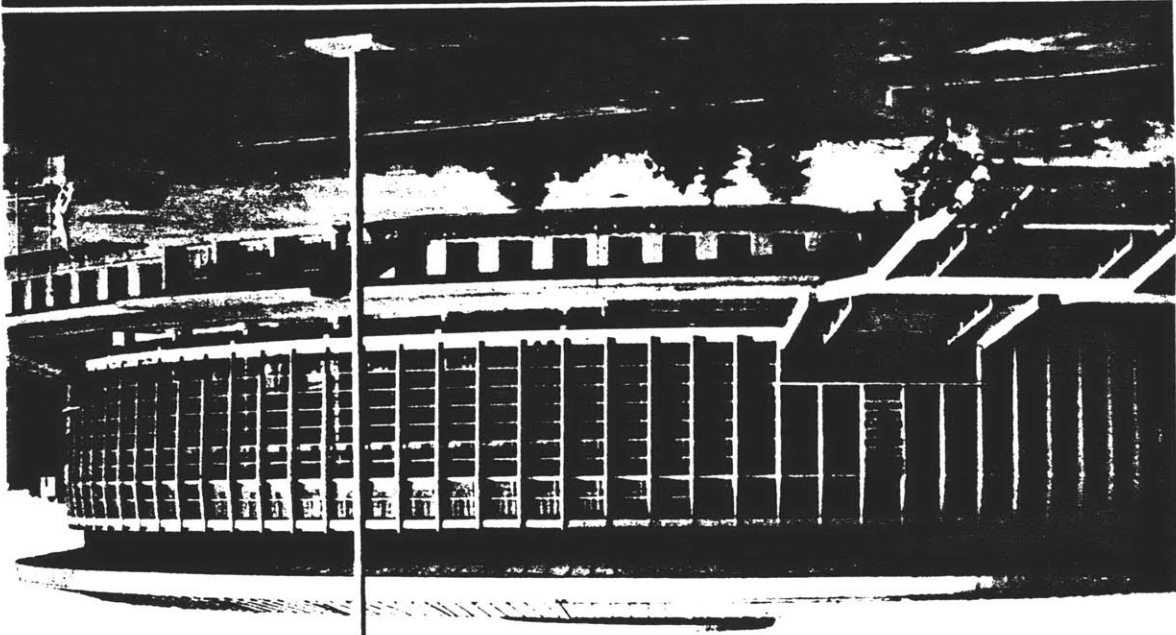
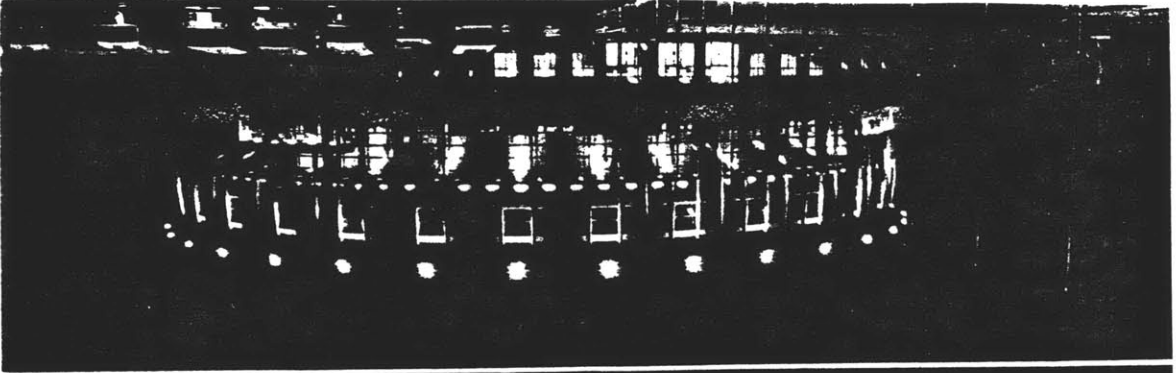
ment of the profession, roughly a century after its arrival in the treaty ports.

NOTES

1. Henry C.K. Liu, "China," Architecture Plus, I (1973), pp.40-47.
2. Gin-Djih Su, Chinese Architecture: Past and Contemporary, (Hong Kong: The Sin Poh Amalgamated, 1964), p.123.
3. John King Fairbank, Edwin O. Reischauer, China: Tradition and Transformation, (Boston: Houghton Mifflin Co., 1973), pp.373, 407.
4. One of the reasons for China's decision to enter WWI, was her hope to retrieve her holdings from the losing powers of the war. Japan made a previous agreement with Great Britain, France, and warlord China to take over Germany's holdings. After a month of nationwide demonstrations, the Chinese finally refused to sign the treaty.
5. Hu was instrumental in instating the widespread adoption of the vernacular language, paihua, as the principal literary medium during the 1920s. It was also he who called for the 'Chinese Renaissance.'
6. R.A. Hamburger, "L'Architecture en Chine," L'Architecture d'Aujourd'hui, IX (1938) X-66 - X-76.
7. Su, p.132.
8. Su, p.133.
9. Ibid.
10. Yang Ting-pao will come up again in Part II.
11. Su, (see note no.2) Su graduated from U. Michigan in 1930, and collaborated with Lei Wei-Paak (U. Mich. 1932) on several of the Chinese Renaissance projects.
12. Su, p.153. Quoted in Jianzhu Xuebao, No.11, (1958), p.6.
13. Hamburger. I am indebted to Hamburger's 1938 article for these initial years of the architect's profession.
14. Ibid. These conditions are those of the Western architect, which probably paralleled the guilds' at an earlier time in Europe. Undoubtedly they would vary for the Chinese architect.

15. Richard Harris, "Miscellany," Architectural Review, CVIII, September 1950.
16. "Rebuilding China's Universities," China Monthly Review, August 1952.
17. The background for this interpretation of the two lines is from the following reference: unpublished M.Arch. thesis (M.I.T. 1976) by Mei Wang, "The Practice of Architecture in the People's Republic of China since 1949."
18. Michael Gasster, China's Struggle to Modernize, (New York: Alfred A. Knopf, Inc., 1983), p.139.
19. Named after a 1966 directive by Mao Tse-tung.
20. I am indebted to the following reference for the basic chronology of the post-liberation years in education: Frederic M. Kaplan, Julian M. Sobin, Encyclopedia of China Today, (New York: Eurasia Press, Inc., 1982).
21. The 'two estimates' were that the revisionist line had held the dominant position since 1949, and that the majority of students and teachers were 'bourgeois intellectuals' (also during this post-liberation period). It essentially criticized the lack of success in Mao's line of education up to the GPCR years; which Mao refuted, maintaining that the majority, indeed, were in support of socialism.
22. 'A spokesman for the Ministry of Education,' "What's happening in China's Education," China Reconstructs, April 1978. These remarks were quoted as having been said by the Gang of Four.
23. Ibid. Where applicants prove equal in political and physical qualifications, preference is given to those who do best in the entrance examinations. Given that all of the aforementioned are equal, preference is then given to workers and peasants, children of worker and peasant families; with special consideration to national minorities and overseas Chinese. The article also states that entrants must be under 25 years of age, unmarried; with an extension of this age limit to 30, in specific instances.
24. Agriculture, industry, national defense, and science and technology.
25. "What's Happening in China's Education," China Reconstructs, April 1978.

26. Gao Yilan, translated by John K.C. Liu, "Teaching Students to Design for People," Journal of Architectural Education, XXXV No.1, (1981).
27. Frederick Gutheim, "Whither Chinese Architecture," AR, August 1981.
28. Yilan, Ibid.
29. The following reference provided this background on practice: G.Querrien with the collaboration of Leon Hoa, "Urbanisme et Architecture en Chine Populaire 1950-1978," Supplement au Bulletin d'Informations Inter-Etablissement no.35, (Paris: Centres d'Etudes et de Recherches Architecturales), October 1978.
30. Gutheim, Ibid.
31. Paul Sun, lecturer, "East Asian Program: Neighborhood Transformation Seminar, (M.I.T. 1985).
32. Andre Croize, "Chine 1966: impressions sur l'amenagement du territoire, l'urbanisme et l'architecture," Urbanisme, No.98, (1967).
33. An English Summary of a speech given by Dai Nianci, "Aiming at New Prospects through System Reformation, Jianzhu Xuebao, No.6, (1983).
34. Wang Tianxi, "A Step in Structure Reformation," (Eng. Abs.), Jianzhu Xuebao, No.8, (1986).



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T H E A D V E N T o f N E W P R O G R A M S

The creation of new forms can only be based on new contents rather than old contents.¹

Although the specific relating of content to form raises a whole new set of issues, this quote nevertheless implies: old contents\old forms -- new contents\new forms.² Suffice it to say that the church or chapel delineates the early intervention of new program, and with it, the concept of building type, (as Pevsner treats it).

It must here be noted that traditional Chinese building types take the form of standardized units in relation to building complex, such as hall for the temple or palace; or in the case of garden, pavilion; or gate in the case of city. In essence, they are hierarchical, rather than programmatic. Their proportions and placement in plan, in relation to the rest of the complex at whatever the scale, are what determine their level of hierarchy. Structural choices such as roof style or platform height; as well as detailing, such as color; thereupon provide further delineation. The commemorative pagoda and p'ai-lou provide other exceptional singular-form examples, but these are more aptly to be regarded as monuments, often as parts of a procession. In other words, the development of plan and parti in relation to building usage, is essentially foreign to the Chinese conception.

Hotel provides the most obvious example of this advent, subsequent to the founding of the 1911 republic, (as too, does apartment building). These phenomena arose in the treaty ports, specifically contradistinguishable from the local tradition in their high-rise character. (Horizontal decentralization has long been considered one of the primary characteristics of Chinese Architecture.)

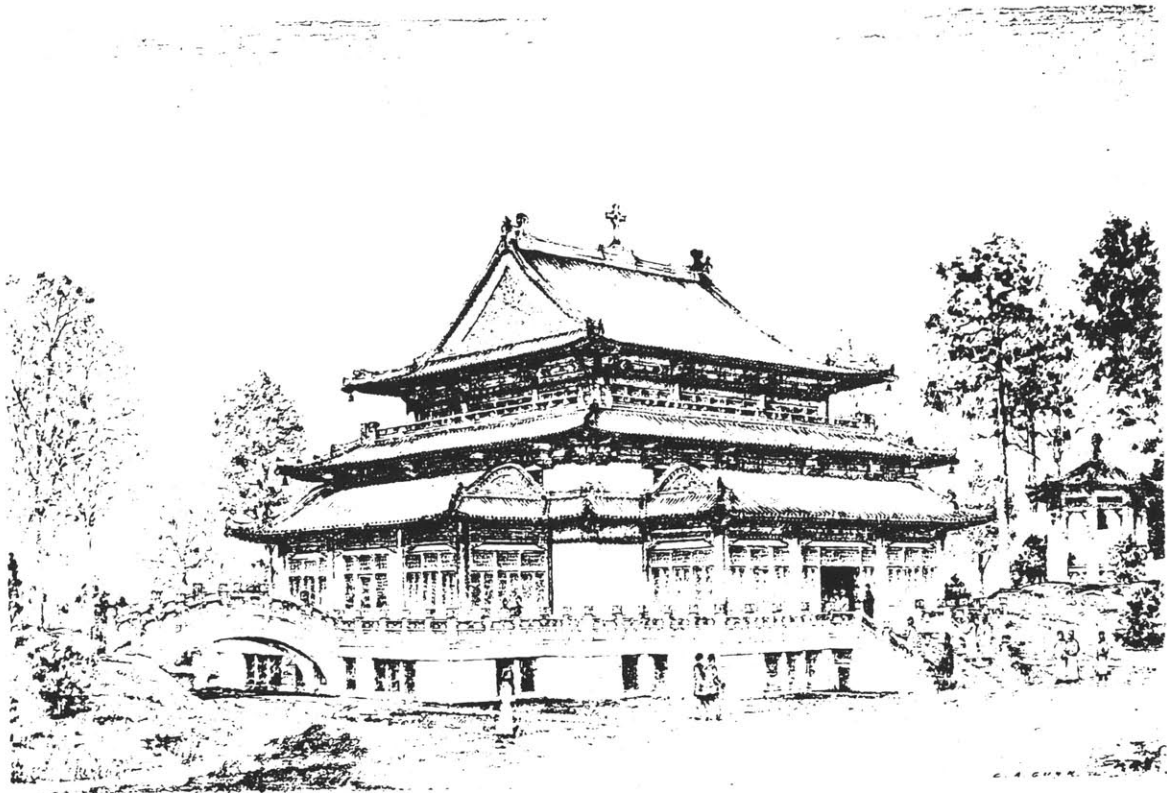
The government building warranted a new kind of attention during the twenties and thirties, as it was to

depict the new egalitarian state. University buildings were forerunners of this 'democratic' portrayal; while the introduction of transportation terminals presented yet another, very different aspect of the growth of popular communication.

In essence, the advent of new programs can almost be considered a priori: its base so broad that there is virtually no reason to circumscribe its edges. Nevertheless, it must be noted that the Chinese conception of the Western building type gave rise to the tackling of new sets of problems, both formal and technological. To demonstrate this duofold intervention, I offer several examples of building types with their characteristic approaches. It is not my wish to present them conclusively; rather, it is my intent to merely point out this advent as a crucial factor in the development of modern Chinese Architecture; crucial moreso by their means of access to producing the buildings, than by the categorization of the buildings as types themselves, which will require more time to develop a more meaningful retrospect.

A variety of solutions provided the avenues to tackle these new programs. I present a range of examples here as brown paper, packaged depictions; to chart the pendulum which swings from the most gracious of introductions to the most drastic of interventions; and from there to the reinterpretation of the Chinese own program, based on a classical model.

Among the responses to the new building type was the instinct to accommodate all of the parties involved, as well as to make use of the resources available (whose variables were numerous). 'Oddly imitative' seems to best describe both the Chinese Jeffersonian auditorium at Tsinghua University of 1918, as well as the chapel for Yenching University of 1935. The auditorium was built with American assistance concurrently with other university projects for a gymnasium and a library.



Yenching University at Peiping, China, is about to erect a chapel of which we show a preliminary perspective above and, on the following pages, some of the plans, a section, and a sheet of detail drawings.

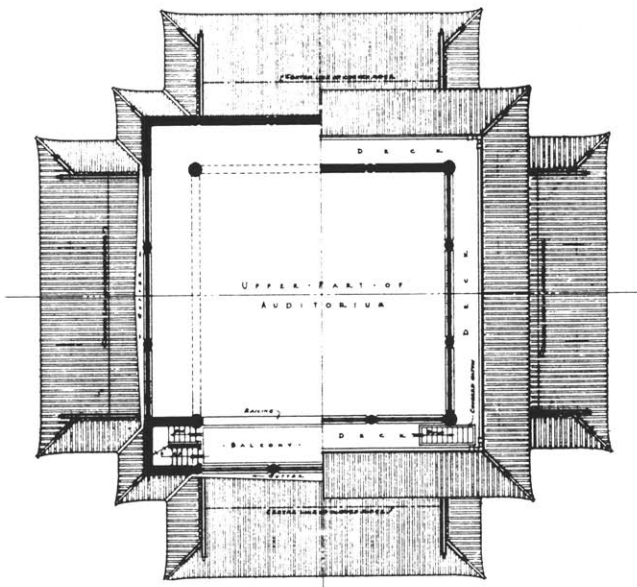
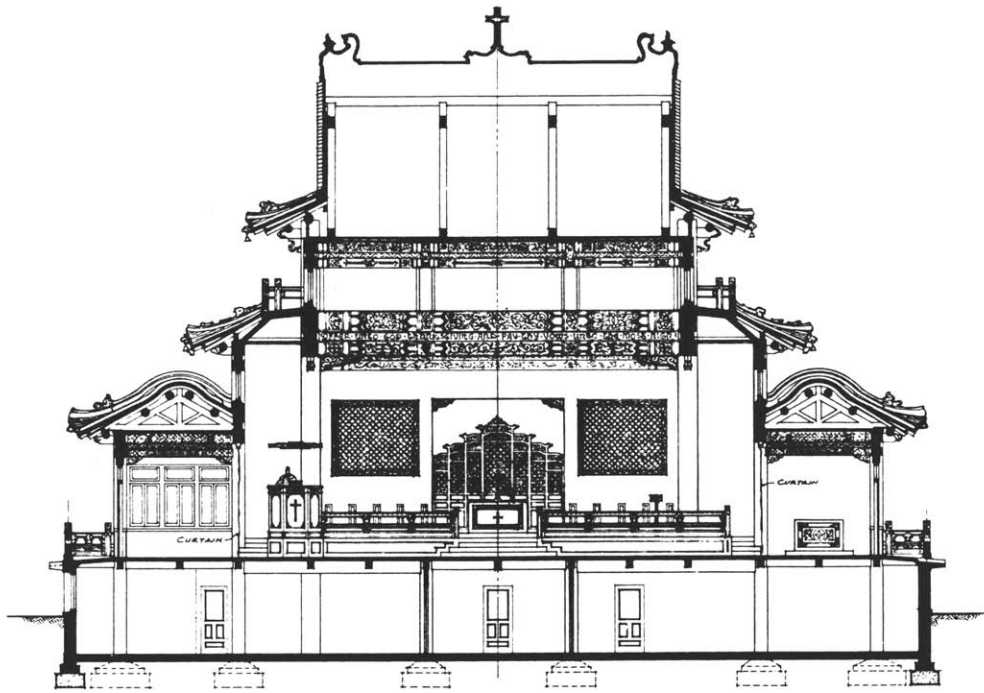
As Christian churches in this style are rare, and moreover, as Western influences in the East usually seek to impose their own ideas of art and architecture upon Eastern peoples, this example is a refreshing exception to the general rule.

Designed by the Presbyterian Building Bureau of China; S. M. Dean, R. L. Creighton, and C. A. Gunn, associates

A CHAPEL FOR YENCHING UNIVERSITY PEIPING, CHINA

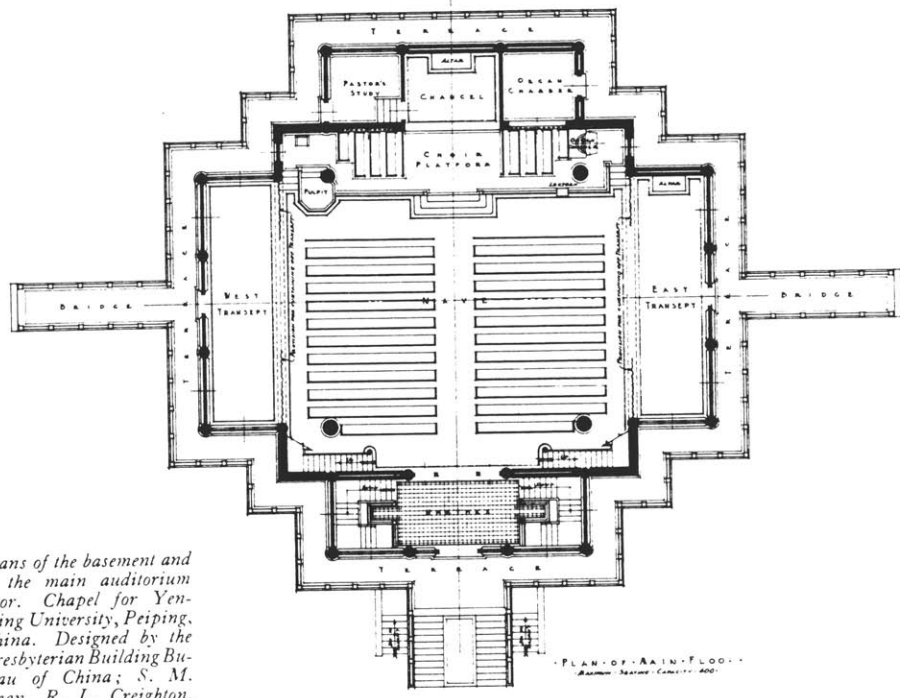
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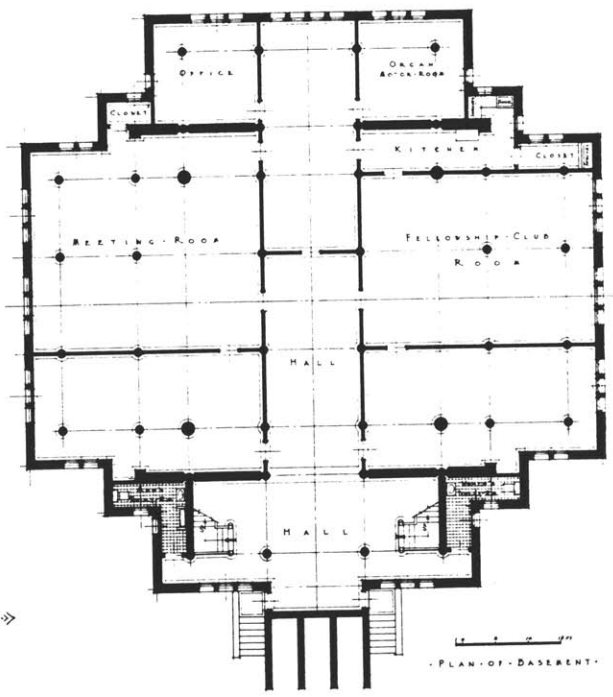
Above, a transverse section; to the left, plan of the balcony and deck levels. Chapel for Yen-ching University, Peiping, China. Designed by the Presbyterian Building Bureau of China; S. M. Dean, R. L. Creighton, and C. A. Gunn, associates

• ONE-HALF-PLAN-AT-BALCONY-LEVEL • ONE-HALF-PLAN-AT-DECK-LEVEL •

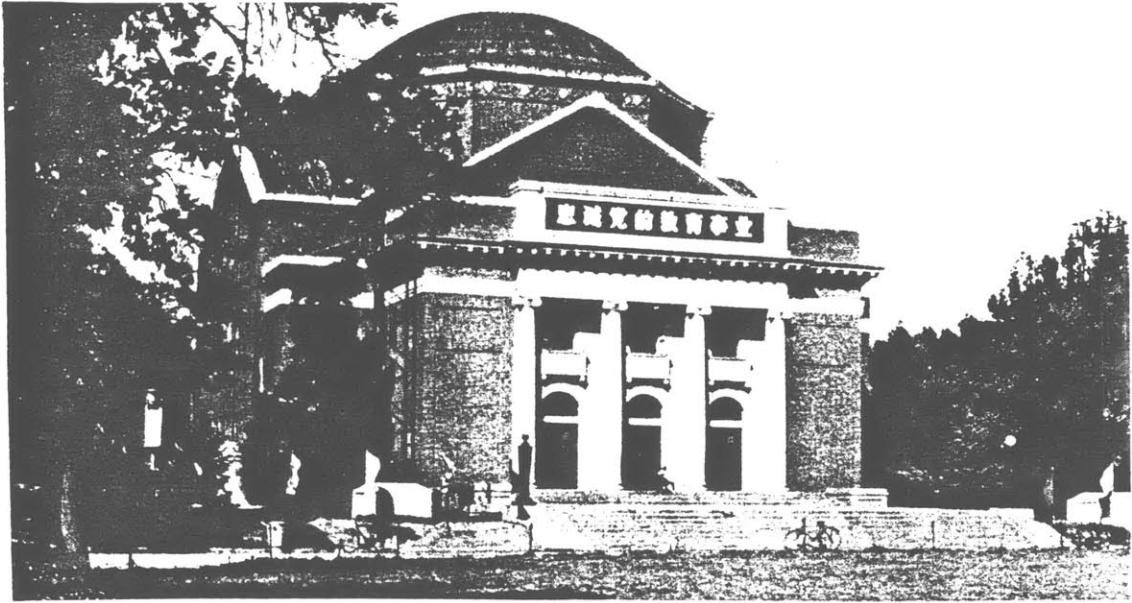


Plans of the basement and of the main auditorium floor. Chapel for Yen-ching University, Peiping, China. Designed by the Presbyterian Building Bureau of China; S. M. Dean, R. L. Creighton, and C. A. Gunn, associates

PLAN OF MAIN FLOOR
Actual Seating Capacity 400



PLAN OF BASEMENT



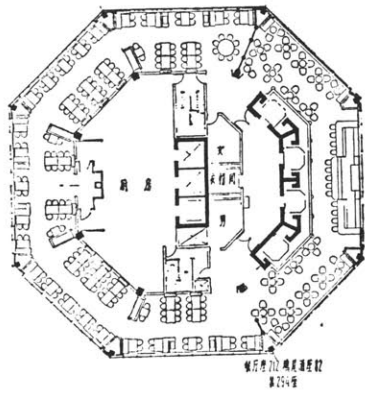
Bricks were brought in from America for its construction.³ The chapel designed by S.M. Dean, R.L. Creighton, and C.A. Gunn Associates (of the Presbyterian Building Bureau of China), is a late example typifying the effort to give the Chinese their own heritage, for a clearly, non-Chinese usage.

'Western transplant' is next in the range of solutions, undoubtedly the most extreme; and what better program to illustrate this than hotel. The appearance of Portman's 'megabolt' hotels in the 1980-6 issue of the "Jianzhu Xuebao,"⁴ is foreshadowed by an article on the Great Wall Hotel, in the previous issue. Its origins are precarious:

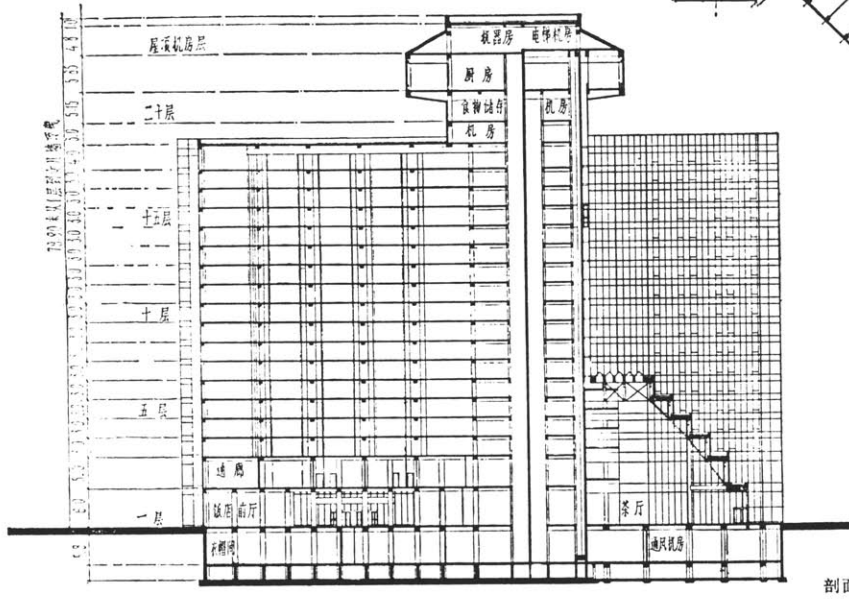
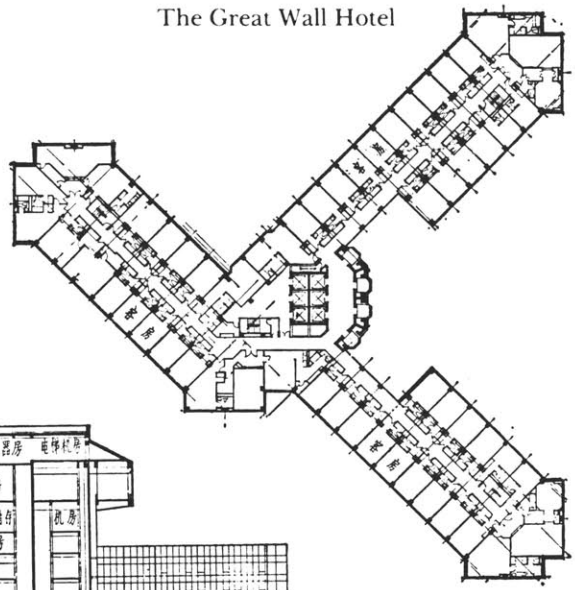
The PRC is also sending occasional delegations abroad to study building types they are planning.-- Becket's Beijing Hotel apparently is the direct result of such a group's fascination with his Dallas Hyatt.

.....
The 1,007 room, 22-story Great Wall Hotel by Becket is a \$78-million joint venture by the China International Travel Service (CITS), E-S Pacific Corporation Company (ESPDC), and Becket Investment Corporation. To be completed in 1983, the structure is being built with Chinese labor and will be jointly managed by CITS and ESPDC. The operation and owner-ship of the hotel will revert totally to the Chinese ten years after its completed.⁵

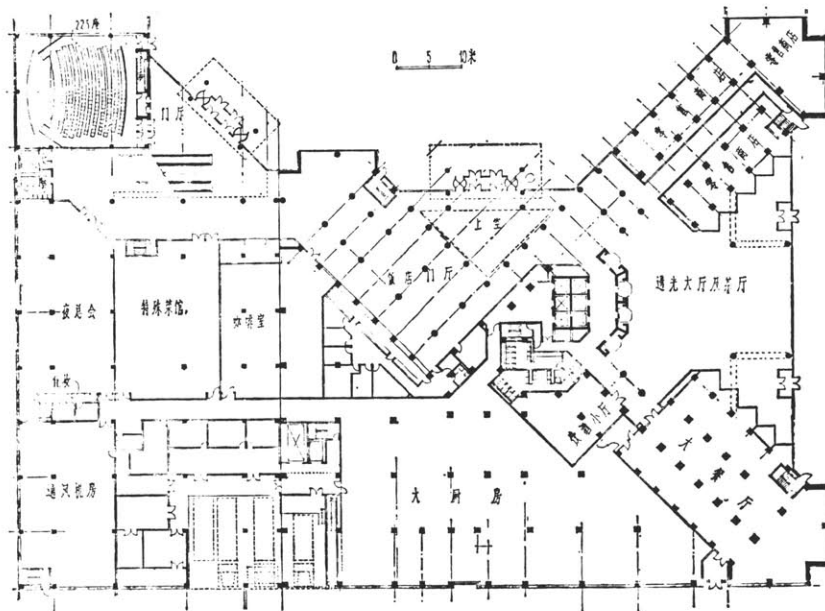
The Great Wall Hotel



餐厅平面 圆形餐厅 1254 席



剖面

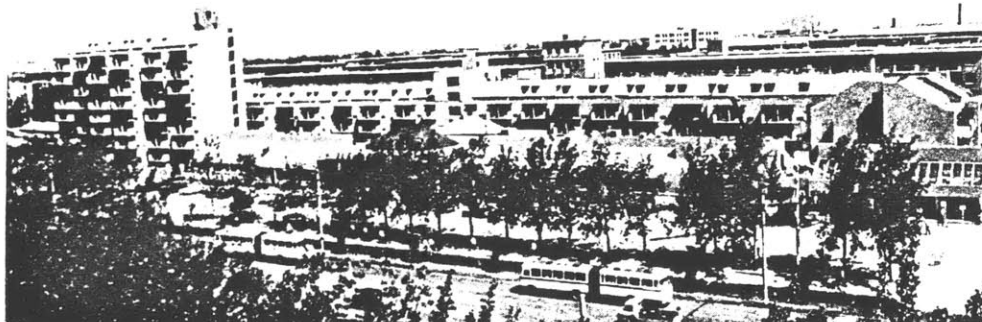
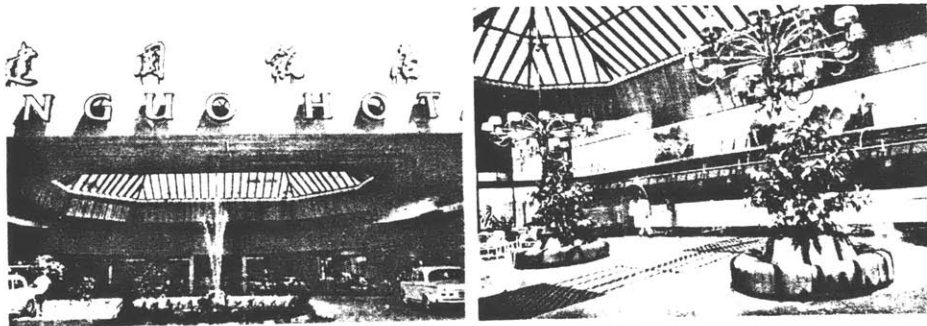


一层平面

It is the contemporary 'Western transplant' version of nineteenth century treaty port eclecticism, and although it may be that its clientele continues to be Western, the command of its presence by the Chinese, is not.

Joint-venture law using Chinese and foreign investment was instituted in July of 1979. Clement Chen's Jianguo Hotel (completed in 1982) was the first such joint-venture project. The Chinese-born American architect from San Francisco attributes the success of the hotel in part due to the "extensive training of the Chinese employees in hotel and restaurant management by a large staff of foreign employees."⁶ The California-stucco project is centrally located in Beijing, and is modest by comparison to other more elaborate 'Western transplants.' The "Jianzhu Xuebao" makes the following comment on the Jianguo Hotel:

It was agreed that the design was a success as a typical American hotel for holidays.... It was also pointed out that in some respects the design did not fit the habitual conditions in China.⁷

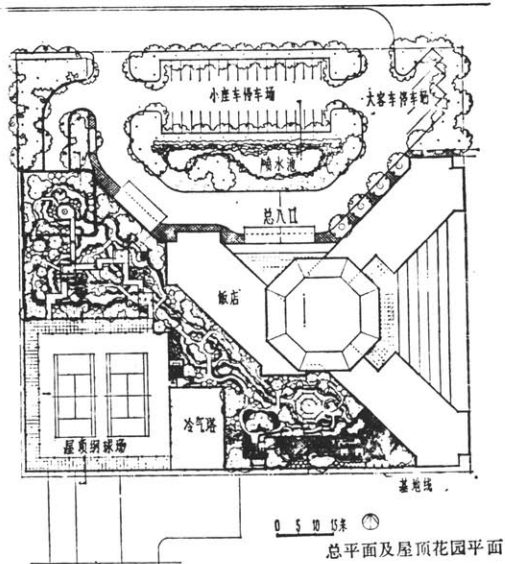


Clement Chen's Jianguo Hotel

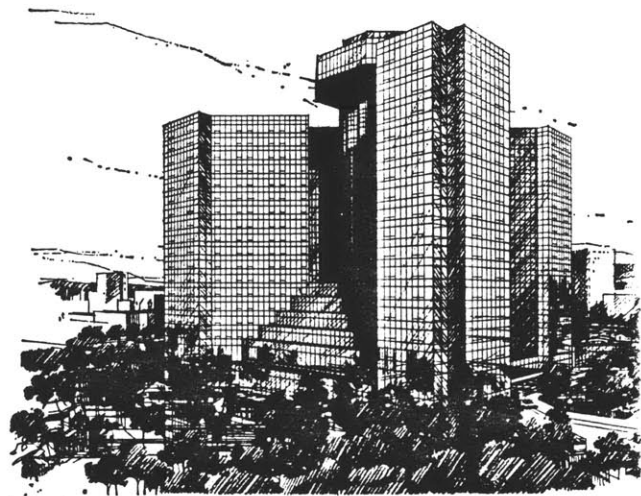
Nevertheless, the contributions of these projects to the introduction of building technologies must be noted; and their presence at the Chinese request, furthermore, must be reiterated:

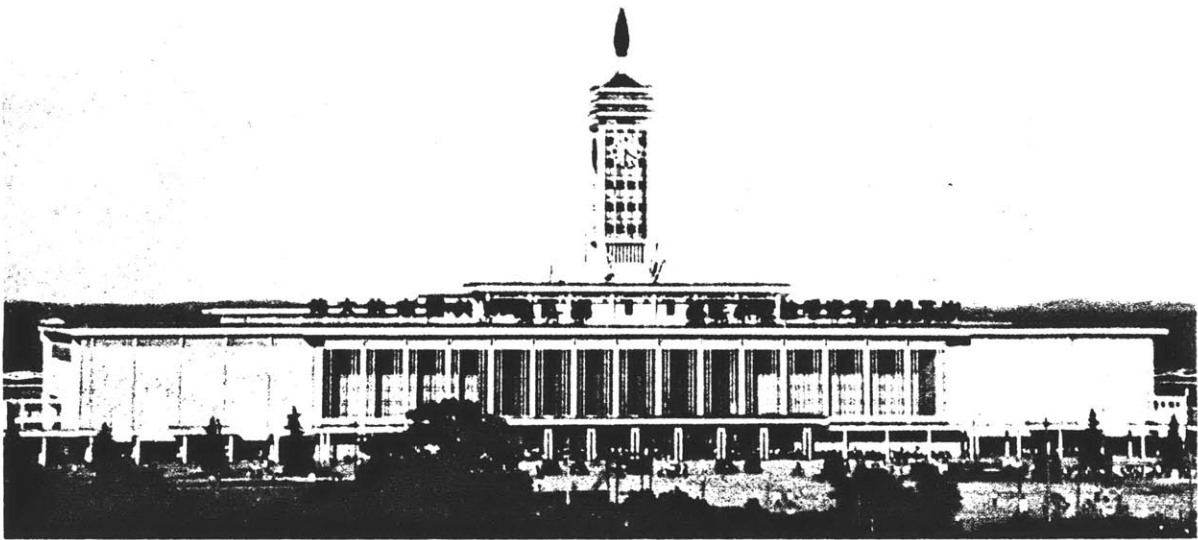
Becket's hotel, completed in 1983, is one of the most technically sophisticated buildings in China today. Becket says he argued with the Chinese that foreign visitors would want to see more traditional features, and an attempt was made to include Chinese pavilions in the complex.... The hotel was the first curtain-wall structure in China, and fabricators Charmebel of Belgium used the project as a training ground for Chinese laborers. . . . [By the same token], the Great Wall Hotel ran approximately eight months behind schedule, primarily due to lag in material delivery.⁸

Trade centers, and on a much larger scale, the Special Economic Zones, also typify the relinquishment of Chinese tradition in favor of an internationalization of architecture. It is the old theme of 'progress' which must here be considered, articulated by the Great Wall Hotel's citation as a "symbol of Beijing's impetus toward the twenty-first century,"⁹ complete with its own six-storey atrium. Form and technology are herein faced with a somewhat "chicken or the egg" situation.



Becket's Great Wall Hotel



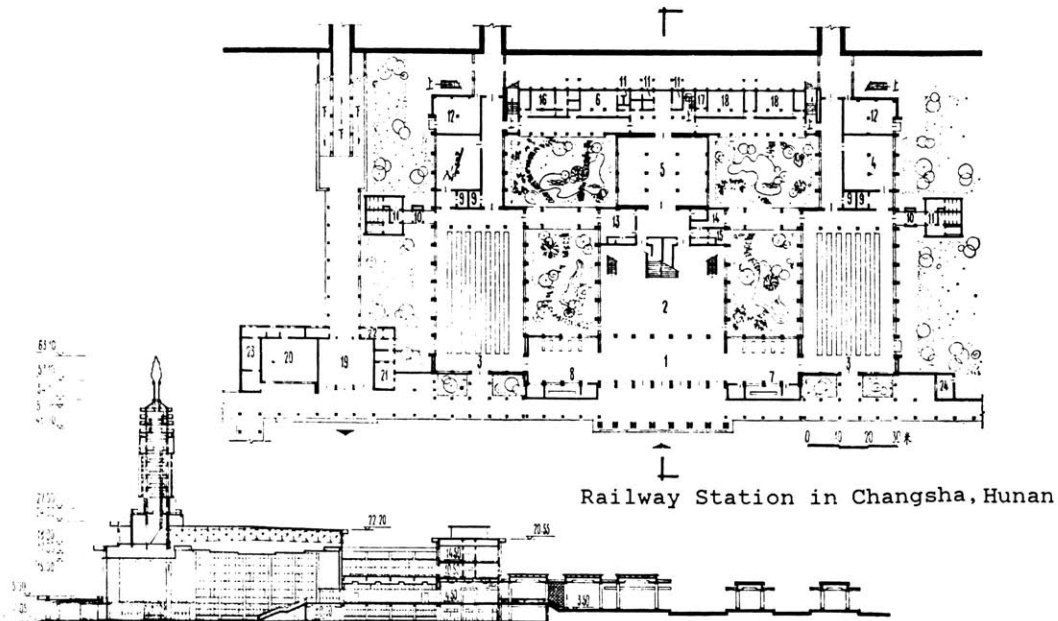
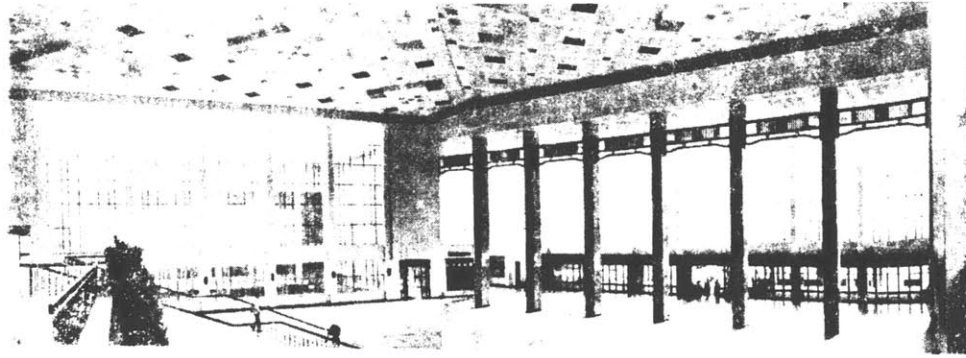


In architectural treatment, efforts were made to care for the organic combination of modern terminal structure with Chinese traditional features so as to create a new style with a sense of plainness, terseness, and clarity.¹⁰

Building types for transportation and communication frequent the "Jianzhu Xuebao," as they also delineate the theme of progress. Communication buildings, first constructed in the 1950s, bear the mark of Soviet inspiration as monuments; with their centered towers and siting along key boulevards.

The origins of large-scale transportation buildings during the same era are also distinguishable by their heavy concrete construction. These are the new city gateways; and key cities as well as eminent cities warrant special attention for their terminal designs:

The main block is topped by a huge clock tower above which rises a torch. The tip of the torch reaches over sixty meters above the ground.
The new station will play a significant role in speeding up the industrialization of Hunan Province. It is now much more convenient for both foreign friends and the Chinese people to visit Shaoshan, Chairman Mao's home village.¹¹



Smaller, informal versions proliferate the small and medium-sized cities; for railway, bus, and air travel. Long-span construction techniques are given full experimentation in these horizontal sliding bar buildings of vertical concrete structure. Although their technology inevitably gives these buildings their roots in the Sino-Soviet style, their frankness of structural expression is all in all, a rather 'Chinese-generic,' straightforward approach to variations on the same theme, from city to city.

The design of the stations aim at creating a unified new architectural style and strives to organically integrate form with function and structure, and make the external facades honestly express the internal spaces.^{1 2}

The buildings for industry such as factories are mostly precast concrete. I think these are the highest quality buildings technically that I saw in China.¹³

Building by complex is a much expanded program, although this is not by any means, new to the Chinese hand. Industrial complexes, however, are phenomena of an entirely different nature. They were first introduced en masse during the first Five Year Plan. Talk of the Soviet departure in 1960 with their "blueprints in hand" attests to the importation of factory.¹⁴ Although they may have been technically well conceived, in terms of urban planning, they were not. The squandering of land for industrial projects during the 1950s instigated the urban and suburban chaos which was to result. (A later discussion on land will elaborate more fully on this point.) While industry sprawled to fill the expectations of Soviet grand-scale planning, apartment buildings of uniform building lines and height arose along the newly widened boulevards, similarly illustrating the mismatched scaling of architecture to urban form.

The 'Russian transplant' of urban scale (conceived with a largely imaginary program to support it), is echoed by the industrial complex, at the architectural level. Both industry and housing, in their relation to urban planning, began to be significantly addressed with the instituting of the People's Communes during the Great Leap Forward.

Nonetheless, the shortsightedness of technology was to become a recurrent theme for both urban as well as architectural form:

The authors hold that the role and responsibility of architects in the design of industrial buildings should be sufficiently recognized. It is improper to leave everything to the technology and equipment designers with the architect in a passive position. As a matter of fact, owing to the use of most advanced technique, industrial buildings are most capable in reflecting the characteristics of the time.¹⁵

Yet the Chinese have consistently had a fascination with science and technique, throughout the century, which ranges from purely pragmatic concerns, to the exaltation of technology as a solution in itself to the quest for moder-nization. Economy underlies technology, needless to say, as the Great Leap's slogan "for more, faster, better, and more economical results" proclaims. There are also times when economy undermines technology, as was often the case during the Cultural Revolution. Moreover, there are instances when architectonics simply assumes the position of primary concern. The stadium and gymnasium are two such examples of this, in which technology and form are essentially the same. The civic role of these structures is wholeheartedly embraced by the Chinese, and although economy remains a concern, it is essentially

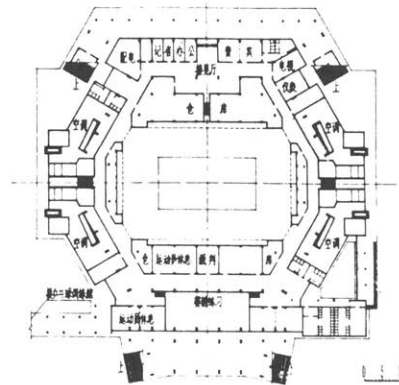
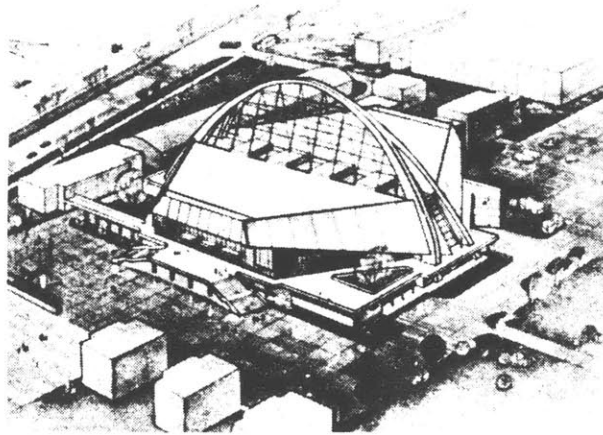


图 4 一层平面

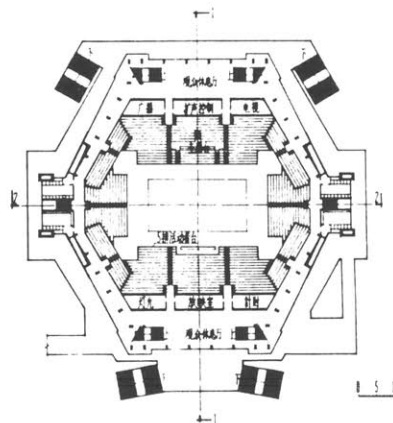
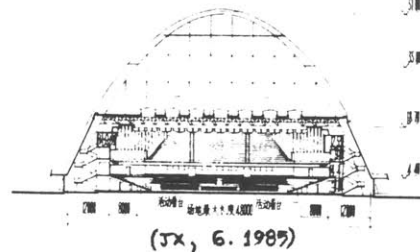


图 5 二层平面



overridden.

The Peking Workers Gymnasium (1961) and the Shanghai Gymnasium (constructed during the GPCR) both employ bicycle wheeled roof structures, uniting building form to building technology. Program and form also coincide over basic issues of access and egress, as is the beauty of stadium and arena. Although these birthday cake buildings are clearly objects, their horizontal decentralization is akin to the Chinese architectural tradition. Furthermore, these edifices uphold Chairman Mao's instructions to "promote physical culture and build up the people's health."

Other cultural endeavours have not been architecturally, as enthusiastically sanctioned. Theatre and library are among the most celebrated of Western building types, whereas their inception during the early decades of the

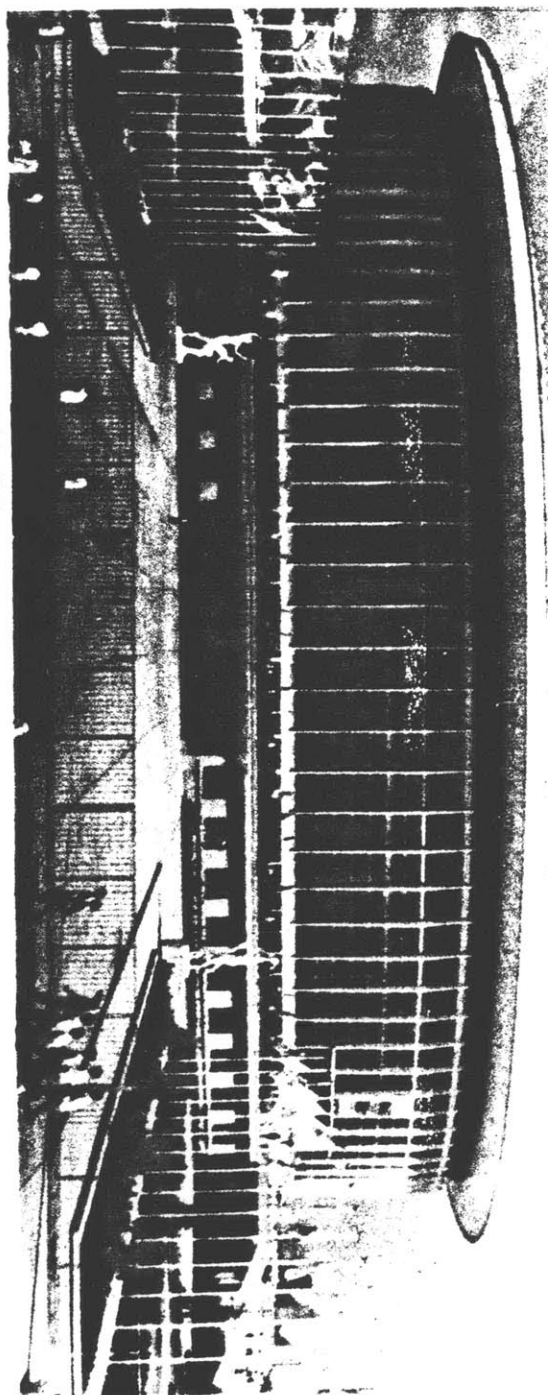


图 4 比赛馆西大门外景

People's Republic has for the most part, been understated. Key technical aspects of both of these programs have received the bulk of attention in the "Jianzhu Xuebao;" notably, acoustics and lighting. The Chinese propensity for 'scientific' has already been articulated. For the library, high efficiency has been cited as the most important characteristic, in view of its complex programming.¹⁶ Theatre design, on the other hand, has provided a unique opportunity for interior design, which lends itself well to the Chinese forte of building with void.

Prior to the 1980s journal coverage on either of these building types makes little note of elevation and building mass, (not to mention parti). Instead, technical diagrams, building diagrams, as well as plans and numerous interior photographs, illustrate the project's intentions. This treatment attests to the

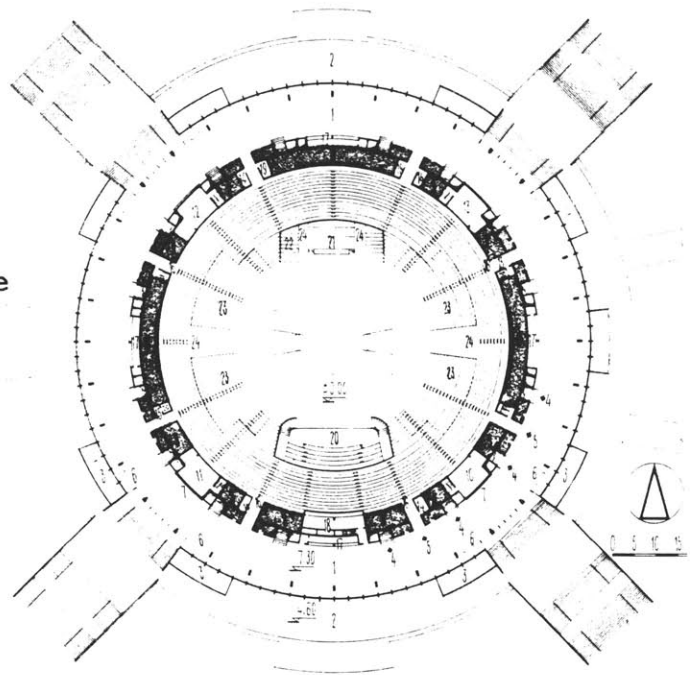


图 5 比赛馆夹层平面
Shanghai Gymnasium

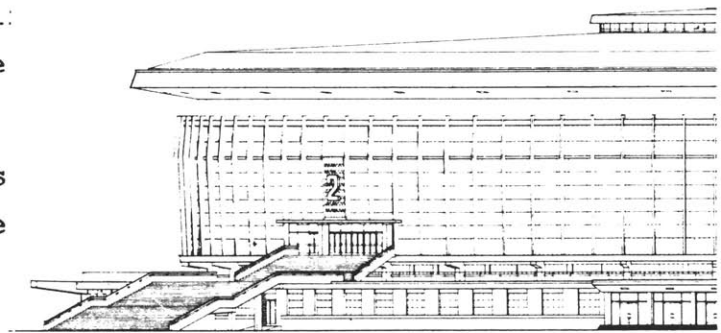
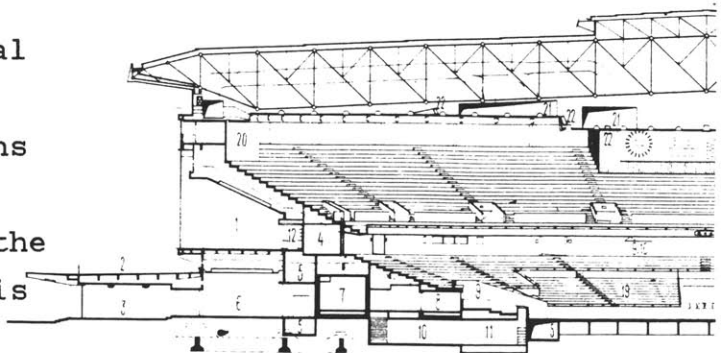
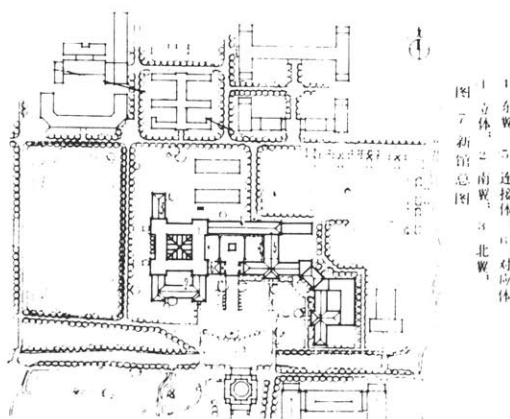
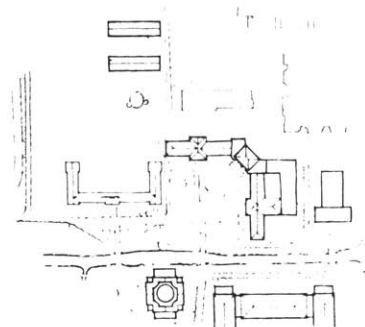


图 8 立面



Chinese priority. (One must, however, obviously take the political atmosphere of the last decades into account.)

Recently, a new kind of attention has been paid to both of these 'cultural' programs. A project for library expansion at Tsinghua University, for example, brings us to the careful consideration of the addition, or 'piggyback' program. It is designed by Professor Guan Jiaoye of Tsinghua, who studied at M.I.T. in 1958, and also did extensive research on the Temple of Zugla Kang in Lhasa, early in the 1980s. The original library was built in 1919, (the aforementioned project with American assistance) and later extended in 1931. Guan articulates the problem for the 20,000 sq. m. addition to the existing floor area of 7,700 sq. m., as threefold:



Design for Library Expansion,
Qinghua Univ., Beijing Guan Zhaoye

- 1) Continuity in history and consistent with the environment. As the new library to be built will be

图 8 南立面



图 9 剖面

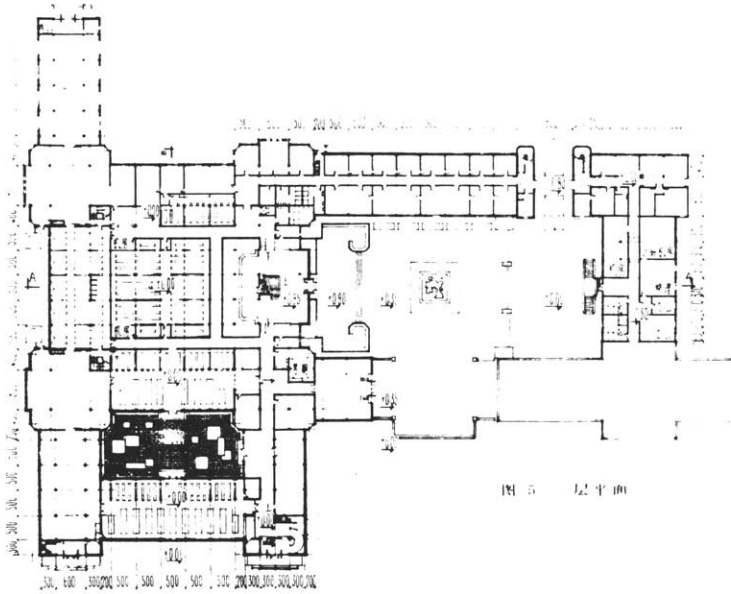
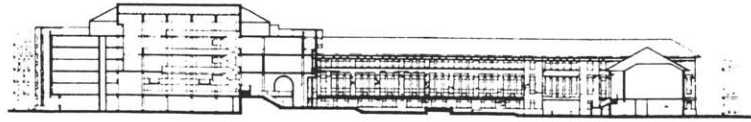


图 5 一层平面

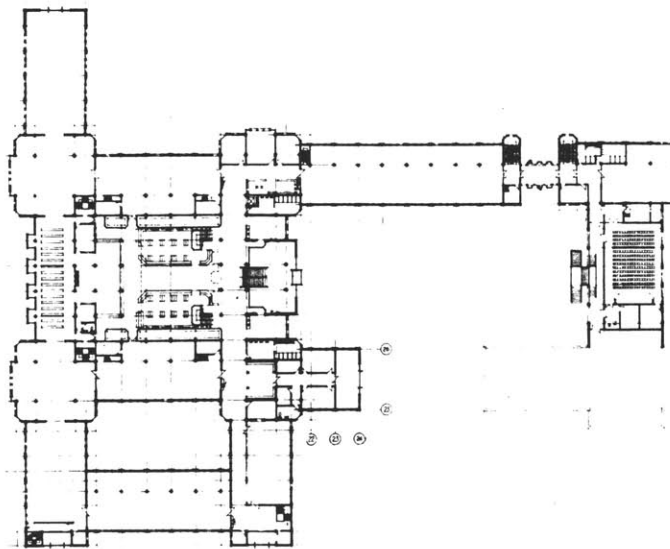


图 6 二层平面

Design for Library Expansion, Qinghua University, Beijing
Guan Zhaoye

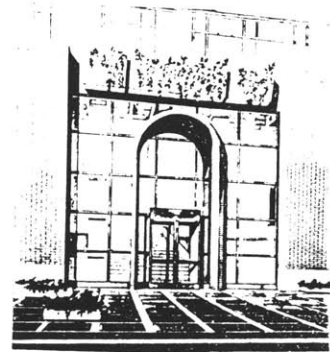


图 10 主要入口处理 (郭宝山绘)



图 11 过街楼 (羊培绘)

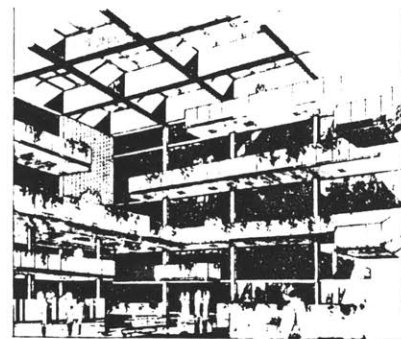


图 12 目录大厅 (王宇绘)

much larger than the existing one, the first problem to be settled is whether it should be located in the quarters of the old buildings or that of the new ones ... it has been decided to take the former location to the advantage of better connection with the existing building and save in land ...

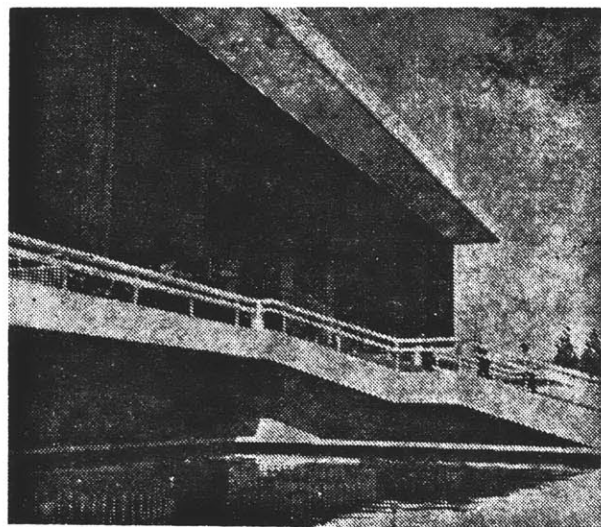
2) The quarter of the old buildings has the Auditorium as the central motif. [the same Jeffersonian one, previously mentioned] As the library expansion will have a considerable mass, the problem of maintaining the Auditorium as the central motif has been carefully considered ... to make it in harmony in style with the old building, but not simple repetitions.
.....

3) The creative conception of the expansion design has been emphasized on the coherence and subordination to the existing buildings rather than the expression of the individuality of the design itself.¹⁷

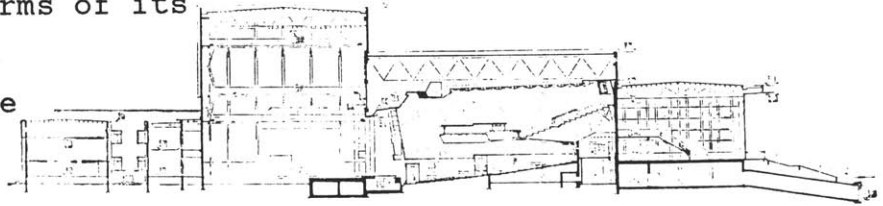
The recent endorsement of the preservationist attitude is well delineated by this project. One must also note the presence of the individual.

The passage of time is specifically addressed in the 'piggyback' program, and increasingly such projects are featured in the "Jianzhu Xuebao," with their varied stances of dialog, subordination, and so on; in the effort to enhance a senior and respected artifact.

Theatre design has also reached a point of celebration in the last few years. A step back to a pivotal time in 1979 provides a key example, sited alongside Hangzhou's famous West Lake. A glass facade beneath a cantilevered roof is undoubtedly the response to such a location, not only



for viewing the lake, but also for lightening the building mass. Its plan demonstrates a departure from prior decidedly 'proscenium-in-a-box' schemes, with circulation seemingly tacked onto their perimeters. This plan, by contrast, begins to breathe. However, as is undoubtedly a sign of the times, the project presentation in the journal is largely in terms of its materials, again demonstrating the predominance of architectonics:



Owing to the requirement of city planning, the main block is designed in a symmetrical form ... the interior decoration of the auditorium is mainly determined by the requirement of acoustical design.

The facade design aims at achieving an architectural effect of both simplicity and clarity. The wall surface is mainly composed of large window areas of glass ... In acoustical design, the ceiling of proscenium and the sidewalls as well as four reflective panels [are] installed behind the side lighting. . . . Measurements in the completed auditorium show that the reverberation time is satisfactory....¹⁸

A theatre design competition is held in 1980 (published J.X. No.3 1981), and the range of solutions increasingly respond not only to the integration of design and technology, but also to local characteristics. (The Chinese inherent tendency for organicism translates well to these theatre interiors.) The Jincheng Theatre design is published in the journal in 1983, which takes on a scope of virtual

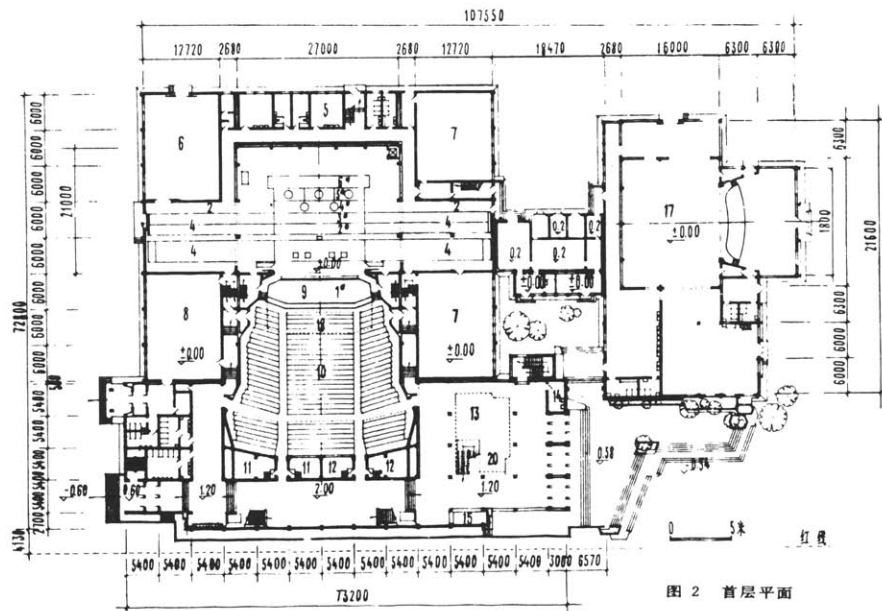
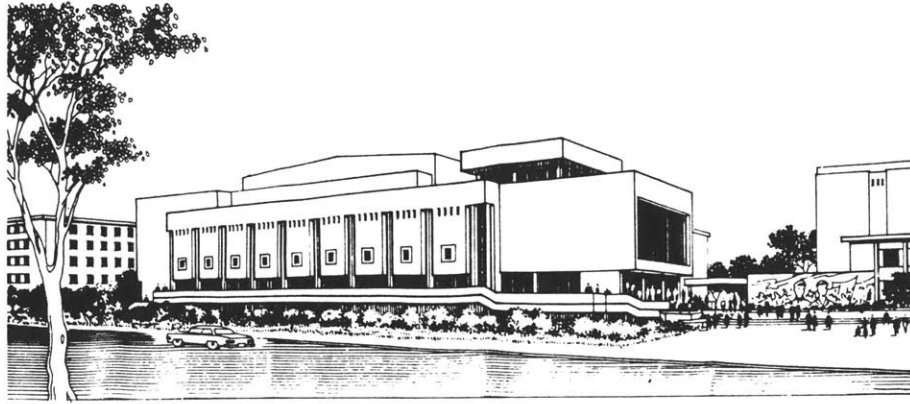


图 2 首层平面

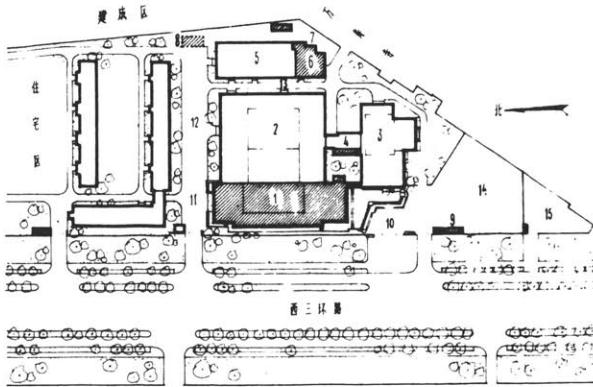


图 8 总平面

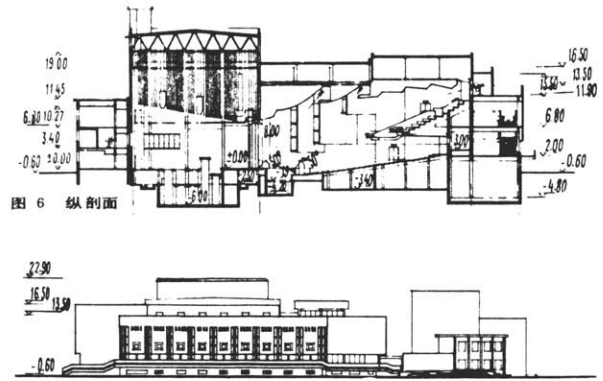


图 6 纵剖面

图 7 西立面

China Opera House

extravaganza, and by 1984, the Chinese Opera House in Beijing follows suit. This project is constructed to commemorate the 90th anniversary of Chairman Mao Tse-tung's birthday, and the 35th anniversary of the founding of the People's Republic. It is incidentally, designed asymmetrically to fit the site.¹⁹

A gem of a design, the Beijing Concert Hall is completed in January of 1986, and is considered the first of its kind in the capital. Whereas previous theatre designs have if anything, displayed shortcomings in massing and elevation, with their weighted, looming, box-like presence (not unlike Lincoln Center in New York City); this concert hall is an unabashed box, and it is precisely this characteristic which gives it its strength. The irony of its design is the absence of a proscenium contained within.

Sited in downtown Beijing, the building cantilevers from a podium in all directions, in order to gain more space for the upper floors. The podium houses mechanical and service rooms, as well as

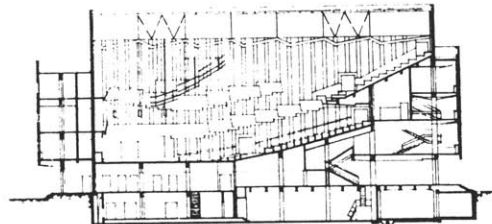
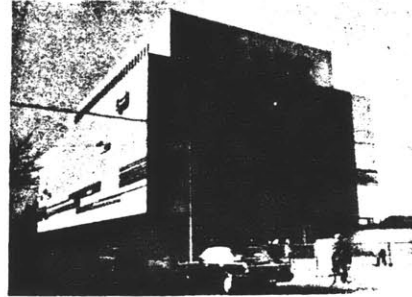
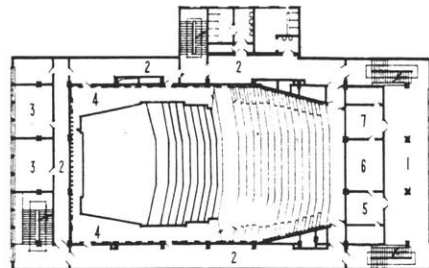


图 8 纵剖面



the lobby-- understated perhaps, but horizontally emphasized under the weight of the box. A performance platform projects into the auditorium, and circulation and service rooms circumscribing it are specifically cited for their acoustically insular functions.²⁰ The auditorium's dynamic qualities contrasting with the sedate posture of the building form demonstrates the Chinese architect's increased proficiency at building 'objects,' with the degree of modern invention often associated with such undertakings.

A final wee testimony to the triumph of theatre design (out from under the shadow of technique), is from a project featured in the journal, in August of last year. Although of a much smaller scale, the Daguanlou Cinema of Beijing illustrates well, the desire of the Chinese to make the building program, the building type; their

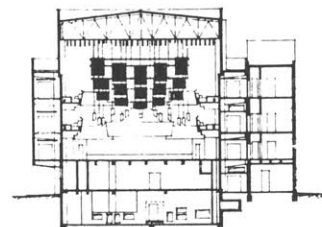
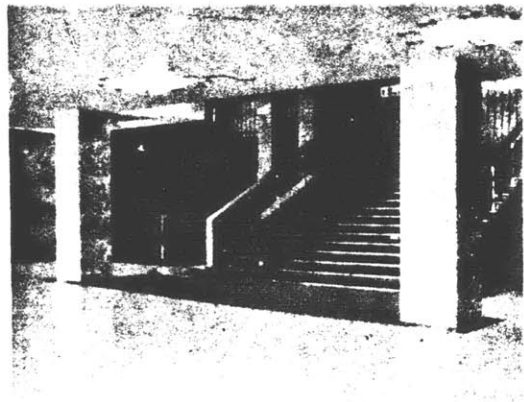
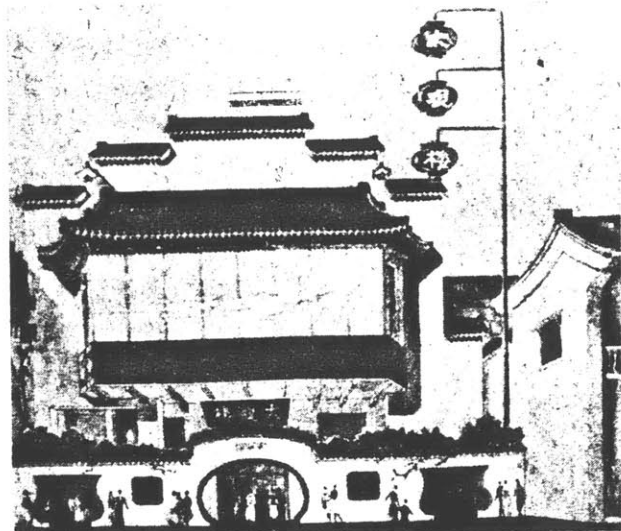
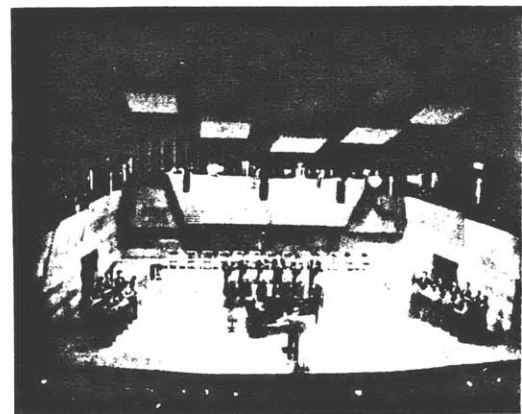
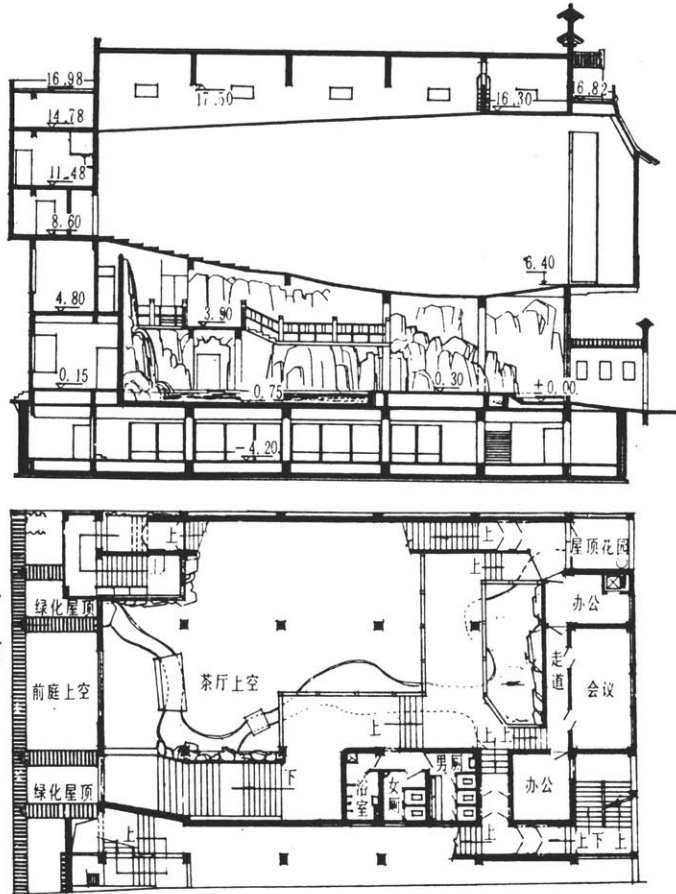


图 9 横剖面



own. The meandering through a garden atrium for two floors before reaching the cinema up top, is evidence that it is not just technique nor economy which must be considered in design. (This demonstrates, moreover, a degree of resolution in conflicts of former 'bourgeois' endeavors.) The integrity of materials is undoubtedly the key factor in upholding this emphasis on interior design; and needless to say, this is in direct relation to the tailoring of decoration.



The translation of landscape design to interior design is clearly suggested by this project, whereas it is blatant in others. (Even the splendid landscape tapestry covering a vast wall in Chairman Mao's Mausoleum attests to the bringing of the outdoors, in. And who can keep their eyes off of it?) Landscaping begins to be featured in conjunction with architecture in the journal increasingly, subsequent to the fall of the Gang of Four; (needless to say, as does preservation as well). By 1980, an article is featured on the Suchow Gardens, regarding their adaptation to modern design. Two years later, the first 'scenic spot' is published in the "Jianzhu Xuebao," with coverage of the "Symposium on the Planning and Development of Scenic and Historical Districts" to follow, soon thereafter.

The overall program of the 1980s is one of historic

restoration and preservation, key components of regional and urban planning. By the late seventies, administrative organizations had begun to be established, with a growing concern for the situation at hand. Legislation was issued in Beijing, for example, in each year of 1980 through 1982, designating and protecting monuments and historical relics. The following project epitomizes the pivot in attitudes at the time:

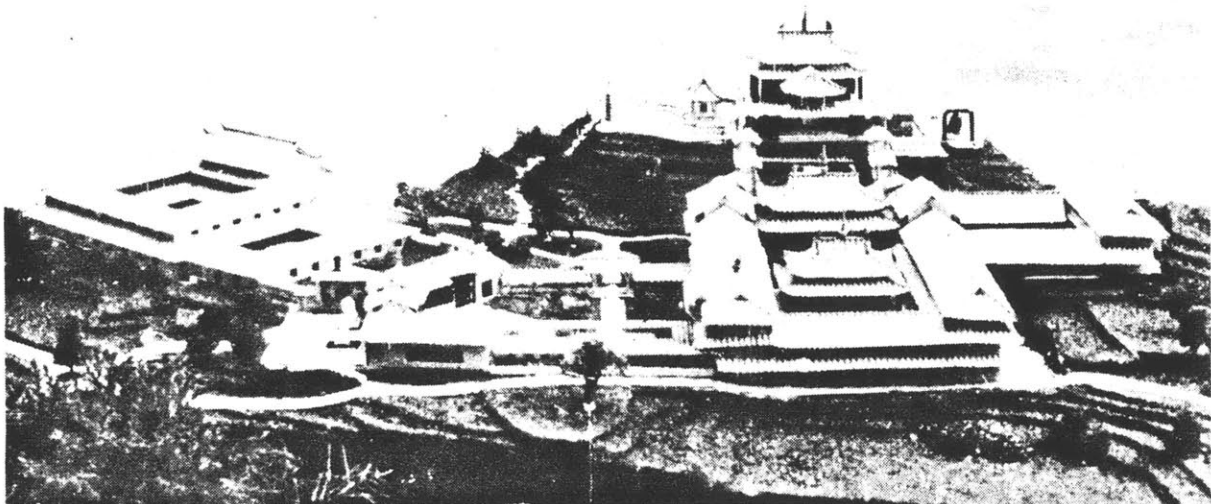
Under the sponsorship of the ASC, a seminar on the reconstruction of Yuan Ming Yuan was held in August 1980. Some ninety scholars and experts of architecture, gardening, history, relics and fine arts attended the meeting. Another meeting was held on October 18, 1980; the 120th anniversary of the destruction of the garden, in commemoration of the disaster, at which more than 200 persons attended. A written proposal was passed at the meeting for the organization of an academic society on the research and reconstruction of the garden, . . . Thousands of youths have joined in the clearance of the site as a patriotic activity.

The author relates the historical changes of the garden and its importance in history.

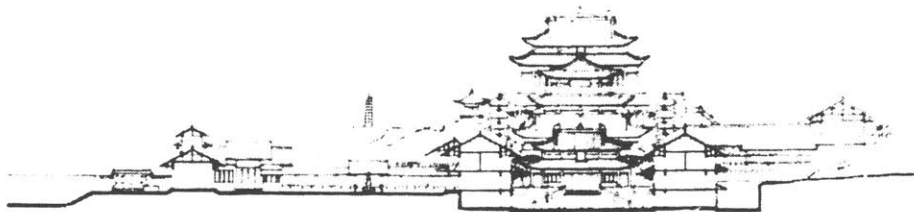
.
In the reconstruction of Yuan Ming Yuan, preparations in three aspects are necessary: raising of the funds; building up technical teams for planning, design and construction; and formation of organization for management.^{2 1}

By 1983, extensive steps towards preservation were taken in the CCP Central Committee and State Council approval of a proposed master plan for Beijing's urban development. In addition to historical designation of monuments, sites, and so on; specific guidelines for building design were promulgated. (The "Proposal concerning the Control of Building Heights in Municipal Beijing" was instituted by the Municipal Government of Beijing in 1985.)

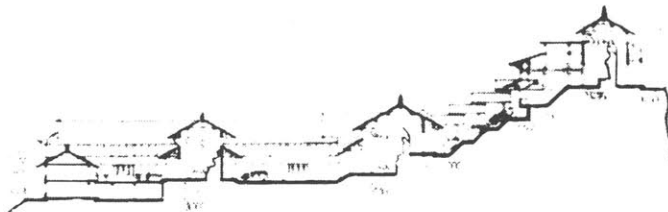
Scenic spots and gardens are now featured on a regular basis in the journal. The development of scenic districts are to be directed toward the service of domestic tourists,^{2 2} whereas gardens are offered for export to both



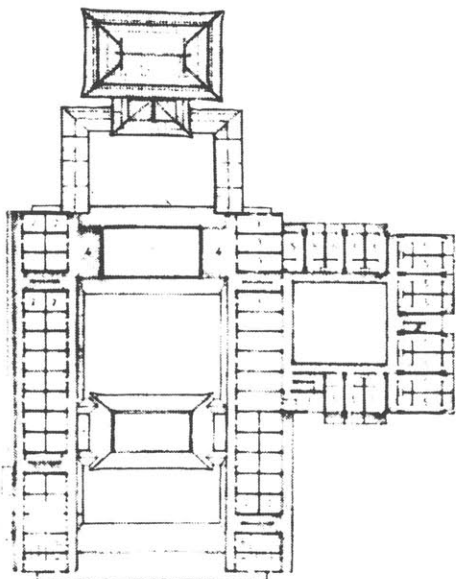
全 景



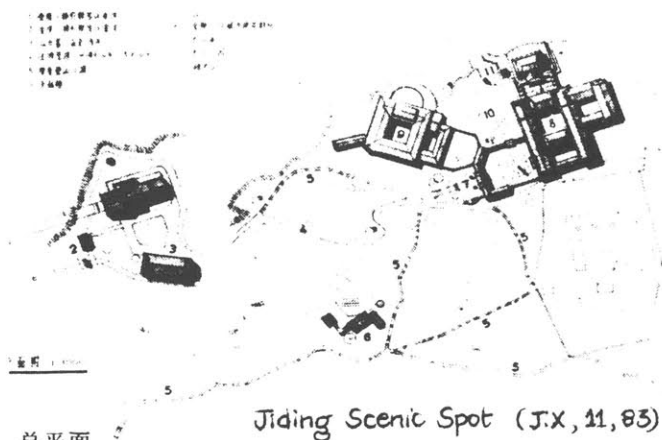
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剖面 1-1



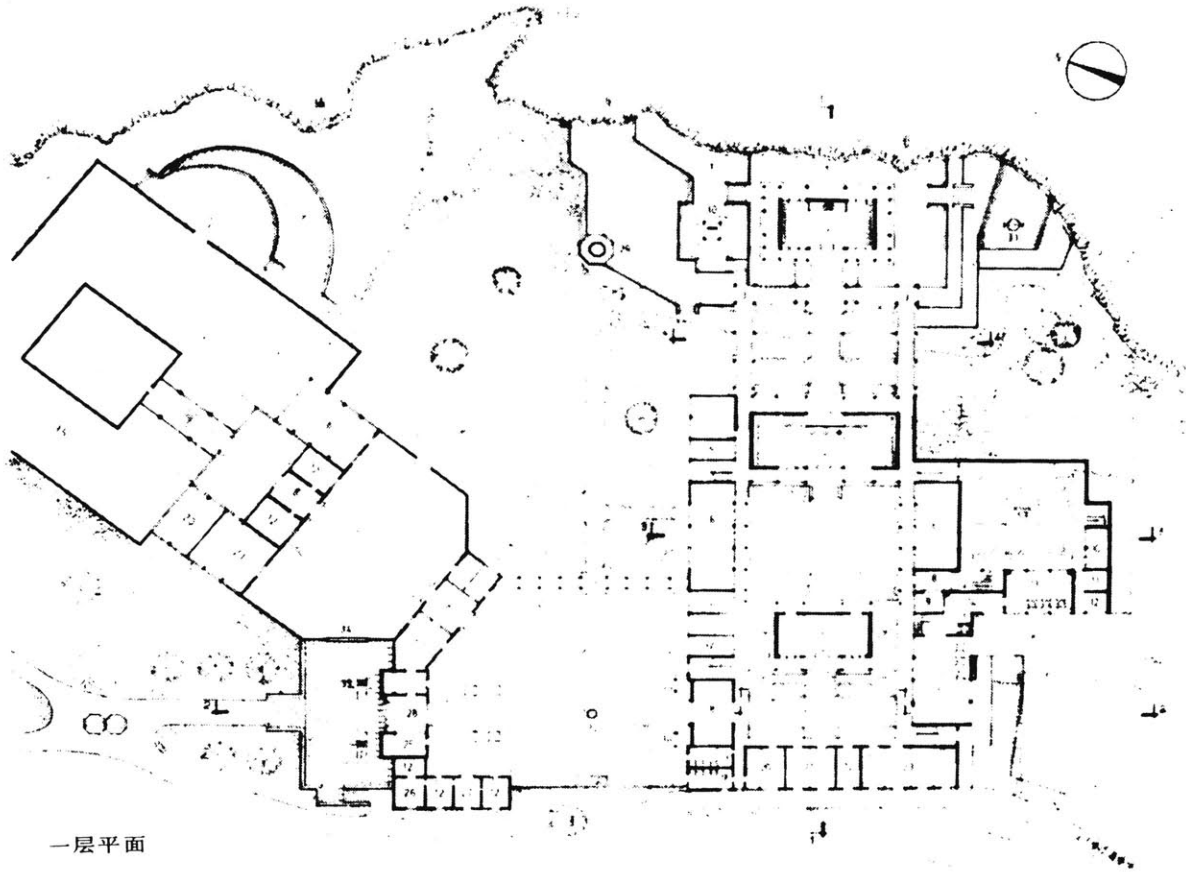
二层平面



总平面

Jiding Scenic Spot (J.X, 11, 83)

Vancouver and Sydney, Australia. Program thereby comes full circle, as the Chinese own program to include a celebration of their own building types, is finally instituted.



NOTES

1. Xiong Ming, "Architectural Creation and Contemporary Spirit," (Eng. Abs.), Jianzhu Xuebao, No.1, (1985).
2. The relating of content to form will emerge as a singular issue in the 1960s. (see segment entitled: "Roof.")
3. This was told to me during a lecture series at Tsinghua University in 1982.
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建筑学报





R E G I O N A L I S M
t i e d t o t r a d i t i o n
t i e d t o r e c e n t t r a d i t i o n

The most striking contrast is, of course, between the north and the south-- the dry and bracing climate of the north and the weepy steamy hothouse atmosphere of the south. North China does not begin at the Yangtse River, but at the watershed just to the north of it. The true dividing line is the central mountain belt, the Tsin Ling range, which breaks out from the tremendous plateau of Tibet in a series of gaunt and ragged peaks, and runs eastward gradually dwindling until it finally disappears in the alluvial plain formed by the Huai and Yangtse Rivers. North of this line is a land of uncertain rainfall, a brown, bare land swept by dust storms, where semi-arid conditions prevail, crop failures are frequent and famines are caused by floods, droughts and plagues of locusts. The characteristic crops in North China are wheat, beans, and kaoliang, a remarkable kind of millet which is often twelve feet high. There is no animal husbandry anywhere in China, and the absence of pastures and the ravages caused by deforestation are features of the landscape which are common to both north and south.

.....
The south is a land of abundant rainfall and the country is green, except where the soil has been washed away from the hillsides denuded of trees or vegetation. Everywhere in China, whatever has not been planted for the purpose of providing food ... is ruthlessly cut down or raked out by the roots to be burnt for fuel.... Deforestation has had a most disastrous effect on climate and rainfall as well as on the general configuration of the land. Rain is no longer distributed evenly throughout the year, but is concentrated in brief seasons, when it falls in torrents which rush into the sea through stony ravines, useless for either commerce or cultivation.

South China is a land of intensive cultivation and careful irrigation. The country is much intersected by canals which are used for transport as well as irrigation. The crops are mostly rice and bamboo. In the south, the population is crowded into towns and serried into the valleys. The streets of the teeming cities are so narrow that walking in one of them one often sees the sky only with difficulty. There are no plains or large plateaux, nothing corresponding to the great north China plain stretching from the Great Wall to the Yangtse, nothing like the rolling loess uplands, wide, spacious, cold, and clean, where people live spread out in innumerable little

towns and hamlets. The coastline is also quite different. Along the whole north China coast, excepting only in the rocky Shantung peninsula, there are no places where access to the sea is easy, and there is no fishing industry or seaborne trade... From Shanghai to Canton, there is deep water right up to the land with many good harbors and sheltered inlets, but these are cut off from easy communication with the interior by a large and difficult sharp which delimits and largely isolates the coastal fringe. The people of the coast have few interests in common with the dwellers in the river valleys; they turn their back upon the land and gain their living almost entirely by the sea. One result of this enforced preference for the sea and for intercourse with people in foreign parts is the bewildering variety of dialects spoken in the coastal fringe. Forty or fifty miles inland some recognisable variety of the standard national tongue is spoken, but each treaty port along the coast, while able to speak the national language, has its own peculiar and wholly different dialect.¹

If you can forgive me this romantic indulgence, you will be able to find its portrayal of "the most striking contrast," a peephole into the profound impact of regionalism in China. Romance is actually here well suited to the topic of architecture, as it is a notion which is upheld by the use of the 'vernacular' in the present day.

Regionalism finds its primary association with domestic architecture: cave dwellings, courtyards and canal houses, the like. The wood frame-structural system with non-bearing walls is considered the underlying basis of this tradition, in spite of the numerous other materials and methods employed. Its great flexibility is upheld with tremendous pride, attributable to the dou gong corbel bracketing system:

The author points out that research on the vernacular structure is in no way less valuable than that on palaces and temples.
(Further) analysis has been made on the adaptability to variations in building depth and flexibility in plan division, to variations in story-height and vertical separation, . . . to the use of cantilever elements of various forms, to different topographical and

climatic conditions...²

The northern courtyard house typically translates this system to a Confucian formal ordering. The dry, cold wind from Siberia is just cause for strict southern orientation, subordinating east and west both physically as well as symbolically. Brick is used in conjunction with timber, and the use of primary colors which began as wood preservatives, grew to delineate hierarchy. Graphic standards were published during the Sung Dynasty formulating both preservative and decorative use. During the Ming Dynasty, warm colors were to face the sun whereas cool colors were to be used in the shade. Moreover, for temples and palaces, the use of colors were symbolic of the universal orders.

Inversely, to the south one is not to rival with great nature. White stucco and natural coloring provides contrast without competition. It is simple elegance which is sought, to give a cooling sensation. Due to the scarcity of wood, thinner pieces of timber section must be put to use. Heavier columnation is the result of this, taking the load directly from the purlins at smaller section intervals. (This is by contrast to the truss system, which is in stress. In the Chinese system, beams do not carry as much load, as it is transversed through to columns.) This renders the southern style more playful, and more picturesque. Cross-ventilation is given top priority and ceilings are also placed higher for the rise of heat. To minimize sun, the courtyard must be shaded, so one finds roof eaves projecting further and higher. The structural system of the south makes full use of flexibility to suit these various needs, and can in effect, be considered, open planning.

Needless to say, although regionalism is rooted in domestic application, it goes far beyond this use, and in the twentieth century, it can even take on the name of style, specifically when it is used under the ambiguous guise of

`vernacular.' The argument for the applicability of vernacular will be tossed back and forth in the volley, during the decades following liberation. Some maintain it is the only road to modernism; whereas others are adamant that it is overrated, and furthermore, not a part of classical tradition. (Although some may consider this a matter of terminology, it remains a distinction that must be made.)

There are two inherent ironies to the application of the term. Vernacular implies un-studied, un-self-conscious, instinctive, and moreover, innate. To extract its essence for bottling or injection into another species, is to transform this implication, drastically. Second, it implies indigenous, localized, specialized, and regional; in terms of materials, methods, and aesthetic sensibility as well. To take the southern style and put it in the north, is not to make use of a vernacular tradition. This is not to say that it cannot be a source of inspiration for design; not any less so than any other `romantic' notion. This is also not to say that it cannot translate to an innate design sense, from its source of the builder, artisan, or architect. Nevertheless, `vernacular,' like style, is something which happens; it is not something to be contrived.

r e c e n t t r a d i t i o n

Ce qui caractérise ces villes, c'est le manque de tradition. Les marchands étrangers arrivent, font leur commerce, font leur profits et retournent à leur patrie. Ces villes ne sont une patrie pour personne, même pas pour ceux qui y ont passé une vingtaine d'années, la durée d'une génération.

Ce qui caractérise encore ces villes européanisées, c'est le chaos des styles.

Les Anglais construisent des banques pompeuses, telles qu'on en trouve dans la cité de Londres. Les Chinois suivent leur exemple. Les Allemands érigent, au bord de l'eau, un club dans le style d'un château-fort du moyen-âge. (Il vient d'être démoli pour faire place à un gratte-ciel.) Pour bâtir un hôtel de ville, les Français imitent les châteaux de plaisance de leur pays. Au coeur de la ville, le carillon d'un temple gothique anglais se mêle aux disputes de Ricshaw Coulis grâce à l'enthousiasme actif de quelque groupe chrétien.

Aux alentours, où la ville finit, ce sont des villes s'inspirant du style tudor-- ou de tout autre style qui favorise la mode du moment.

Les Américains aiment se voir dans des maisons du style colonial espagnol telles qu'on les trouve en Californie, maisons à colonnes tordues et à petits balcons ronds éternellement deserts.

Ce sont là les inspirations des peuples étrangers au pays de Chine. Pour compléter le chaos, le Chinois moderne ajoute à tout ceci ses idées à lui et ses conceptions de l'architecture moderne.

Mais il y a après tout, un charme qui provient de la variété, charme qui donne son cachet à la vie de camp et que possède aussi cette façon de bâtir. C'est le charme de l'absence de tradition...³

Whereas it might be possible to distinguish the former sense of tradition at a glance, its recent representation would require a squint to capture the essence of its very different kind of picture. Yet another romantic excerpt has spoken of "the absence of tradition." An absence of tradition is an absence of time.

With the turn of the century, that which was considered to be traditional, revisionist, and eclectic in Europe; was transplanted and superimposed in an environment such as

Shanghai, (which best epitomizes the treaty port aura). This advent was perhaps to provide as multifaceted and multi - perspectual a cubist collage, as did Picasso's and Braque's work, for Europe. Without having the frame of reference for layering time, like flipping pages through a book of European historical styles; the impact for the Chinese, was to be inversed. Instead of moving through time quickly (as had been the Futurists method to employ this new tool); in effect, it was the absence of time which was to be the Chinese experience. (But as we all know, time was only to stand still for a very short while.)

The impact of this at the architectural level, was the introduction of styles in one felt swoop, (and with it, the Western transplanted). When viewed close up, it was perceived as a "chaos of styles." Regionalism in the sense of recent tradition, however, is best perceived from a distance; as it is, in truth, moreso an issue of urbanism. It has become a seed of urban planning strategies, specifically related to industrialization. The call to transform consumer cities to producer cities began immediately after liberation. The over - concentration of industry in treaty ports was criticized:

Firms operating on bureaucrat capital--linked to foreign monopoly--depended on raw materials.

.
The very location of the city, near the sea and far from sources of raw materials within the country, was based on its lopsided development that was meant to serve imperialism.⁴

Thought reform was instituted in 1951. The San Fan and Wu Fan (Three-anti, Five-anti) Campaigns were directed at the imbalance of industry and commerce in the treaty ports. The former was directed at improper bureaucratic practices: (corruption, waste, bureaucraticism); while the latter called for punishment of those involved in illegal business practices: (bribery, tax evasion, stealing state capital, inefficiency, and stealing state economic information). In

essence the campaign was to heighten the depiction of large cities as social deviations. Economic policy will later more fully depict the contrast of coastal and inland cities at the time. The following quote, however, just about sums it up:

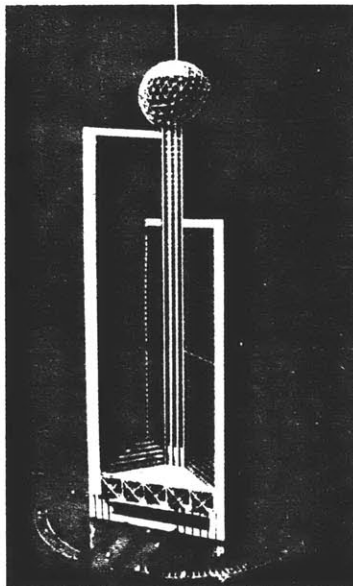
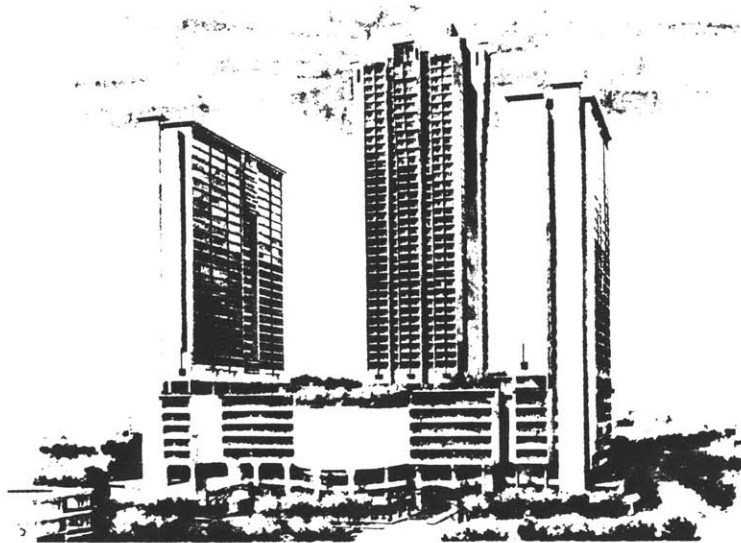
Even though the new government sought to have industry, commerce, and transportation in Chinese cities return to full operation, the PRC leadership continued to use a rhetoric derived from earlier periods of rural based revolution. This rhetoric was not conducive to urban revitalization. In this characterization, the city was seen as the center of undesirable social and economic forces. It is summed up in the slogan that China's urban places were consumer cities (xiaofei chengshi), which meant that most urban residents were parasitical rather than contributors to the processes of economic production.⁵

A flash ahead in time brings us to a repeat performance of this earlier phenomenon, with the one crucial distinction: (to borrow an old slogan), these are conceived as producer cities (shengchan chengshi). Fourteen coastal cities are profiled in "China City Planning Review," in November 1985. These locations have been designated by the State Council as economic development zones, in which foreign investment and economic cooperation will be encouraged. The cities virtually cover the coastline, and more than half of them were original treaty ports. They are to be distinguished from the Special Economic Zones (SEZ), only adopting a selection of their policies. Together, the two types of zones, "will serve as doors through which advanced technology, management techniques and knowledge of the international market can flow to the other parts of China. This will play an important role in speeding China's socialist modernization."⁶

The Chinese have hereby taken the stance to move through time quickly. The creation of these economic zones but begins to account for the latest surge of Western-transplant hotels, international exhibition centers, and other such fruits of a recent tradition which began in the mid-nineteenth century. Urban and architectural phenomena here join hands

once more, coming full circle.

The **Shanghai Center**, a project of John Portman Companies, Atlanta, will be a multiuse facility including hotel, office, retail, and apartments. The tallest of three towers will be 48 stories. The center is financed by Portman Companies in joint venture with the American International Group and the Hong Kong-based CCIC Finance Ltd. Construction will be supervised by Kajima, a Japanese engineering and construction company. Completion date is set for 1988.



The **Trade Tower** complex, a project of Henry Hwang & Partners and 3D International, Houston, is also based on a mixed-use program. The complex will include the tallest building in China, at 62 stories. It is to be located 60 miles from Hong Kong on the trade fair grounds in Guangzhou (Canton), where much of China's foreign trade is conducted in April and October of each year.

N O T E S

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5. David D. Buck, "Policies Favoring the Growth of Smaller Urban Places in the People's Republic of China, 1949-1979," Urban Development in Modern China, Ed. Laurence J.C. Ma, Edward W. Hanten, (Colorado: Westview Press, 1981), p.120.
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B U I L D I N G M A T E R I A L S
a n d
T E C H N O L O G I E S

" w a l k i n g o n t w o l e g s "

I see in industrialization the central problem of building in our time.

So long as we use essentially the same materials, the character of building will not change, and this character, . . . ultimately determines the forms taken by the trade. Industrialization of the building trade is a question of material. Hence the demand for a new building material is the first prerequisite.¹

-Ludwig Mies van der Rohe (1924)

Modern materials and methods are as central to the development of twentieth century architecture for China (needless to say), as they were for Europe-- beginning particularly in the 1920s. The distinction must be made, however, that their introduction on the Mainland was concurrent with the advent of industrialization itself. [A discussion of the range of building technologies in China today, inevitably centers on the housing industry. The following segment will be centered more generally in architecture, only to the extent that this is possible.]

One cannot speak of Chinese building technology without first paying tribute to the ancient wind-water system of feng-shui, which up until this century, was considered an official state science, directed by the Board of Rites in Peking. Traditionally defined as: "the art of adapting the residences of the living and the dead so as to cooperate and harmonize with the local currents of the cosmic breath;"² its origins lie in the worship of nature.

The principles of feng-shui were first applied in burial rites, with respect to the belief that the body spirit is scattered by wind, but stopped by water. To ensure that the venerated ancestor remain with the family to protect it, it was essential that dispersion be prevented. This practice,

however, was to have other repercussions: "The ancestors were originally buried in or near the house but interment eventually occurred on suitable sites on adjacent family lands. Pre-war estimates indicate that as much as 1/6th of China's best agricultural land thus became unusable."³

The coincidence of material and spiritual worlds in the Chinese mind made all aspects of life and conduct subject to the effects of feng-shui. The ensurance of the harmony of an individual with the gods, the spirits, and the universe; led to the adaptation of these principles beyond the veneration of ancestors to the evolution of much broader philosophic considerations, eventually extending to towns, villages, buildings, and of course, landscape.

Necessary tools for the evaluation of a site included geomantic and magnetic compasses, the computation and integration of both the client's and the site's horoscopes; and thereby, a suppression of the bad aspects of both. In effect, the geomancer provided hygienic, climatic, as well as aesthetic standards in the selection of a site; a workable system which became the typical Chinese environment. Interpretation of the topography, the direction of watercourses, the forms and heights of buildings and their orientations (for coolness in summer and sun in winter); as well as directions of roads and bridges; were all practical decisions made by the geomancer. Implicit in this were good rules of thumb for conservation and preservation of the landscape. "It even ensured architectural good manners, for it prevented buildings overlooking or interfering with each other, and it prevented the siting of dwellings below graves-- a most necessary precaution if uncontaminated water supply was to be obtained."⁴

From this wide-angled lense view, a telescopic zoom to some of the brass-tacks issues inherent in a rapidly industrializing People's Republic will provide insights into the

recent past and present state of building technology. A brief introduction to the state of the industry before and immediately subsequent to liberation will first set the stage.

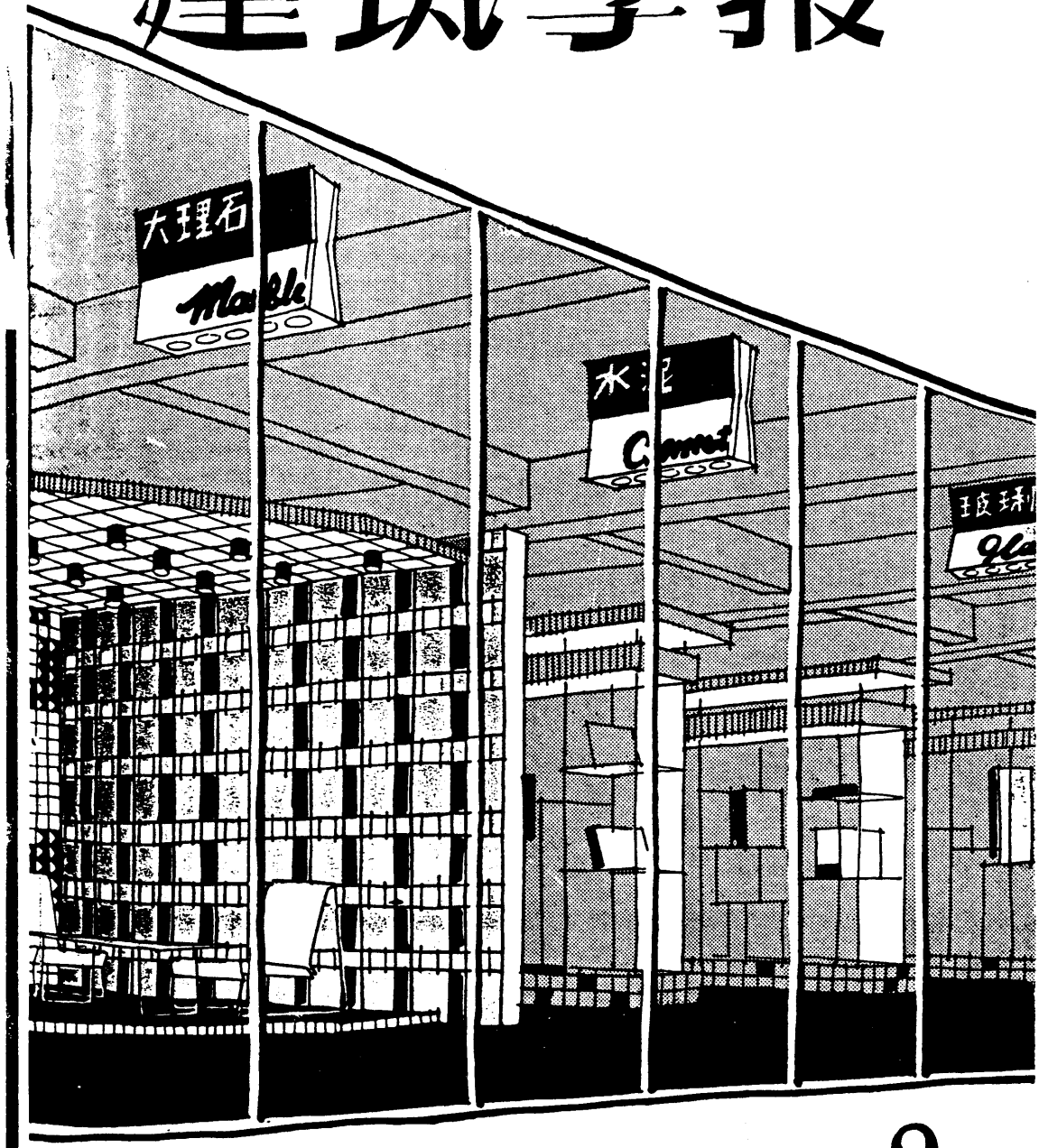
The state of construction materials for the foreign architect is described as such, in 1938:

La Chine est assez dépourvue de matériaux de construction naturels. Elle n'a ni bois ni pierres; on n'y trouve que peu de granit et plusieurs sortes de marbre, blanc et noir pour la plupart. En outre, l'industrie de matériaux de construction artificiels est très peu développée. Jusqu'à présent il n'a pas une seule usine de production de profilés; même les châssis métalliques pour les fenêtres sont importés et assemblés sur place. On importe le grès, les marbres de couleur, le travertin et tous les métaux essentiels. Or, importer les matériaux de construction signifie construire cher. Il faut donc que l'architecte se limite essentiellement aux deux matériaux que la Chine fournit: la brique et le béton. On fabrique en Chine une excellente brique hollandaise très dure; de même, l'industrie locale du ciment est très bonne.⁵

Brick and wood had provided the basis for housing material up until the 1950s. The depletion of resources through the use of both of these basic materials, however, were due cause for concern. With the instituting of reforestation plans immediately after the founding of the People's Republic, the low forestation percentage of 10% (versus 30% in the USSR and the USA) began to be addressed.⁶ Brick use also had to be curtailed as it was encroaching on the barely 10% figure of arable land.⁷

In the early 1950s, new steel and cement factories created the supply of concrete floors and roofs, thereafter replacing the pitched roof in housing with flat ones. By the 1960s, these became the earliest prefabricated components commonly substituted for the use of wood. Concrete and steel were for the most part, reserved for public and industrial buildings in the 1950s.

建筑学报



1963 2

m a t e r i a l s

The industrialization of building techniques and the new materials which spurred this transformation, would bring on new sets of problems, in addition to the old ones of the draining of resources. An overview of the building material industry in 1980 provides an indication of the priorities and progress during the thirty years since the founding of the People's Republic.

At that time, the industry consisted of some 45,000 plants of all sizes, employing 3.5 million workers. Of these, over 90% were run by communes or their brigades. These commune enterprises produced 70% of all brick, 90% of the lime, sand and stone; and two-thirds of the nation's cement. The remaining 5000 plants were state-owned, employing some 1.4 million workers. Of both commune and state enterprises, only 130 were considered large and medium sized plants. Other overview statistics include the increase of cement production, some 100 fold since 1949 (70 million tons in 1980); glass production increase 24 fold (to 23 million standard crates); and bricks, 12 fold (to 120+ billion); during the thirty year span.⁸

Four points are cited to characterize the priorities as well as the state of affairs at the turn of this decade; from which I will expound further. 'The upgrading of management and equipment,' (which is to include its technical transformation) is of primary concern. The policy reflects a corrective shift from previous decades; a time which is viewed as having left the building industry in a relatively backward state.

This detour began with the Great Leap Forward's "General Line for Socialist Construction," which was the first to suggest the short-sightedness that took full hold during the 1960s. (The French translation of the "General Line" provides a better model with which to illustrate the problem.) Since the 1958 slogan: "Quantité, Rapidité, Qualité, et

Economie," was first set forth, the repeated criticism has been that only the engine and the caboose (quantité et économie) have been on the track, leaving their cargo and its substance behind on the journey. Subsequent to the fall of the Gang of Four in 1976, considerable effort has been made to correct this, with "Qualité" given the lead; (but I might add, with the essence of speed not far behind).

Directly related to the upgrading of equipment is its fabrication. The manufacture of key machinery components has been habitually handicapped by the shortage of machine tools; in particular, those for gear cutting and finishing; grinding and milling-- in other words, precisely those needed for mass-produced components. The machine building industry was initially heavily reliant on imports from the Soviet Union and its Eastern allies, but this was reversed after 1960.⁹ Virtual self-sufficiency of machine tools has today been achieved through "adaptation and innovation."

'The maximum use of local resources' is second to delineate the building industry. This principle, furthermore, again reveals the Chinese leitmotiv; an attitude which began with "uniting Soviet experience with Chinese practice," and progressed whole-heartedly to "self-reliance," (when reiterated by the Great Leap's line of "Diligence and Thrift"). "The country covers a vast territory inhabited by a huge population--56 nationalities--so it is evident that a great diversity of geographic environments and economic and cultural demands have to be taken into account.... This we do as we exploit local resources to the full to push ahead with developing our building material industry."¹⁰

'Local' resources are fundamental to a principle which epitomizes the building industry itself: "walking on two legs." The slogan is another of the Great Leap Forward's (GLF) inventions; and has numerous applications, but none so befitting as this. It draws upon the Chinese propensity for

dualism to combine indigenous with foreign, natural with manufactured; and furthermore, traditional with modern resources, all in the spirit of "adaptation and innovation."

The ideal balance suggested by the slogan, however, makes no mention of the inherent contradictions which arise from such an inclusive embracement. A brief digression to the slogan's application to building enterprises during the 1960s provides an example of 'socialist' and 'revisionist' contrasting approaches; which needless to say, overrode the two leg balance.

Stated with his GLF policies and reiterated during the first years of the 1960s, Mao's choice was to emphasize the construction of small and medium enterprises. He maintained that state investment would thereby be minimized, due to the low capital requirement; and moreover, that the wisdom and drive of the masses would be spurred on to break foreign conventions and find their own self-reliant way. In short, it emphasized simple methods for initializing production, with quicker results. This clipped hand-to-mouth thinking is the essence of the line of "Diligence and Thrift," articulated by Mao; "We want to carry on a large scale construction, but our country is still very poor-- herein lies a contradiction. One way of resolving it is to make a sustained effort to practise strict economy in every field."¹¹

Liu Shao-qi's 'techniques-in-command' by contrast' focused on large scale enterprises, which was criticized by Mao as requiring several times more capital, longer time for construction; and an over-reliance on experts, and modern equipment. Needless to say, this approach was discarded during the Cultural Revolution; and has been largely resumed in the national economic adjustment policies of the 1980s. (It is also the favored Soviet method of the first Five Year Plan.) "Walking on two legs" acknowledges that both short and long term approaches, ideally, must be integrally considered for a

balance of industrial and economic development, to allow for shifts in priorities within the context of the time, and prevent a limping from the over-emphasis on one leg or the other.

We return to the overview of 1980 with an innovative by-product originating from maximizing local resources. This third point is truly a seed of Chinese ingenuity. As has already been mentioned, the inherent conflict of the fabrication of bricks is from its use of arable land. By the mid-sixties, with increased construction beginning to swell over as an urban phenomenon, farmland in close proximity (and lowest transportation cost), was beginning to be eaten up.¹²

This began to create a contradiction between capital construction and agricultural production.

.....
This was taken as the primary task in improving building material.

One of the chief methods for accomplishing it has been through using various kinds of industrial waste as the base for building materials. This is in line with a directive issued by Chairman Mao in 1958 during a visit to the construction site of the Wuhan Iron and Steel Works, which said that efforts must be made toward building more integrated industrial complexes which carry out multi-purpose use of resources.¹³

Fly ash was cited as the most common, as well as the most harmful of the industrial wastes. It was therefore given top priority. An estimated minimum of ten million tons of fly ash are discarded by thermal plants yearly. Blocks of this waste combined with cinder were first produced in Shanghai in 1960. Walls of their construction are considered to be twice as strong as those of ordinary brick, at as much as a 25% savings. Oversized blocks can also be made from this composite, which offer the significant advantage of thinner walls, and thereby utilize less interior building space. Cement consumption is thus decreased by more than half, and both time and labor are, furthermore, saved. Additional experimentation during the mid-sixties consisted of varying

composite ingredients for increased strength, as well as acoustical and thermal insulation.

These initial applications extended to the use of slag and cinder in concrete, bricks, ceramicite, and silicate wallboards, with the two-fold advantage of decreasing the cost of building materials as well as pollution. By the mid-eighties, the following statement is made: "Industrial wastes will probably be the best if not the only solution, especially for wall construction."¹⁴

Later applications extended not only to the research of new materials themselves, but also to their applicability in new building technologies. This is cited as the fourth and final characteristic approach of the building industry. Floors and roofs were the first to make use of pre-fabrication. Experiments with lightweight materials began by the mid-seventies. A wide array of products have been the overall outcome of this research, to include prefabricated concrete beams, plates and columns, asbestos or wire cement plates and aerated concrete plates for wall construction; as well as various thermal and acoustical insular wall treatments. Prefabricated windows and mechanical systems hardware components are also factory produced. The construction of China's largest building component plant began in 1979, in Beijing. The burgeoning new materials industry responds not only to the short-term pressing need for quantity, but also allows for the long term factor of quality to be integral with this approach. This is considered the forte of the application of this research.

Before elaborating further on the inevitable expansion of materials research to new technologies, and the industrialization of the building industry; a glance at the recent state of so-called 'modern materials' will provide further insight into the development of the industry during the century.

The output of crude steel was considered almost

negligible in 1949. Instrumental to industrialization, steel became a major recipient of capital investment. Between 1953 and 1975, the production of crude steel experienced an average increase of 15% annually. By the mid 1970s, China ranked sixth in the world's steel production.¹⁵ Anshan is the largest producer of some 25% of the nation's total output, followed by Shanghai, whose approximate ten large plants produce close to 20%. The Wuhan Iron and Steel Plant is the nation's second largest single complex, as well as the focus of technological advancement.¹⁶

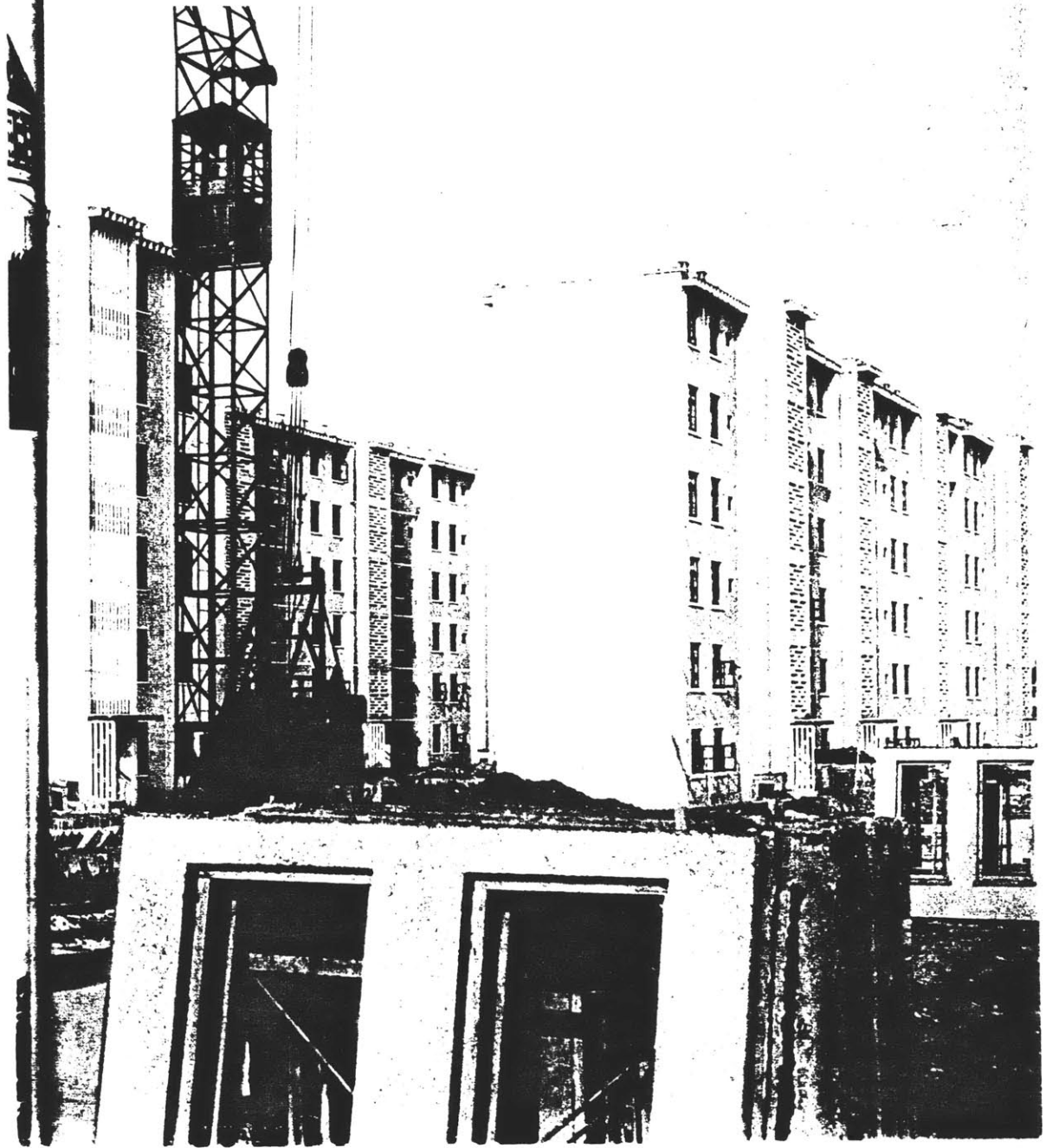
Although attempts at scaled-down production of metal are well-known from the Great Leap Forward, the technological processes introduced by the Soviets in the 1950s were not applicable to smaller plant fabrication. As a result, the quality of output of the backyard furnaces was virtually useless. In the late 1960s, an improved version of the furnace was introduced, and by 1977, small and medium plants produced 11% (steel) and 27% (iron) of the nation's output. Nevertheless, the steel industry retains its large-scaled emphasis, moreso than other sectors.

China ranks fourth in worldwide output of cement, (behind the USSR, US, and Japan). Small-scale cement works have proliferated the country, accounting for half of the nation's supply. Although production meets the nation's needs in terms of quantity, high quality shortages persist.

By 1986, the 7th Five Year Plan echoes the sentiments of the overview in 1980, citing "technical transformation and expansion of present enterprises" as one of its four priorities.¹⁷ Specific mention is given to the short supply of raw materials: iron and steel, non-ferrous metals, chemical and building materials. It remains constrained due to the exponential rise of demand in construction, which has resulted in an increased reliance on imports. Extensive mining projects and new chemical enterprises are targeted to address this.

建筑学报

1976 4



t e c h n o l o g i e s

The industrialization of the building industry begins with materials, but becomes a means through methods. This revolution brings with it the seemingly inherent conflict between quality and quantity. Thereupon, a translation to the principal contradiction in employing new building technologies is identified: 'standardization versus diversification.'

By the end of the 1950s, the composite system was developed. This semi-industrialized system consists of load-bearing walls with brick infill, with an assortment of pre-fabricated parts: floors, lintels, balconies, stairways, and so on. For several reasons, it is still the most popular of the three main systems in use today; (with the use of medium sized blocks as an alternative infill). No scaffolding or crane is needed for this system, and steel consumption is low. Upper floors can be cast while those below are being filled, and no additional finishing is needed since people like the look of the brick. Its fast construction applies best to 4-5 storeys.

Heavy pre-fabricated systems made their appearance at the beginning of the sixties, especially taking hold in large cities. (The first totally prefabricated building in China was developed at Tsinghua University at that time. Research on industrial housing by architects and civil engineers resulted in the construction of 3-4 storey housing blocks in Beijing's northeast suburbs.)

By 1975, 15-16 storey extensions of earlier experiments began to dot the skylines, bringing the issue of high-rise to the forefront for the first time; a controversy which persists to the present. By the late 1970s, these high-rises were especially popular for Beijing and Shanghai, featured with both center and corner balconies.

Components were, however, still not standardized at

that time. A conference at Tchengtch'ou in 1978 proclaimed the urgent need for the rapid industrialization of the building sector through the mechanization of sites, prefabrication, and standardization of building components. The 30cm. module was thereby firmly established after prolonged use of both 20cm. and 30cm. modules; (reinforced concrete components, steel windows and doors all use this), allowing nationally standardized components to be produced nationwide for all sorts of buildings. Designs that deviate from standardized measurements or specs can either be vetoed by construction companies, or given a higher construction fee.

In contrast to the fully industrialized system, a less popular (for housing), but more flexible system, is considered to be 'partially-industrialized.' It is distinguishable from the aforementioned composite system (with block or brick infill) by its use of conventional brick-bearing walls, in conjunction with the pre-cast reinforced concrete components. Apparently, this is not used in mass housing projects in large cities, but is nevertheless found in 90% of other construction in China: (public buildings, small factories, and smaller cities' apartment buildings). This method is preferred "because it allows for a greater diversity and better quality of design than do any of the other systems.... The brickwork does not prolong overall construction time, and nationwide standardization allows the interchangeable use of prefabricated components in this system as well as all the various other construction systems in housing and in service-facility buildings."¹⁸

If we now step back for a moment to probe this quest for building industrialization, the Great Leap's four-car slogan which has dropped its cargo again comes to mind. Although claims to lower cost were the initial impetus for the pursuit of such technologies, savings in materials and time are offset by an increase due to transportation and handling

costs. The price per square meter for the more fully industrialized building construction is estimated to range between 10%-70% higher than for ordinary brick. (This is a major factor for the continued popularity of the composite infill system.) Advanced technologies principally offer an economy of time.

Post World War II Europe experienced a similar climate for the development of industrialized building methods. The concurrence of industrialization, urbanization, and the pressing need for housing made for a timing of circumstances not unlike the present-day Chinese predicament, (exacerbated by the Cultural Revolution years, in which virtually no progress was made in housing). Speed was the reason for the development of these methods in the 1950s in Europe as well. The recognition that construction urgently needed to be industrialized, was to produce a rationalized construction framework of differing, but mostly compatible components by the 1960s. (Needless to say, however, the concept of industrialized housing had already come to the forefront by the 1920s.) A fully open system was achieved by the 1970s, designed to interface with the existing manufacturing industry of components, at an overall savings of cost. Only then was the contradiction of `standardized components without standardized buildings` more fully addressed. (The successes of Singapore are a model for all of Asia in this aspect, of prioritizing speed without sacrificing quality.) In view of this only recent accomplishment in Europe, the situation in China appears to be moving at an appropriate pace; particularly with the acknowledgement of `quality` in the 1980s.

In spite of this progress, however, the conundrum of `standardization versus diversification` remains to be solved. Cranage, in particular, continues to be the key lingering disadvantage for prefabricated construction. This issue is especially crucial to problems of uniformity, even in Europe.

Again, the hierarchy of the building trade is cited as a source of this conflict:

The architect is a very minor character on this stage,... The real planning is done by that crane, and this is a very familiar state of affairs. Lots of precast projects in Europe have their site planning dictated by parallel tracks and their buildings dictated by the clean file demanded of the bureaucrat. Between the bureaucrat and the crane, where is the designer?

.
The logic of the system is giving us this product. It has nothing to do with the architect.¹⁹

To this, Tunney Lee adds a pivotal observation, putting more pressure to bear on other strategic points of consideration:

Without democracy, there will be no decentralized system, no chaotic way; a centralized bureaucracy, whether it is Marxist or Capitalist, tends to do what you say it does.

.
China lacks urban democracy-- in rural areas, there is a tremendous amount of democracy, and the results are visible.²⁰

This brings us to the last leg of building technologies -- the rural approach, which is directly related to a recent innovation. Unveiled in December of 1978, "the Responsibility System" rendered the family unit responsible for production, thereby allowing the key emergence of sideline production. This measure of decentralization initiated an upsurge in income for China's 80% rural population. Private ownership of homes began to be extended and encouraged in the form of government aid for materials and the instituting of loan provisions. Tunney Lee hereupon makes an important distinction to contrast with the urban situation: "In China, rural housing is regarded not as the pre-condition for development but as the result of development."²¹

Needless to say, brick is the most popular material in use, while flooring and roofing remain the most common of the

prefabricated components. Production of brick is local and small scale, although surpluses are increasingly being sold to cities as an industrial sideline. The spillover of labor by collective work teams is similarly being absorbed by the cities. These 'surplus' successes are but one indication of the impact of the Responsibility System. Surplus income has resulted in a rural housing boom that has had to be regulated by the authorities, because materials consumption (in particular, traditional materials) was getting out of hand. The resulting shortage is the most pressing source of rising cost in rural construction.

The boom began in 1979, and by 1982, random building was called to a halt. At that time, development plans were drawn up controlling the use of land and the separation of residential and commercial zones. Rural housing competitions have been held yearly since 1981. Winning plans are available for free from the Beijing Rural Construction Corporation. Peasants are also receiving primary training in building techniques as a part of the overall planned effort.

This glance at the cycle of building materials to technologies, primarily through the models of urban and rural housing, is but another walk with two legs, the first of traditional means: manual labor, local materials; and the second of modern means: foreign and sometimes more sophisticated. Léon Hoa points out the necessity to not just juxtapose, but to synthesize the two forms of technology, demonstrated by a current application: an ancient building technique utilizing a mixture of rammed chalk and earth is currently being used as a very suitable foundation system for buildings of the 'composite' type, where soil conditions and building superstructure weight permit.²²

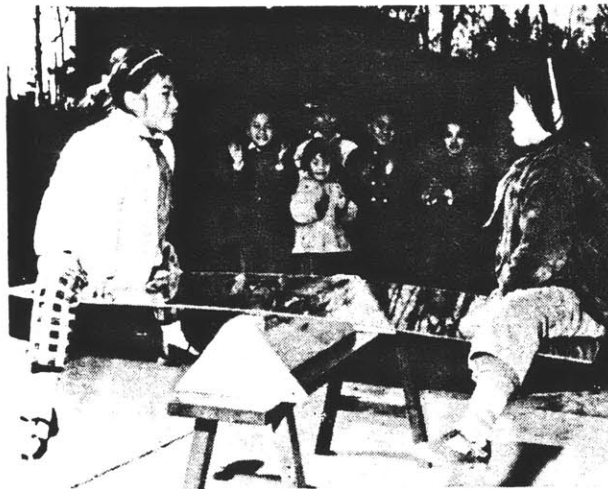
Once again, this synthesis implies a collaborative balance. The status quo, needless to say, more closely approximates juxtaposition. A more fundamental issue behind

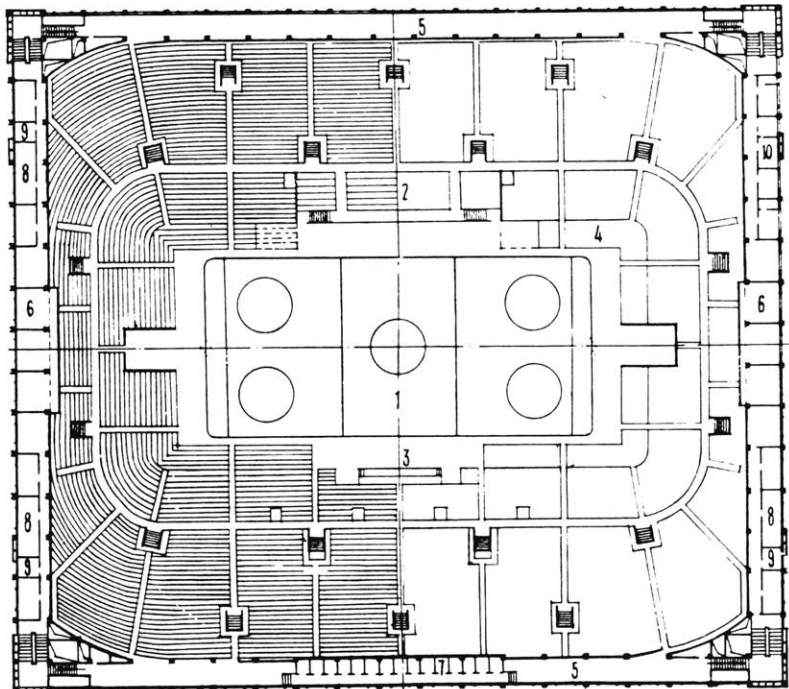
the scenes is a source for further gravitation, perhaps even to opposition; delineated again by Tunney Lee:

These changes are, however, now beginning to create new tensions as well, between individual and collective decisions regarding overall land use, housing location, and industrialization-- especially the need for small-scale industrialization which dictates that labor released by mechanization stay in the countryside and industrialize there. It remains to be seen how the continuous search for balance between individual responsibility and collective need will be played out.^{2 3}

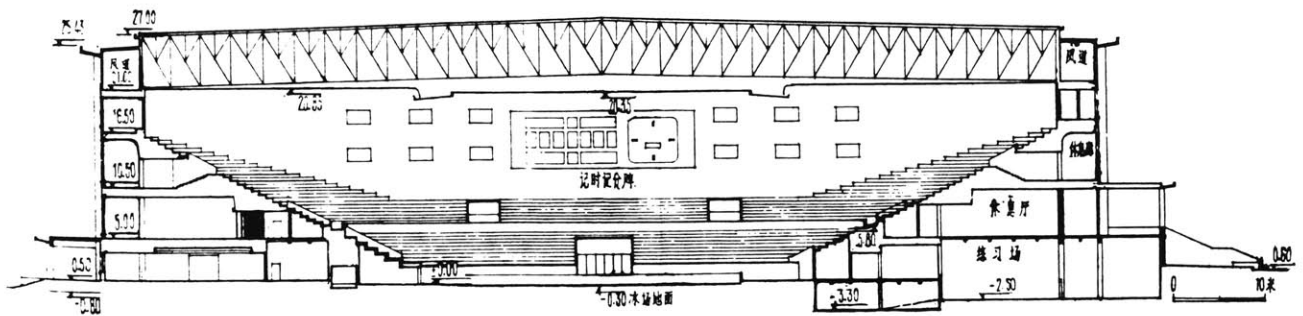
[The evolution of more advanced technologies can be traced through the design and construction of stadiums and gymnasiums, in the "Jianzhu Xuebao;" beginning with the ten-year commemorative project for a 10,000 seat gymnasium in Peking. This progression even persisted through the Cultural Revolution, with noteworthy designs for both the Capital Indoor Stadium (Peking), and the Shanghai Gymnasium.^{2 4} By 1984, however, it is no longer the industrialization of building which is called for. Instead, the "New Technical Revolution" must be addressed; citing the transition from the industrial to the information society, and the change in political structure from centralization to localization; as key factors of this reformation.^{2 5}]

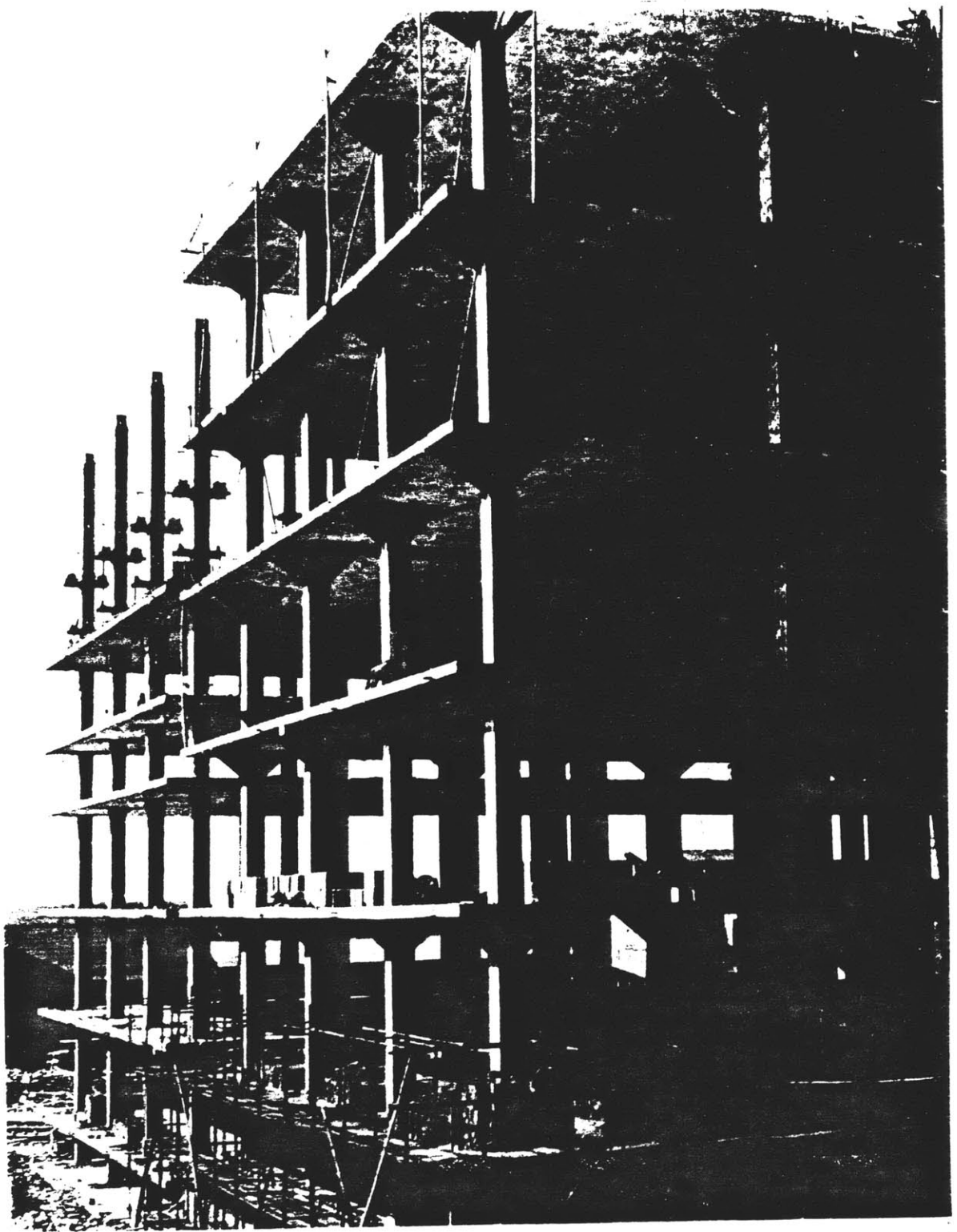
High-strength glass, 5 mm. thick.





Capital Indoor Stadium 1968





采用升板法施工的上海江湾仓库。

NOTES

1. Ulrich Conrads, ed., Programs and Manifestoes on 20th-century architecture, (Cambridge, Mass.: MIT Press, 1986), p.81.
2. Ernest J. Eitel, Feng-Shui: The Science of Sacred Landscape in Old China, (London: Synergetic Press, 1984), foreward.
3. M. Hugo-Brunt, "Walled Villages of Hong Kong," Architectural Review, (date unknown). This article also notes that the full development of feng-shui as a science was achieved by the twelfth century.
4. Ibid.
5. R. A. Hamburger, "L'Architecture en Chine," L'Architecture d'Aujourd'hui, IX, No.10, (1938).
6. François Léonardon, "Les matériaux de construction," L'Architecture d'Aujourd'hui, February 1979.
7. The average surface of arable land per habitant in China is one-fifteenth of a hectare-- which is less than one-third of the French average and roughly one-tenth of the US average.
8. Song Yangchu, "China Building Materials Industry," China Reconstructs, July 1980. The author was both Vice-Minister of the State Capital Construction Commission and Minister of Building Materials Industry at the time of his writing this article.
9. Frederic M. Kaplan, Julian M. Sobin, Encyclopedia of China Today, (New York: Eurasia Press, Inc., 1982), p.228. Reliance on imports is cited as 40% during the late 1950s, which decreased to less than 10% by the late 1970s.
10. Song, Ibid.
11. Cited in: Wu Wan-chi, "Building Materials from Industrial Waste," China Reconstructs, December 1967.
12. Ibid. Wu cites the figures of 20-30,000 mu (1300-2000 hectares) of farmland per year.
13. Ibid.
14. Zhu Ya-xin, "Housing Technologies in Urban China," Aga Kahn Program for Islamic Studies: Issue on Large Housing Projects, (1984).

15. Kaplan and Sobin, p.223. Steel production in 1953 reached a volume of 1.5 million metric tons. This rose to 37 million in 1980. (I am indebted to this source for this briefing on modern materials.)

16. Foreign technicians supervised the construction of this plant, which the Chinese contracted with Japan and the Federal Republic of Germany. It uses basic oxygen furnaces as opposed to the more traditional open hearth style.

17. The other three priorities are construction projects in energy, transportation and communication; the latter two of which are considered weak links of the national economy. Wang Liang, "China's five-year plan reveals ambitious programme," Asian Building and Construction, April 1986.

18. Frances Ya-sing Tsu, "Housing Technologies in Urban China," Aga Kahn Program for Islamic Studies: Large Housing Projects, (1984).

19. Ibid. (Discussion following the article; quote from Charles Correa.)

20. Ibid. (Discussion following the article; quote from Tunney Lee.)

21. Tunney Lee, "The Range of Building Technologies in Rural China," Aga Kahn Program for Islamic Studies: Large Housing Projects, (1984).

22. Léon Hoa, "Construire pour un Millard d'Habitants: la chine, de l'industrialisation aux technologies appropriés," Techniques et Architecture, No.345, December/January 1982-83.

23. Lee, Ibid.

24. Featured respectively, in the Jianzhu Xuebao, No.1, (1973); and No.2, (1974).

25. Wang Huapin, "New Technical Revolution and our Counter-Measure," (Eng. Abs.), No.4, (1984).

建筑学报

1980 1



E C O N O M I C S a n d P O L I T I C S

L'on passe, il est vrai aisément, en Chine d'un extrême à l'autre et les oscillations du pendule sont souvent déroutantes.¹

Economics and politics, as a non-material factor, is about as broad based a category as one could find to apply to China's modern architecture. Trying to put your finger on this is like trying to count the spots on a moving leopard-- you're certain that the spots are there, but it is never perceptually clear where they begin and end. And indeed, perceptual clarity may not be an appropriate aim for this event: a fast moving raquetball game whose partners of economics and politics hit the ball-- industry, the leading sector; against the wall-- agriculture, the base. Nevertheless, misperceptions have persisted in undermining a truer reading of the impact of economic and political policies, on architecture and urbanism; in effect, a cataract that grows on both the Chinese as well as the Western eye.

Whereas the previous segment on building technologies was central to housing as an issue of modern architecture, the vastness of this non-material factor relates most to planning; rooted first in urbanism, and thereupon, to architecture.

R.J.R. Kirkby sheds much light on the situation with his identification of a Western misperception: "anti-urbanism." Although the idea has seemingly been substantiated by the repeated restraint of urban growth, coupled with the lack of funding for urban construction during the sixties and the seventies, he nevertheless maintains that this reading must be dispelled:

A tendency to idealize agrarian society has clouded our vision: for the average Chinese farmer, nature is a deeply hostile force, to be romanticised only by the comfortable poet and painter.²

... it is an irony that we should choose to project on to such a people our own naive rusticism.³

The proof of this pudding is the lack of recognition of the anti-urbanism thesis by the Chinese themselves. And yet, Kirkby acknowledges that: "The major factors of the Chinese economy are determined by factors which are not immediately apparent."⁴ Using data not released until 1983, he exposes the roots of underlying themes which began during the late 1950s:

The Maoist reaction to urban elitism and technological determinism, we are given to understand, was the Great Leap Forward with its wholesale abandonment of urban centered planning strategies ... [which] set the stage for a whole number of policies favoring the countryside and penalizing the cities, these encapsulated in the strategic slogan of the early 1960s-- 'agriculture the base, industry the leading sector.'⁵

The low rate of 'non-productive investment' from the newly released data is used to substantiate Kirkby's thesis: "The Chinese revolution has above all been an Industrial Revolution."⁶

The West, however, have not been the only ones to have had the wool pulled over their eyes:

Reviewing the several major setbacks to economic development over the past 20-some years, we can say in summary that they were the result of overly left mistakes in the guiding ideology which had divorced itself from China's reality in several respects.⁷

Their own lack of perspective is acknowledged by citing the following: the incorrect lingering of 'politics-in-command' at the expense of shifting focus to economic construction; the haste to communism and egalitarian ideas which led to the dampening of worker initiative; an over-estimation of the state of China's economic development; a one-sided stress on self-reliance; and excessively centralized administrative control.⁸ Corrective policies were first instituted in 1978 at the Third Plenary Session of the CCP's 11th Central Committee, with the reinstatement of the 'Four Modernizations' by Hua Guofeng.

'Non-productive investment' (fei shengchanxing touzi)

Proportion of all State Basic Capital Construction Investment in the Non-productive Sector and State Housing

Period	Non-productive investment		Housing investment	
	1 m. yuan	2 %	1 m. yuan	2 %
Restoration 1950-2	887	34.0	277	10.6
1st FYP 1953-7	3,879	33.0	1,076	9.1
2nd FYP 1958-62	3,529	14.6	991	4.1
Readjustment 1963-5	2,895	20.6	970	6.9
3rd FYP 1966-70	3,160	16.2	786	4.0
4th FYP 1971-5	6,176	17.5	2,015	5.7
5th FYP	12,245	26.1	5,546	11.8
1976	7,063	18.8	2,284	6.1
1977	7,890	20.6	2,630	6.9
1978	10,475	20.9	3,921	7.8
Readjustment 1979	15,834	30.3	7,728	14.8
1980	19,961	35.7	11,166	20.0
6th FYP 1981	19,048	43.0	11,119	25.1
1982	25,263	45.5	14,105	25.4

Note: Non-productive investment (*fei shengchanxing touzi*) is that part of the state's 'basic capital construction' funds devoted mainly to urban utilities, cultural, educational, and social service installations, urban utilities and housing, public buildings, commercial enterprises, and transport and communications construction.

Non-productive investment: column 1 — annual average amount in millions of yuan during the respective planning period, prices adjusted; column 2 — average percentage of all basic capital construction investment devoted to non-productive projects during the respective planning period.

Housing investment: column 1 — annual average amount in millions of yuan given over to public housing investments by all urban agencies involved (both housing bureaux and enterprises) during each period, prices adjusted; column 2 — average percentage of all basic capital construction investment taken by housing during the respective planning period; note that the unit cost of housing floorspace construction has more than doubled during the period (eg, 1957: 47 yuan per square metre; 1980: 113 yuan per square metre).

Source: Derived from TJNJ 1983, pp. 323, 339, 359.

Housing Floorspace and Other State Building, 1949-80

	Total			Housing		
	1	2	3	1	2	3
Restoration 1950-2	n.a.	n.a.	n.a.	n.a.	4.5	13.4
1st FYP 1953-7	53.3	24.9	76.1	35.5	18.9	108.0
2nd FYP 1958-62	76.3	44.6	55.4	28.9	22.0	218.1
Readjustment 1963-5	36.2	34.2	65.8	39.4	14.2	260.8
3rd FYP 1966-70	40.3	37.0	63.0	26.8	10.8	314.8
4th FYP 1971-5	76.6	39.5	60.5	32.8	25.2	440.5
5th FYP	100.1	30.0	70.0	46.9	47.0	675.4
1976	69.1	37.9	62.1	35.0	24.2	—
1977	76.2	36.9	43.1	37.1	28.3	—
1978	90.1	33.9	66.1	41.6	37.5	—
Readjustment 1979	120.0	26.6	73.4	52.1	62.6	—
1980	145.0	23.0	77.0	56.8	82.3	675.4
6th FYP 1981	129.4	17.4	82.6	61.1	79.0	754.4
1982	143.6	16.5	83.5	62.8	90.2	844.6

Note: Total floorspace: column 1 — in millions of square metres; column 2 — production-oriented floorspace (factories, warehouses, and offices) as a percentage of column 1; column 3 — non-production-oriented floorspace (educational, medical institutions, housing, and other buildings) as a percentage of column 1.

Housing floorspace: column 1 — housing floorspace as a percentage of total floorspace constructed; column 2 — average annual housing floorspace constructed, in millions of square metres; column 3 — cumulative total (at end of period concerned) in millions of square metres. It should be borne in mind that in the early 1950s the Soviet standard of 9 square metres of living space per person was applied to new construction. By the end of the 1950s this target had been halved; in the early 1980s, the norm stood at around 12 square metres per person for newly-built housing.

Source: TJNJ 1983, pp. 339, 357; for the cumulative completion figures, extrapolated from 1980s total in He Gongjian, JHLT, no. 6 (1980), p. 14; there has been considerable disagreement between various sources regarding the completion figures of recent years. The data in the TJNJ seem to be the most authoritative and reliable, and in every case they are supported by some of the other disclosures.

should here be defined: "that part of the state's 'basic capital construction' funds devoted mainly to urban utilities, cultural, educational, and social service installations, urban utilities and housing, public buildings, commercial enterprises, and transport and communications construction."⁹

A return to 1949 and a look at the progression which culminated in the 'blackout years,' in terms of urbanism and architecture, will begin to enable us to stack up the cards before they were shuffled.

The first three years subsequent to the founding of the People's Republic are considered the Period of National Reconstruction. Basic material necessities were addressed by the CCP at the time, in view of the nation's virtual state of devastation. The Agrarian Reform Law of 1950 abolished the feudal land ownership system, and although owners and renters of land were permitted to retain a portion of their property, the initial aspects of the reformation were considered to be completed by 1952.

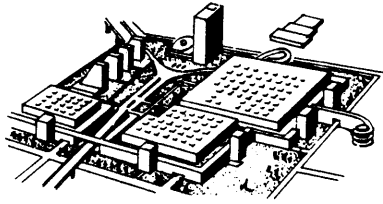
Urban reform, on the other hand, was directed at the treaty ports from the onset. The redistribution of industry to the interiors to align sources with their markets was called for immediately after liberation; while the aforementioned San Fan and Wu Fan 'intellectual rectification' campaigns of 1951-52 were more specifically aimed at universities and cultural circles within the cities. This culpability was seemingly the post-liberation beginning of a polarization between the city and the countryside, previously rooted in the idea that the peasants carried the task of the nation's productivity on their shoulders. The primacy of urban production, however, was first made explicit in the call to transform consumer cities to producer cities, (although still implicit was the low moral character of urban inhabitants). The Party's recognition of the value of technical and managerial skills was evidence to support this primacy: owners

in the industrial private sectors were initially given good salaries and high interest payments on their investments, as continued initiative.

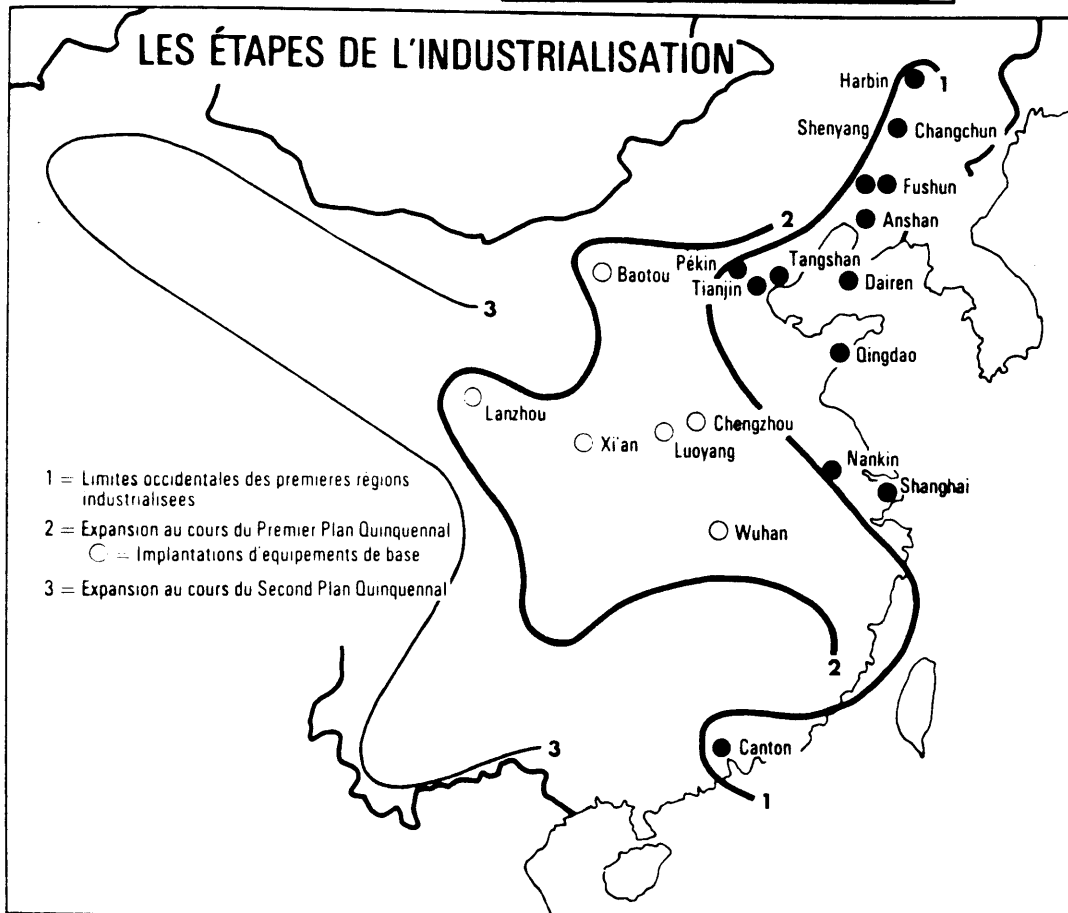
The years spanning 1949-56 are considered an overall era of urban renewal: city walls began to be removed, streets were widened, and basic infrastructure was installed.

The 1st Five-year Plan (1953-57) witnessed the initiation of Soviet 'command type' development, with economy at the helm. Heavy industry was the focus of this program. Key point cities were established inland along main transportation lines to offset the coastal imbalance, using Soviet planning examples of urban infrastructure as a basis for their development. Factories, transportation schemes, and power plants provided this backbone, targetting industrial production. Some 700 projects of large and medium size were instituted with Soviet assistance, of which 156 were considered of major import. From these, benefits were to 'trickle down' to rural areas. It has been more aptly characterized as a situation in which: "urban and regional planning inherently concerned with local spatial interaction, became totally subsumed in the process of economic planning."¹⁰ Although one could claim that misperceptions of the actual conditions again misguided these procedures, this tendency to work with an abstraction of ideals is moreso attributable to the Soviet interpretation of Marxist theory. (A later discussion on the transformation of Beijing during the 1950s will elaborate on this more specifically.)

The mid-fifties are considered an era of great success in socialist construction: "The socialist revolution on the economic front-- that is the transfer to socialist ownership of the means of production in agriculture, handicrafts and capitalist enterprise-- had its great upsurge in the winter and spring of 1955-56. By late 1956 it was virtually complete. During 1957 it was strengthened and extended."¹¹



Mao Tse-tung dominates this stamp, issued in 1950, marking the founding of the People's Republic of China.



This collectivization put an end to the previous allowances made for a continuation of the private sector in both industry and agriculture. With this strong tide of socialism, the singular focus on heavy industry began to be questioned. Mao addressed this specifically in his "On the 10 Major Relationships" of 1956; criticizing the inherent rigidity in a highly centralized economic system. The Soviet method began to be considered incompatible with the high degree of flexibility (and six million persons) available for a more comprehensive approach; to include light industry and agriculture. With the questioning of 'production for the sake of production,' and a shift to a broadened economic base; the treaty ports were reinstated as bases for urban industrial productivity, having largely undergone the necessary reform from 'consumer' to 'producer' cities.

The formulation of the Chinese own program for Socialist Construction thus began, with Chairman Mao's speech of 1957 to declare this embarkment. "On the Correct Handling of Contradictions among the People" cited the principal contradiction as that between the authorities and the masses, if a bureaucratic elite were to emerge; thereby making explicit, the Sino-Soviet divergence. The lack of resolution in Chinese planning methodology was therein also acknowledged, paving the way for Mao's 'politics-in-command.' From then on, the primacy of a given stage of economic development over political consciousness would increasingly be refuted.

Switchbacks between the developing 'Socialist' line by Mao, and Liu Shao-qi's incumbent 'Revisionist' line (the Chinese adaptation of Soviet methodology) were initially subtle, overridden by the fervor of the era. Clashes over subsequent issues, however, were to lead to a split by the mid-sixties.

In response to Krushchev's contemporaneous attack on Stalin's dictatorial methods and revolts in Hungary opposing

communism, Mao launched the "Hundred Flowers Campaign" in 1956, "to let 100 flowers bloom, and let 100 schools of thought contend;" as a safety valve in recognition that contradictions still were present in the pursuit of socialism. Opening a window to promote the progress of the arts and sciences, the overwhelming critical response was too much for the Chairman. The window slammed shut on the fingers of those who had openly opposed the Party, and an intense anti-right campaign followed, branding the authority of technical expertise by 1957. (Many consider this the first sign of Mao's politics gone askew.)

With the launching of the Great Leap Forward in 1958, the vertical Soviet-centralized system was replaced with a horizontal Chinese-decentralized structure, in one felt swoop. Producer goods and strategic sectors remained under central authority, whereas 80% of the balance (formerly centrally controlled enterprises) were transferred to provincial authorities. The first xiafang (sent down) occurred at that time, dispersing the large urban population to the countryside; and the tapping of China's human labor potential was emphatically pursued:

The main idea of the General Line-- "to build socialism ... to get more, faster, better and more economical results,"-- is to bring into action every fraction of the initiative and creative energy of 600 million people ... so as to reach the highest possible targets in the shortest possible time.

The speed at which construction is to go ahead is the basic question. What is envisaged is not merely a rate of development faster than that of old China or the capitalist countries generally ... The Chinese people are to reach levels of production in a couple of decades that cost those other countries one or two centuries to attain-- and then to forge ahead and leave them far behind.

"Six hundred million stalwarts,
Mighty in collective strength.
Rip holes in the sky-- we'll patch them!
Crack the earth's crust-- we'll mend it!
For we can tame oceans
We can move mountains."^{1 2}

A different kind of economy took over the helm at that time. 'Non-productive' investment took a nosedive, setting underlying constraints. The path to "Develop industry and agriculture simultaneously while giving priority to heavy industry," necessitated a delegation of responsibility between the sectors, to compensate for a lack of economic support. "With centralized leadership, overall planning, proper division of labour and coordination, [to] develop national and local, large, medium and small industries simultaneously;"¹³ money was still the bottom line.

The first decade of relentless urban growth had undoubtedly initiated the association of non-productive investment with urban transformation. Pressures on the urban fabric as a direct result of industrial investment, for increased expenditures on housing, roads, public transportation, commercial development, and so on; ran contrary to the 'accumulation impulse,' cited by Kirkby as the number one priority of the CCP. This, he claims, was due to three fundamental factors: the first of which was the imbalance between external 'world' and internal 'domestic' economies. This could be offset by an increase in foreign exchange earnings through exports; but a sector-by-sector revamping would be necessary to raise the quality of her technically advanced products to a competitive level on the foreign market. In conjunction with this external pressure, is the setting of standards for the Chinese popular perception of internal consumption needs, again by the foreign markets. Third and foremost, is Kirkby's citing of the 'nation-building imperative.' Any look at China's recent political history would support this instinct:

The effort to assert and then preserve its national integrity has thus occupied a central place in overall Chinese policy. The tasks ... to stake out and defend territorial claims against all-comers, and to unify lands administratively and economically-- have fallen to the Chinese Communist revolution in the twentieth

century.

Extraordinarily rapid industrialisation has been the means adopted by the CPC in pursuit and defence of its nation-building tasks.¹⁴

It is the industrialisation imperative that has shaped China's urbanisation, not abstract notions such as anti-urbanism.¹⁵

To expound on `agriculture the base,` its purpose was to provide labor, a market for manufactured products, and the insurance of a surplus, regardless of low funding. The advent of collectivization, in conjunction with this, was essentially to guarantee local financing and local supervision for the increasing differential in investment; as had been the case in the Soviet Union during the 1930s:

"The fetishization of production was writ large."¹⁶

We are led to believe that Mao's emphatic shift from the Soviet singular focus on heavy industry, to a decentralized program to include light industry and agriculture; was underwritten with a broadened economic policy. Ironically, investment in heavy industry emphatically increased during periods of Mao's rise in leadership; and by default, non-productive investment declined sharply, undermining the growth of China's modern architecture; (in particular, housing).

The predominance of heavy industry has by now, been rendered more than apparent. A return to 1960 and the Soviet withdrawal will begin to focus more specifically on the translation of Kirkby's thesis, to architecture per se.

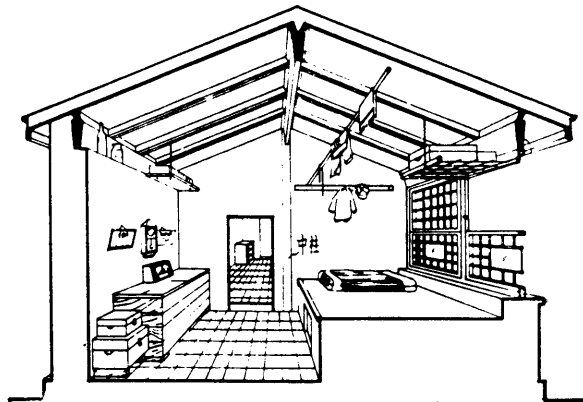
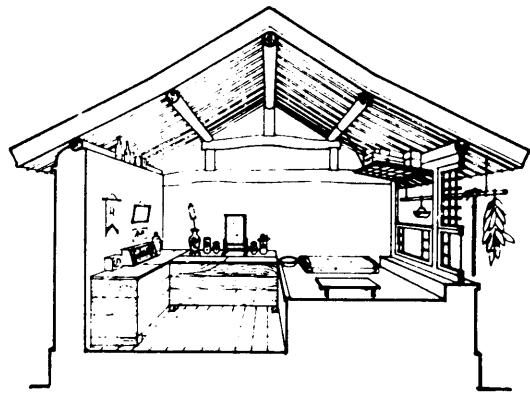
Although the Great Leap's principle of `walking on two legs` was an effort to balance the shifting priorities between Soviet methodology and Mao's emerging `Socialist` line, (accommodating both large as well as small and medium enterprises, through the use of both modern and homestyle methods); the cards were stacked against the Chinese with the

close of the first decade of the newly founded Republic.

Increased hostility to Mao's adventuresome spirit was demonstrated with the Soviet's choice to remain neutral in the 1959 Sino-Indian conflict. The Soviet withdrawal of 1960 was initially an attempt to bring China to her heels. Technical aid and advisors were removed with all their blueprints, while Chinese students in the USSR were sent back home. The effort, however, boomeranged; and Mao became more emphatically anti-Soviet than ever. This put a stop to the era of monumental Soviet urban planning.

Three years of drought between 1959-61, in the meantime, put a stop to the Great Leap Forward. The unrealistic quotas were abandoned for a re-emphasis on pragmatics. A resurgence of traditional building methods research was the direct consequence of this. With the construction of the Miyun Reservoir and the relocation of the area's inhabitants; teams of architects and engineers in collaboration with regional artisans studied re-housing

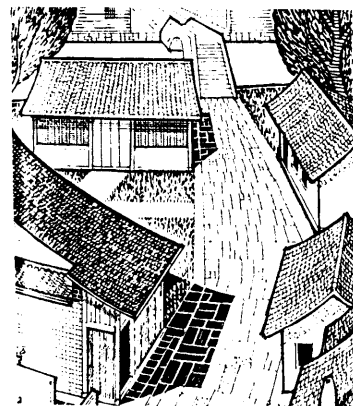
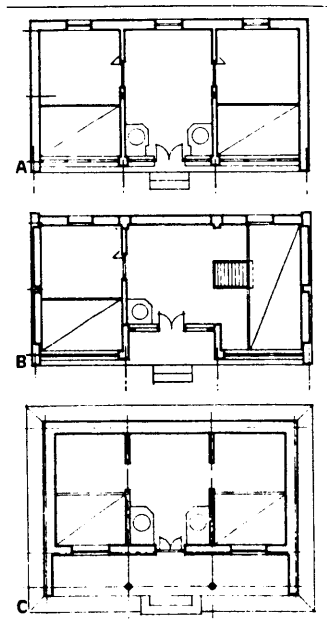
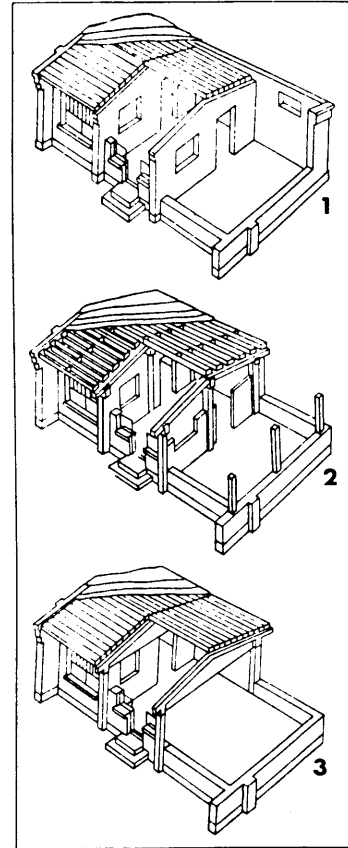
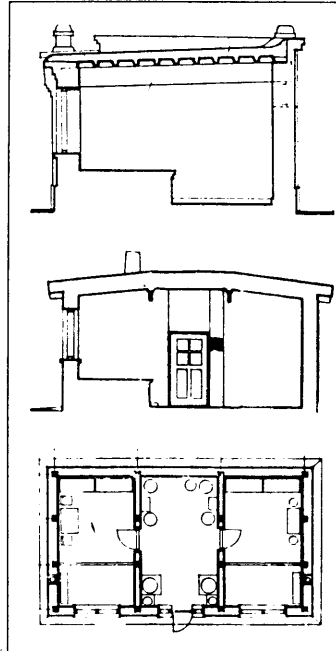
Miyun, le dernier en date et le plus grand des réservoirs devant alimenter Beijing et sa région.



Le Liwu - « pièce intérieure » - sert à la fois de chambre à coucher et de salle polyvalente. Assis en tailleur, on y prend ses repas sur une table basse, on y fait de la couture, etc.

La même salle traditionnelle. Cependant, toutes les pièces de la charpente en bois sont remplacées par des éléments en béton armé préfabriqués : potelets, poutres, bacs.

possibilities. This research paralleled the modern prefabrication of small-scale elements with traditional wood construction techniques. Other research at this time included user inquiries for housing. In other public construction, plan types for schools, hospitals, auditoriums, and other frequented programs; began to be compiled. The Architectural Society of China conducted a survey of old housing in Zhejiang Province, which was presented at a symposium in Beijing in 1964. The extensive research on housing, which was clearly the focus in architecture during the early sixties, would bring with it new inspirations and new controversies. With this embracement of



the domestic tradition, both formally (the classical), and informally (the vernacular), one more key ingredient in China's modern architectural transformation was identified.



Economic readjustment and consolidation had begun in 1960. Between 1962-66, the national economy underwent a smooth restoration, with industrial and agricultural production surpassing the quotas set prior to the Great Leap surge. Self-sufficiency in oil was achieved in 1965, and new industries to include electronics and petrochemicals, began to be built.¹⁷ Wage-incentive policies were reinstated, and market forces were put into play in industry and agriculture; particularly with the restoration of private plots and household accounting units, thereby reducing central control over production.

Although this raquetball partner seemed to be winning the game, the opponent was just beginning to warm up. Political friction increased in the 'area versus line' dispute of the early sixties, bringing to a head the controversies which had arisen during the late fifties over Soviet methodology. This conflict delineates the augmenting contradiction between economic and spatial planning. Liu Shao-qi's revisionist 'line' favored a vertical, top-down approach, with 'techniques-in-command;' whereby production was to receive primary emphasis. Mao's approach, by contrast, was presented as horizontal, regional (by 'area'); and favoring a bottom-up politicization of the masses to represent 'the sum of the needs.' The outcome of this conflict is history.

A fragmentation of GLF policies (in exaggerated form) were to be reiterated with the Great Proletarian Cultural

Revolution of 1966, pushing the notion of economy in architecture, to the extreme. For example, the 'three-in-one combination' of 'on-the-spot' construction which was intended to expedite the building process, essentially left the task of design in the hands of the workers, leaving the architect with drafting tools in hand. Léon Hoa cites the greatest tragedy of this era as the breaking of a spirit which had just begun to be synthesized. Central organizations for the research and coordination of architecture and urbanism were disbanded. Many of their members were 'sent down' to the May 7th schools. Archives of research were sent out to provinces, sometimes in sacks of jute. Surveys of master plans of some 100 cities disappeared. This continued until the fall of Lin Piao in 1971, whereas urban planning organizations would not begin to be restructured until 1973.¹⁸

Two schools of thought emerged in the 1970s, reflecting two opposing ideologies of architectural engineering, which are indicative of the subordination of architecture to the politics of the time. These were called the Confucian and Legalist schools; the former considered a reactionary stance, hostile to innovation and thereby obstructing the progress of technology; whereas the latter was said to advocate change and progress. The Confucian school and its association with Lin Piao, was criticized for its doctrine of restoration and distorted view of Chinese history:

... Confucian worship has left its mark on the research of architectural history, too. In this field, for instance, the architecture of Confucian temples has often been described from a supra-class viewpoint, which nullified its class content.

... Lin Piao and his gang energetically propogated such reactionary ... ideas as "he who excels in learning can become an official" and "those who labour with their minds govern others; those who labour with their strength are governed by others." Such ideas often undermine our "three-in-one" on-the-spot designing and obstructed us from taking the road of integrating ourselves with the workers and peasants.¹⁹

In rejection of the 'Confucian' school, the inverse was said to hold true:

History is made by the working people, and the history of ancient China's architecture was also made by them.... For instance, Lu-Pan, a most outstanding workman in the Spring and Autumn Period ... was known for his inventions in architecture, carpentry and tool making.... Numerous facts prove that "the lowly are most intelligent, the elite are ignorant." The working people who create both the material and spiritual wealth are the real master of science and technology.²⁰

An article also appears during that time entitled: "Confucius' Reactionary Nature seen in the Destruction of Three City Walls," by Ho Yeh-chu (JX No.1 1974). Although I know nothing of its contents, its title is resonant of a much heated era. Objections to the blanketing of this policy were nevertheless made at the time:

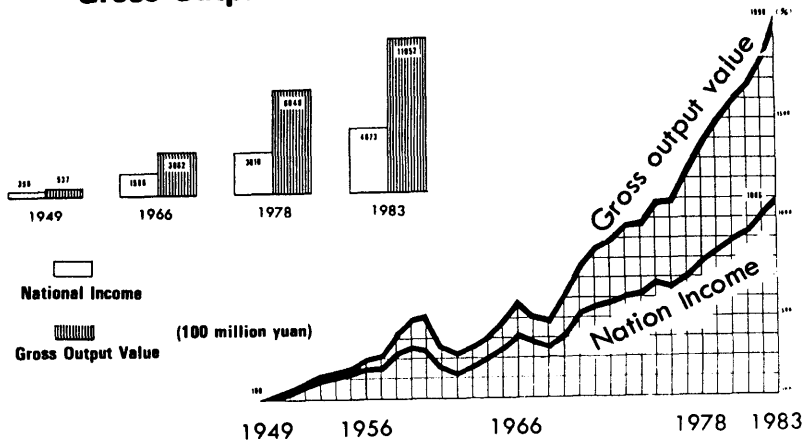
The sinister political motives that the reactionary rules throughout history nourished then (sic) in forcing the labouring people to build or renovate the Confucian temple must be firmly criticized today. But the temple itself is a piece of architectural art created by our labouring people in the course of history. It is a part of our cultural heritage and we must preserve it as a historic relic.²¹

The shift away from political activism and toward production marked the latter half of the seventies, with the announcement of the "Four Modernizations" by Zhou En-lai at the 4th National People's Congress, early in 1975. The architecture of the time focused on large-scale construction projects such as gymnasiums, stadiums, airports, and health-care facilities; to suit the mass-orientation. Self-reliance was reinstated, and small-scale industry was rejuvenated with collective models such as 'Learn from Dazhai' (National Agricultural Conferences in October 1975 and again in December 1976).

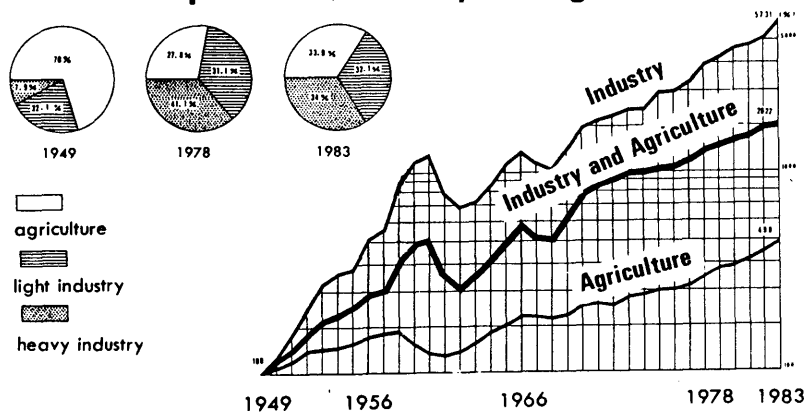
Party and state leadership was in a virtual revolving door for the next two years, beginning with the death of

The National Economy 1949-1983 at a Glance

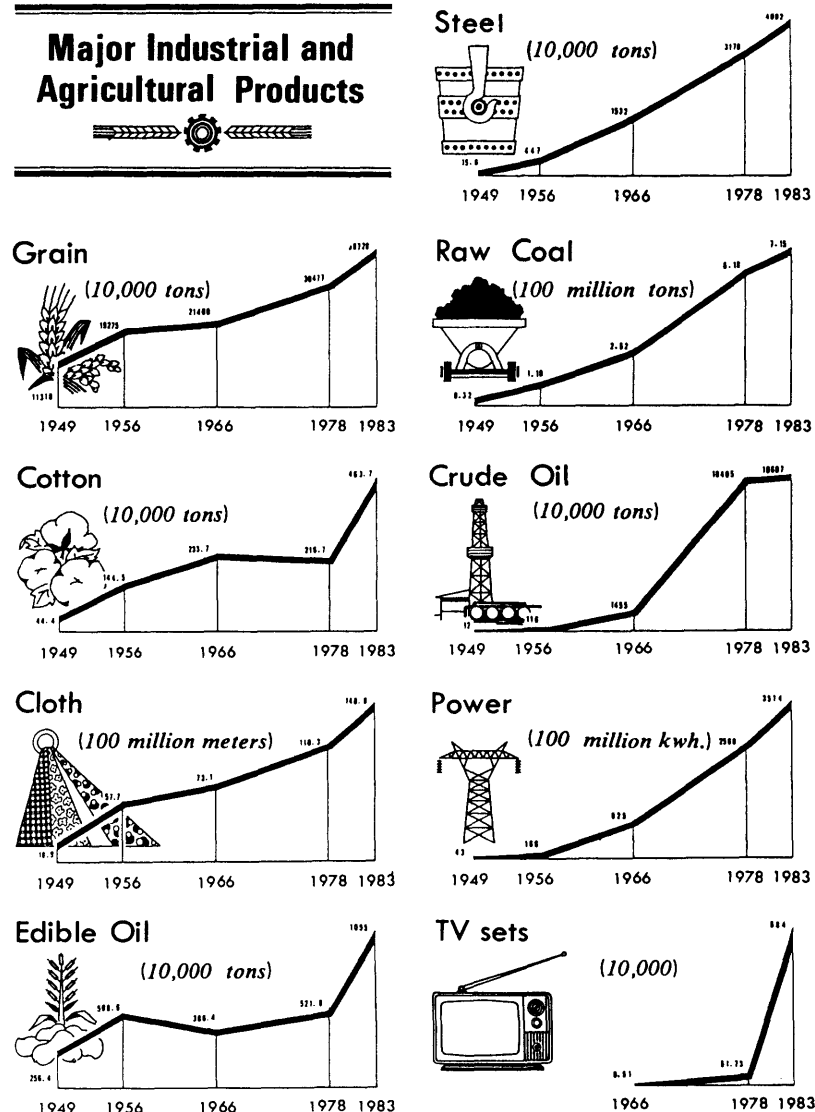
Gross Output Value and National Income



Gross Output Value, Industry and Agriculture



Major Industrial and Agricultural Products



Premier Zhou En-lai in January 1976. With the naming of Hua Guofeng as acting premier, Deng Xiaoping was given the boot. Chairman Mao Tse-tung died in September of 1976, and Hua was given the role of Chairman by October. The Gang of Four were arrested and implicated during the same month. A National Industrial Conference was held in April of 1977 (the first since 1949), with Daqing as the model. By July, Deng was reinstated, figures for Dazhai were denounced as false, and the Gang of Four were expelled from the CCP. By the end of the following year, a 'comprehensive modernization' plan was announced by Hua Guofeng, to make China an 'advanced socialist country by the end of the twentieth century;' whereby once more, it was 'full speed ahead.' Agriculture was given top priority, and the diversification of the rural economy was planned. With this, the Responsibility System was unveiled, and the budding market economy was placed second to planned economy. By March of 1979, the Great Leap Forward was attacked by the People's Daily as the source of economic difficulties during the former two decades; and come July, joint-venture laws were enacted.

In recent years, criticism of the 'accumulation impulse' has been echoed by the Chinese, as consumption began to be encouraged to offset the 'incorrect' previous years' economy:

In 1966,... the "cultural revolution" was launched, and this was a mistake.... The national economy became seriously out of balance. Capital construction was expanded blindly. As much as 33 percent of the national income went for accumulation, leaving considerably less for consumption, or the people's life.

.....
In the years 1977 and 1978,... an impetuous desire for quick results reappeared in economic work, with too much stress on speed and high quotas. Investment in capital construction was excessive. The supply of energy and raw materials could not keep up.²²

The years 1979-1983 are characterized by a 'seismic shift' to housing. Investment in urban construction during

that period totalled 83% of the total sum of the previous thirty years. Comprehensive urban planning guidelines in land use were established in 1980 by the State Capital Construction Commission, to include greenbelts, highways, residential densities and housing construction codes, as well as private and public (commercial) zoning.

At the 12th Central Committee of the CCP in 1984, reduced government interference was advocated, to cut down the bottlenecks in the production process, which was still considered to be top-heavy at the time. Increased autonomy for all sectors was implicit in this shift; with the balance between accumulation and consumption, still being tested.

In the past few years efforts have been made to reduce and control the amount of investment in capital construction, to increase the proportion of investment in construction to directly benefit the people and to raise urban workers' salaries and rural peasant incomes. Acceleration of economic reform in the cities is scheduled. Reform has been carried out on a trial basis. At present the main stress of this reform is to eliminate the effects of equalitarian (sic) thinking, which is referred to as "everybody eating out of one big pot."^{2 3}

With the instatement of the Seventh Five-year Plan (1986-1990), economic reform which began in the rural areas began to reach the cities. A tight rein is to be maintained on the rate of development to ensure smooth reform; in view of the overextension of economic growth, capital construction and consumption (both domestic and foreign) in the years 1984-85. "The details are complex, but the method is not-- increase production so that it can provide prosperity for every member of society."^{2 4}

On the one hand, 'proceed with caution' remains the status quo for the sea of now, over a billion persons. On the other, having identified the increase of foreign exchange earnings through exports as instrumental to achieve economic

equilibrium through this period of intensive growth; China is seeking foreign investments to bolster her economy, drawing the focus once more to her large cities.

Having discarded the notion of 'anti-urbanism,' Kirkby identifies the current dilemma: 'over-urbanisation;' a perceptual problem which persists in spite of the access to truer readings of the urban predicament:

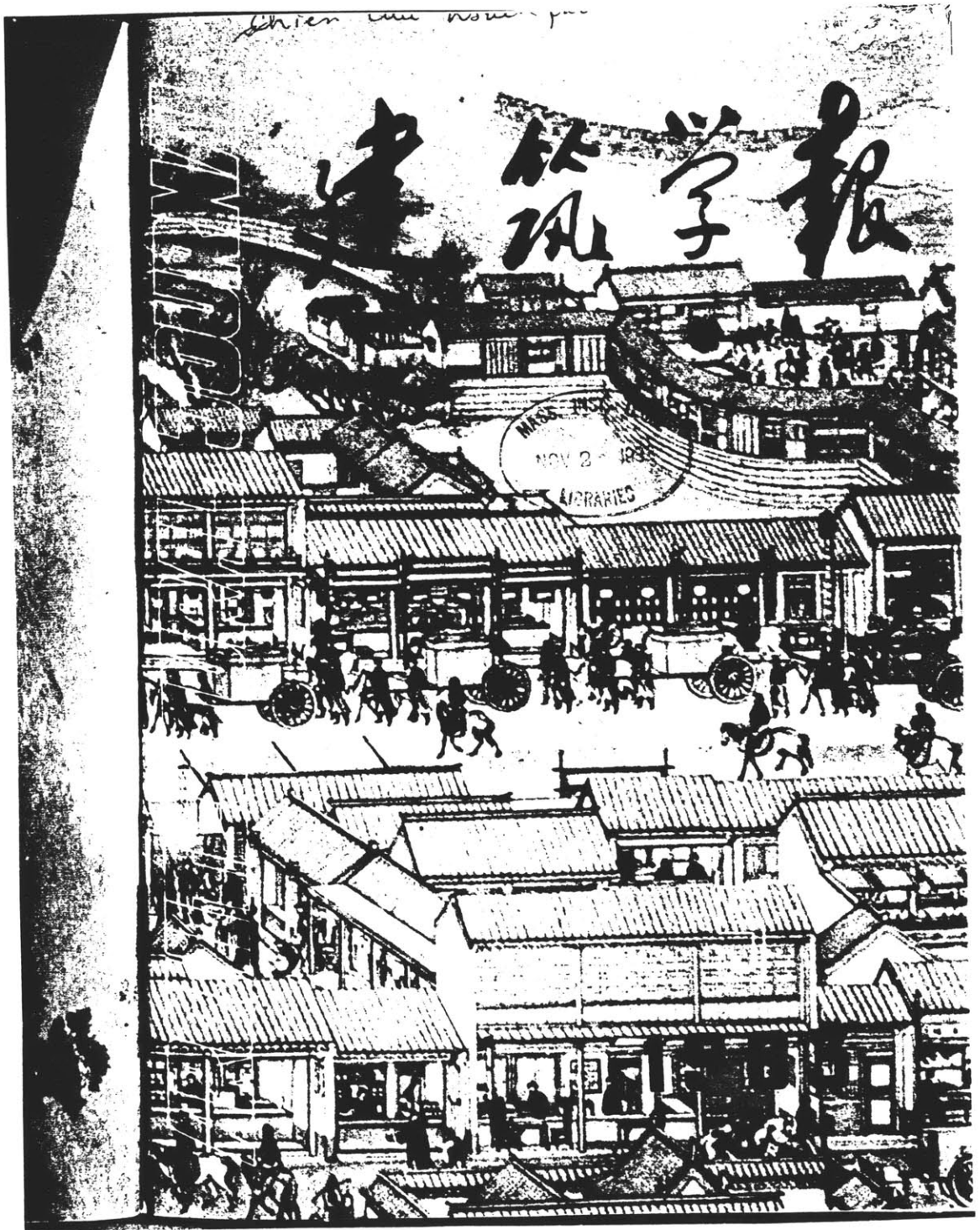
The inadequacy of funds for urban construction (and especially for housing) in the 1960s and early 1970s gave rise to a perception of over-urbanisation--strongest in relation to the larger cities. In the mid-1980s, the impulse to migrate to cities remains, albeit in a less fierce form than previously. But the land resources of China's major metropolises are finite, and the flow of funds on a grand scale to non-productive capital projects places the economy under great strain. The awareness of these constraints is an important factor behind the continuing perception of 'over-urbanisation.'²⁵

Although Kirkby may well have succeeded in dispelling the Western misperception of anti-urbanism, which had been sustained (to a degree) by 'Chinese' myth; indeed the 'modern' myth remains in large part, the Chinese own daydream of the West, epitomized by her metropolises. Even if remedial attention can be paid to the perception of the problem, the sublimeness of it all remains to be addressed.

N O T E S

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2. R.J.R. Kirkby, Urbanisation in China: town and country in a developing economy 1949-2000 A.D., (Australia: Croom Helm Ltd. 1985), p.9. I am indebted to both of Kirkby's references for this segment.
3. Kirkby, p.18.
4. Kirkby, p.11.
5. Kirkby, p.5.
6. Kirkby, p.13.
7. Zhong Jingtai, "Thirty Five Years: Socialist Construction," China Reconstructs, November 1984.
8. Ibid.
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14. R.J.R. Kirkby, Urbanisation in China, p.13.
15. Kirkby, p.14.
16. Ibid.
17. Zhong Jingtai, p.15.
18. Léon Hoa, Reconstruire la Chine: trente ans d'urbanisme 1949-1979, (Paris: Editions du Moniteur, 1981), p.161.
19. "Summary of a Meeting to Criticize Lin Piao and Confucius Organized by the Architectural Society of China," (Eng. Abs.), Jianzhu Xuebao, No.1, (1974).

20. "The Legalist School's Political Line Promoted the Development of China's Architectural Engineering," (Eng. Abs.), Jianzhu Xuebao, No.1, (1975).
21. "The Confucian Temple in Chufu and the Struggle between Revering and Opposing Confucius," (Eng. Abs.), Jianzhu Xuebao, No.4, (1974).
22. Zhong Jingtai, pp.15-16.
23. Zhong Jingtai, pp.23-24.
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H I S T O R I O G R A P H Y

From the beginning of Chinese building through the nineteenth century, the uses of wood construction and timber units were common knowledge only among Chinese builders. The study of Chinese architectural history, including architectural documents, did not begin until 1901, when a commission of Japanese architects photographed, measured, and described the Forbidden City in Beijing.¹

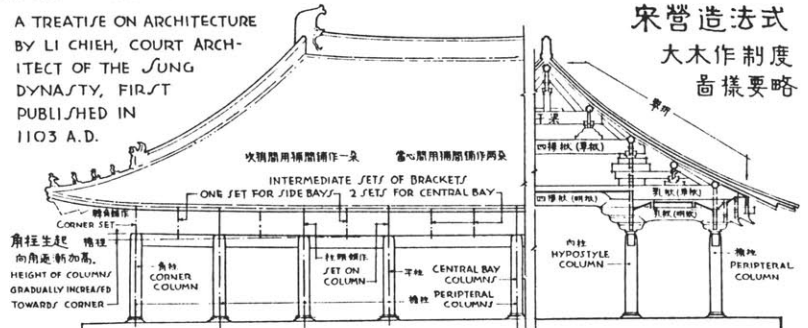
Whereas calligraphy and painting have been charted through the ages by Chinese historians; ancient architecture, not having been upheld as one of the arts, lacks both historical and theoretical documentation prior to this century. Although this situation began to change in the 1920s with the re-publication of a key treatise from the twelfth century, thereby addressing China's ancient tradition; her modern architectural tradition has yet to be substantially asserted with regard to history, theory, and criticism. (Needless to say, the state began to assume the role of critic in the 1950s, applying pressure which resulted in a virtual shutdown of ideas in the field, during the 1960s. (A discussion of these events are soon to follow.) I hereby offer a chronological sketch of architectural historiography by the Chinese themselves.

The recording of architectural history has for the most part, taken the form of building manuals. Of these, only two treatises survive on the methods of building construction. First and foremost, Ying-tsaο fa-shih, (A Treatise of Building Standards), was compiled by the Ministry of Public Works during the Sung dynasty. It was edited in 1100 by Li Chieh, the Vice-Director of the ministry, and first published in 1103, (and again reprinted in 1145). The eight volume manual includes literary quotes dating from the Zhou dynasty in the first two of the total thirty-four chapters. The remainder of the manual comprises four sections: **rules** for construction methods, work units per day for the artisan (**labor**),

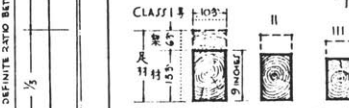
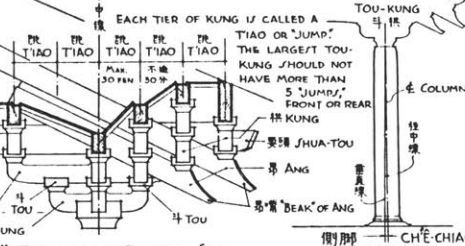
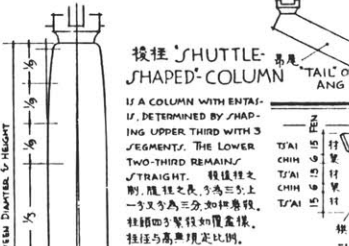
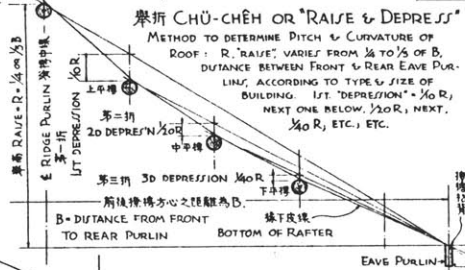
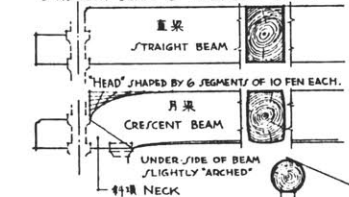
RULES FOR STRUCTURAL CARPENTRY ACCORDING TO YING-TSAO-FA-SHIH.

A TREATISE ON ARCHITECTURE BY LI CHIEH, COURT ARCHITECT OF THE SUNG DYNASTY, FIRST PUBLISHED IN 1103 A.D.

宋營造法式
大木作制度
圖樣要略



梁 BEAM 須有直梁與月梁二種。月梁者以六瓣為度。依殿殿而增。直梁與月梁。二種之梁。其形如圖。



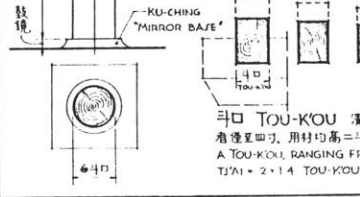
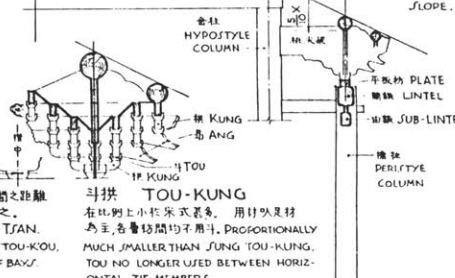
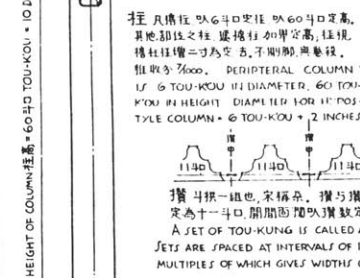
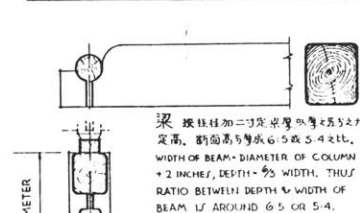
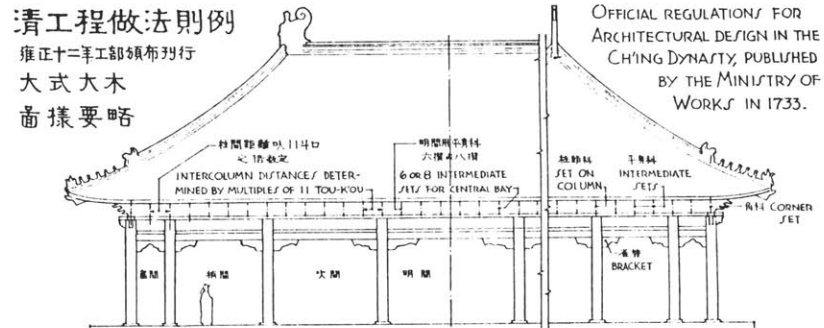
斗梁分 運量之制以材為限。材有八等。厚薄之大小。因用之。各以其材之廣(高)分為十五分。以十分為厚。凡屋宇之高深。名物之短長。由算術之等。是之定。皆以材用。材之分。以為度量也。

斗拱 TIAO CHIH & FEN: TIAI, THE STANDARD TIMBER FOR ALL CONSTRUCTION, IS GRADED INTO 8 CLASSES. THE DEPTH OF EACH TIAI IS DIVIDED INTO 15 FEN; 10 FEN GIVES THICKNESS OF TIAI. THE PROPORTION OF EVERY PART OF THE BUILDING IS THUS MEASURED IN TERMS OF THE FEN.

RULES FOR STRUCTURAL CARPENTRY ACCORDING TO KUNG-CH'ENG-TSO-FA

清工程做法則例
雍正十二年工部頒布刊行
大式大木
圖樣要略

OFFICIAL REGULATIONS FOR ARCHITECTURAL DESIGN IN THE CH'ING DYNASTY, PUBLISHED BY THE MINISTRY OF WORKS IN 1733.



斗口 TOU-KOU 漢式插榫厚四斗口。即不之十寸也。斗口自一寸至六寸。共十一等。但梁頭見最大者僅至四寸。用材均為三斗口。厚材用較粗。榫橫高為四寸。斗口之寬。以 TIAI 之寬為定。TIAI 之寬。以 TIAI 之寬為定。TIAI 之寬。以 TIAI 之寬為定。

specifications for **materials** (quantities and their composition), and **drawings** of cross sections and construction details. Each of these four sections is further subdivided according to more specific application, relating materials to their corresponding methods. Units of standardization are emphasized throughout the manual, the most important of which is the timber unit.

A British architect made the following observation regarding the Ying-tsaο fa-shih in 1947:

... this compilation not only explains the standardization of Chinese architecture, but in its clear division of functions between the various craftsmen, demonstrates the impossibility of a western individualist approach to the design of buildings ever finding any outlet.²

The second manual is entitled Kung-ch'eng tso-fa tse-li (The Rules of Construction and Architectural Design of the Ch'ing dynasty), published in 1733 by the Ministry of Engineering and Public Works. These were official regulations for wood construction methods for building frames and dou gong bracket systems, and construction methods for stone and tile building parts. As Professor Liang Ssu-ch'eng has noted: "Perhaps it was the uncompromising strictness of the dimensions given in the Kung-ch'eng tso-fa tse-li that succeeded in effacing all the suavity and elegance that we find so charming in a building from the period of the Ying-tsaο fa-shih."³ A discussion of material quotas and labor was also included. (This was not an illustrated manual.)

A design manual on Chinese Gardens entitled Yuan Yue was published in 1631 (republished, Tokyo 1970), as the Ming dynasty drew to a close. The author, Ji Cheng, included such advice as:

`Follow nature's path to a certain extent, but do not forget it is to be made with man's hand.'
`Make the force follow the real one.'
`It is artificial, but should look like a natural one.'

‘Learn and follow from nature.’

These Taoist principles which translate formally to assymetry, avoidance of the architectural axis, and an inclusion of more use of perspective in design; are to be contrasted with the Confucian principles which have largely guided China’s classical architecture through time: hierarchy, order, symmetry and a strong, yet subtle use of axis. The symbiotic relationship of Taoist and Confucian principles has provided both philosophical and formal sources of Chinese classical architecture and gardens. Gardens are therefore, inseparable from China’s architectural history.

The twentieth century with its many innovations, was to bring with it the new conception of the role of architectural history. In 1919, a Chinese scholar-official, Zhu Qiqian, who had been in charge of the restoration of the Forbidden City, was sent on a delegation to Nanjing. While visiting the Provincial Library, he was shown a copy of the Ying-tsaο fa-shih. This encounter initiated the manual’s re-publishing in 1920; but it soon thereafter became evident that many mistakes were present in the library’s edition, due to recopyings by scribes unknowing of building techniques. A reconstructed version of the Sung manual was published in 1925, (edited by Zhu and a board of scholars), after five years effort to compile accurate copies. Thereafter, the publication received wide distribution, fully impacting the contemporaneous ‘Chinese Renaissance’ movement by the end of the decade.

In 1929, Zhu Qiqian and several other scholars who had been gathering to discuss the newly published research, established the Society for Research in Chinese Architecture, and founded a bulletin. The first two volumes published in 1930 and 1931 were devoted to the Ying-tsaο fa-shih, which included translations by Western authors on the subject. ‘Master craftsman’ manuals (formerly secret information) from

the artisans in charge of the maintenance of the Forbidden City were also included in these early volumes.

The Society was reorganized in 1931 with new members on its board. Young architects who had recently returned from studying abroad were given appointments. Liang Ssu-ch'eng, (son of the eminent scholar-educational reformer, Liang Ch'i ch'ao), had returned from U. Penn. in 1928, where he had studied with the Beaux-Arts architect, Paul P. Cret. He was put in charge of fieldwork. Liu Dunzhen was given the task of textual research, (Academy of Engineering, Imperial University of Tokyo 1928); and Lin Hui-yin, (BFA U.Penn. 1927-women were not admitted to the department of architecture at that time) and wife of Liang Ssu-ch'eng, was also appointed to the board. Fieldwork was the primary matter taken up by the Society, beginning in 1932, and largely interrupted by the Japanese occupation in 1937. Forced to leave Beijing, editing and compiling of the material took place in Szechuan, while in exile.⁴

When the war ended, the Society was disbanded. Liu Dunzhen had accepted a professorship in the department of architecture at the University of Nanking in 1943, and Liang Ssu-ch'eng went on to become founder and professor of the department of architecture at Tsinghua University in Peking, in 1946. (He thereafter became involved in the post-liberation reconstruction of Peking.)

Professor Liu Dunzhen went on to focus his research on traditional Chinese housing. The work was published in 1957 by the Institute of Architectural Research of the Nanking Institute of Technology, in collaboration with the Architectural Research Center of China. Originally entitled: Zhongguo Zhuzhai Gaishuo (Aperçu sur l'Habitation Chinoise), it was republished in 1980 by Editions Berger Lerrault under the direction of Pierre Clément, entitled: La Maison Chinoise. This book has been instrumental in providing a foundation for

subsequent study of domestic architecture.

By 1964, an 'overseas' Chinese architect published a book in Hong Kong, entitled: Chinese Architecture: Past and Contemporary. The author-- Gin-Djih Su, stated his intention by writing this history to "Throw a brick to attract jade," in the preface. The book not only compiles the architecture of the past and its principles; it is moreover, an invaluable reference of twentieth century architectural development. Su made the following declaration as he concluded, at a time when 'style' was at the peak of debate on the Mainland; which was an indication of the increasing inseparability of history and criticism for the Chinese architect, at the time.

A style should not be formed for the sake of style. In architectural creation, function, structure and beauty are unified. To emphasise any one of the three is liable to cause prejudice and distortion of the contents. Such a creation cannot present the mutual significances of materials and the spirit.

.
[Furthermore,] The tendency to commit basic mistakes in production will result if the idea of creation is not clearly established.⁵

During the mid-sixties (and prior to 1966), in the tradition of the construction manual, an elaborate Chinese 'Neufert' was assembled. (The original German reference manual by Neufert is entitled: The Elements and Projects of Construction; a veritable dictionary consisting of 3600 drawings, first published in 1936. The French version by Dunod was published in 1951, consisting of 300 pages.) The Chinese version was compiled by the Committee of Architectural Research, comprising two volumes, of 500 pages each.

Continuing along these lines, the final stages of A History of Chinese Architectural Technology was announced in the "Jianzhu Xuebao," (No. 1, 1978). The Research Institute of Natural Sciences History of the Chinese Academy of Sciences conducted this 'scientific' activity. It includes three segments on primitive, slave, and feudal stages of architec-

tural development, dealing with construction methods of the varying predominating materials; as well as building technologies of national minorities, city planning, landscape, and gardening. This 'everything' book contains 800,000 words and 500 illustrations.

Also by the late seventies, under the instruction and in-situ research, again conducted by Liu Dunzhen; the Nanking Institute of Technology and the Architectural Theory and History Research Division of the Academy of Building Sciences jointly compiled: Traditional Gardens in Suchow. Some 190 gardens and courtyard houses were thereby surveyed and documented, of which the analysis of 15 gardens were to be included in the 500 page publication. This was announced in the "Jianzhu Xuebao" (No.2, 1979), as imminently to be published by the Chinese Building Industry Press, Peking.

Once more from overseas, Reconstruire La Chine: trente ans d'urbanisme 1949-1979, was published by Editions du Moniteur in Paris, 1981. The author, Léon Hoa, was born in Peking in 1912, and went on to study architecture and engineering in France, where he worked until 1951. He then returned to China and worked as chief architect on the Committee of Urbanism for the city of Peking for the next four years. The following twenty-two years were spent working for the Building Design Institute of Peking. He returned to France in 1977, and wrote this book. Reconstruire La Chine centers on urbanism, but it also addresses architecture and especially housing, in conjunction with the major topic. It is interesting to note that Léon Hoa also makes use of the same Chinese proverb as did Gin-Djih Su, in his preface: 'une vulgaire brique qu'un jour quelqu'un de plus compétent pourra transformer en jade.'

The most well-known of these pioneers of Chinese architectural history is the eminent Professor Liang Ssu-ch'eng. His book entitled: A Pictorial History of Chinese Architecture

has a history of its own. Initially written during the final years of exile in Szechuan Province, (the drawings were compiled in 1943); the book was first completed in 1946, based on some 2000+ historical buildings throughout the 25 provinces of China. It was not to be published, however, until 1984; at which time it was edited by Wilma Fairbank, an old friend and colleague of Professor Liang who had helped to compile the original text.

When Liang had returned to China in 1947 (subsequent to his appointment at Yale as a visiting professor), he left the original drawings and photographs in America with Mrs. Fairbank. When in the 1950s he sent for the drawings, they were to become lost for some thirty years. In the meantime, Professor Liang's wife, Lin Hui-yin died in 1954, the same year in which he was first bitterly denounced. Liang Ssu-ch'eng died in 1972. Mrs. Fairbank was able to recover the manuscripts only in 1980, upon discovering that they had never reached him, in 1978.

The eminent Professor Wu Liangyong (Professor and Dean of the department of architecture at Tsinghua University), has made the following overview of the book's contributions:

- Emphasis on the analysis of Chinese architecture with respect to the structural system.
- Division of historical periods of the development of Chinese architecture based on the study of both indirect materials (like remaining sites of Shang Dynasty, burial clay models Han Dynasty) as well as murals in grottoes ...
- Analysis on various types of architecture: palaces, temples, tombs, bridges, etc-
- Photographs and drawings of typical examples as the main contents [of the book] with concise explanation.⁶

Professor Wu also wrote the foreward of the book, and its first paragraph opens up a big can of worms for present day architectural theory: "Professor Liang originally planned it to be one part of a large book, The History of Chinese Art.

The other part, for which he had already written an outline, was to be Chinese sculpture, but this plan was never carried out."

Thus, the 'leader of the first generation of Chinese Architectural Historians' (W. Fairbank), and the 'pioneer of Protection of Historical Architecture' (Chen Zhihua, "JX" No.9, 1986); identifies "Architecture as an Art," thereby thrusting the first spear in Chinese architectural theory as well.

[The discussion of the non-material factor: architectural theory, will be pursued in Part II: "Examples and their Significance in a Modern Tradition." As virtually nil has been compiled on this topic, I have chosen to align it with the development of the artifacts themselves.]

Finally, the very recent publication entitled: Modern Construction (Vision Press of China 1986), was announced in the "Jianzhu Xuebao," at the end of 1985. The authors, Gong Deshun et al, make the following comment on their research:

For the purpose of summarizing the experiences in Chinese architecture since the founding of the People's Republic in 1949, the authors spent a period of two and a half years in visiting more than a dozen large cities ... to make a study on the typical examples.... It has been found by the authors that conditions are not so simple as they first expected. For example, backgrounds in politics, economy, and other respects which influenced building activity are not quite clear or some even unknown.... the authors have prepared a chronological table of events in building activities since 1949 ... divided into six periods:

- (1) Period of Recovery of National Economy, 1949-52;
- (2) Period of First Five-year Plan, 1953-57;
- (3) Period of "Great Leap Forward" and economical difficulties, 1958-60;
- (4) Period of Readjustment of Economy, 1961-64;
- (5) Period of "Design Revolution" and "Cultural Revolution," 1965-76;
- (6) Period of Development of Socialist Modernization, 1977-84.⁷

Whereas 'getting the pendulum to settle' has epitomized political and economic development in the post-liberation years, overshadowing virtually everything in its path; historiography has, even in its meager beginnings, played a significant role in the development of twentieth century architecture by its presence alone. Although its reading has largely tended toward the 'scientific,' and not toward the theoretical or critical; one must bear in mind that this is another 'new kid on the block,' whose awkwardness will only be fully shed after having passed pre-conception, to arrive at a level of conception.

One must add that until its recent introduction from the West, the Chinese have never held to the reverence for old buildings as they have so tenaciously to that of age in the individual.⁸

NOTES

1. Else Glahn, "Unfolding the Chinese Standards: Research on the Yingzao fashi," Chinese Traditional Architecture, (New York: China Institute of America, 1984). From the Aarhus University of Denmark; Glahn is considered Europe's leading specialist on this topic. I am indebted to this reference for the background material on early twentieth century and ancient historiography.
2. Richard Harris, "Chinese Architecture: A Historical Sketch," Architectural Review, CII, July 1947.
3. Liang Ssu-ch'eng, A Pictorial History of Chinese Architecture, Ed. Wilma Fairbank, (Cambridge, Mass.: MIT Press, 1984), p.21.
4. Else Glahn, (pp. 55-56), provides further reference that must here be noted. Chen Mingda, who had assisted Liang Ssu - ch'eng, Liu Dunzhen, and Lin Hui-yin in the 1933 measurement of three temple compounds in Shanxi Province; went on to do more significant research on the Ying-tsao fa-shih. This began with the 1962 measuring and photographing of the timber pagoda at Yingxian, Shanxi; published as a book in 1966, but never distributed. Recent research again on the ancient manual, by Chen, was published in Beijing in 1981: Yingzao fashi damu zuo yan jui, solving some of the lingering riddles of the Sung standards.
5. Gin-Djih Su, Chinese Architecture: Past and Contemporary, (Hong Kong: The Sin Poh Amalgamated, 1964), p.248.
6. Wu Liangyong, "A Pictorial History of Chinese Architecture by Professor Liang Ssu-ch'eng," (Eng. Abs.), Jianzhu Xuebao, No.12, (1985).
7. Gong Deshun et al, "Periods in Architecture of New China 1949-84," (Eng. Abs.), Jianzhu Xuebao, No.10, (1985).
8. Harris, Ibid.

TWENTIETH CENTURY
CHINESE ARCHITECTURE :
Examples and Their Significance
in a Modern Tradition

by

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Volume II of II

PART TWO

EXAMPLES and Their SIGNIFICANCE
in a
MODERN TRADITION

Chinoiserie on the Mainland

European eclecticism

Western transplant

Chinese design - Western style:
"foreignization"

Western design - Chinese style:
"western building, chinese hat"

Chinese Renaissance:
national style
palace style

Big roof

Classic Revivalism

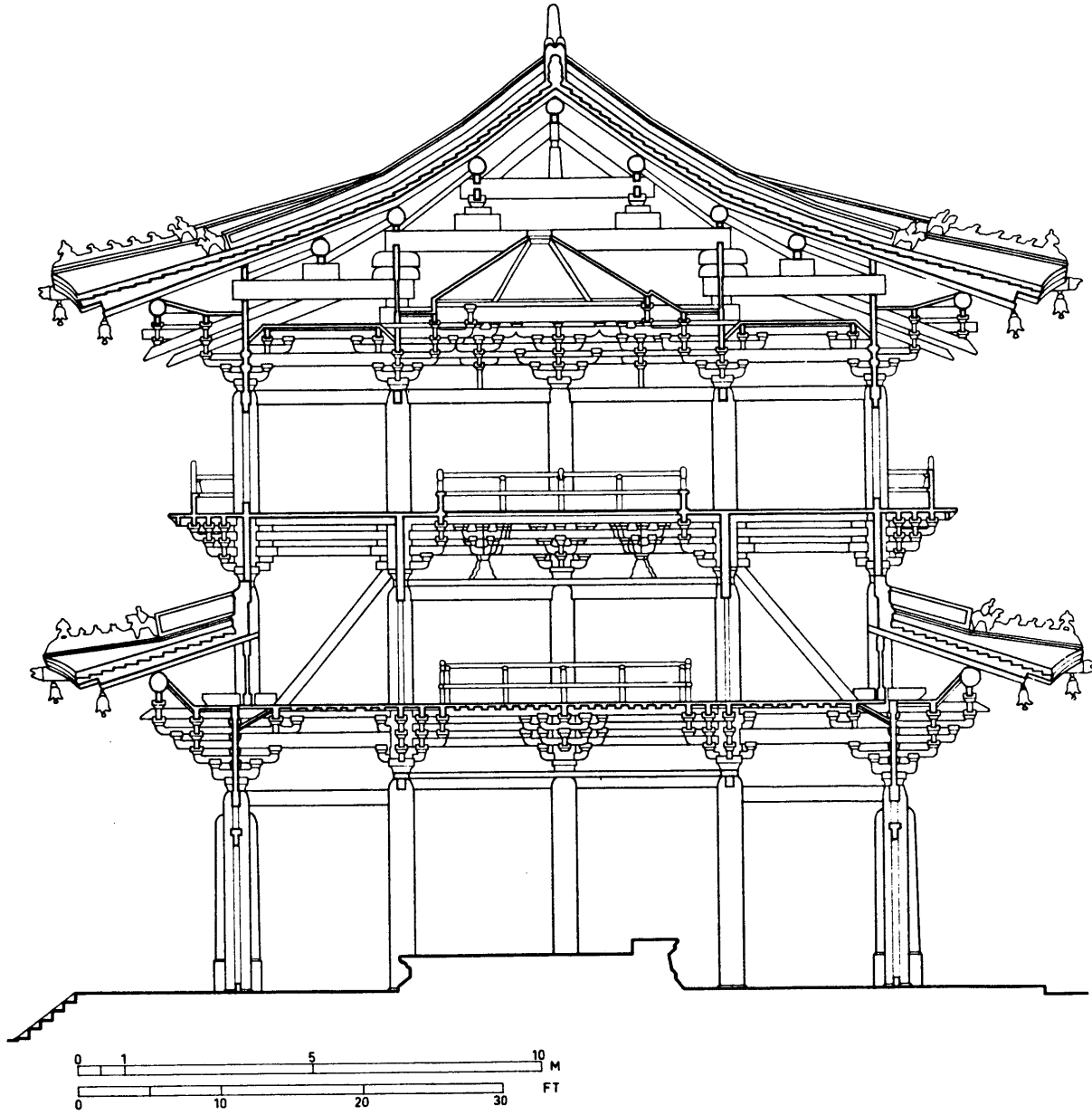
Sino - Soviet

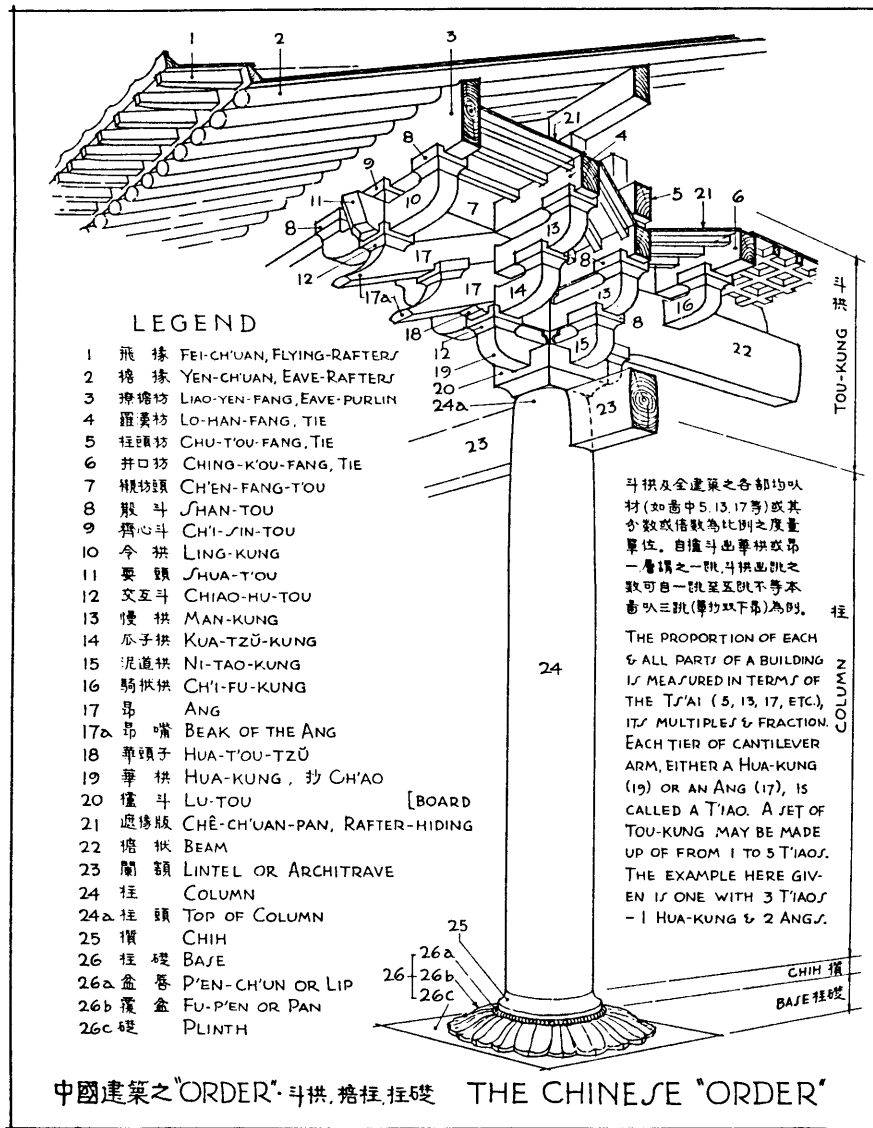
"vernacular"

three-in-one, on-the-spot

modern

traditional





The Chinese "order" (the most frequently reprinted of Liang's drawings)

I N T R O D U C T I O N

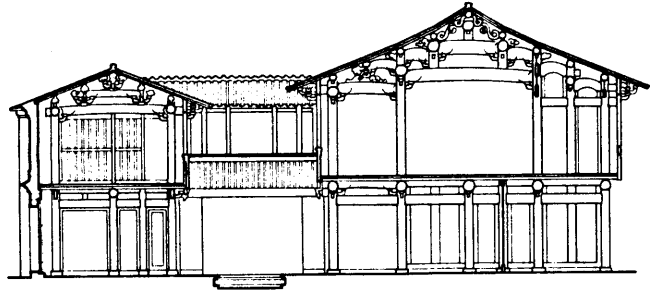
The Chinese building is a highly "organic" structure. It is an indigenous growth that was conceived and born in the remote prehistoric past, reached its "adolescence" in the Han dynasty (around the beginning of the Christian era), matured into full glory and vigor in the T'ang dynasty (seventh and eighth centuries), mellowed into grace and elegance in the Sung dynasty (eleventh and twelfth centuries), then started to show signs of old age, feebleness, and rigidity, from the beginning of the Ming dynasty (fifteenth century)... throughout the thirty centuries ... the structure has retained its organic qualities. ... Thus the study of the Chinese building is primarily a study of anatomy. For this reason the section drawings are much more important than the elevations.

-Liang Ssu-ch'eng
A Pictorial History of Chinese Architecture
(MIT Press 1984) Preface, p.3.

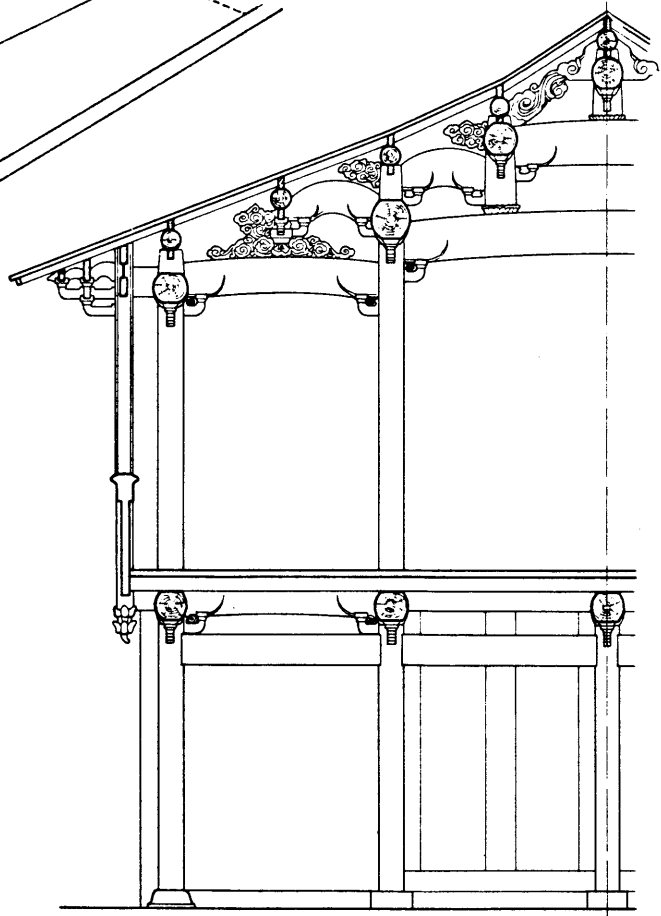
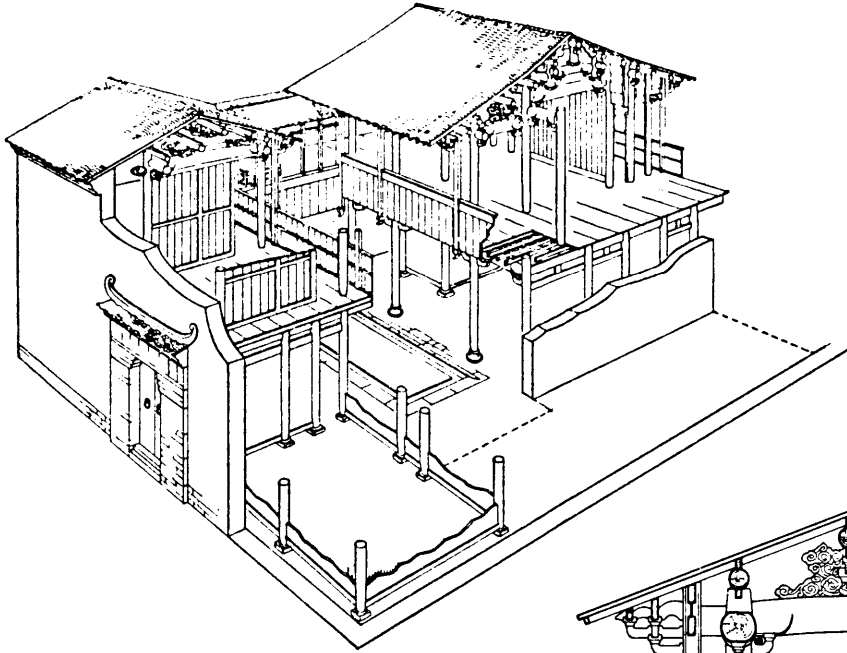
The chief irony of twentieth century Chinese architectural design (as an urban phenomenon), is the general failure of the building's role as an intermediary between the indoors and the outdoors. This flexibility had once been upheld by the instrumental design of section, which in turn yielded the characteristic non-bearing walls, and of greater import, horizontal decentralization; to Chinese traditional design.

Although the heritage of structural integrity was made explicit through the reading of section, the reading of elevation was largely made to substitute for the use of these perceptible attributes. The outcome of this is encapsulated by the old sardonic saying: "Beauty's only skin deep." Through the use of new construction methods to duplicate what was believed to be traditional 'form,' the approach of building from the outside-- in, was from the start, not to be a 'match made in heaven.'

Moreover, a word on the treatment of plan is necessary with regard to this primary emphasis on section. The transla-



Wu Hsi-chih's house, Anhui



tion of the renowned Chinese ability for spatial planning to an a priori capacity for the design of building plans, has been intercepted during this century. The introduction of Western building design was to bring its own rich heritage, largely centered upon building type, (in relation to program, and thereby to building plan; of the Latin tradition). A disparity in design approaches which began with the building itself, was further compounded with its relation thereof, to city form. Needless to say, each 'means and ends' of planning are unique to their respective cultures. An acknowledgement of this is here well articulated by Professor Liang Ssu-ch'eng, as attested to by the charting of Chinese architectural history through her two eminent building manuals:

Neither book mentions ground plans. The Ying-tsaο fa-shih contains a few plans, but they show columniation, not the internal division of spaces. Unlike European buildings, the Chinese building, ... is rarely planned by subdividing the individual unit. Since it may be subdivided so easily by means of wooden partitions or screens between any two columns, the problem of internal planning hardly exists. Planning, instead, concerns the external grouping of individual units. -(Liang, p.21)

This distinction suggests yet another underlying divergence in the lineage of architectural design traditions: the predominance of section versus the predominance of plan; and one can easily see how a blending of the two could lead to a conflict of interests.

The misunderstanding of principles as delineated by the building section has thereby led to an increased separation of indoors and outdoors which began with the mis-perceived object, thereafter leading to a familiar predicament: the modern Chinese building's virtual divorce from the environment. This began with the 'national style' of the 1920s and was to continue through to the 1970s when a new kind of invasion marked this misalignment: courtyards of palaces, temples, and housing began to fill in while high-rise

balconies tried to push their building skins out. Underscaled and overscaled since the 1950s, the ancient microcosm caved in, while urban renewal typically carved out large, barren areas, waiting to be filled; (as is epitomized by Peking).

The integration of solid and void which once gave Chinese architectural design its most distinctive qualities, transposed to the level of city form, has thus been replaced with an ever-increasing compacting of an already minute scale, juxtaposed with a vast showcase displaying an array of awkward objects; not knowing how to relate to one another, let alone what they have to do with the people who use them. (If this virtual game of chess on a board of Chinese checkers is but modern existentialism making an inevitable substitution for so-called ancient harmony, then somebody please find me a time machine.)

In all fairness, however, alot has happened in a very short time in the People's Republic. The chasm between Western architecture, which was itself undergoing a revolutionary transformation; and Chinese architecture, which when compared to the pace at which the nation was transforming was standing 'relatively' still; is abysmal at best. Moreover, the only recent encounter with the 'art of architecture' was also to become diluted in a solution of perceptible terms, along with structural integrity. This ocured both on behalf of the Chinese architect, whose other recent introductions include 'history' and the profession itself; and on behalf of the Western architect, who to this day continues to try to give the Chinese what he 'thinks' they want. The reduction of that which was produced in architecture during a century of transition, to a series of flash-card styles, sums up the situation quite well. Buildings were by and large, either 'Chinese looking' or 'foreign looking;' and this, was perhaps inevitable.

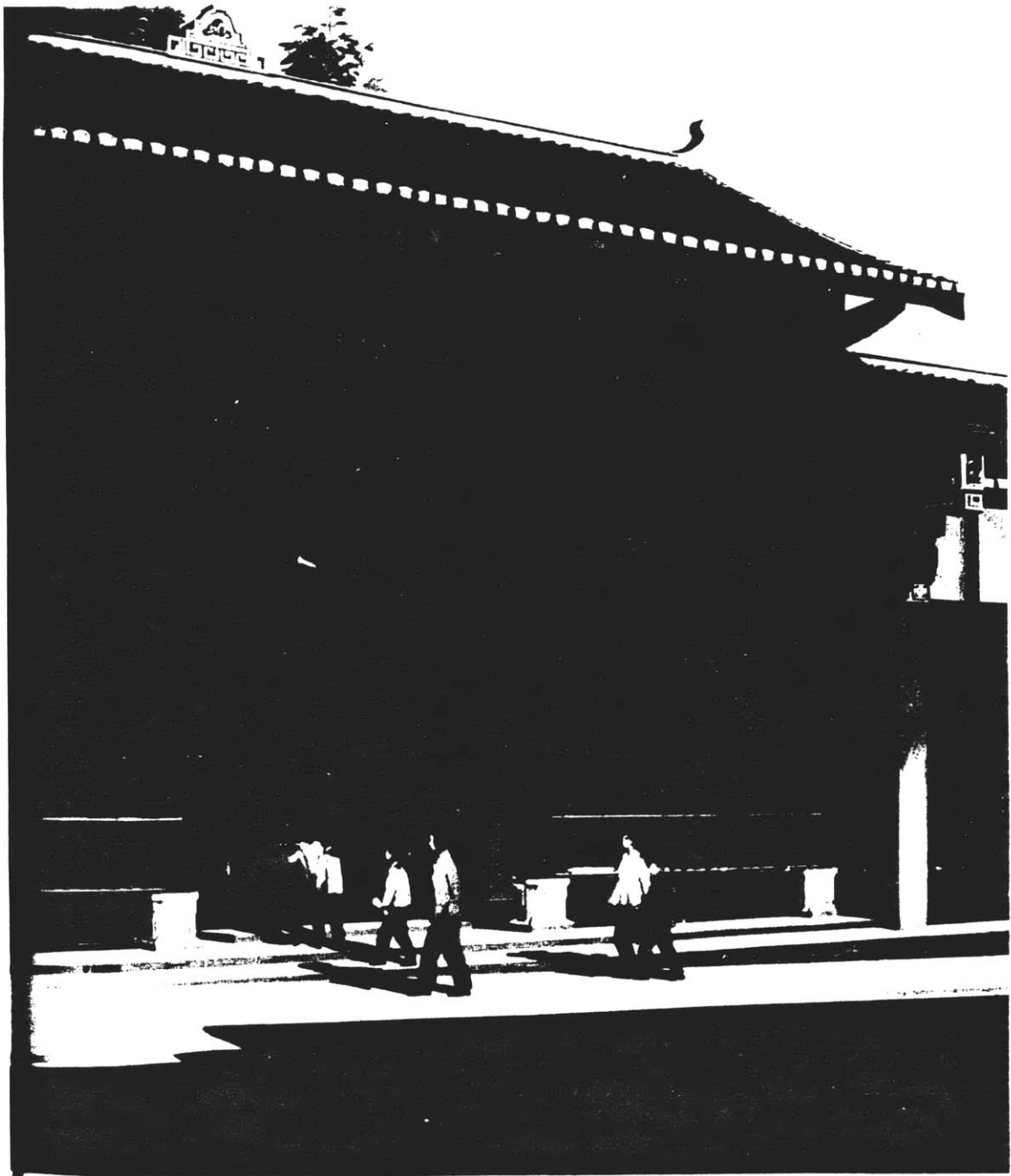
Attempts to elevate this status were undertaken using

the guise of `scientific,' emphasizing Chinese technique (at times rural inspired, at times more formally derived), or foreign technique (Soviet or Western; and in the 1800s, European); and to open an even bigger can of worms, `function' showed its face at around the same time that `art' was being ushered out. An `over-rational' bias toward technique in architecture, however, runs into the same problem everywhere-- a general absence of substance-- (where's the beef? ... and the same could be said of an inversed bias).

The pendulum of `architecture as an art' and `architecture as a science' thus began to swing, and for a civilization which has had a long history of dualisms, this one has been a difficult one for them to grasp. Whereas the equilibrium between architecture and environment (and most specifically with respect to urban planning) has been reinstated as a priority of the 1980s, a chord of balance between `art' and `science' has yet to be struck on the Mainland, although it could well be imminent. With the increased understanding of each of these misleading sources for building from the outside--in, (the former: an eclipsing of the environment through the substitution of elevation for a truer reading of section; the latter: art, which again over-emphasized perceptible terms); one might finally begin to bypass this jaded tendency to focus on the building's `looks.' Needless to say, when one sets out to design a building, one is not thinking first to make art or science. Design starts with a concept; and that is what has been sorely lacking in much of what has been built in this first century of a modern tradition. This has only been further complicated on the one hand, by the encapsulation of the Western building design concept in the term `parti'-- plan, the generator; and on the other hand, by the coinciding of the classical Chinese `parti,' (if such a thing exists), with an emphatically feudal order. Moreover, Chinese quintessential architectural design concepts are manifested in gardens, by literary association,

emphasizing both perception as well as immaterialism. With all of this crossing and recrossing of wires, 'design concept' has yet to be plugged in.

'How did this happen?' remains the most rudimentary of questions. Although one cannot hope to answer this, one can begin to address it. We begin with "Examples."



建筑学报

1977 3

EXAMPLES (1840 - 1949)

It was not the land which the foreigners wished to conquer in the treaty ports, beginning with the 1842 Treaty of Nanking, but the markets; and with this new commerce came the building of a society.

On commença par démolir les pauvres cabanes, combler les canaux, régulariser le cours des rivières, construire des ponts.... Et tout l'appareil nécessaire à l'essor économique rapide et à l'organisation confortable de la vie privée se développa: clubs, bars, champs de course, banques, édifices administratifs, maisons d'affaires, logis, magasins, fabriques.¹

The old Chinese distinction between market town and city (which may be said to have accommodated foreign interests) must here be made. The former: Tseng tse (tse meaning market), referred to an unfortified settlement; whereas the latter: Cheng tse (cheng meaning wall), referred to both market and city, protected by a wall.

Growing to encompass the largest of the foreign settlements, Shanghai became the quintessential market town of foreign influence, upholding the primacy of economy:

Commerce, not diplomacy or evangelism, was modern Shanghai's main business from the start.... Politics were always tempered to avoid conflicts with business. The consuls were only part-time government employees. The local mandarin with the longest tenure in this period [by the 1850s] ... was also a businessman, a Cantonese, who had purchased his literatus rank. Most of the early American consuls were concurrently in charge of ... the largest American firm. Britain was similarly represented. Under these conditions, the government function was indistinguishable from business entrepreneurship. Public power was inevitably used to enhance business enterprise.²

Although the subordination of politics was to become increasingly ambiguous, the instituting of an economic and social structure provided a slow but steady initial growth within the city:

By 1847, the first parish hospital was established. In the next year, Holy Trinity Church was founded for resident Anglicans, as were an Anglo-Chinese school, a foreign hotel, five Western shops, a recreation ground, a public green, a foreign cemetery, and a formal men's club.³

[Furthermore,] Many of the first roads and parks in Shanghai were financed by private money.⁴

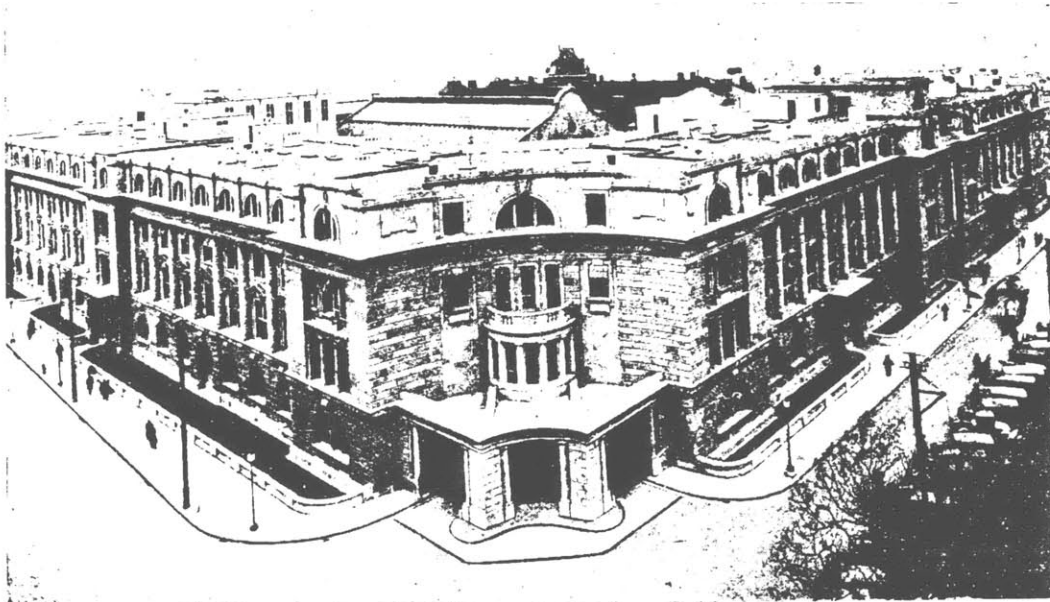
One must here emphasize that this was not a white slate being painted on. Shanghai's economy was to be dramatically impacted by the superimposition of foreign interests:

Smuggling, the opium trade, and war indemnities led to large outflows of silver from the country. This caused a rise in the price of silver. Because rents in the Wu region had been monetized in silver before the foreigners arrived, the net effect was a rise in the real rent that tenant farmers paid. Resulting peasant unrest reduced the security of inland transport routes and in turn caused an influx of refugees to Shanghai.⁵

And in turn, foreign interests increasingly had to find a way of maintaining its own equilibrium, once the Chinese began to engage in the relay:

Modern municipal institutions in Shanghai may have grown only semi-publicly, but they grew very quickly. By 1850, the first local newspaper, the North China Herald appeared regularly. Foreign monetary institutions were established to circumvent the need to deal with native banks. To finance the early years ... "traders had to manage with the native banks and compradores, to the latter's great advantage." Thus in 1850, the Oriental Banking Corporation was established in Shanghai, followed in 1854 by a Mercantile Bank of India, London, and China.⁶

Meanwhile, in spite of the foreigner's effort to keep his hands clean, the political situation in Shanghai was far from benign. During the 1850s, the Taipings (a mystical Christian peasant organization) had established their government in nearby Nanjing (renaming it Tianjing); while the Small Swords (a federation of ritual clubs, historically opposed to the foreign Manchu Court), seized county seats also near to Shanghai. Small Sword and Taiping Rebellions ensued



S.M.C. ADMINISTRATION BUILDING

through the 1860s. Although the foreigners' policy was to avoid engaging in this local politics, involvement was inevitable, if only due to the flux of refugees to the concessions. This was to lead to the establishment of a Mixed Court for criminal and civil jurisdiction over Chinese inhabitants in the Shanghai settlement, by 1864.⁷

The persistence of "non-governmentalism" in Shanghai is a long story, which goes beyond the scope of this thesis. The point of this briefly painted background is, however, that the evolution from superimposition, to juxtaposition, and later to a virtually ubiquitous position of the foreigners in relation to the Chinese, centered around the sustenance of economy over governmentality; (hence, the nomenclature: "semi-colony," as opposed to colony). This provides the setting for the advent of foreign architecture, illuminated by the priorities of the time.

Merchants were the designers of the earliest foreign buildings, modified by Chinese builders to fit local materials and techniques. These were simple two to three acre compounds,

consisting of warehouses and residences. A more generic version, which was derived from these most basic beginnings, was known as the 'compradoric style' compound. The main building of these complexes was distinctive for its open verandas with wide arches running along the bottom two of a 4-5 storey tall structure, with an overhanging roof to cover the upper ones. Made of native brick covered with white plaster, the thick walled (minimum three foot) construction was specifically designed to combat the heat and humidity. Offices, bedrooms, and a mess hall were housed therein. To the rear of the compounds were the compradore's residences and offices, dwellings for Chinese assistants, warehouses, and the stables. This building style was common to central and south Chinese treaty ports in the nineteenth century; and in Shanghai, the compounds were typically located on the river side of the concessions.⁸

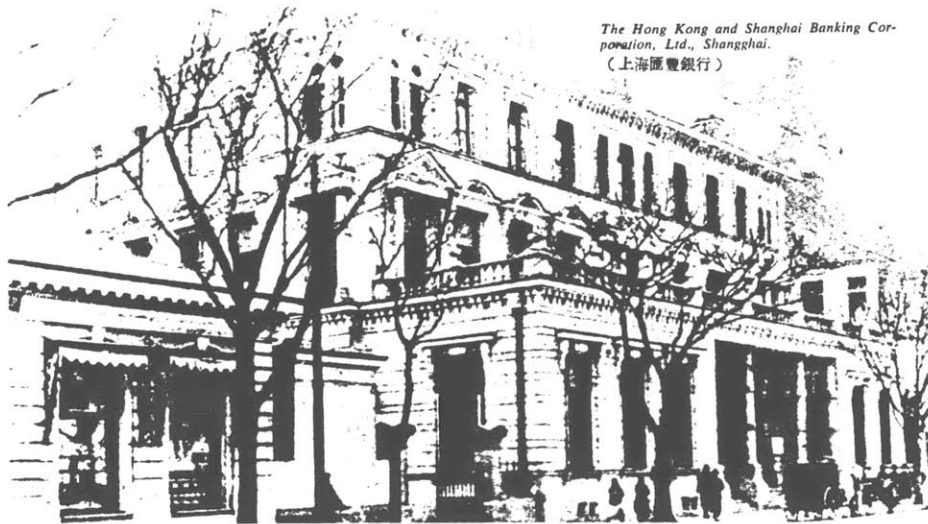
As wealth increased, so too did the use of imported materials for finishing. The earlier white-plastered finishing and simple building forms had blended in well enough with the indigenous architecture of the south. The use of granite and marble, however, initiated another era.

This was the semi-colonial era. Widespread building began in the 1870s and 80s, and continued steadily thereafter. Foreigner's communities

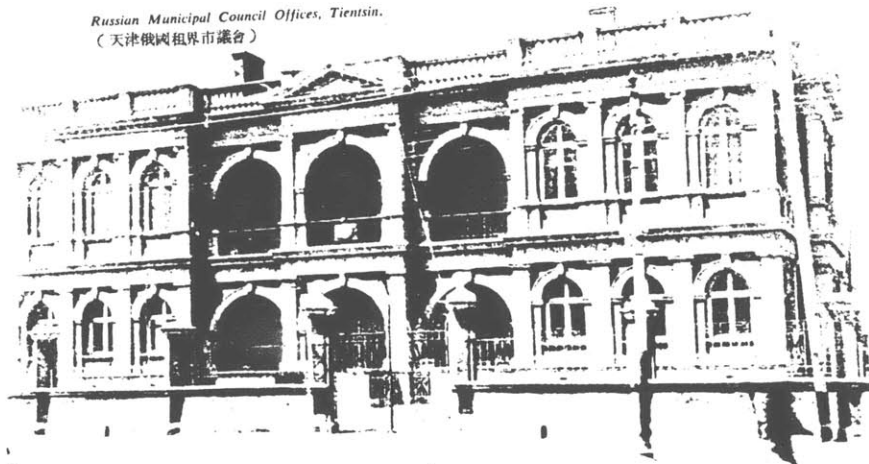
SEEING SHANGHAI



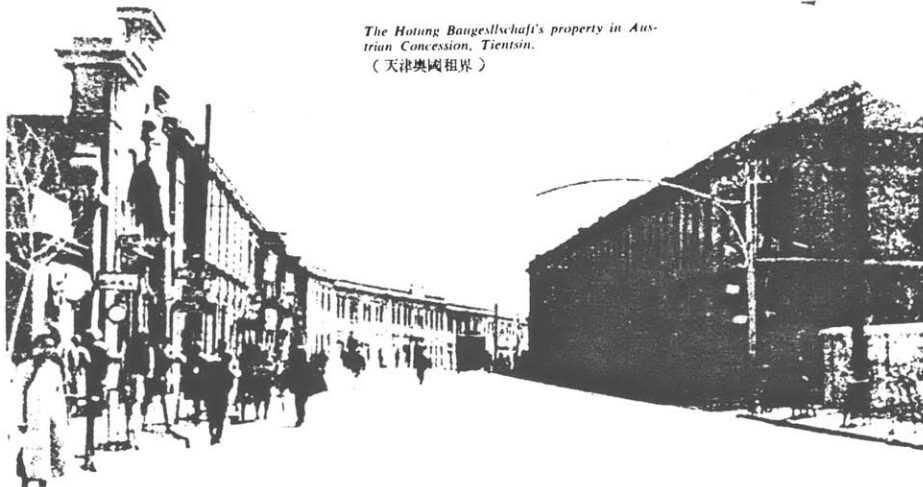
Head Post Office



The Hong Kong and Shanghai Banking Corporation, Ltd., Shanghai.
(上海匯豐銀行)



Russian Municipal Council Offices, Tientsin.
(天津俄國租界市議會)

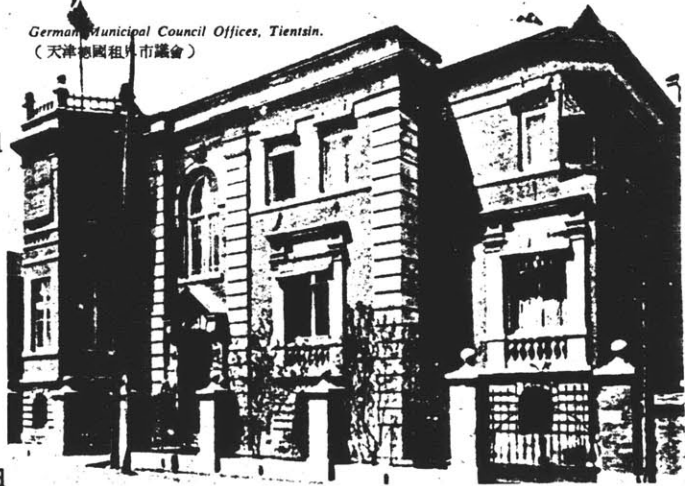


The Hutung Baugesellschaft's property in Austrian Concession, Tientsin.
(天津奧國租界)

developed as 'spheres-of-influence' were established. Tsingdao was known for its German-styled buildings, whereas Port Arthur and Dairen were predominantly Russian-styled. Weihaiwei, Canton, and Chefoo were all quite British; and Tientsin to the north was characterized by a threefold Russian, British, and Japanese influence. Shanghai, although heavily spiced by the British and French hand, was renowned for its international flavor.

Foreign architects' practices were established at the end of the century. Thus, the introduction of the Western architect's 'individualist' work ironically, first took the form of nineteenth century eclecticism. By the beginning of the twentieth century, however, nothing much was said to remain of the Gothic revival and delicate ironwork of the earlier surge. It was instead, replaced by 'Capitalist Baroque.'

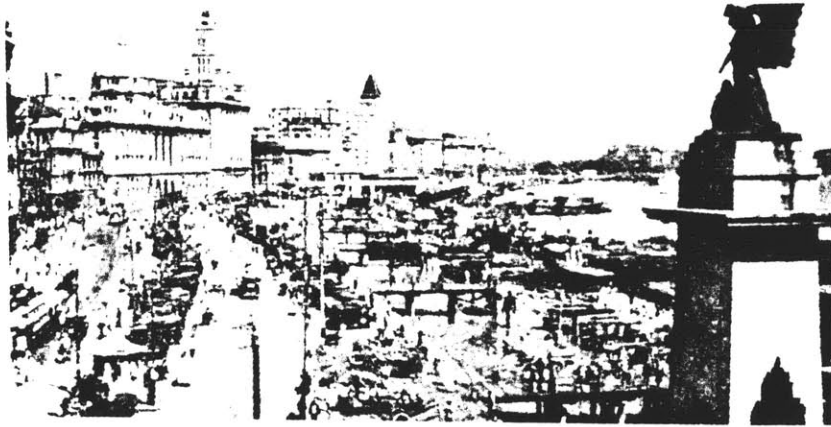
German Municipal Council Offices, Tientsin.
(天津德租界市議會)



Gordon Hall, Tientsin.
(天津英界戈登堂)



Hongkong & Shanghai Bank and Custom House



The Bund, Shanghai



Aerial View of Race Course and Public Recreation Ground and Surroundings (Photo by C. de Soria, courtesy of N.C.D.N.)



VIEW OF THE BUND, ABOUT 1889

Des banques couronnées de coupoles, des magasins aux tours illuminées, de hauts buildings surgissent à côté des cabanes chinoises délabrées.... Les spectateurs achètent des terrains et font construire en tout hâte des rangées de maisons d'habitations à bon marché le long des artères principales. Après dix ans on les démolit et on en bâtit d'autres. Qu'on quitte la ville, et qu'on y revienne après six mois, on a de la peine à en reconnaître certaines parties, tant elles ont été démolis et reconstruites.⁹

With the end of the dynastic rule in 1911, the early years of the Republic were filled with a spirit to start anew. Change was welcome, and the archaic was to be discarded. It was par for the course for the young nation to look to the West. The popular term of the day was 'foreignization,' at that time an equivalent for 'modernization.'

Architecture as an art, not as a trade, came to China at that moment, and as a part of foreignization. This explains the paradoxical fact that the beginning of an interest in architecture in China coincides with a complete eclipse of [her own] creative architecture.¹⁰

This advent coincided with the years of the first World War (1914-1918), a time in which the Chinese bourgeoisie made strong economic gains in native industries while the foreign powers were absorbed in the war.¹¹ Although the Warlord years were ill-suited for consistent development of any kind, their stronghold was largely in the countryside; and cities grew in spite of the political shifts of the era. Thus, to the aspirations of the foreigners in China, were soon to be added the conceptions of modern architecture from the burgeoning modern Chinese, to 'complete the chaos.'

On the 'other side of the grass' however, the zeal for change was already beginning to be checked. Missionary churches and colleges were the first Chinese-styled buildings to be constructed with reinforced concrete and other modern materials. The movement was American inspired, an added twist to the fate that had already been turning. Chinese details were introduced to provide an indigenous sense of color. The

structural integrity which had already begun to diminish (along with the shrunken size of the dou gong) was to be totally undermined by these new interpretations; here cited as contingent upon the industrialization of architecture:

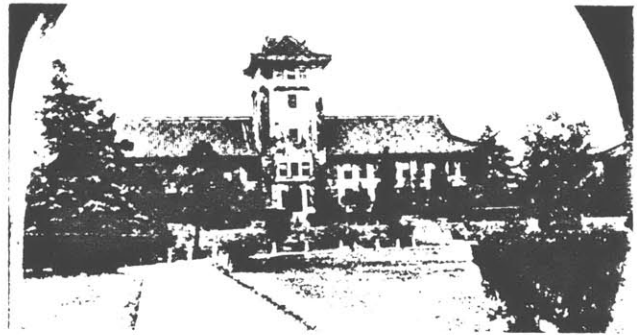
The new national style merely accommodated stereotyped Western structure by grafting on Chinese design elements for outward effect. It was an Eastern equivalent of sham Gothic, fake Georgian, or any of the many bastard derivations that have passed for architecture since the Industrial Revolution in the West.¹²

Professor Liang Ssu-ch'eng's response was to declare these buildings nothing but "foreign buildings with curved roofs put on;"¹³ a sentiment echoed by Su Gin-djih:

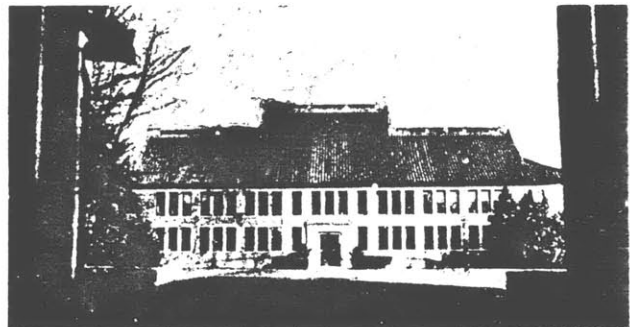
Since their knowledge of the Chinese treatise and proportion of unit module to elements of construction, and the method of obtaining the proper curvature of the roof was pitifully lacking, the result was a western building wearing a Chinese roof as a hat; ...¹⁴

Early examples include the missionary-run Nanking University, St. John's in Shanghai, and Peking Union Medical College. Later, more ambitious versions appeared during the 1920s in Peking's Yenching University, and Ginling Women's College at Nanking, (both designed by Henry Murphy), flaunting increased ornamentation on pillars and frieze.

Among American architects who advocated this national style were



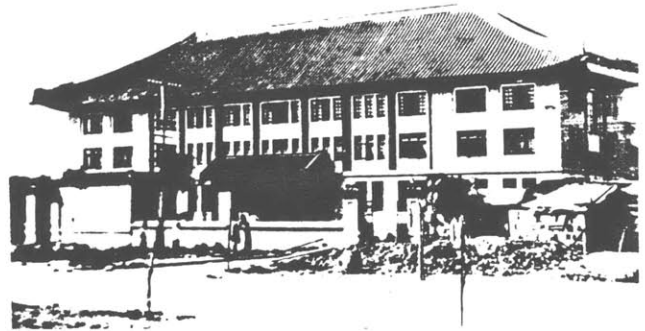
Chin Ling College and Chin Ling College of Arts and Science for Girls, Nanking, designed by Henry Murphy (南京金陵大學及金陵女子大學)



Murphy, Danno, Coolidge, Shattuch, and Shephy. From this rudimentary beginning, young Chinese architects who had learned the principles of Chinese architecture initially from studying abroad (as developed by Americans), further evolved its applications; notably: Kwan Sung-sing, Chu Ping, and Yang Ting-pao (of Kwan, Chu and Yang); Robert Fan and Shen Chao; and Lu Yen-chih (of Lu, P.G. Lee, and Y.C. Lee). The 'palace style' was soon to overtake 'foreignization' as a popular mode.



Public Library at Wuchang



the Over-Seas Chinese Hostel, Nanking, designed by Robert Fan (南京華僑招待所設計者范文熙)

The 'Chinese Renaissance' in architecture made its official debut in Peking, in 1925:

... in the regulations governing the competition for a new National Library it was stipulated that the style to be adopted was to be that of a Chinese palace.

.....
 The Library, though designed by an American architect, shows a more sympathetic understanding of Chinese architecture and is undoubtedly a notable example of recent trends.¹⁵

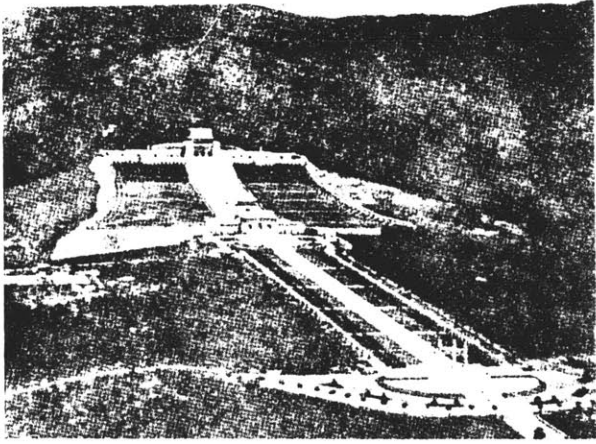
Moreover, the initial resurgence of an authorized 'national style' has been attributed to the republishing of the Ying-tsaο fa-shih;

In 1925 it was reproduced by photo-lithography, after an unsuccessful attempt had been made a few years before. The reprint appeared at the time of the building of the Peiping National Library which heralded the coming of the "Chinese Renaissance." No doubt this reproduction of an ancient treatise did much to stimulate the growing interest in architecture.¹⁶

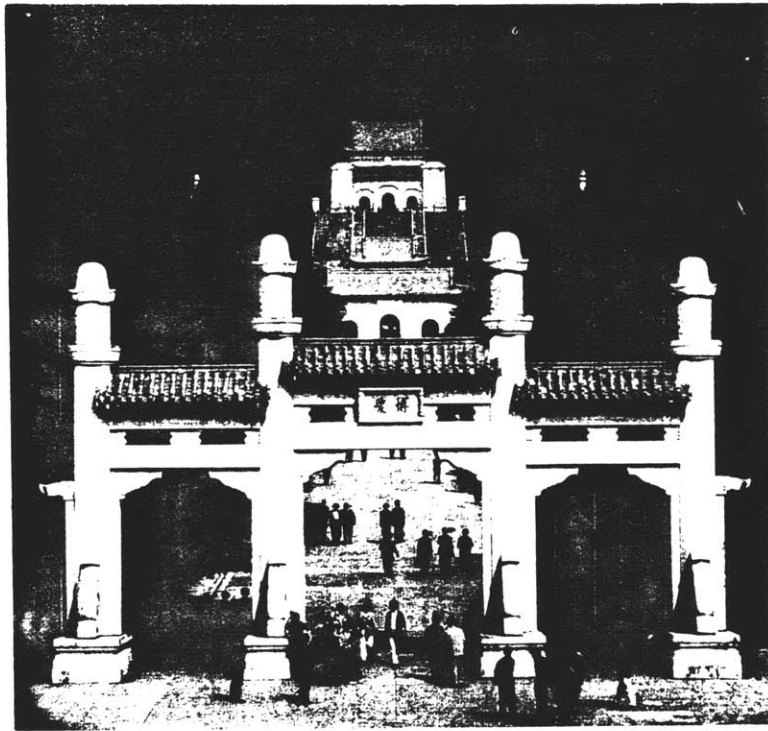
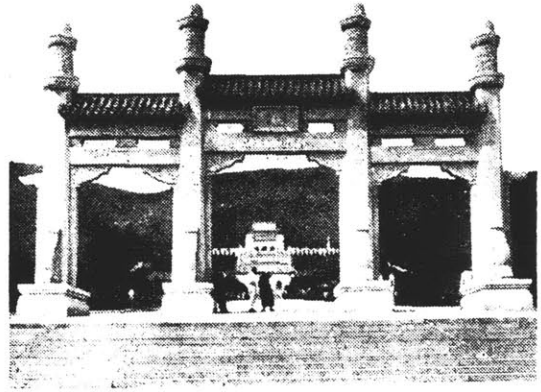


The National Library, Peking

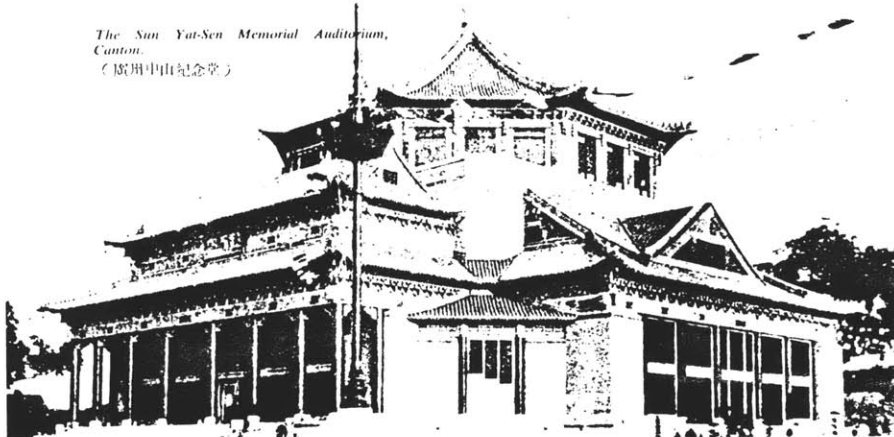
In 1927, a national competition was held for the memorial tomb of Dr. Sun Yat-sen, subsequent to the Kuomintang victory. (Sun had died in March 1925, leaving the Nationalist campaign to his successor, Chiang Kai-shek.) The memorial was to be located in the Purple Mountains of Nanjing, which is also the site of the renowned Tomb of Ming Tai Tsu. The competition was won by Lu Yen-chih, who did his undergraduate work at Tsinghua University, and went on to study at Cornell (graduated 1924) with the leading American exponent of 'modern Chinese' architecture at the time; (who was later to become an advisor to the Nationalist government).¹⁷ Lu died in 1929 before the work was completed, at 32 years of age. Poy G. Lee (in partnership with Lu) took over the work, and also later completed Lu's auditorium design for another Sun memorial in Canton, (whose construction began in 1931).



Dr. Sun Yat-sen's Mausoleum, Nanking



*The Sun Yat-sen Memorial Auditorium,
Canton.*
(廣州中山紀念堂)



Lee was born in New York in 1900, his parents of Cantonese origin. He studied at M.I.T. and Columbia, and was a registered architect in New York State. Lee had been sent to China in 1923 by the Y.M.C.A. building bureau, and thereafter designed a number of hostels, churches, schools, and quarantine stations, in several Chinese cities. Cited as a product of the teachers in America who were heirs of a tradition that expressed period detail at the expense of creative form;¹⁸ Lee's design was indeed indicative of a lingering eclecticism into the early decades of the twentieth century. This upholding of detail over form is (ironically) evidenced by an observation made by Professor Wang Tan of Tsinghua University, pointing out that in the mausoleum design, the cantilever brackets are off-center from the columns; accordingly labelling the style: "Chinese Rococco."¹⁹

Liang Ssu-ch'eng's criticism of the memorial was a bit more subtle, but to the point; "With all due respect for the late Mr. Li's great industry and imagination, his design still shows some lack of understanding of Chinese architectural principles."²⁰ The inevitable comparison with the nearby Ming Tomb, however, provides the most suitable criticism of the Sun Mausoleum design. The former is characterized by quiet dignity;

... approached by a large broad avenue paved with flagstones and flanked on either side by the statues of armored warriors and ministers in full court dress. At the top of the avenue is a group of buildings laid out according to the requirements of ceremonies. The tomb is erected at the bottom of the hill in the form of a mount over which pine trees grow in great profusion. While this Ming Tomb is hidden away among the trees in the Purple Mountains, Dr. Sun's Mausoleum stands out boldly, trying to dominate the whole of the scenery.

... the vast flight of steps and the formal planting of the trees ... surely ... derive from occidental classical monumentality and are wholly alien to our traditional conception.²¹

To reiterate this last point, even in the most renowned

axis in China, in Beijing; at no interval is the procession treated as a blasted alley, revealing all, from start to finish. Finally, a comment made by a British architect in 1950, most aptly names the mausoleum: "that gargantuan piece of vulgarity on the hillside in Nanking."²²

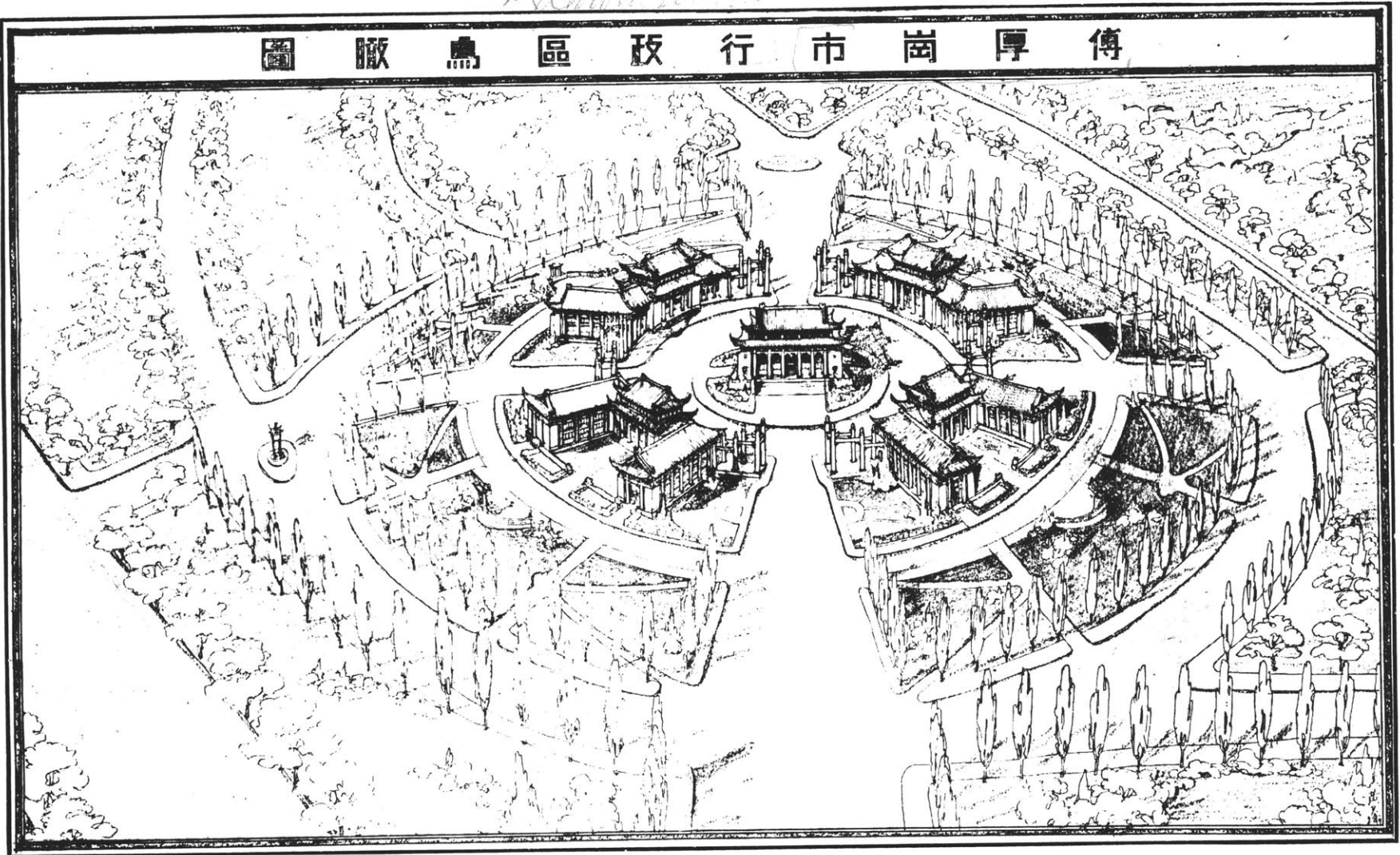
With the reunification of the nation by the Nationalists in 1927, the national spirit had begun to soar, thereupon fully bringing the 'Renaissance' to architecture. The Kuomintang officially moved the capital from Peking (renamed Peiping) to Nanking in 1928, although the Republic had been based in Nanjing since 1911. (Dr. Sun Yat-sen's "Three People's Principles," declaring 'nationalist, democratic, and economic'-- essential rights; had already groomed the city for what was planned to come, in its suggestion of the principle of revival.) All of the foreign powers recognised the new Nationalist government, including the Soviet Union.

With the establishment of the capital in Nanking, a period of intense reconstruction was embarked upon. A Chinese commission was sent on a world tour at that time to select foreign advisors for a vast program. Public offices were to be designed for both the new capital as well as for other provincial city governments. In November of 1928, the Nanking City Planning Bureau was organized, headed by Lin Yi-min, an American trained engineer. Two American advisors guided Lin: Ernest P. Goodrich and H.K. Murphy, (who themselves had two American assistants). In addition, W.Y. Cho held the position of Chinese chief of engineering, while Y.Y. Wang served as principal architect's assistant. Perspectives were prepared by a Chinese architect.

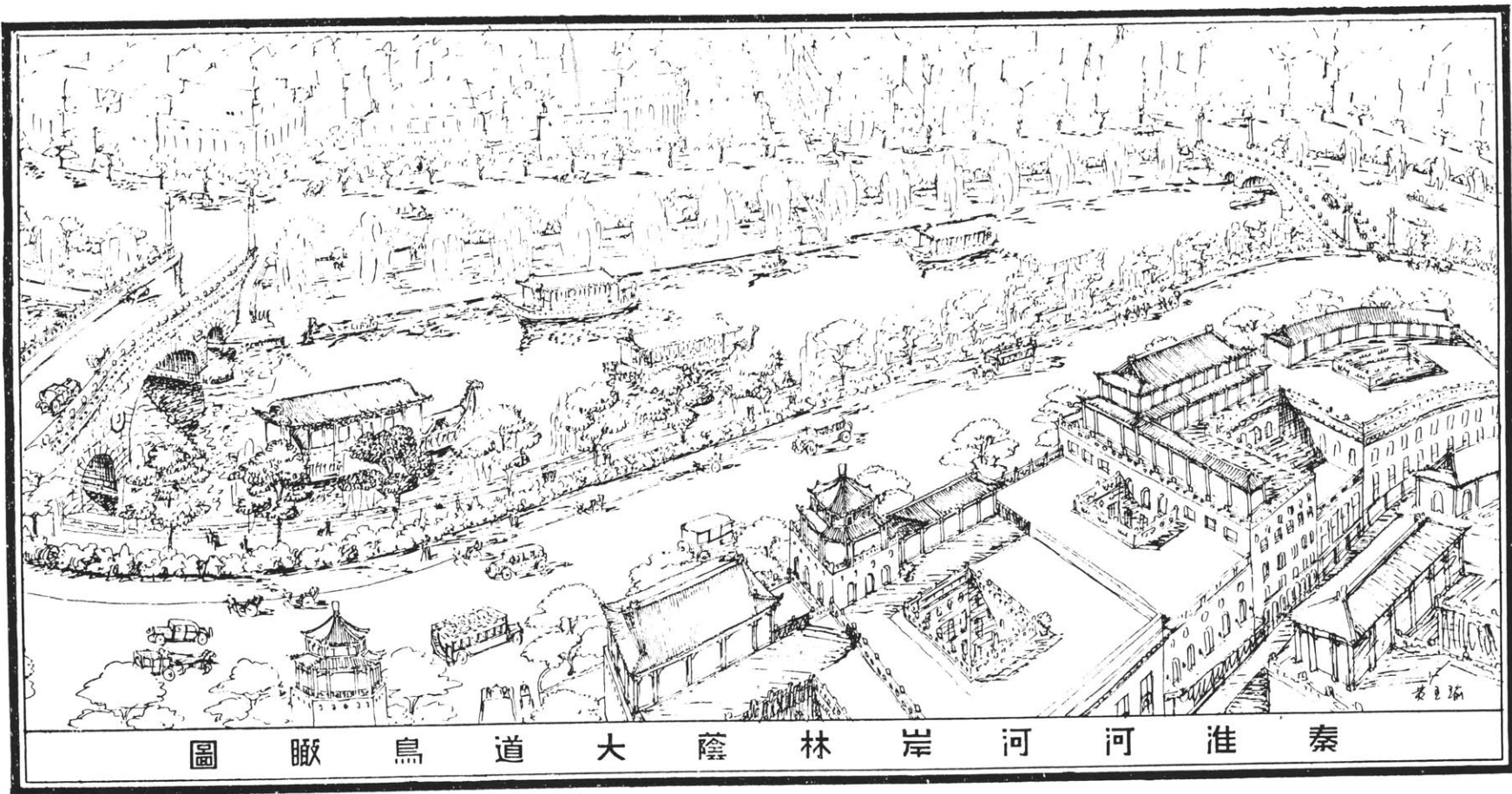
Their task was to direct the building of Chiang Kai-shek's capital in the new "national" style. Two hundred government buildings were envisaged, thirty of them to house government departments, contained within a layout that it was thought would rival the Forbidden City in beauty and exceed it in area. The fact that a

Administrative

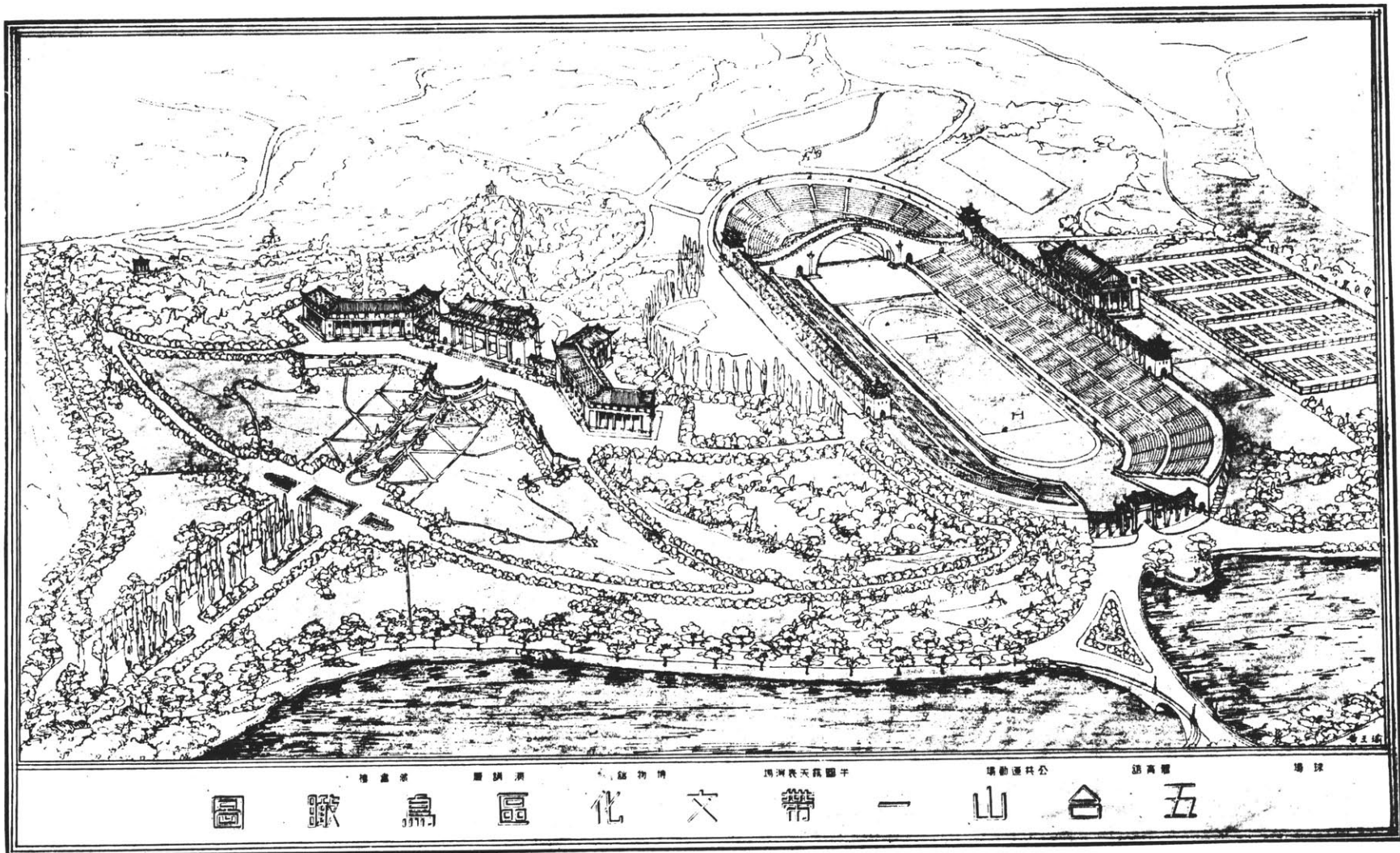
傅厚崗市行政區鳥瞰圖



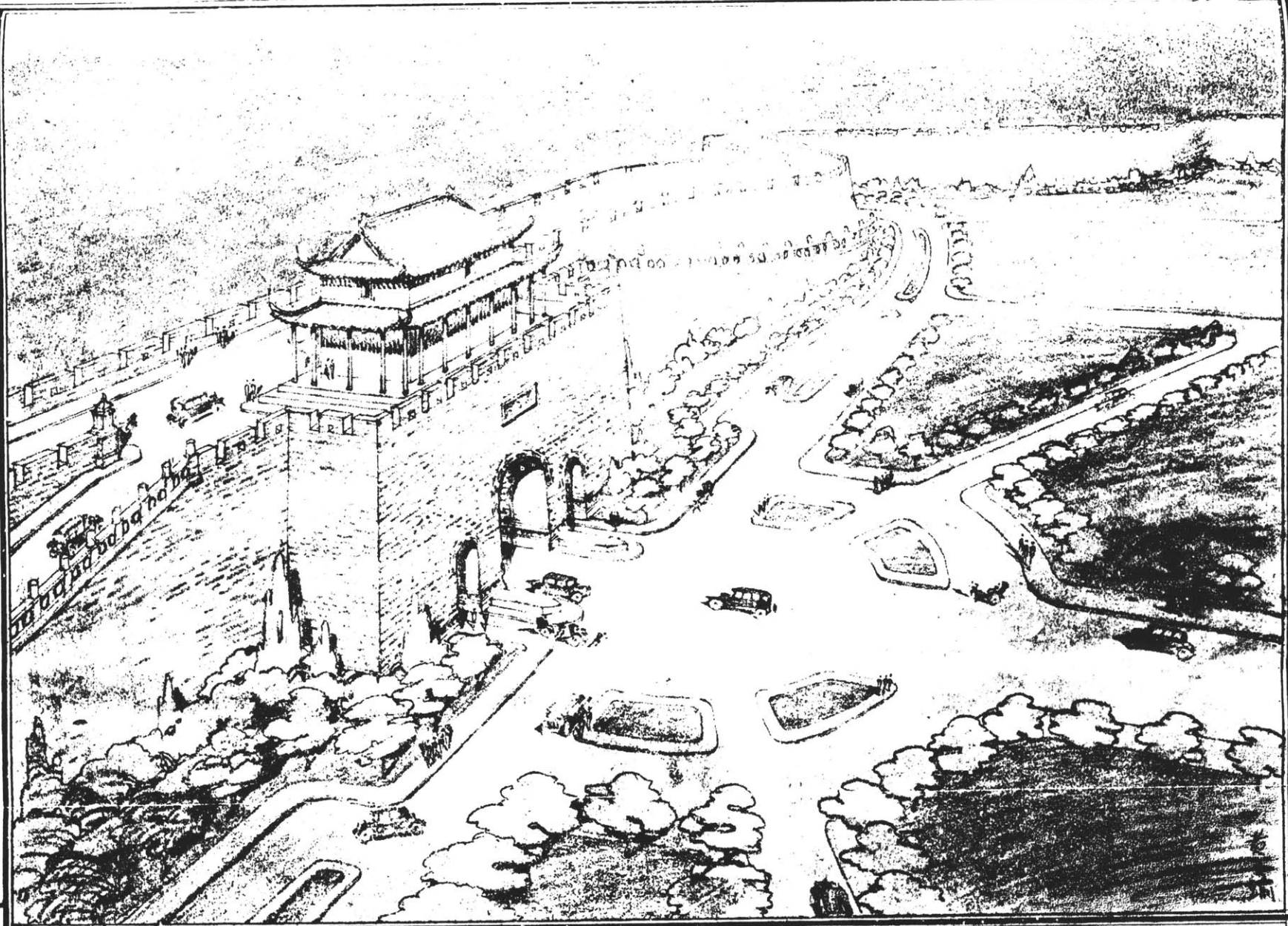
第十八圖



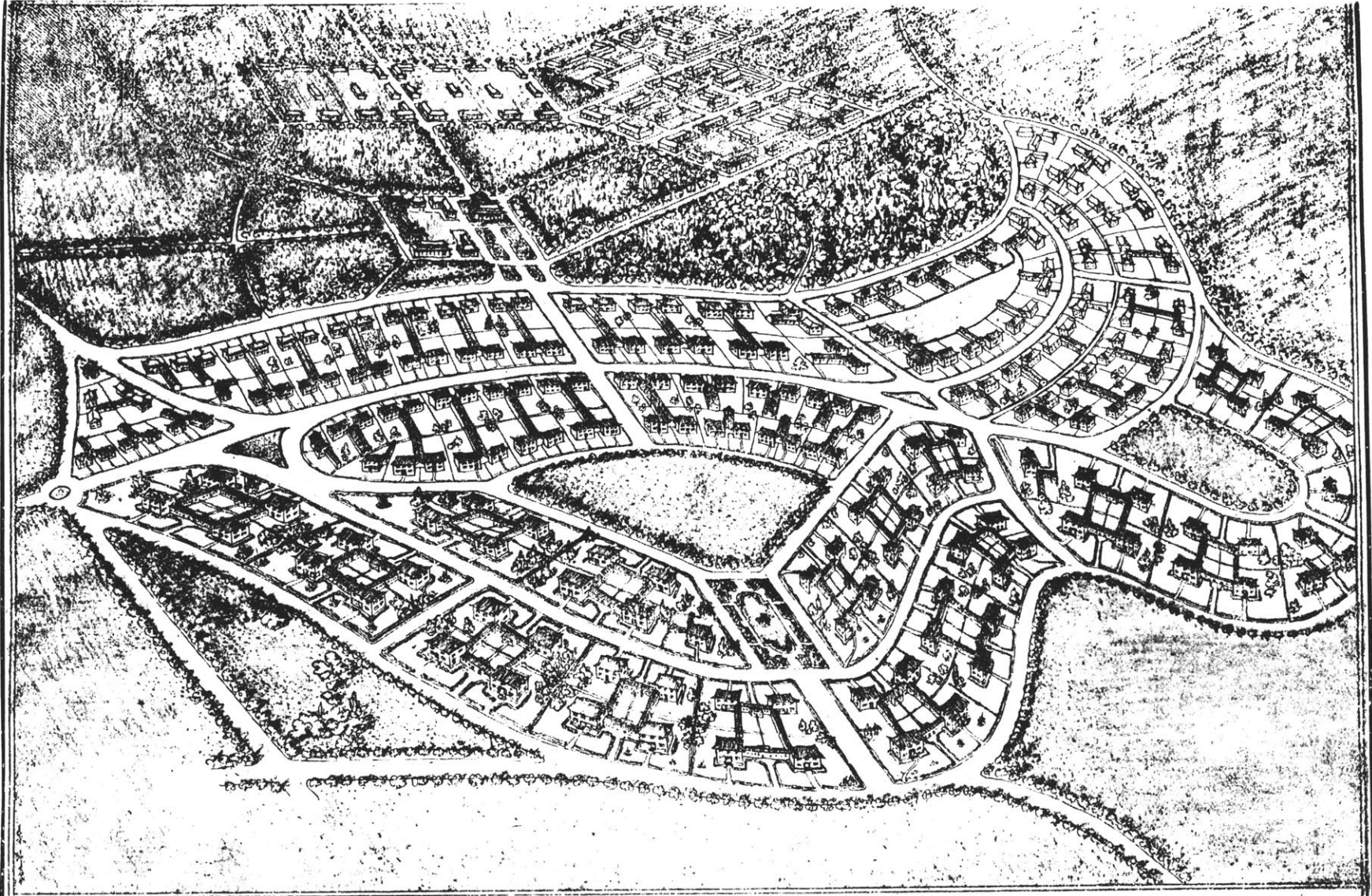
第 三 十 一 圖



第 二 十 圖



圍城林蔭大道及城上大道路鳥瞰圖



政 府 職 工 住 宅 區 草 圖

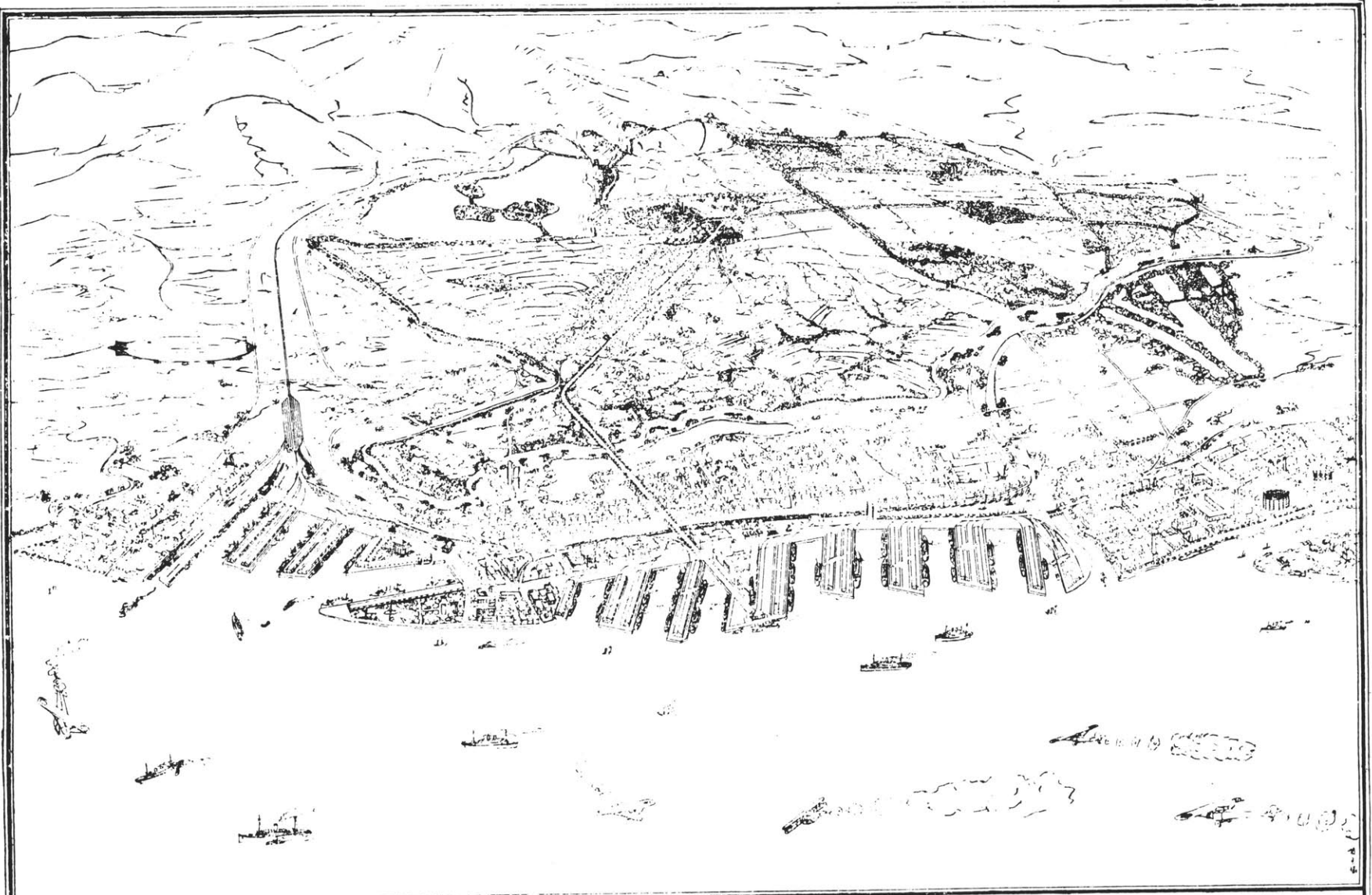
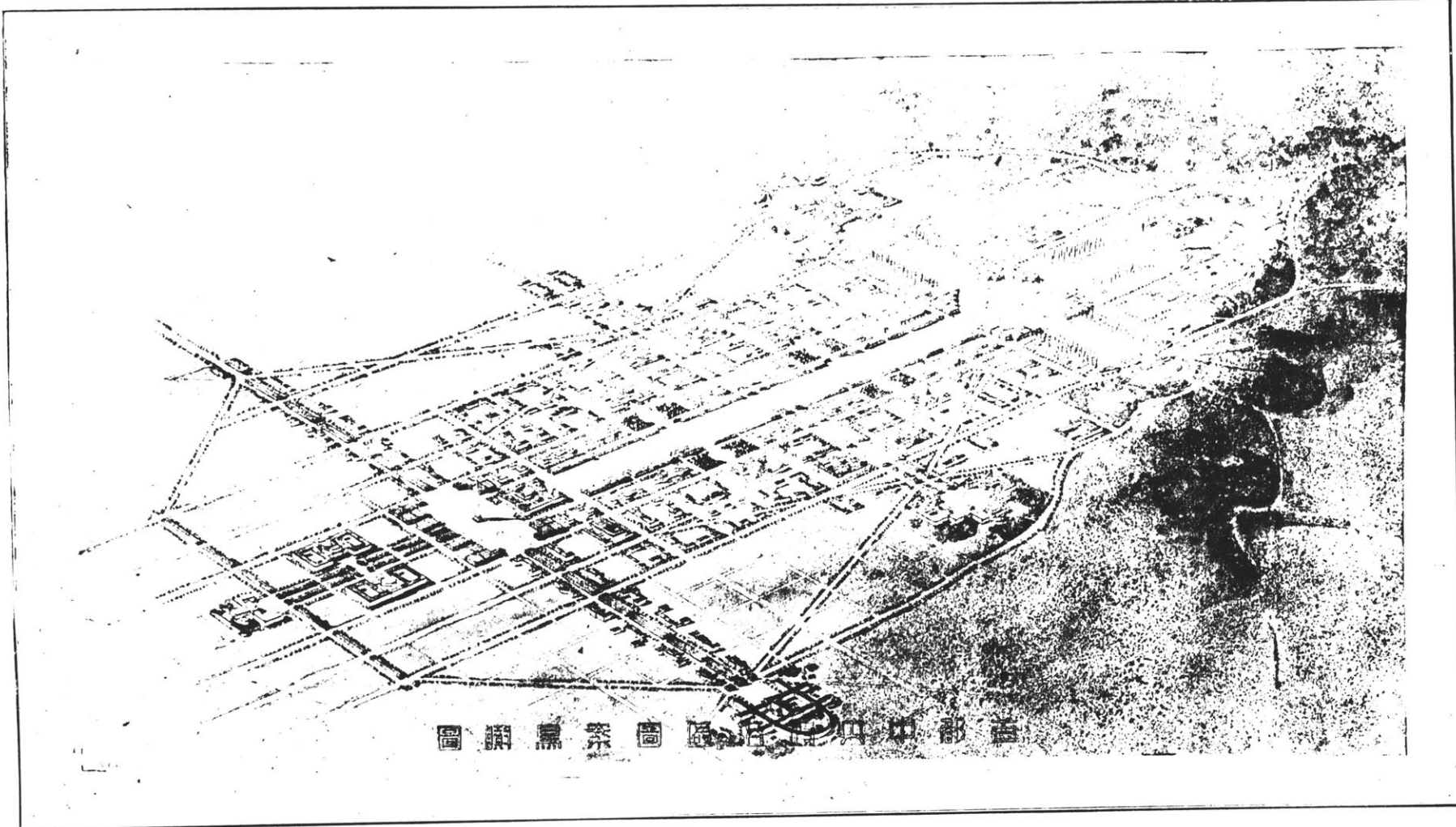


圖 京 南 下 關 碼 頭 貨 倉 及 工 業 區 圖

第 四 十 四 圖



第 十 三 圖

new Chinese capital in the twentieth century was thought of as a rival to the Forbidden City indicates the spirit that inspired the only really large-scale attempt at city planning and design in pre-war China.

[The author goes on to declare:] The new capital of Nanking was destined to become the unfinished monument to the Chinese architectural "Renaissance."^{2 3}

A brief digression to the issue of rivalry raises a Chinese dynastic tradition which occurred both out of envy as well as out of admiration: the replication of complexes. The Gardens of Yuan Ming Yuan with its 'forty views,' and the summer resort of Chende, north of Beijing in Tibetan style, both attest to this. An earlier and much more adamant example of rivalry which led to replication, was the Yuan dynasty moving of the capital from the south (Kaifeng, Honan), to Dadu, where it has remained ever since; (present day Beijing). The Tartar invasion of the twelfth century had pressed the reigning Sung Court to withdraw further south. The Mongols thereupon established their capital in the north, erecting a palace which was a careful and respectful copy of the Sung palace at Kaifeng.^{2 4} Although the Nanking City Plan in no way attempted to duplicate the Forbidden City Plan, I have taken this opportunity to present the a priori existence of a tradition of replication. One must bear in mind, the strong presence of continuity most particularly in this aspect (architecture) of Chinese civilization. Nevertheless, the implications of unabashed duplication have no doubt been felt in the twentieth century.

We return to the Nanking City Plan which was completed in one year, reviewed by the National Capital Construction Committee, and was thereupon given a six-year projected construction time. Due to the lingering political static of the time, a modified version soon replaced the original, which itself, was also never completed. Separate buildings instead came to manifest the legacy of the once grand scheme. These included the Ministry of Railways, completed in 1930, designed

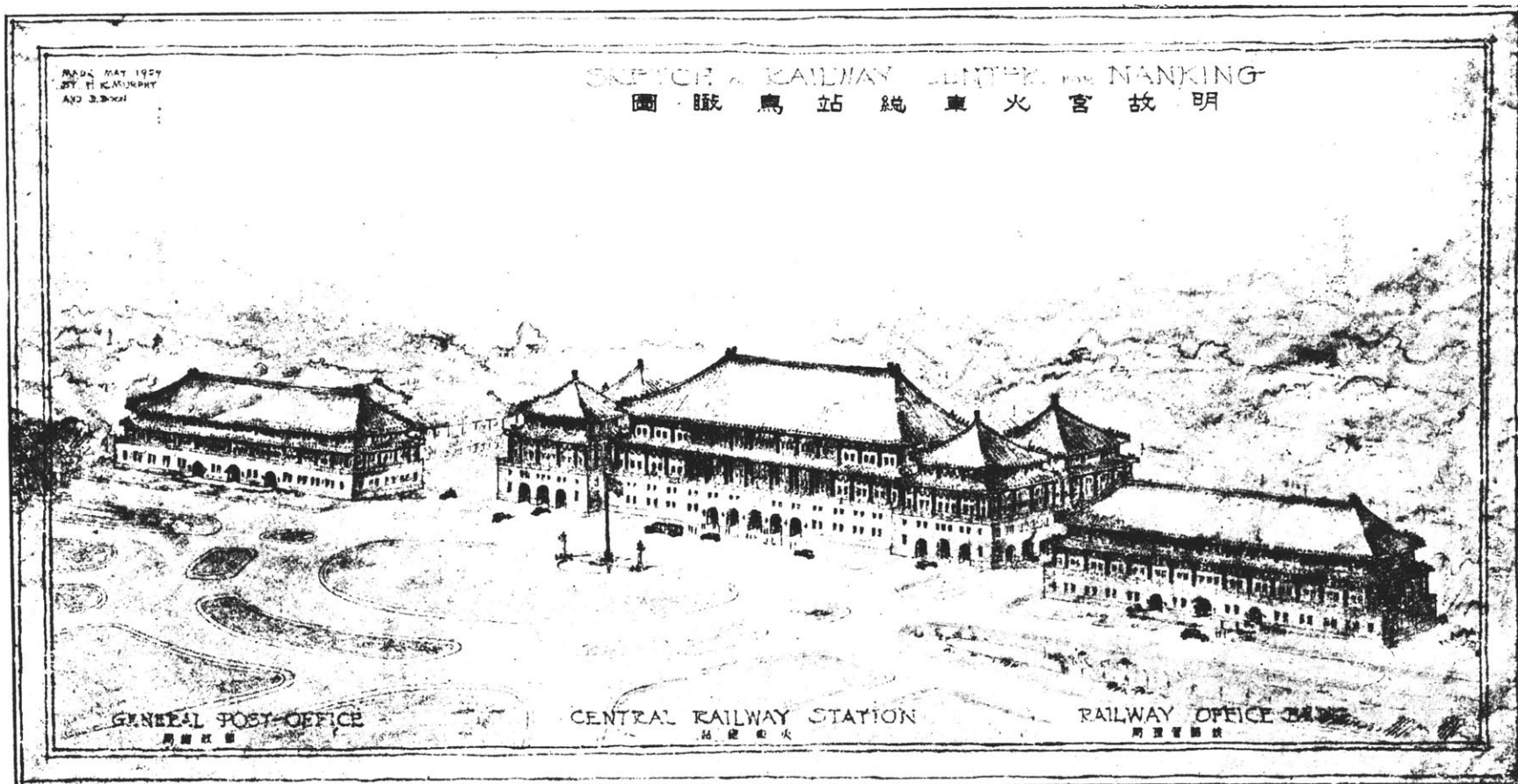
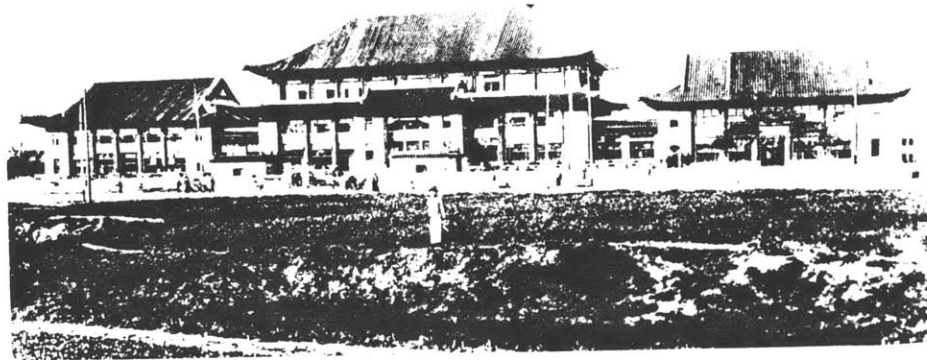


圖 八 十 三 第

The Ministry of Railways, Nanking.
(南京鐵道部)



the Ministry of Railways, Nanking, designed by Robert Fan
(南京鐵道部設計者范文照)



The Official Residence of the Minister, Ministry of Railways, Nanking. Robert Fan
(南京鐵道部部長官邸)



The Ministry of Foreign Affairs, Nanking.
(南京外交部) designed by Chao Shen

by Robert Fan and Shen Chao; the Ministry of Archives, by Kwan, Chu, and Yang; the Ministry of Communications by Fozhien C. Ede, and the Ministry of Foreign Affairs by Shen Chao. Another quintessential example of the era was the design for the National Central Museum of Nanking, from a 1935 national competition won by Su Gin-Djih in cooperation with Lei Wei-paak. Described by the architect as Liao or early Sung style;

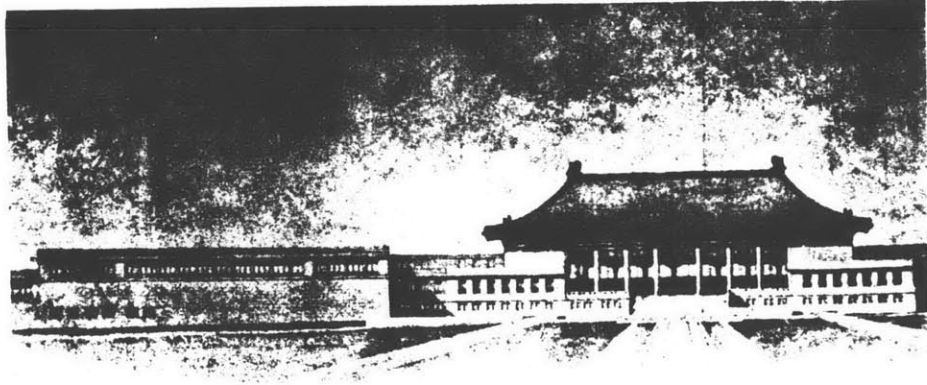


Ministry of Communications, Nanking, designed by F. C. Ede (南京交通部設計者奚福泉)

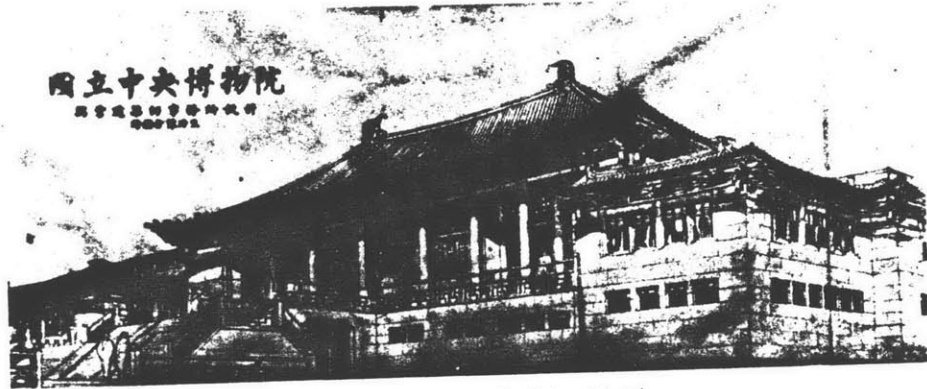
The details are simple and bold. The bracket system is more functional than decorative. It was [to be] built in reinforced cement concrete with the consideration of cantilever principle ... using the method of "lifting and depression" [from the Ying-tsaο fa-shih].... The result was a light and buoyant-looking structure.²⁵

A final word on the Nanking City Plan is here offered to demonstrate the good-willed, but nevertheless, disastrous effects of superimposing worlds which are not only materially far apart; but indeed through their 'imagined' compatibility, the lack of vision is further compounded:

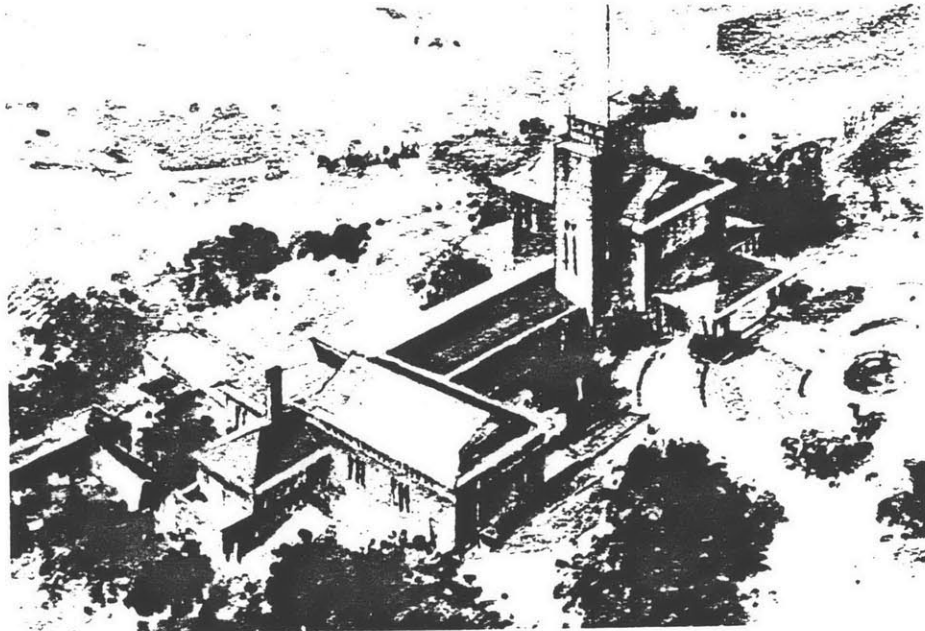
One of these perspectives shows a traffic crossing alarmingly like peace-time Picadilly Circus dressed up in Chinese clothes as tawdry as a music hall mandarin's. Maybe the plan will work well, but spiritually and visually the idea of a pseudo-Chinese capital of China is most incongruous and depressing.²⁶



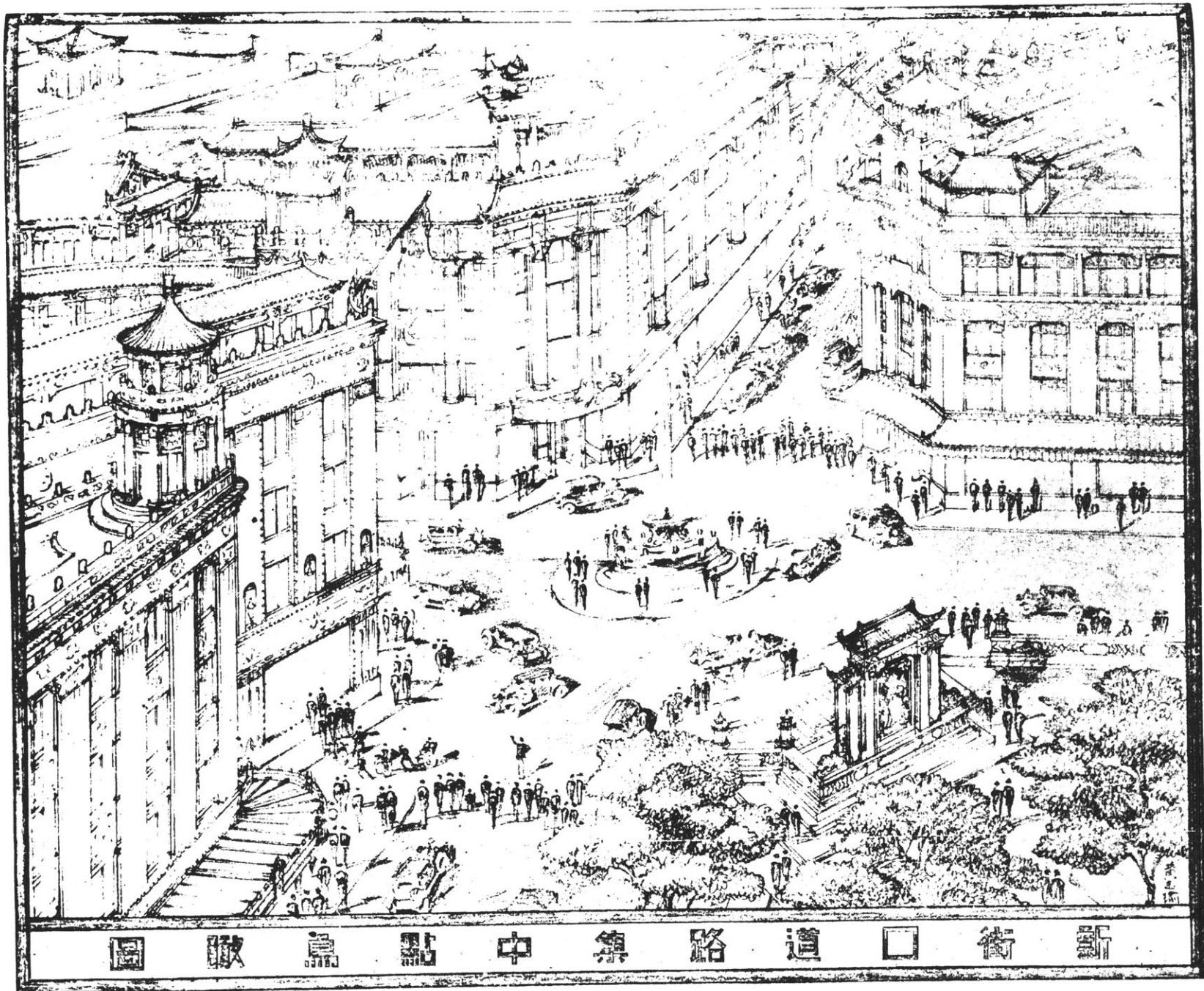
Winning Design of National Competition
for The National Central Museum, Nanking,
1935 — Chinese Architecture of Ch'ing Style.
(南京國立中央博物館清式大選圖)



Perspective and Details of Amended and
Final Design of The National Central Museum
in Liao Style.
(南京國立中央博物館最後修正版式圖)

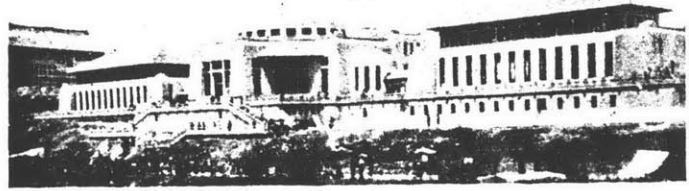
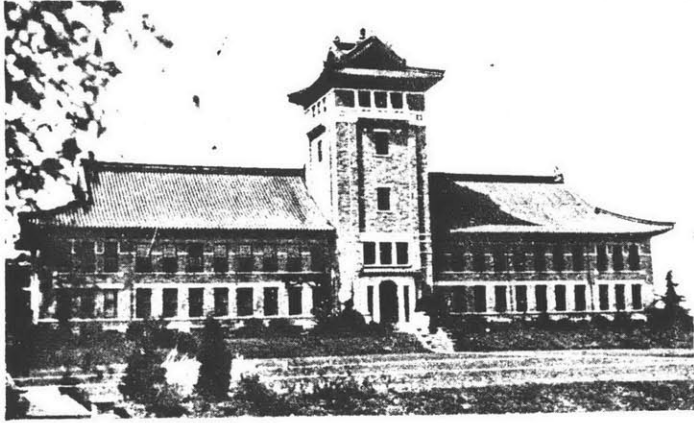


the Central Agricultural Experimental Bureau, Nanking,
designed by the author and Wei-Paak Lei



新街口道路集中心點鳥瞰圖

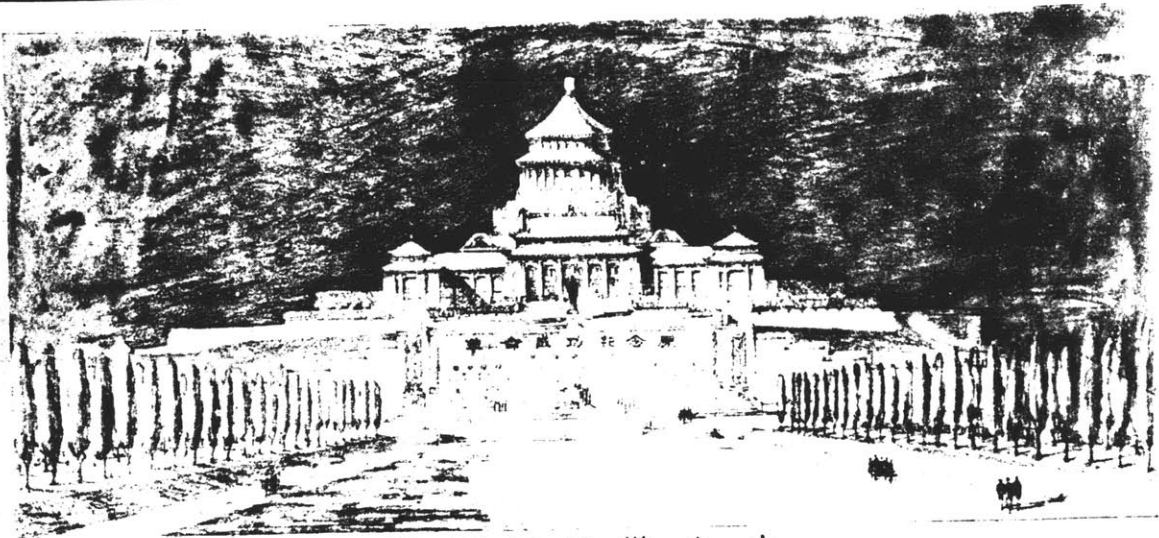
第二十三圖



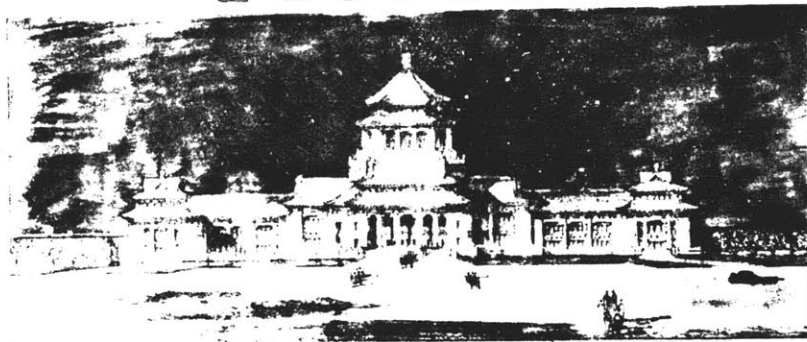
*BATIMENTS DU GOUVERNEMENT,
NANKING*



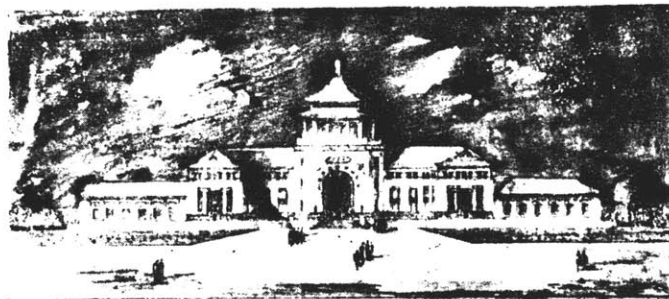
Museum of Archive, Kuomintang, Nanking designed by S. S. Kwan, Pin Chu and Ting-Pao Yang



圖面正部黨央中



圖面正府政民國



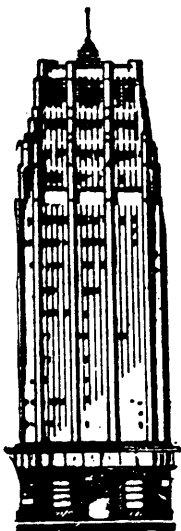
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圖 五 十 第



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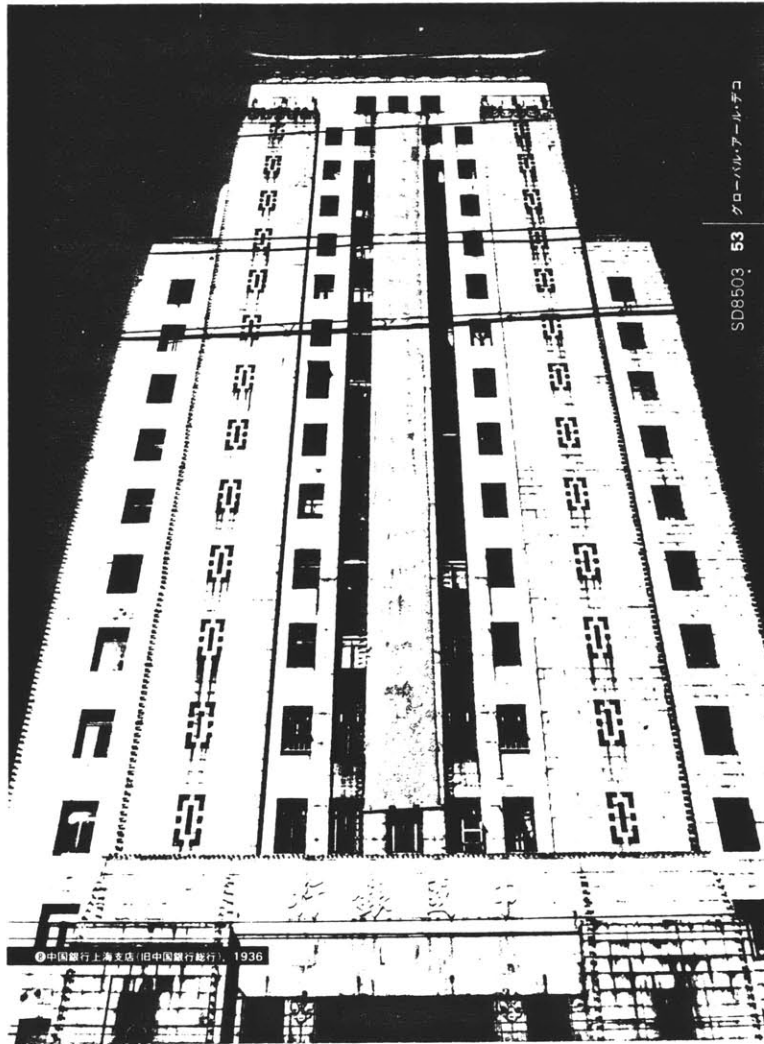
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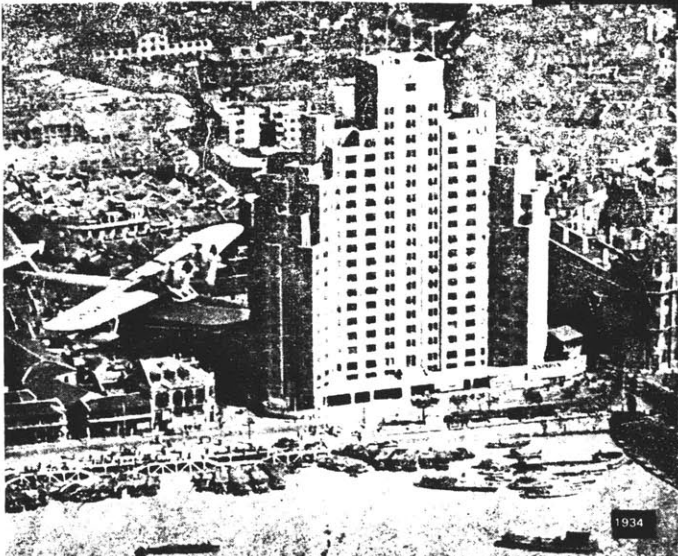
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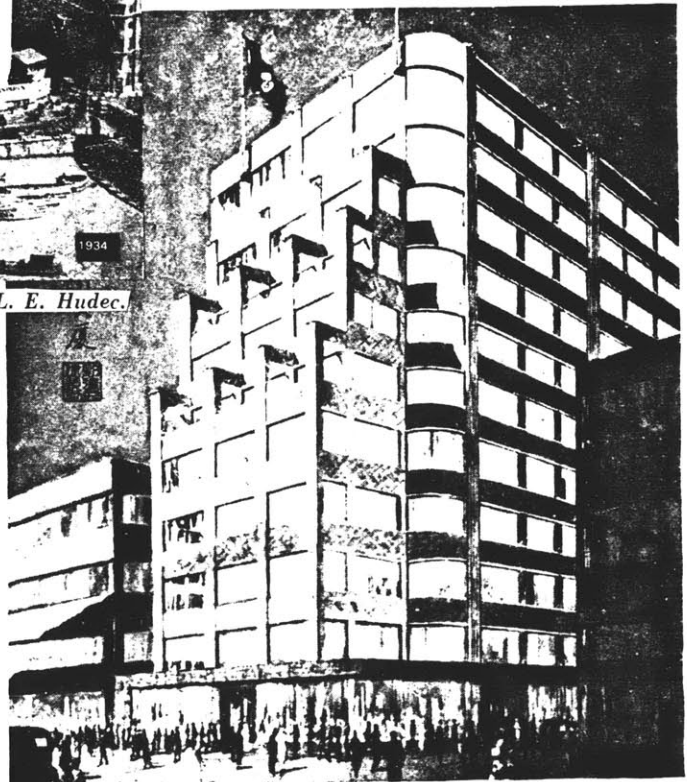
Although commercial buildings of the time constituted a virtual showcase of a burgeoning Western idiom: the skyscraper; Shanghai in the 1930s offered the opportunity for the Chinese to more fully address their own idiom. By then, the Renaissance style was well established, and the contemporaneous publishing of the Ying-tsau fa-shih in the "Bulletin of the Society for Research on Chinese Architecture" further popularized the classically inspired derivative.



IMMEUBLE DU SUN MAGAZINE, SHANGHAI.
Architectes : Kwan, Chu et Yang.



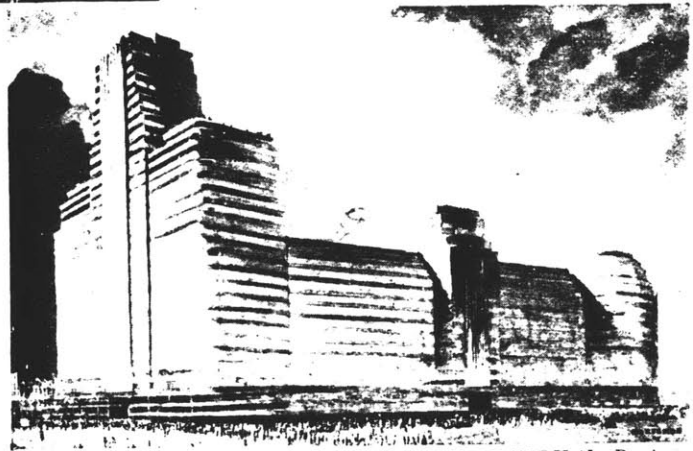
CHAO TAI FIRE INSURANCE Co. Architecte : L. E. Hudec.



PICARDIE APARTMENTS, SHANGHAI. Architecte : Minutti.



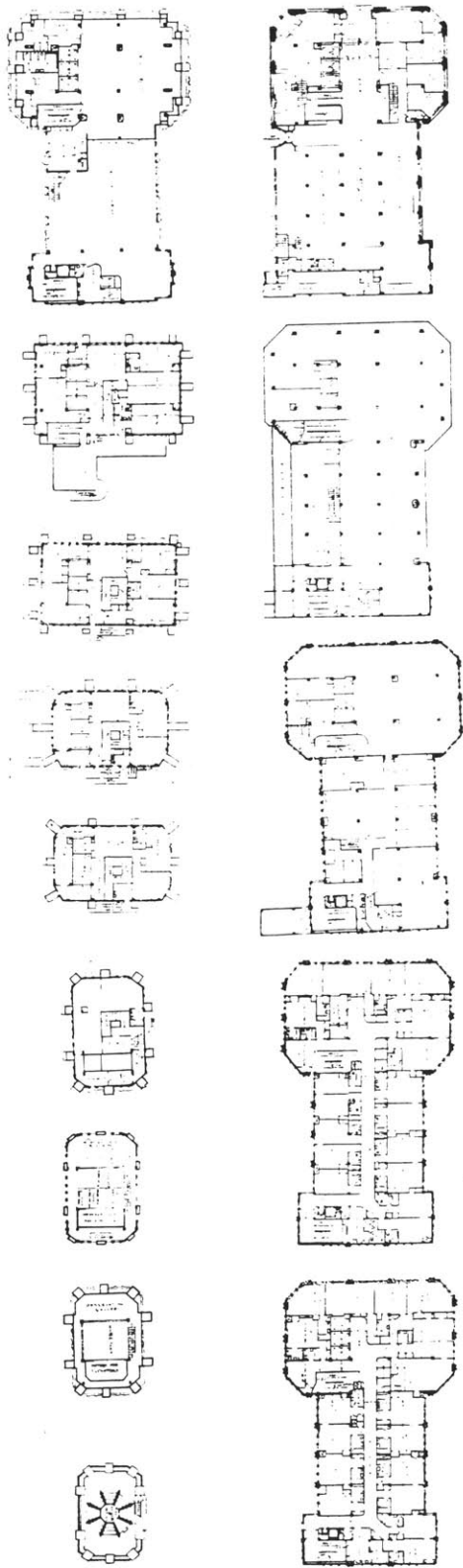
GROSVENOR HOUSE, SHANGHAI -
Architectes : Palmer et Turner.



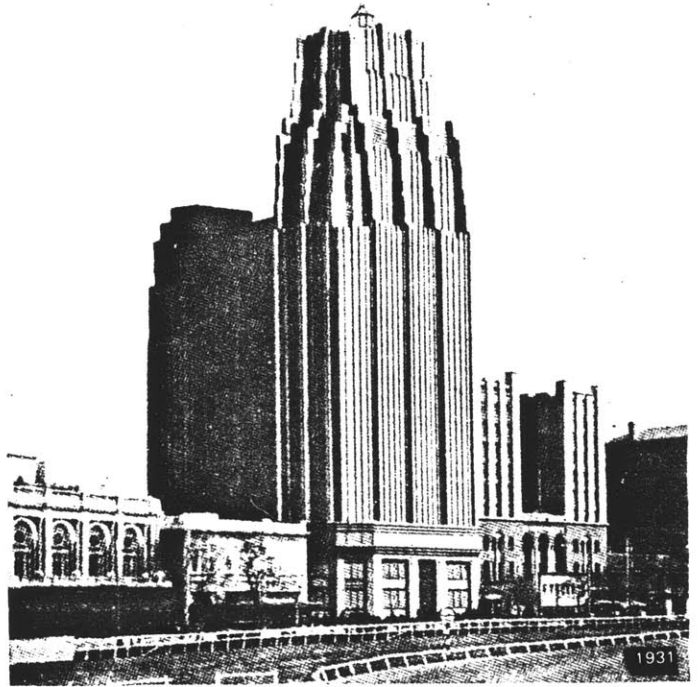
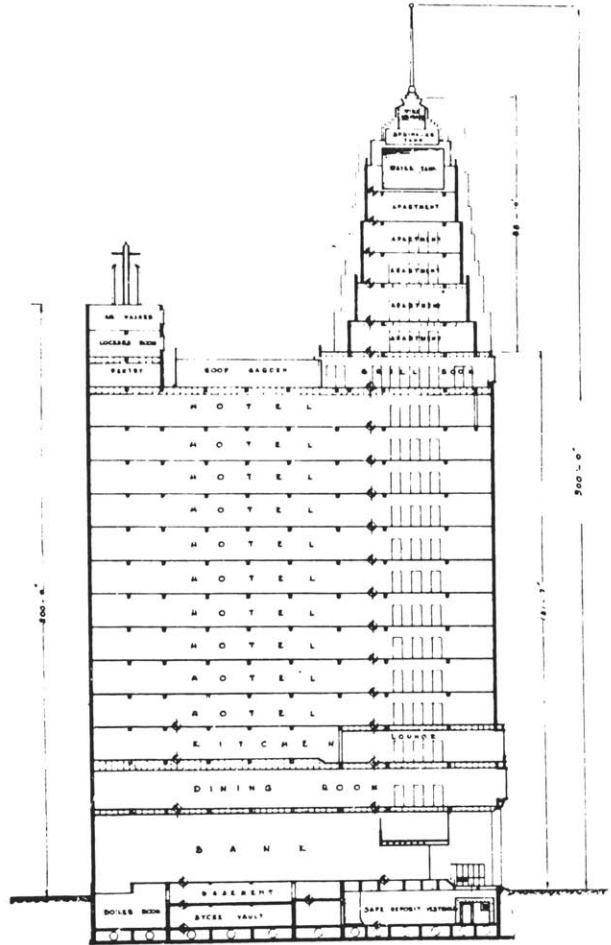
CHINA MERCHANTS Co BUILDING, SHANGHAI (Projet).
Architecte : L. E. Hudec.



BROADWAY MANSIONS, SHANGHAI.
Architectes : Palmer et Turner.



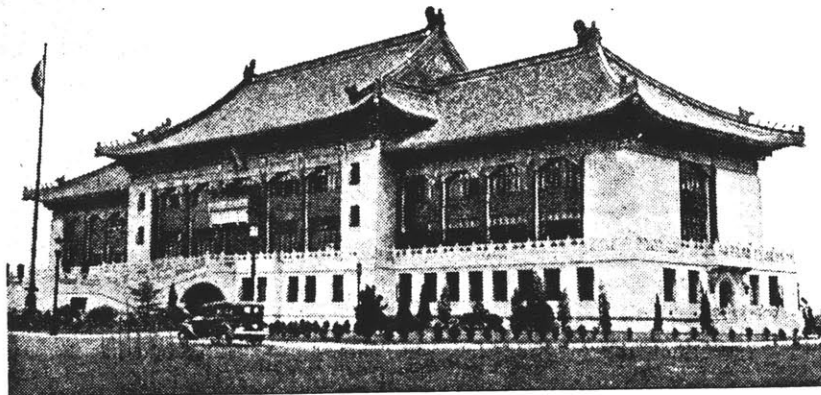
Cet hôtel est parmi les rares constructions à ossature métallique, en raison de sa hauteur.



PARK HOTEL, SHANGHAI. ARCHITECTE : L. E. HUDEC

The Greater Shanghai Plan of the early 1930s again authorized the national style, although, like the Nanking City Plan, it too was never completed. An open competition was held in 1930, and won by a Chinese architect, Chao Sing. The Shanghai Civic Center provided a focus for the plan, set within a large, formal garden, symmetrically bordered by a variety of buildings, seemingly unrelated. Cited as American inspired and moreover, pushing the notion of learning indigenous principles from a refracted source yet one step further (to physical planning); the misalignment of such an attempt is here well articulated:

But whatever the functional soundness of such layouts in the United States, in China they are nothing but abstract patterns devoid of any real meaning.... The old Chinese planning patterns were arrived at by regarding buildings as an expression of a social order. The new American pattern in China is only an empty shell, pretty though it may be. The result of such socially and nationally unsound individualism can be but chaos.²⁷



City Hall, Civic Centre

The virtual obliteration of good design by such ill-conceived 'aims-to-please' is again delineated by the Municipal Hall (or Mayor's office), located within the Civic Center complex, and erected in 1931. Although I must admit, it

is a rather handsome edifice, to be admired if only for its stately posture and unabashed statement of precisely the problem which it is trying to address; the conflict of interest in such an amalgamation is inevitable:

The design seems to consist of the three principal parts of ancient Chinese structures: the platform, the frame structure of the main story, and the roof. But the architect, [Tung Ta-yiu,] as anxious to adopt a traditional style as he was to meet modern requirements, decided to cast to the winds all the logic of the past and be satisfied with appearance instead of principles. The platform in ancient buildings is a solid base upon which the light frame structure is erected; it gives the feeling of security to the superstructure and also provides an interesting contrast between strength below and lightness above. In the Mayor's Office, on the other hand, the platform with its numerous windows is not really a platform at all but only a European ground floor in a threadbare disguise. Admittedly, the offices need light. But the architect's compromise between this contemporary need and the basic composition of the national past is of the most superficial nature. The result is neither a true continuation of the cultural heritage nor a satisfactory expression of the contemporary spirit.²⁸

As we all know, however, the platform was not to be the key issue for transforming the three part (platform, body, and roof) principle of traditional architectural form; although the diminishment of a ground level horizontality makes for an even more emphatic 'Western building, Chinese hat.' Instead, the roof was destined to be the crux of the matter, for decades to come, aptly articulated by a Chinese critic, as early as 1937:

We have no quarrel with the tile roof on a Chinese temple, just as we have nothing to say by way of argument with such a consistent die-hard as Ku Hung-ming who kept his pigtail as a protest and as a symbol.... It is perfectly sensible to erect a Buddhist temple, a tea pavilion, or a memorial hall with a tile roof, according to the classic Chinese formula and tradition; but it would be at once an anachronism and fallacy if the tile roof is made to cover constructions of any size with a modern interior arrangement.

.

In Tibet, Mongolia, Jehol and particularly Kokonor, the combination of the tile roof and the terrace in one building has been typical for centuries; ... in this type of architecture the building looks as Chinese as the tile roof itself.... Most peculiar is the use of nothing but the flat roof, ... throughout many of the frontier regions.... If this Renaissance style is going to survive, not merely as 'pigtail' architecture, it must reconcile itself to the flat roof. The burning question today, however, is not so much concerned with the flat roof as the art of making it look Chinese.... [He goes on to declare:] at present, classical Chinese architecture has nothing to offer to the modern building....²⁹

Needless to say, the war with Japan put a stop to the flourishing 'national style' in 1937, even though it also reinforced the spirit of nationalism which characterized the 1920s and 1930s. The return of the concessions in 1943 to the Chinese, terminated the foreigner's century of encroachment; and by 1945, the Japanese dominance was also eliminated. Several more years of war and devastation, nevertheless, still remained.

In 1950, the following observation was made by a British architect, in critical support of an imminent turning point for the new People's Republic:

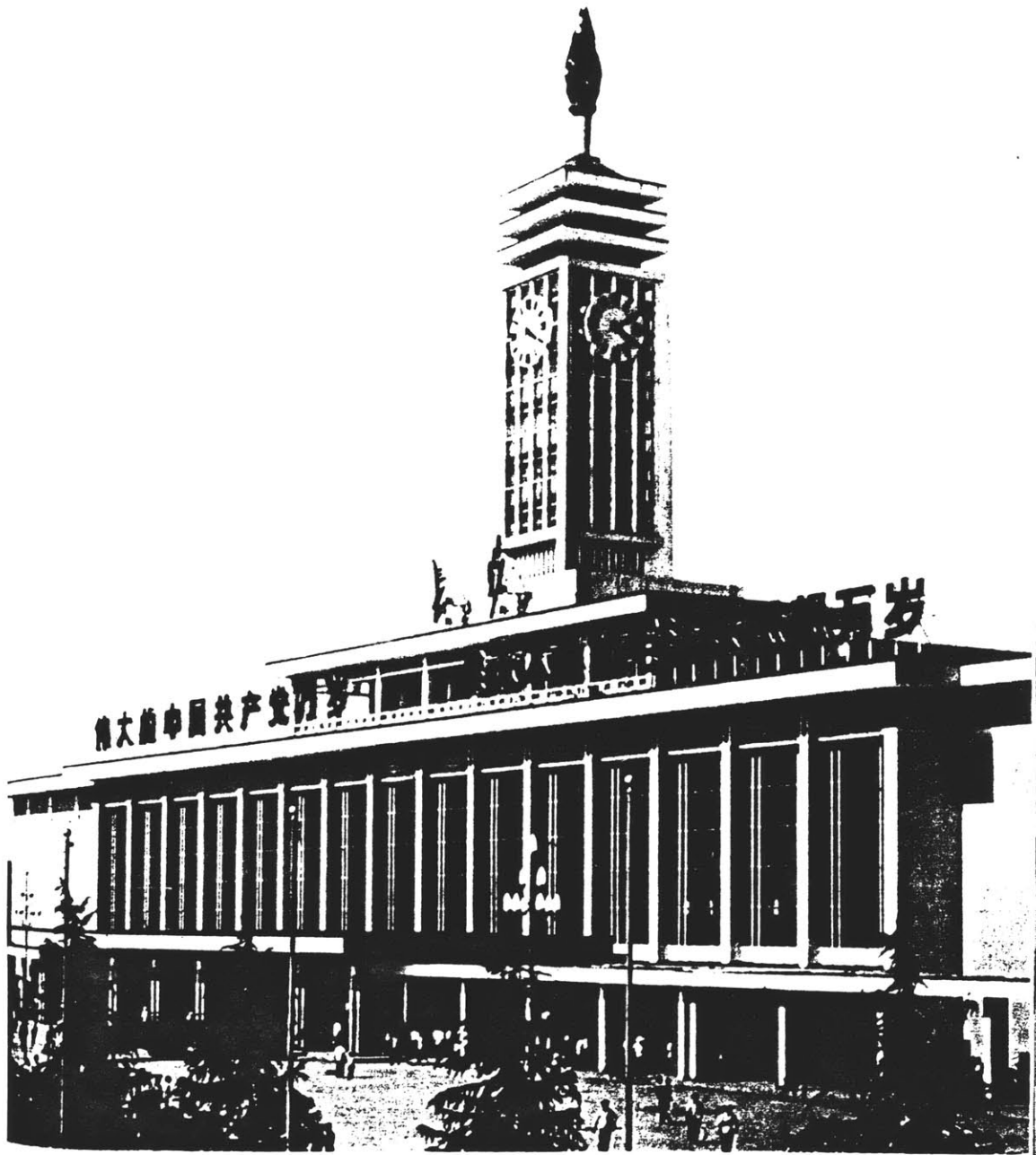
Nothing would be easier, nothing indeed has been easier in the immediate past than to dress up a building in a Chinese style;
[He continues;] Landscape gardening ... can play no less a part in the future than it is now doing in England. The sense of space so admirably expressed in walled courtyards, the openness of Chinese planning, the austere, massive dignity of city walls-- all these are domestic characteristics whose study and revival in a modern idiom may contribute to a new architecture in China.
... China has been stagnant for too long; even more stagnant has been the Chinese acceptance of Western admiration for their art and architecture, for it is only too often uncritical and tasteless and has done little service to China except to add further swathes to an already well-wrapped mummy. New eyes are needed in China.... The return to the peasant and his background need be neither sentimental nor regressive.³⁰

Thus, by the Japanese invasion in 1937, which in effect marked the halting of building activity until after liberation in 1949, the players for the PRC's modern architecture had begun to assemble for the first act. One can now begin to discuss the development of China's modern architectural theory.

N O T E S

1. R.A. Hamburger, "l'Architecture en Chine," l'Architecture d'Aujourd'hui, IX, No.10, (1938).
2. Lynn T. White III, "Non-Governmentalism in the Historical Development of Modern Shanghai," Urban Development in Modern China, Ed. Laurence J. Ma, Edward W. Hanten, (Colorado: Westview Press, Inc., 1981), p.24. I am indebted to White for this background on Shanghai.
3. White, p.23.
4. White, pp.24-25. Cited from George Lanning and S. Couling, The History of Shanghai, (Shanghai: Kelly and Walsh, 1921), p.431.
5. White, p.25.
6. White, Ibid. Quoted in James Vivian Davidson-Houston, Yellow Creek: The Story of Shanghai, (London; Putnam, 1962), pp.36, 41, 85.
7. White, p.30.
The Settlement Mixed Court, established in 1864, was originally for the trial of cases in which foreigners were involved, but later came to include cases of all Chinese under jurisdiction of the International Settlement. Under the original system, which lasted until 1927, the residing Chinese magistrate would be assisted by foreigners. (This system was replaced in 1930.) Cited from: H.J. Lethbridge, All about Shanghai: A Standard Guidebook, (Hong Kong: Oxford University Press, 1983), p.22.
8. Gin Djih Su, Chinese Architecture: Past and Contemporary, (Hong Kong: The Sin Poh Amalgamated, 1964), p.129. Cited from Rhoads Murphy: Shanghai- Key to Modern Shanghai, (Cambridge, Massachusetts: Harvard University Press, 1953), p.69.
9. Hamburger, Ibid.
10. Charles Chen, "Recent Architecture in China," The Architectural Review, CII, July 1947, p.27.
11. In particular, cotton, tobacco, silk, and foodstuffs were sources of internal economic growth. The number of Chinese Chambers of Commerce grew to nearly 800 at that time.
12. A.C. Scott, Literature and the Arts in 20th century China, (Great Britain 1965), pp.111-112.

13. Quoted in Chen, p.27. (no further reference cited).
14. Su, p.135. I am indebted to Su for his background on these otherwise, sparsely documented years.
15. Chen, p.27. (I must also note that Su, p.139, cites the library design as British.)
16. Charles Chen, "Chinese Architectural Theory," The Architectural Review, CII, July 1947, p.19.
17. Scott, p.114.
18. Scott, Ibid. (I must here note that China Reconstructs, XXX, No.1, (1981), p.16; lists the architect's name as Li Jinpei.
19. From a lecture series: "A Short Term Course in Traditional Chinese Architecture," Tsinghua University, (1982).
20. Chen, "Recent Architecture in China," pp.27-28, (no further reference cited. I must here note that Chen cites the designer: Li Mèi-ch'è; although Scott and Su both concur on Lu Yen-chih.)
21. Chen, p.28.
22. Richard Harris, "Miscellany," Architectural Review," CVIII, September 1950. (One must here also note that this tradition of "gargantuan vulgarity" continues in "The Monument to the Martyrs of the Huaihai Campaign," (Jianzhu Xuebao, no.5, 1979).
23. Scott, p.115.
24. Richard Harris, "Chinese Architecture: A Historical Sketch," Architectural Review, CII, July 1947, p.11.
25. Su, p.136. Due to the imminent Japanese invasion of 1937, this work was never completed.
26. Chen, p.28.
27. Chen, Ibid.
28. Chen, Ibid.
29. Scott, p.113. (no further reference cited)
30. Harris, Ibid.



建筑学报

1978 1

T H E O R Y
F i r s t H a n d S e c o n d H a n d

The history of China is written across a struggle with nature.¹

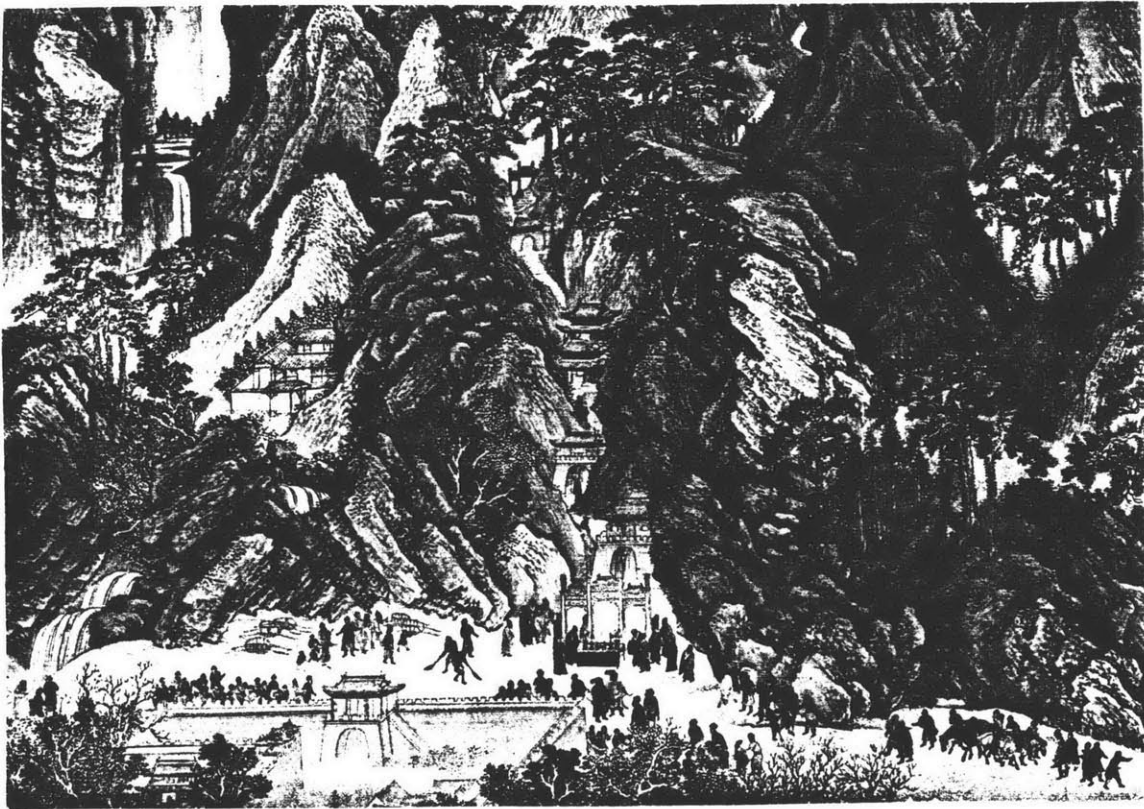
No full-proof theorem can be made regarding the stances of Western man and Eastern man with their respective relationships to nature, except that they are fundamentally different. Contrary to popular belief, the East has by no means cornered the market in the consideration of nature for architectural (as well as urban) design. The terms organic, organicism, and organism have all been applied to principles of design by the West during this century; from a more rudimentary level in the applied arts (beginning with art nouveau at the turn of the century), to a more essential approach as articulated in the writings and work, notably of both Louis Sullivan and Frank Lloyd Wright. (The list goes on, but let us not forget Hugo Haering, whose advocacy of "organic building" came to direct confrontation with Le Corbusier and his geometric principles at the CIAM Conference of 1928; which needless to say, was not to be decisive in the outcome.)

Nor, on the other hand, has the West gained exclusive rights to the so-called rational approach; (to dispel the myth of a Chinese unyieldingly 'natural' sensibility):

The new Ch'ang-an known at first as Tahsing, was planned before the end of the sixth century and became during the Tang dynasty (618-907) 'the largest, richest and grandest city in the world of that time.'²

.....
'As the great capital of Tahsing was taking shape, villages were levelled, avenues laid out, and rows of trees were planted. According to legend there was one old locust tree that was not in line. It had been held over from the old landscape because, underneath it, the architect-general had often sat to watch the progress of construction, and a special order from the emperor in honour of his meritorious official spared it from being felled. Thus, except for this tree, the total superimposition of man's order on natural terrain was complete.'³

Nature's omnipresence in daily life throughout the evolution of Asian civilization has however, made it a source book of both Chinese philosophy and design. (Western civilization seems to evolve, by contrast, in spite of itself.) One must here emphasize that both fear as well as admiration have been equal partners in yielding the well-known Chinese reverence for nature, as this deep respect has indeed been subject to misinterpretations. (And puritan ethics do tend to overlook shadows cast in their one-sided 'good-graciousness'.)



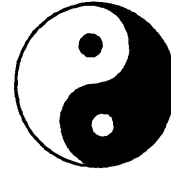
However and whatever are the motivations for paying homage to nature on either side of the planet, it is plain to see that they have become manifest in architectural form in decidedly differing ways, (as I have already articulated in

the foreward). Whereas with just a glance at most any Western plan, one is able to distinguish outdoors from indoors, the Chinese plan is not so easily discernible. Whether one chooses to regard this latter sensibility as mysterious, sentimental, or respectful bordering on fearful, it yields to nature and is inclusive of nature in its relentless integration of solid and void. Moreover, the predominant volume in Chinese design is an outdoor phenomenon. Densities of people, the precious commodity of arable land, and the resultant compacting of space in Asia also provide a common sense explanation for the instinct to make outdoor communal rooms.

More substantial underpinnings for these somewhat abstract notions lie in the realm of Chinese philosophy (just as Western religion is largely the source book for the quest of ideal forms). To pursue either of these courses, however, would only take us further from the status quo, housing and hotels alike. Instead I offer it as exhibit number one for distinguishing Chinese architectural theory as her own: the relationship of architecture to nature, a fundamental principle of Chinese design whose substance is retained in the relationship of solid to void, with the primacy of void over solid, outdoors over indoors, and of greater import, the integration of the two. Few would contest this. Those who might choose to dismiss it as a merely formal consideration will nonetheless acknowledge it as a design consideration, and those who choose to dismiss it as a mere design consideration had better brush up on their Chinese philosophy; for even an earful of the spoken language attests to the ever-present principles of yin-yang from which it originates. This then, is an underlying, a priori theme of Chinese architectural theory: the pronounced relationship of architecture to nature, the outdoors, and the environment; and the first of four 'coagulants' which I have chosen to bring forward of recurrent twentieth century themes. (It also brings us to the second matter.

Dualism pervades

Chinese design. Although it is hardly unique to Chinese philosophy (Plato, the Persians and Ormuz and Ahriman all advocated theories of universal dualism), the deeply rooted principles of yin-yang have become a Chinese leitmotiv, even in this modern day. In painting, the application of these principles seeks to depict the infinite; and in politics, the more specific application of dialectical materialism as employed by Mao, is to incite 'perpetual revolution.' (But one must take heed: when dialectic is applied habitually and uncritically, it leads only to dichotomy.) China brings these two elements from her ancient past to hereby provide two coagulants of her modern architectural theory.



Two others are more specifically from the twentieth century and the West which first, however, raises the issue of an amalgam of theories. Just as the Chinese have had to ask themselves, what constitutes their modern architecture, so too have they had to ask what their theory comprises. Needless to say, it is not suitable to critically analyze Chinese architecture with the sole application of Western theory, although it is now just as true that modern Chinese architectural theory can no longer be exclusive of Western theory, any more than it can be of Soviet theory. The unfortunate outcome of this inclusion, however, is as regrettable as has been the case for built form: one ends up having to dig through that which is to be included in order to get to a more fundamentally Chinese attribute. The fifties were laden with Soviet slogans and by the 1960s, readings on Chinese architectural theory were spiced by a tangent of Chinese professors harping, 'form follows function;' both instances of signs of the times, but nevertheless, the cart without the horse.

Moreover, with Western theory comes the affirmation of its association already with the scholar and the elite, at times undermining (at other times underlying) the whole concept of theory itself. The controversy surrounding the so-called esoteric application of theory, however, has been pretty well bundled up in a neat package for the West as well in twentieth century use, centered upon the issue of aesthetics. A fish out of water for the Chinese perhaps, but also one that should have indeed gone farther out to sea, in the opinions of many of the forerunners of the "Modern Movement." Nevertheless, 'aesthetic concerns' was to become an inextricable element of modern architectural design, and is the third coagulant to be raised. A digression to a tumultuous era for architecture during the 1920s begins to clarify a correlation between the developing ideas of modern architecture in Europe, with the Chinese subsequent donning of these second-hand shoes. (The Soviet side of the coin will follow thereafter.)

In spite of the West's head start on the process of industrial revolution, the specific application of industrialization to the building trade and architecture reached a level of crucial significance only during this century, as was the case for Mainland China as well. Earlier indications of this impending impact had been witnessed by the Chinese in the nineteenth century treaty ports, through their abundant examples of European eclecticism. Although China was lagging behind in industrialization, (at the risk of diminishing this differential) indeed, the introduction of the profession has perhaps been a greater hurdle to scale, substantiated by its only recent, more true emergence. Of greater import in understanding the coming of this industrialization was the impact of its conception; which had begun by emphasizing production in relation to time, and thereby, quantity in relation to productivity, and was now rounding the bend to somehow guarantee an accommodation of

quality not only for the product, but for the user as well. Thus, key was this industrialization in epitomizing a pivotal time, moreso than the process itself; an era which is anchored, for architecture, in the 1920s.

In many respects the Chinese and the European were both in the throngs of unpacking some seemingly new and exotic fruit; the Chinese amidst their 'Renaissance' with the Nationalist reunification of 1927, and the European so-called invention of the Modern Movement, signalled by the 1927 Weissenhof Exhibition at Stuttgart (soon to be followed by the CIAM Conferences). Although both situations were neither inadvertently nor pointedly centered upon aesthetic concerns, they nevertheless raised the issue quite emphatically. The latter predicament is ascertained as follows:

The Berlin Group was thus dominant in the Weissenhof Project, while, contrary to Sigfried Giedion's assertions, aesthetic concerns prevailed over the new ways of considering the housing problem and despite the prominence of urbanistic concerns. The variety of solutions itself counters any illusion of a unity in the research on minimum typologies or on aggregated elements.⁴

To provide a frame of reference for this precarious member (aesthetic concerns), more fundamental issues of the late twenties and the advent of a "new architecture" must first be brought forward; (while continuing to parallel the Chinese situation).

The theme of 'the conception of society' underpins virtually all of the major ideologies which were impacting, and to a large extent, revolutionizing architecture during the 1920s, with the advent of World War I and the 1917 Russian Revolution. Whether conceived as a vehicle to transform the society, or as an end to represent the society in either a state that had yet to be achieved, or had already been achieved, (nuances of which, as will soon be demonstrated, are significant); the idealized vision of society is conspicuously

central to the conception of modern architecture, and even more emphatically, modern urbanism.

In direct correlation to this was the architect's role with regard to this new relationship between architecture and the society. How the architect was to uphold this social commitment became the crux of the conflict which was in many ways, to dignify as well as to unsettle the early CIAM Conferences, setting them apart from the later ones which became to a great extent, compromised (as was reflected by their level of accord). Thus, this newly conceived 'fresh start' for the architect ran concurrently with its introduction as a profession altogether, by the 1920s in China. Again underscored in both instances was the role of the artisan in 'building,' which had been the vehicle for academicism on the one hand in the West; and on the other hand, for the Court in China. This role was virtually eliminated along with the shifted emphasis on new methods and materials of industrialization, a thesis which has been attributed to Pevsner's book entitled: Pioneers of the Modern Movement from William Morris to Walter Gropius. In a sense, therefore, this transformation in Europe was not so very far ahead of the Chinese transference from the master craftsman to the architect; (and indeed, the engineer's role has become a more pertinent point of focus as a result of this transaction, as labor-intensive construction techniques persist on the Mainland).

Related to this was the dominance of the Academy in architecture, which was being overturned in Europe while it had only just been newly introduced to Chinese architects educated in America. The impact of this school was short-term (but substantial) in China, as it was only during the late 1920s and early 1930s when its influence was to be manifest in the Nanking and Greater Shanghai plans. (Its influence as a pedagogic method has however, not been as short lived. The

over-emphasis on renderings as an 'approach' to design is still scrutinized today, but the Chinese propensity for watercolor techniques are conducive to its persistence.) The rejection of the Academy was a key concern (as it was for the European), in spite of its recent introduction to the Chinese, although for reasons of bourgeois and therefore imperialist associations. This rejection provided a much stronger polemic for the CIAM Conferences, as it was the crux of Le Corbusier's concerns, being directly contiguous to the relation of architecture and the state. This was articulated in the final declaration from the first CIAM Conference at La Sarraz as follows:

Academicism seduces government into spending considerable sums for the construction of monumental edifices, against the dictates of wise management, flaunting an outdated luxury to the detriment of the more important task of urbanism and housing.⁵

One would not argue that the consolidation of state power was central to Chinese concerns throughout the twentieth century, but this was for a very different purpose than Le Corbusier's reasoning: "... The State, that authority which particularly at that time Le Corbusier saw as the political power alone capable of realizing the technician's ideas."⁶ The greatest underlying source of friction occurred at La Sarraz in 1928 centered upon this point. Le Corbusier's obsession with the 'inevitability of mechanization' was to correspond with an economic transformation which would only be possible if sanctioned by the State. Furthermore, the degree of autonomy which was needed to provide both the means and ends for this architectural transformation (through standardization), was just reason for the placing of paramount importance with the State. Others present at the conference, however, saw this as clearly going from the frying pan to the fire:

Against Le Corbusier who pointed to a strong State as the ultimate goal to which the efforts of the

Congresses should strive, they proposed a course of action aimed at changing the structures of society. In opposition to Le Corbusier's talk of 'mechanization,' Stam, Schmidt, and Meyer asserted the importance of the collective nature of society and class conflict.⁷

Although four topics were presented by Le Corbusier at La Sarraz, the conference's final declaration was to condense these into two. Thereby, 'The Architectural Consequences of Modern Technology' and 'Standardization' (the first two) fell under the categories of 'General Economics' and 'Urbanism' (the latter two); a manifestation of this opposition. It is also clear, however, that the rejection of technology and standardization was not the aim of the three who opposed Le Corbusier, as is here demonstrated by their views on urbanism:

... these three proposed an urbanism as pure technique, which would organize the functions of collective living. In addition, with regard to the themes which Le Corbusier would later specify as the functions of urbanism, ... these architects, particularly Stam, placed the emphasis on the organization of transportation as the base of the territorial order. Moreover, in reaction to the formal elements so important to Le Corbusier, the "five points of a new architecture"-- that is, in reaction to the introduction of a form that would modify the structure of the city and elements that would set the terms for the standardization of the building industry and direct industrial organization-- Stam, Schmidt, and the other "radical" architects fought for the eradication of aesthetic convictions in urbanism and the building industry: we must replace aesthetic concerns, they declared, with more general interests.⁸

We thus return to aesthetic concerns, which was to become inextricably related to modern architecture, rooted in Le Corbusier's profound effect on its twentieth century development. If one were to doubt the man's sincerity, one might be led to believe that this fervor for standardization and mechanization was only a decoy for a more fundamental concern with aesthetics. His view of their close relation, however, is revealed in the first line of his influential

book, Towards a New Architecture: "The Engineer's Aesthetic, and Architecture, are two things that march together and follow one from the other: the one now being at its full height, the other in an unhappy state of retrogression."⁹ Although a strong desire for the concurrence of standardization and aesthetics in architecture may be inferred from this statement, an inherent contradiction which arises with the assumption that standardization is to serve a functional purpose, is here well articulated:

While Corbusier was proclaiming on the one hand that a house was 'a machine for living in,' he also believed that architecture was the 'masterly correct and magnificent play of masses brought together in light ... cones, cubes, spheres or pyramids are the great primary forms which light reveals to advantage ... these are the beautiful forms, the most beautiful forms.' This duality of purpose is symptomatic of a schizophrenia which runs throughout the modern movement: the consideration of function and aesthetics as separate problems.¹⁰

The opportunity to separate 'mechanization' and 'aesthetics' (and thereby to leave the former to float between the latter and function) had, however, already been taken by the Purists, a group whose arguments appeared in L'Esprit Nouveau which was the "last but one and by far the most substantial attempt to found a Cubist magazine in Paris"¹¹ (running from 1919-1925). This was pointed out by Reyner Banham, who states (according to the Purists); "The important characteristics of the new times were ... second: The separation of techniques and aesthetics"¹²

Mechanisation has diverted from our hands all work of exactitude and quality, and has delegated it to the machine. Our situation appears more clearly thereby: on the one side, technical knowledge remains with technology (mechanisation) while, on the other, the plastic question remains untouched.... Mechanisation, having resolved the problems of technology, leaves the problem of art intact. To refuse to recognise the step that has been taken is to impede the progress of art toward its pure and proper ends.¹³

Banham had previously noted that, "...the Purists proper were only two, Amedee Ozenfant and Charles Edouard Jeanneret. They first met in 1918, through the agency of Auguste Perret, to whom Jeanneret, later to be known as Le Corbusier, had been a draughtsman in 1908-9..."¹⁴

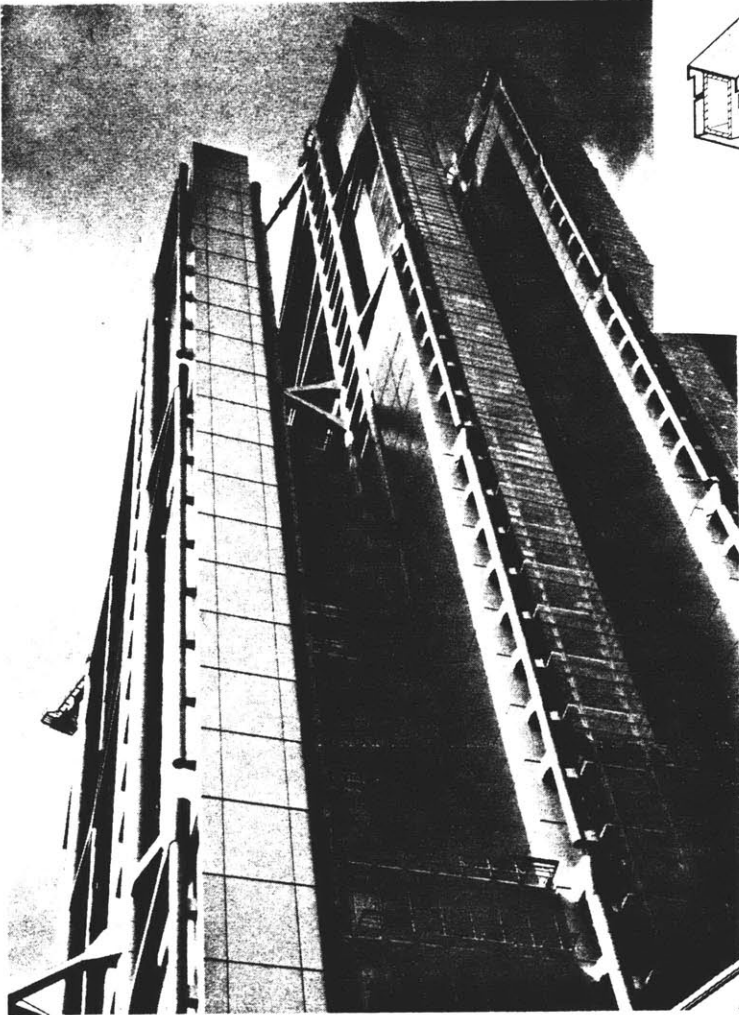
The ambiguous relationship of 'aesthetic concerns' with 'standardized' elements and 'mechanization' was perhaps never intended, but their reciprocal treatment as cases of mistaken identity is certainly a modern conundrum. Although one must take into account that this interchangeability has provided a safety valve for the pressures of quantity over quality, the differential between 'standardized' and 'standardized-looking' components remains an idiosyncrasy of the industrialization of architecture, resulting some sixty years later in a project such as the Hong Kong-Shanghai Bank:

The steel work has to be fireproofed with a furry ceramic fibre blanket. This means that, in order to preserve the smooth metallic finish which is essential to the building's aesthetic, every column, beam, brace and strut has to be encased in aluminium.

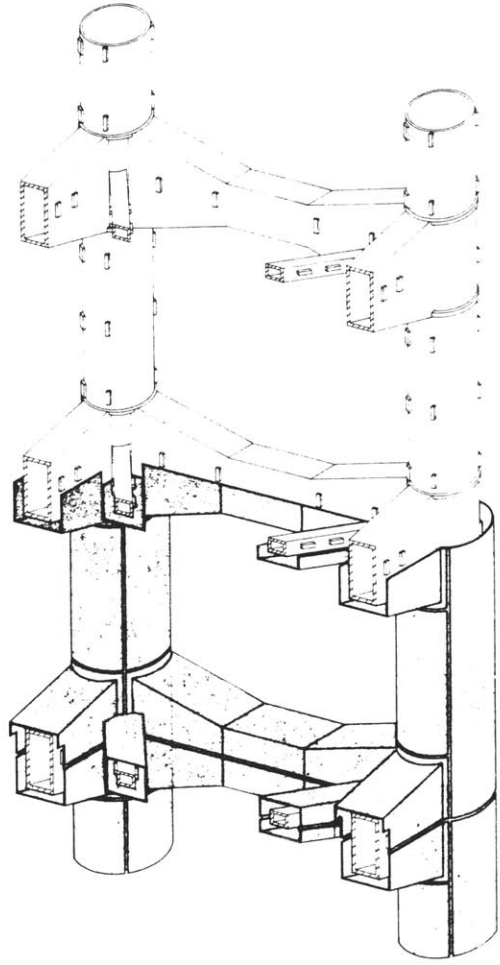
.....
There is, of course, a degree of repetition and standardisation of components in the Bank but it remains essentially a crafted building. The research and development programs were set up to produce one-off designs.¹⁵

True to Le Corbusier's intentions in such a project is the upholding of the means, which for him, lay in standardization or mechanization; over the ends. Although housing, not house, was originally intended to be the vehicle for the transformation of society, the irrelevance of program (to him) had already been delineated by the Weissenhof Project of 1927. As neither the vehicle nor the transformation of society were of primary concern to Corbusier, 'house' arose as the 'autonomous object' with which to perform the 'inevitable' process of mechanization.

Although many of the key ingredients for making 'modern



the Hong Kong-Shanghai Bank



architecture' were already on hand (in spite of their jetlag) for twentieth century China, underlying themes of which include: the conception of society, the architect's role in this 'new society,' the disposal of the artisan's trade to embrace the new methods of industrialization, the ushering out of academicism, and aesthetic concerns (as ambiguous as they may have been); conspicuously absent were the sources of the early CIAM polemics: on the one hand, urbanism as an instrumental concept with which to embrace the new society; on the other, the autonomy of architecture (as yielded either formally, or by the State). 'Modern architecture,' which instead became an object for export, (having been previously stripped of much of this essence), certainly lacks these key ingredients in the Chinese instance which has further deterred this bread from rising upon their own soil. The imagery of urbanism and its 'new society aesthetic' has been made to substitute for a yeast of substance; and moreover, the absence of architectural autonomy has deprived the object of its identity, an autonomy which in the hands of Le Corbusier, was indeed the object according to the subject (thanks to aesthetic concerns), in spite of its supposed standardized anonymity and inevitability.

Having gone a rather circuitous route for the sake of introducing aesthetic concerns (complete with the whole brotherhood); in spite of all its ambiguity, it is a distinguishing and furthermore indispensable mark of 'modern' architecture. (This precariousness, however, will leave it in a position to become a leech to the 'art' of architecture in China; whereby having first performed a blood extraction in the 1950s, aesthetics will be called back in the sixties to give 'art' a transfusion.)

An equally indispensable theme which has plagued the twentieth century is the manifestation of time, the last of the four coagulants. Shuffled, compressed, or simultaneous,

and growing out of industrial acceleration; the perception of time was notably recorded with the advent of Cubism:

`that form is not a finite and fixed characteristic of an object. An object is seen in terms of planes which indicate but do not define its external and internal boundaries. Simultaneously, these limits are not absolute for any object in itself, but are always reflected by its relation to other forms.... If we may grant this much, then we must agree that the artist may,... consult an object from several positions in space and report the result of his observations ... multiple spatial observations recur in Cubism and account for much of its dynamic quality. Since such observations can only be pursued in time, the record deposited upon the canvas is one of temporal experience.
[And from analytic to synthetic cubism, in which the convention becomes reversed:] Ordinary perspective in its full theoretical rigour, gives only the accidental appearance of the object.¹⁶

With this synthesis came formal autonomy and the multi-perspective, modern sense of space. The depiction of time was encapsulated as an architectural device by the Futurists, who like the Chinese, were witnesses to drastic change centered upon industrialization. Coming from a politically opposite end of the spectrum, however, the Chinese Communists were to find a nearby source from which to derive a modern theme of time, just as it had reached the point of being overripe in the Soviet Union: "the spirit of the times" and Stalinian architecture.

Having introduced these four coagulants: the relationship of architecture to nature; dualism and dichotomy, (its modern translation to dialectical materialism, often only to the point of antithesis); aesthetic concerns; and time compressed, shuffled, or idealized, but nevertheless perceived; one can now move on to the next overlay, bearing these in mind.

NOTES

1. "Human and physical factors," l'Architecture d'Aujourd'hui: Chine 1949-1979, No.201, February 1979, p.90.
2. A,E.J. Morris, History of Urban Form: before the Industrial Revolution, (U.S.A.: John Wiley and Sons, 1979), p.291; Quoted from: Andrew Boyd, Chinese Architecture and Town Planning 1500BC - AD1911; (no additional reference cited).
3. Morris, Ibid; Quoted from Nelson I. Wu, Chinese and Indian Architecture; (no additional reference cited).
4. Giorgio Ciucci, "The invention of the Modern Movement," translated by Stephen Sartarelli, p.71; originally published as "Il mito Movimento Moderno e le Vincendo dei Ciam," Casabella, XXXIV, No.463-64, December 1980, pp.28-35. (I have been unable to locate the English source for this article.)
5. Ciucci, p.74. Quoted from "L'Architecture et ses rapports avec l'Etat," Article IV, Paragraph 5.
6. Ciucci, Ibid.
7. Ciucci, p.75.
8. Ciucci, Ibid. (I am indebted to Ciucci for this background on the CIAM Conferences.)
9. Le Corbusier, Towards a New Architecture, (Great Britain: Holt, Rinehart and Winston, 1960), p.7.
10. Peter Blundell Jones, "Scharoun, Häring and Organic Functionalism," Architectural Association Quarterly, V, No.1, January-March 1973, p.50.
11. Reyner Banham, Theory and Design in the First Machine Age, (Cambridge, Mass.: The MIT Press, 1982), p.206.
12. Banham, p.209.
13. Banham, pp.209-210.
14. Banham, p.206.
15. Colin Davies, "Building the Bank," Architectural Review, April 1986, pp.82, 84.
16. George Heard Hamilton, The Pelican History of Art: Painting and Sculpture in Europe 1880-1940, ed. Nikolaus Pevsner, (U.S.A.: Penguin Books, 1974), pp.240-241.

建筑学报

1976 3



T H E O R Y S o v i e t R o o t s

L'idée que la culture d'une société en est d'une certaine façon l'image, a été défendue par tous les marxistes, et la notion de l'architecture comme image visible de la société qui l'a construite est aujourd'hui une conception classique...¹

A series of slogans which were first introduced in conjunction with the Soviet influence of the 1950s have become constituent parts of Chinese modern architectural theory. Although the definitions of each of the terms used in these slogans are in themselves, at least as much of a puzzlement as their relation thereupon to each other and their application accordingly as a whole; their recurring appearance (in sum or in part) within many of the articles pertaining to theory since their inception, attests to their significance. The slogan: "socialist content, nationalist form" was adopted by the Chinese early in the 1950s and was the inspiration for what thereafter came to be known as the 'big-roof' style. Derived from the Soviet theory 'socialist realism,' the slogan provides an example of the gravitation from dialectic to dichotomy. (In later years it usually appears as the derivative "socialistic content, nationalistic form," the preferred version when referring to architectural styles.)

"Utility, economy, and if possible, beauty," and "Beauty at the expense of utility" are also Soviet imports, which while putting an end to Stalinian architecture in the Soviet Union in 1954, also put an end to the 'big-roof' style on the Mainland by the following year. The origin of these slogans in a Soviet era which was itself as 'indefinable as it was unattainable' is just reason for their being plainly and simply, bad seeds.

Although no one could figure out quite what "socialist content, nationalist form" meant (and in spite of its supposed abandonment), it was nonetheless to persist in providing an

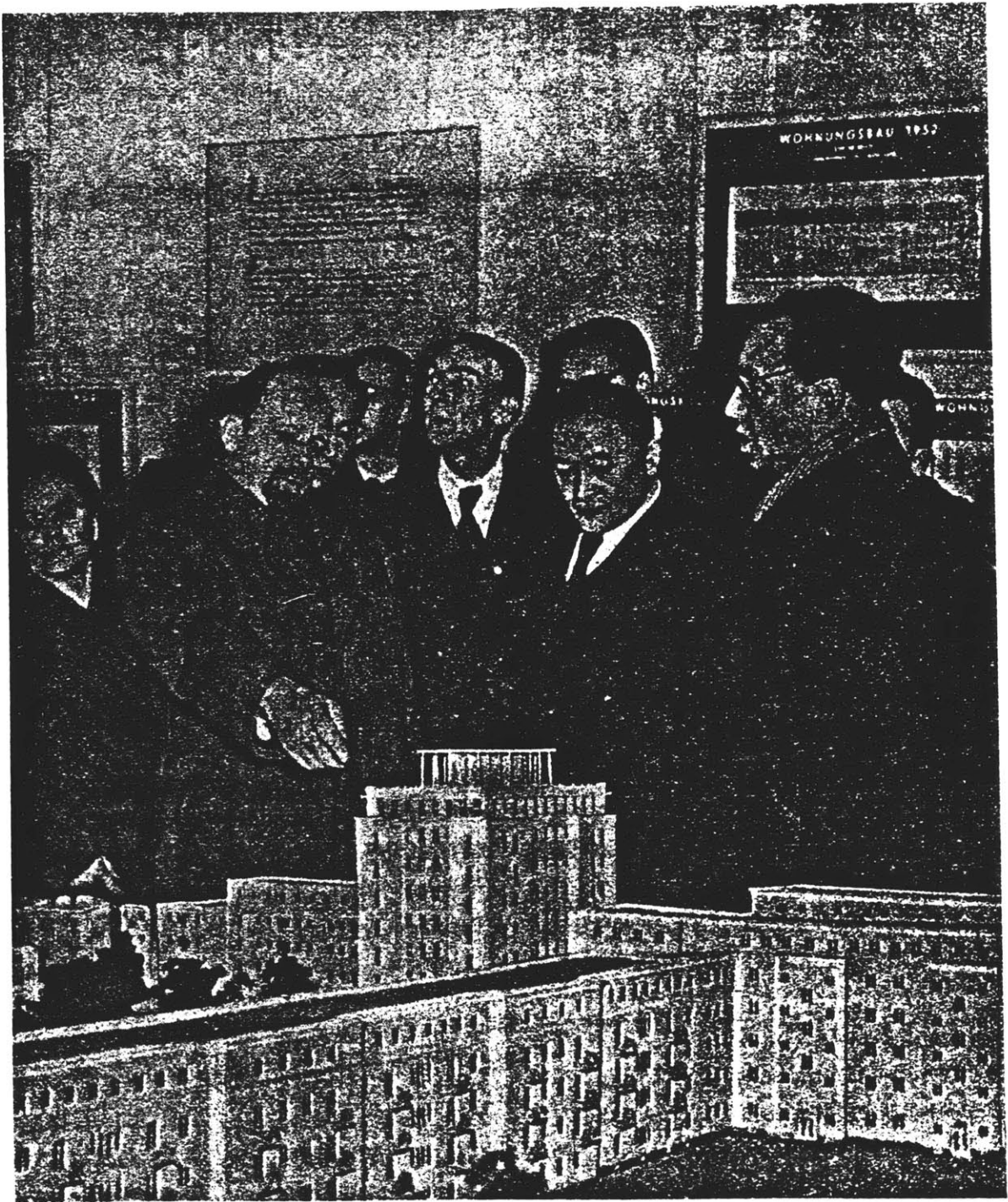


圖1 副總理瓦爾特·烏布利希（左），斯大林獎金獲得者及蘇聯建築科學院院士烏拉索夫（A. Wlassow）（中）及德國建築科學院院長李布克內斯特博士（Dr. K. Liebknecht）（右），在討論德國建築科學院的建築展覽會中魏伯綠地廣場上的高層建築模型。1954年

undercurrent to Chinese architectural theory. Whereas the issue of 'socialist content' finally subsided with the fading of 'function,' (both of which had been in the limelight since the equation of content to function by the early sixties); the pressing issue of 'national form' still hangs on as a last vestige of the earlier 'national style.' Needless to say, in spite of repeated attempts to hand form over to function, it has habitually been delegated to the 'art of architecture,' together constituting an ensemble which would surely have been discarded by the Chinese before 'science' (if they had to make such a choice). Thus it is an irony that form should have endured as it has, although one must also take into account that it has had 'national' on its side; (and indeed the quality of irony often lends its patrons a degree of resilience). An in depth word is, however, first needed on the Soviet roots of these slogans before delving into the issues of art and science in architecture (which are perhaps more central to Chinese concerns).

The importation of Soviet architectural theory was included in the package deal of the 1950s and set forth by Chairman Mao. (One must here note that Mao's "On New Democracy" (1940), and "On Practice" (1937) both preceded the Sino-Soviet collaboration.) The timing of Chinese modern development with that of the Soviets assumed a somewhat 'big brother-little brother' relationship, (the former too strict, the latter defiant) together in their pursuit of socialism and the quest to depict the 'spirit of the times;' and moreover, the 'spirit of the party.' These 'spirits' had arisen in the early decades of the twentieth century. In depicting this pursuit, 'socialist content' was to manifest the utopian ideals which had become paramount by the 1920s and were to persist into the following decade, although, with an added twist. Whereas the choice to depict the former sense of 'spirit' had been typically directed toward an era yet to come, the latter 'spirit' was to be put before our eyes in the form of

architecture, to epitomize a time that had already come, according to the Party. This notion of infusing 'spirit' into architectural form rather than being read from the form subsequent to its creation, is a peculiar phenomenon of the twentieth century, and is rooted in Marxist theory, whose impact on Chinese architectural theory in truth deserves a thesis all its own. The Stalinian years will, however, have to suffice for this background. (I will draw heavily from a source written by Anatole Kopp on this convoluted era.)

The instituting of 'socialist realism' in architecture by 1937 began with the ushering out of Constructivist theory, starting in 1929. By March of 1932, the newly published "Sovietskaia Arkhitektura" (which was affiliated with the Communist Academy and replaced the former Constructivist journal) featured writings by Nicolai Milioutine, the editor in chief. Milioutine was, at that time, finally forced to take a stand both for himself (a former friend of Guinzberg: a key architect of the Constructivists) as well as for the Komakademia (the Communist Academy). Provisionary silence had been kept by the Academy subsequent to the Central Committee's denunciation of the Constructivists in 1929. This restrained reaction has been attributed to the Komakademia's primary interest in urbanism and not architecture which had been at the crux of the Committee's 1929 attack. Milioutine's article was the last straw for the Constructivists. With his disassociation as such, they existed thereafter only as an autonomous organization.

Of greater significance in this article was the appearance of the term 'partijnost' or 'spirit of the party.' Originally a Leninist principle applied to literature, it stipulated that literature could not be a-political, that it could not be 'art for the sake of art.' The term originally appeared as the adjective: 'partinaja,' but was changed to a substantive by means of a hegemonic linguistic method.

'Partijnost' was thereby rendered dominant to that which it modified, legitimizing the new entity--'spirit of the party'-- and reducing art, literature, and architecture to instruments for conveying this. This leitmotiv was thereafter identified as having to be expressed in the architectural form itself, and not just in its program, but by its form, through the invention of a new architectural language: 'form in the spirit of the masses.' This was the first 'arctic blast' which would later determine the choice of historical monumentalism as the most readily identifiable architectural form 'of the masses.'

The tracing of this transference from 'partijnost' as primarily an issue of 'socialist content' whereby it became an issue of form, needs to be clarified, as the transformation which both form and content undergo throughout the 1930s in Soviet theory and practice sheds what little light there was to be shed on the switchback of Soviet architecture. Although an understanding of this may not ultimately serve to clarify the slogan "socialist content, nationalist form" precisely at the time it was adopted by the Chinese, it will nevertheless trace the 'turnip roots' of what was to be inherited, largely predetermining its destiny as merely a 'style.'

The terminology originates in Stalin's writings:

"Prolétarienne dans son contenu, nationale dans sa forme, telle est cette culture universelle vers laquelle va le socialisme. La culture prolétarienne ne supprime pas la culture nationale mais lui donne un contenu. Et, en retour, la culture nationale ne supprime pas la culture prolétarienne, mais lui donne une forme."²

This was expounded upon by the critic M.P. Tzapenko in Des Bases Réalistes de l'Architecture Sovietique, Moscow 1952, (making it hot off the presses for Chinese absorption) as follows:

"De cela découle que l'architecture (...) se développe suivant une forme nationale et non dans une quelconque forme abstraite et non nationale. Et en effet, la sage

prédiction du guide (Staline) au sujet de la forme nationale de la culture prolétarienne, formulée il y a déjà de nombreuses années, a trouvé sa pleine confirmation dans les brillantes créations des peuples de notre pays, spécifiques dans leurs formes et socialistes dans leur contenu."³

Stalin's dialectic had also been reiterated by the V.O.P.R.A., who had been the first to declare proletarian art and architecture art of the masses instead of art for the masses. The V.O.P.R.A., or Union of Proletarian Architects, was created in August 1929 by this declaration which also featured a denunciation of the Constructivists and a rejection of their 'abstract inventiveness which leads to the tendency of absence of contents.' The V.O.P.R.A. declaration of 1929 furthermore took a stand against the separation of form and content, against the separation of form and construction, and for their organic unity. They declared that form: is not a canon, nor an abstract symbol, nor an end in itself, but the means for an expression of a concrete contents.⁴

The relationship of form and content was to be central to the debates of the Stalinian period along with its discussion of 'socialist realism' in architecture, by the 1940s. (Kopp is careful to point out that this relationship is by no means a topic exclusive to the Soviet Union, but one of the "grands classiques" of all discussion in architecture.⁵) It was also the crux of the largest gap between the Constructivist theory of the twenties and the proponents of socialist realism. For the Constructivists, the introduction of the idea of 'satisfying social needs' was conceived in terms of the future rather than to the present conditions, adding the dimension of time to the complexity of the problem. They maintained: "there exists a project of the society and it is in conjunction with this project that one must conceive of an architectural project."⁶ Thus for them, the problems of architectural form (as for Stam, Meyer, and Schmidt) were not of primary concern, not a means nor an end, (and not unlike

the V.O.P.R.A.'s blue-ribboned declaration), and could therefore only be treated as aesthetic phenomena isolated from their context. Moreover, whether they were considered beautiful or not, was not a point of concern, (akin to the contemporaneous Functionalists of Western Europe). 'Content,' on the other hand, was regarded as the 'social condensator' and more precisely as program. Since the program was to become the aim of the new architecture: to aid social transformation; it was thereby the essence of content.⁷

The 'Socialist realists' (for lack of a better name to call those who advocated socialist realism) considered the Constructivist treatment of content a mechanical conception. It was a key point of divergence. Furthermore, their conception of form also raised a fundamental difference: that of the treatment of time, and the state of mind or the state of society in time. At the First Congress of the Architects of the U.S.S.R. in 1937, the existence of the already ideal society was clearly stated (as edited by Kopp):

"le peuple Soviétique est le plus heureux des peuples du monde." Dans ces conditions, quelles sont les fonctions de l'architecture? Elle doit d'une part refléter cette situation heureuse par définition "c'est pourquoi notre architecture doit être profondément optimiste et joyeuse."⁸

Thus for the Socialist realists, form was to address a present state, not one which was being pursued in a future time. For them, architecture had to have an 'image'--a visual term which Kopp uses for the Russian literary term: 'obraz,' which specified 'artistic' literature as opposed to all other kinds. Program was to have no ties with artistic expression. Rather, it was to address a list of the needs of the project. Content, however, was indeed to be integrated with 'obraz,' and was furthermore to be the basis for the 'expression' of architecture. This 'artistic image' was to convey ideas through the proper means of the art of building: "La caractéristique essentielle de chaque image artistique

(khudojestinyi obraz) reside dans sa capacite de transmettre des sentiments concrets..."⁹ The enveloping of content within this vague concept of `obraz` and the ideas which they were together supposed to transmit was yet another one of the abstract intangibilities which characterized the Stalinian era, but nevertheless distinguished it as well.

The borrowing of a literary term was not unusual for the advocates of socialist realism, as the movement was born and bred in the field of literature during the 1930s, whereby it became a method for architectural use. As the twenties drew to a close, the First Five-year Plan was instituted and political power was again centralized. This was the Soviet era of collectivization, in which production was pushed to the limit, quotas were set high, and the calls to `overtake America` and `bypass capitalist production` were the order of the day. The impact of this revolutionary zeal on the arts is characterized by Kopp as follows:

Des brigades d'artistes vont également s'organiser et épousant totalement les objectifs du pouvoir, mettent leurs talents au service de l'industrialisation. Par ailleurs la théorie de la consolidation du socialisme dans un seul pays marquera profondément la théorie artistique des années trente.¹⁰

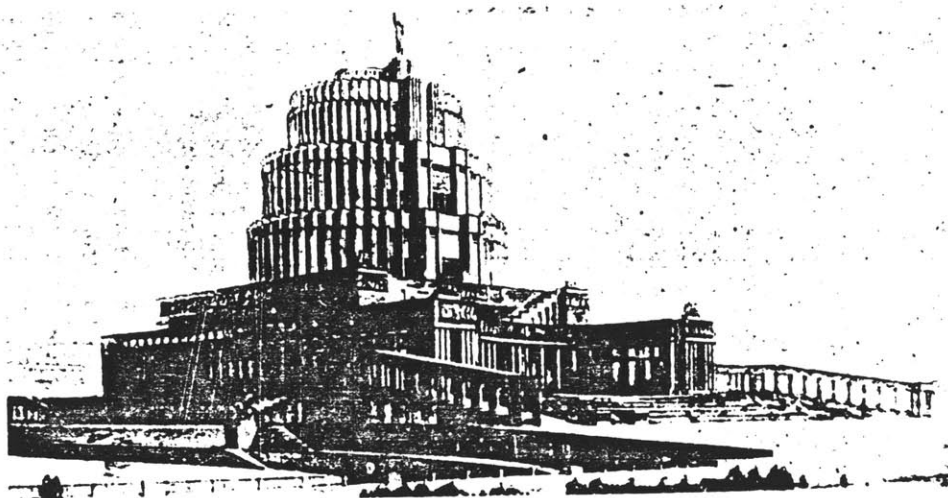
The artists role was thus to adhere to the consolidation of society. To affirm this new reality, art was to unfold in a narration, rather than to represent a moment of compositional concentration as it formerly had. The narrative device of socialist realism marked the literarization of all forms of art in which the artist was thereby in the privileged position of being the mediator, to make explicit to the masses, the new reality: the `spirit of the party`.¹¹

There is a sense of `all paths leading to the same road` in each one of these enigmatic arguments put forth by the proponents of the theory known as socialist realism. The aesthetic of the 1930s and the advent of applying this theory

as a method was to finally come to fruition by the "Conseil de Construction du Palais des Soviets" (1932);

Le classicisme est indiqué ici comme solution, solution la meilleure pour la forme et l'idée, solution qui exprime l'idéologie comme la forme de beauté la plus parfaite. Nous pensons qu'aucun architecte ne peut concevoir le Palais des Soviets autrement que sous les formes les plus parfaites et par conséquent les plus classiques.¹²

This declaration articulated the subordination of artistic form to socialist content. Moreover, "L'esthétique des années trente redéfinit la dichotomie de la forme et du contenu. Le contenu de l'art soviétique des années trente c'est précisément cette société industrialiste..."¹³ Form was thereafter only to support the message of social content, in the most demonstrative possible means; from which was derived a return to classicism, the art of glorification, in a word: monumentalism.



Projet de B. Yofan au premier tour du concours

But we have been thick in the discussion of how the

treatment of form or content all lead to the depiction of content. Let us return more specifically to form, because whether it was the 'light at the end of the tunnel' or not, it was nonetheless, ultimately what appeared before our eyes during the Stalinian period of Soviet architecture, as well as in Mainland China by the mid-1950s.

Monumentalism was chosen to convey 'grandiose content,' but where did this return to 'the culture of the past' come from which had all but been discarded, even by the Komakademia. "During the 1920s, classical styles were considered the product of condemned political systems."¹⁴ By the same token, eclecticism was regarded as reactionary, inspired by the past; but it was soon to be resuscitated by their man Milioutine, who declared that the problem of cultural heritage was not a simple refusal of eclectics, formalists, and functionalists; but rather, a common ground. (This also appeared in the aforementioned 1932 article in "Sovietskaia Arkhitektura.") Kopp's critique of this declaration sums up Milioutine's argument to a 'T.'

Milioutine n'a pas fait faire un pas de plus à la notion d'architecture "prolétarienne" et n'a en rien contribué à la naissance de cette nouvelle architecture dont il souligne la nécessité. Il a par contre ouvert la porte, que les constructivistes avaient jusque-là réussi à bloquer, par laquelle s'engouffreront bientôt, au moment du concours pour le Palais des Soviets, "les meilleurs exemples de l'architecture du passé."

Milioutine a simultanément condamné et réhabilité tous les styles, toutes les époques, toutes les formes de composition.¹⁵

The culture of the past finds its justification in the theory of "assimilation of cultural heritage." Lenin's thesis maintains:

"Si nous ne comprenons, (écrit Lénine), qu'une culture prolétarienne ne peut être édiflée qu'a partir d'une connaissance précise de la culture créée par toute l'humanité et par l'intégration de cette culture, nous ne pouvons accomplir notre tâche."¹⁶

This thesis was utilized as a method--`critical assimilation of cultural heritage`--to rehabilitate the architecture of the past, at least its forms. From the application of this method it was deduced that a new relation between form and content existed:

"et qu'on peut utiliser des solutions compositionnelles et spatiales tirées de l'héritage du passé en leur donnant un nouveau contenu, et en modifiant la norme jusqu'à complète adéquation avec le contenu."¹⁷

It was this method which allowed the acceptance of old styles, old forms, rather than having to invent new ones for the new Soviet socialist architecture.

Thus classicism and monumentalism were wed to become the new Soviet architectural style of the 1930s under the single doctrine of socialist realism, which was set forth for all disciplines during a decisive stage of centralization in 1932. At that time the Central Committee also ordered the reconstruction of artistic and literary organizations into single organizations. The Union of Architects of the U.S.S.R. was thereby founded for the discipline of architecture; and from the onset of its first congress in 1937, the doctrine became unique and obligatory for all architects. And although the theory of socialist realism was originally defined for literature as:

[une] "création d'oeuvres d'une haute signification artistique, pénétrées de l'héroïque impulsion du prolétariat international, de la grandeur de la victoire du socialisme et reflétant la grande conscience et l'héroïsme du Parti communiste (...), la création d'oeuvres digne de la grande époque du socialisme."¹⁸

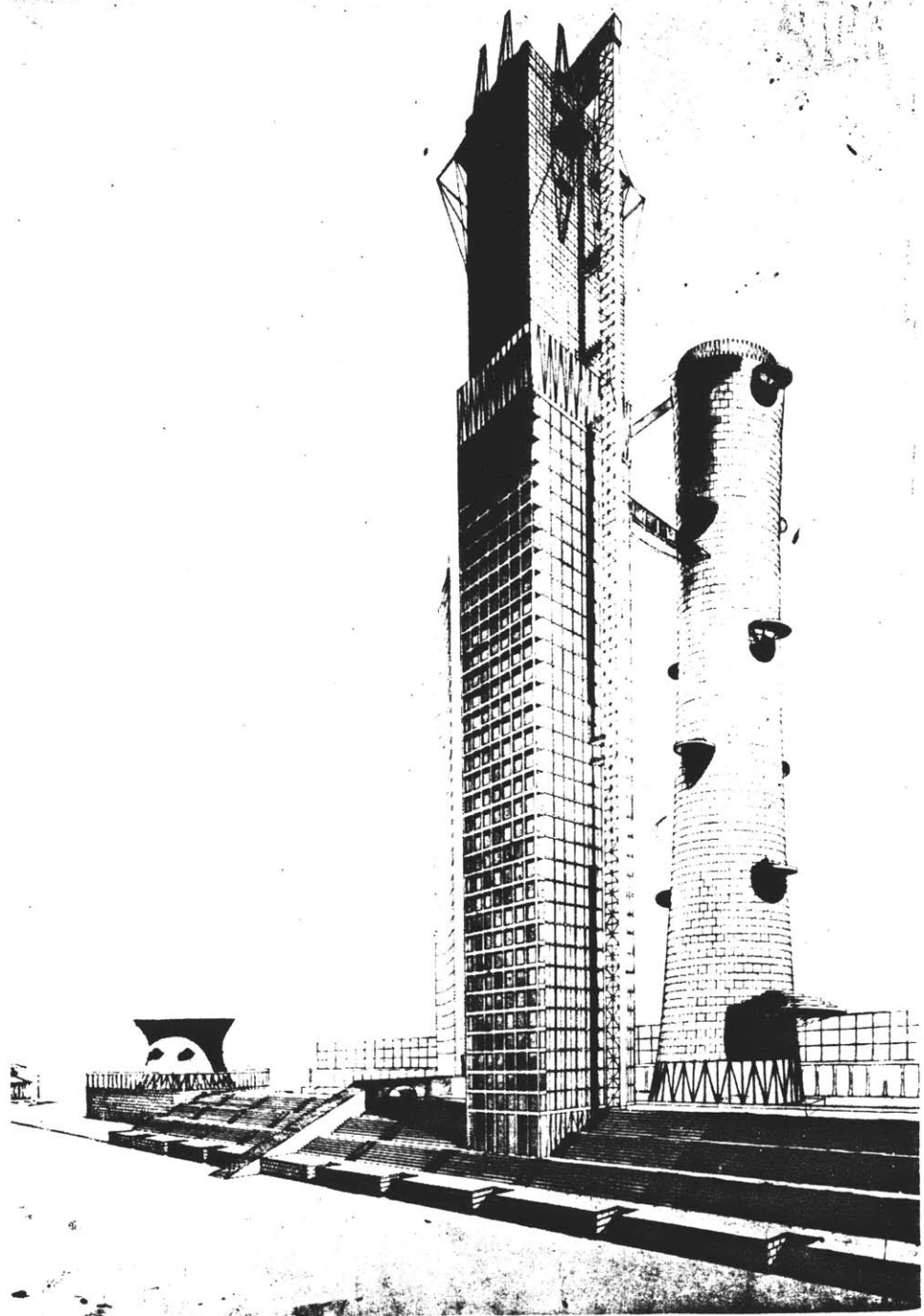
Kopp nevertheless maintains that it was never defined for its application to the field of architecture, except in a backhanded manner, by default:

Le réalisme socialiste en architecture ne sera jamais que le rejeton avorté du réalisme littéraire. Il se définira d'une part par un refus: refus de

l'architecture d'avant-garde soviétique ou occidentale abusivement assimilées l'une à l'autre; refus de la recherche et de la prospective sociale des années vingt liées à la notion d'un "mode de vie nouveau"; refus de l'approche scientifique et objective qui avait marqué les doctrines des divers groupes d'architectes de la période précédente. Mais il se définira aussi et surtout par des pétitions de principe dont la plupart ne seront que des tautologies du niveau le plus élémentaire.¹⁹

Although the style or method of socialist realism in architecture was never clearly defined apart from expounding upon its conventions of a 'new Soviet style' to be born by the 'critical assimilation of historical heritage' and above all, to be a 'socialist architecture,' all those who broached the topic always took care to affirm that it was "neither the servile copy of the works of the past nor the innovation cut from all historic roots."²⁰ Kopp also takes heed to note that the appearance of architectural grandeur to reflect the grandeur of the objectives of socialism was not initially seen during the peak of the Stalinian period. The Constructivists were the first to demonstrate this tendency early in the 1930s, which was no doubt out of character for the group, but nevertheless may have been an ill-attempt to cling to a ledge from which their grasp was rapidly slipping.²¹

If I have strayed too far down the path of Soviet theory and its Stalinian or 'socialist realist' architecture, it has been for a two-fold purpose. The Chinese will also attempt to go down this same trodden path in search of a 'socialist architecture' to express an ideology, that may, at least through the methods of 'socialist realism,' be unrealizable. The Soviet assistance of the 1950s was nevertheless to make an indelible mark on China's architecture, particularly in relation to urban form. Thereof, the presence of these forms which attest to this prior bonding have now become a part of the Chinese own cultural heritage to be 'critically assimilated.'



Projet pour le Narkomtiazprom (commissariat à l'Industrie lourde). Arch. : I. Léonidov, Moscou, 1930. Cet ouvrage était destiné à la place Rouge. Il est démonstratif de l'évolution de l'architecture soviétique du début des années trente vers le gigantisme, évolution à laquelle les constructivistes eux-mêmes ne sont pas insensibles

Whereas the dichotomy of form and content in the Soviet instance was derived from the timing of the thirties' monumental classicism with the concurrent collectivization of the working class, the introduction of the Stalinian forms on the Mainland early in the 1950s was to precede the communization of the late fifties. Nonetheless, the implanting of these 'wide-armed' 'wedding cake' edifices with which to embrace the new society (thereupon translated to wide-armed, curved roof structures) was to serve as no less of a contradiction, and was moreover to instigate a dichotomy between the art and science of architecture supported by the increasing incompatibility of 'socialist content' and 'nationalist form.'



NOTES

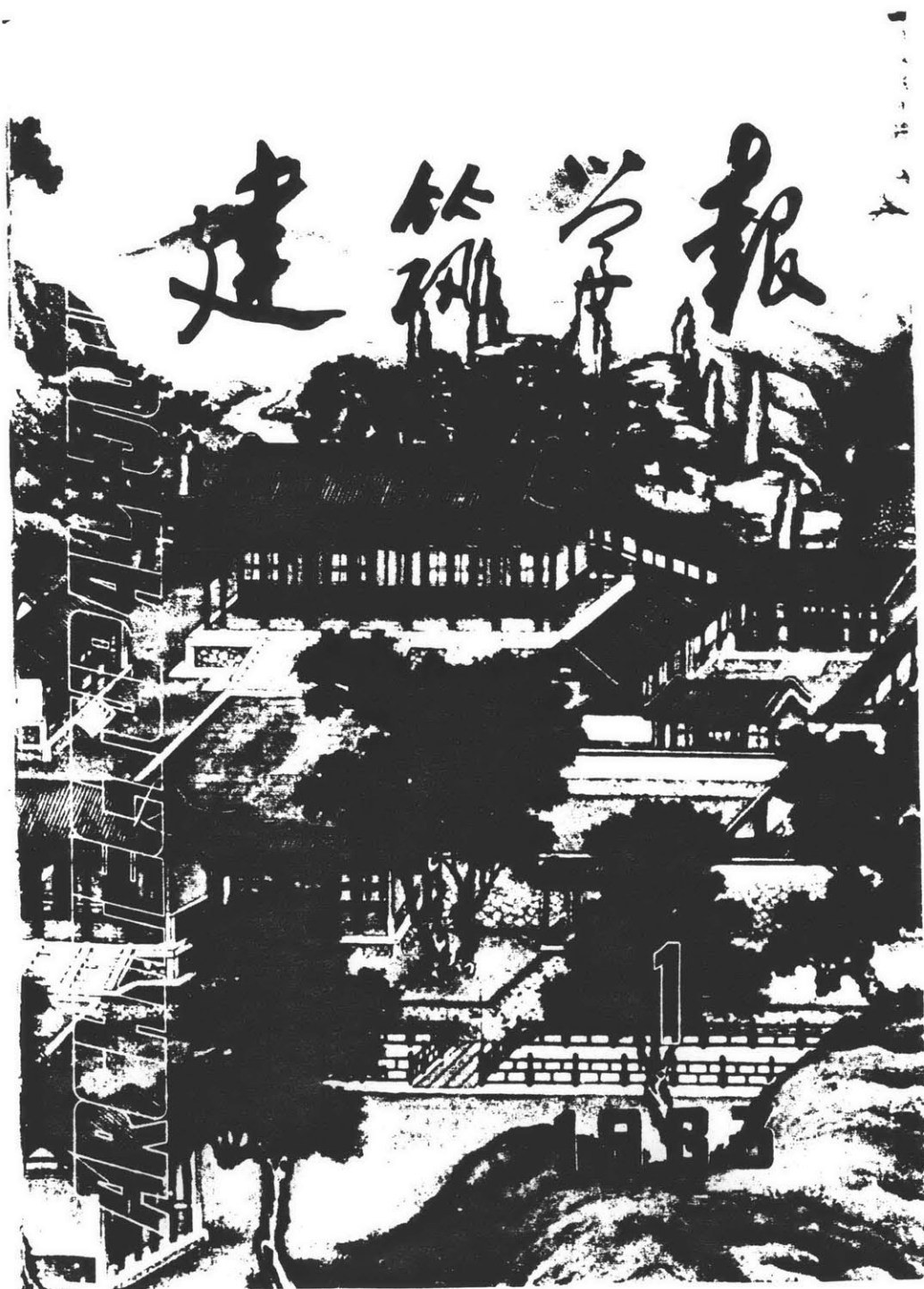
1. Anatole Kopp, l'architecture de la periode stalinienne, (France: Presses universitaires de Grenoble, 1978), p.210. (I am indebted to Kopp for this reference.)
2. Kopp, p.267. Quoted in : J. Staline, Oeuvres Complètes, VII, p.138, (of the Russian edition).
3. Kopp, Ibid.
4. Kopp, p.83. (translated from French)
5. Kopp, p.232.
6. Kopp, p.211. (translated from French)
7. Kopp, p.232.
8. Kopp, p.211. Quoted from :discours de N. Kolly au premier Congrès des architectes de l'U.R.S.S. (1937).
9. Kopp, p.234. Quoted from: I. Matza, Arkitektura S.S.S.R., No.3, (1944).
10. Kopp, pp.193-194.
11. Needless to say, this literarization of the arts was also to be Chairman Mao's call during the Cultural Revolution, as was exemplified by the following article:
Preparatory Group of the Revolutionary Committee of Art Organizations under the Central People's Government (author), "Art that Serves Proletarian Politics," China Reconstructs, No.2, (1968).
12. Kopp, p.198. Quoted in: "Procès-verbal du Conseil de Construction du Palais des Soviets," (1932).
13. Kopp, Ibid. Cited from: H. Arvon, L'Esthétique Marxiste, Chapter 3, P.U.F., (1970).
14. Kopp, p.67.
15. Kopp, p.118.
16. Kopp, p.200. (no further reference cited).
17. Kopp, p.268. Quoted by Boblyj cited from: I. Matza, "Le Palais des Soviets et l'heritage architectural," La Brigade des artistes, No.3, (1932). (Matza was one of the founders of the V.O.P.R.A..)

18. Kopp, p.209. Quoted from: Ettore Lo Gatto, Histoire de la Littérature Russe, (translated from Italian: Desclée de Brouwer, Paris, 1965).

19. Kopp, pp. 209-210.

20. Kopp, p. 221. (translated from French)

21. Kopp, p.232.



T H E O R Y
a r t - s c i e n c e
e m o t i o n a l - p r a c t i c a l
i m m a t e r i a l - m a t e r i a l

Chinese architecture today is working to bring about a renaissance on a new level of the national tradition. It is making a critical appraisal of the cultural heritage,... It aims, at the same time, to master the most advanced theoretical and technical experience of world architecture, and in particular the lessons already learnt in the Soviet Union of the demands made on architecture by socialist ways of living and building. It is striving to adapt these experiences realistically to Chinese conditions.¹

The First Five-Year Plan of 1953-57 was the breeding ground for the Sino-Soviet collaboration, comprising one of the most extensive technological transfers in modern times. The question of whether the Soviet graft was going to take or not was in issue for politics, economics, as well as for architecture. Emphasis on symmetry, and planning from an airplane's perspective were about the extent of the common bond shared by these burgeoning socialist nations at the time of their architectural association. In spite of the Chinese deference to the Soviets, however, from the onset it was evident that they had a mind of their own: ('self-reliance'). This third and final segment on theory will therefore address what the Chinese have had to say with regard to their own architectural theory; (with the addition, of course, of my own two cents).

We return to the dialectic of form and content whose divergence arose, in the Soviet instance, first through the subordination of form to content (due to the 'spirit of the party') and which was subsequently reunited through the method of 'critical assimilation of cultural heritage' in the guise of historical monumentalism; (or so they claimed).

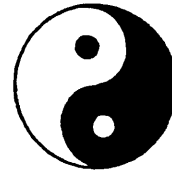
In the Chinese case, however, although one will certainly be able to detect the manipulation by the hands of the party both in overall tone as well as in specific

incidents, the underlying source of conflict which will prevent the dialectic of form and content to synthesize will be centered upon the issues of art and science in architecture. Even though these in themselves were also matters of concern for the Soviets, the crux of the controversy thereof was the interpretation of these issues, not the question of their a priori existence altogether. For the Chinese, by contrast, the role of art in architecture was obscure.

The attitude taken by the Chinese Communists toward the arts has been inclined to their suppression, as has already been mentioned. Their association of the arts with dynastic tradition, the scholars, and the Imperialist powers, on the one hand; and with a more brass-tacks concern with urban consumerism and 'non-productive' investment on the other; makes for a thick field of preconception to cut their way through before finding a 'socialist art' or even one which is merely non-bourgeois. 'Theory' shares this association with the arts in its elitism; theory which in the realm of the scholars (either ancient or modern) sets itself apart from practice. Of greater significance in the relationship of theory to art, however, is the understanding that together they constitute the immaterial aspects of architecture, (a position which they share with literature). This but begins to suggest why the recording of architecture in the past has been largely in the form of building manuals or treatises on construction, solely addressing its material aspects. (Thus through the exclusion of theory in written documentation, a separation of art and science can also begin to be inferred; but it was not for this reasons alone.) For architecture, prior to this century, was essentially a two-fold task undertaken by the builder and the scholar: the former, regarded as an artisan of low social status; the latter, from the class of the litterati; and the distance between the two, virtually impassible. The builder's responsibilities were

primarily to satisfy the 'practical' and material aspects, characterized by the 'objective' requirements of structure. This role has been roughly translated to taking charge of 'modern technique' and 'science.' The scholar's task, by contrast, was to tend to the 'emotional' aspects: to raise spirit and to satisfy the artistic or 'emotional' needs of the client. Literature was his source book. The scholar drew from the classics for the 'art' of architecture. Although traditionally donning the artist's robe, the scholar's position in modern terms is more aptly revealed by his task 'to raise spirit,' as it is essentially a political role. Being that there are two sides to every coin, however, the so-called objective role of the builder was also that of artisan and master craftsman: to tend to the material aspects of the building's art. Correspondingly, the delegation of 'subjective' and 'spiritual' fulfillment to the scholar also warranted his hand in the bigger picture; as the scholar was also a planner. It was his responsibility to designate social order in accordance with built form, both at the urban and architectural levels. This confirms his role as politician.

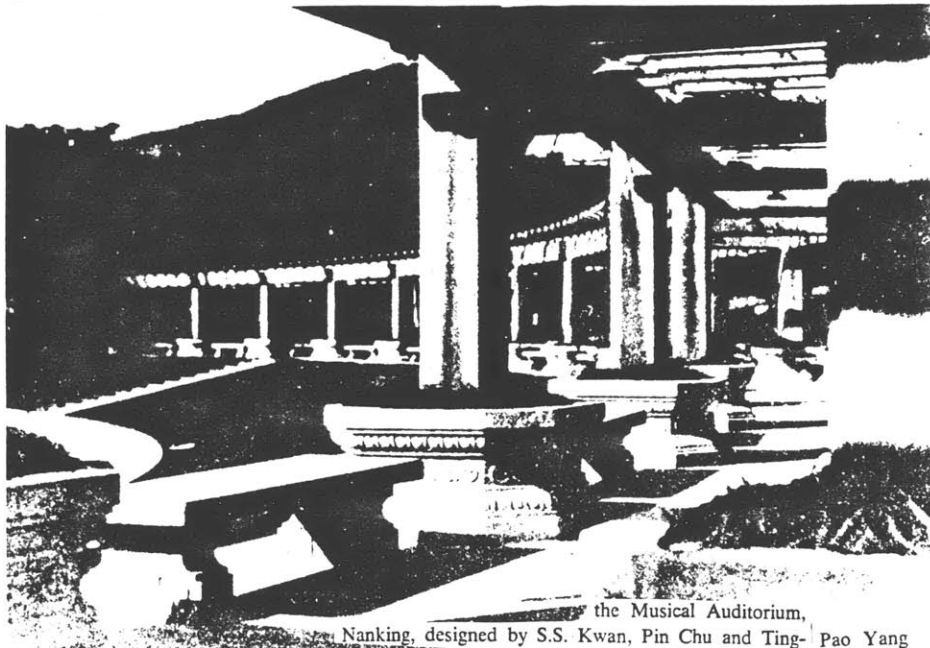
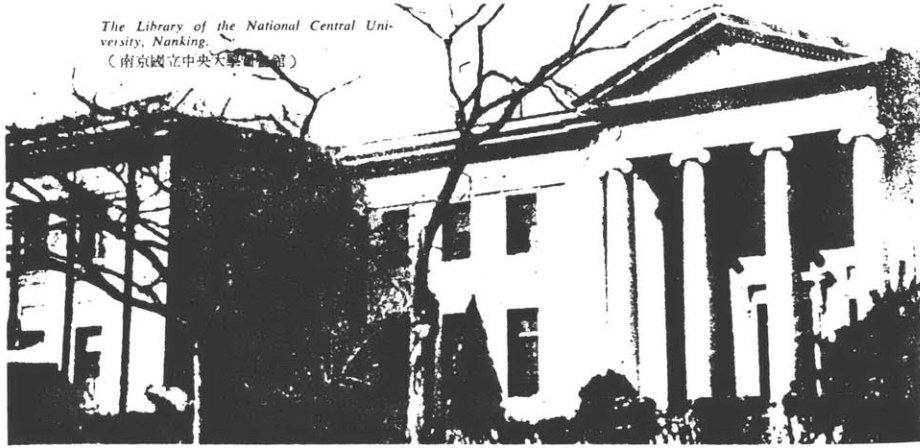
I am hereby reminded of the lessons of the yin-yang diagram. At a glance it is composed of the intermingling of the two forces, dark and light. Closer examination draws the eye to the two tiny dots in each of the paisley shaped figures. I learned of their significance during a lecture on Chinese gardens by Professor Wu Huanjia (of Tsinghua University), who referred to them as the 'true' yin and 'true' yang, each housed within their opposing force. (I don't suppose that Western color theories of simultaneous contrast quite convey the same sort of message.) It seems to make sense according to this principle that the scholar, although commonly romanticized as an ethereal being, would also be the one to have the iron fist.



This leaves the art of architecture in a rather precarious position. Not only does it have to vie with science and technique (of which the Chinese are terribly fond, in large part because it represents `modern`); but it also has a seemingly innocuous ringmaster with a very big say. To endow an individual with the kind of power which is only to be held in collective command, is a rather touchy situation in the People's Republic. This tension is most conspicuous in articles concerning architectural theory in the last several years of the "Jianzhu Xuebao". Architects repeatedly call upon the people for their support in the profession's increasingly individual endeavors. (Needless to say, the suppression of the arts in all of the communist-bloc nations is not just riveted to the individual, but to the power of the arts in dissent, which begins with the individual.)

Although the inherent conflicts surrounding the `art of architecture` were quite evident, Professor Liang Ssu-ch'eng-- "the pioneer of research on Chinese traditional architecture"-- was to be interviewed in 1961 for a newspaper article which was then reprinted in "China Reconstructs" entitled: "Architecture as an Art." His approach to the study of Chinese architecture has in large part been attributed to his Beaux Arts education at U.Penn. Liang was to become an advocate of historicism in the north, and was instrumental in ensuring that the past didn't get left behind in the rush for modernization. By contrast, Yang Ting-pao, who also trained with Paul Cret at U.Penn., would establish himself in the south at the Nanking Institute of Technology. Aside from designing numerous buildings during the `Chinese Renaissance` (in collaboration with Kwan and Chu), he also designed the Nanking University Library with its ionic columns; and later went on to do the 1952 Peace Hotel, a well-known, early example of the `modernist` approach on the Mainland. (These projects were diverse distillates perhaps, but nonetheless a steady barometer of the shifting winds.)

The Library of the National Central University, Nanking.
(南京國立中央大學圖書館)



the Musical Auditorium,
Nanking, designed by S.S. Kwan, Pin Chu and Ting-Pao Yang



the International Club, Nanking,
by S. S. Kwan, Pin Chu and Ting-Pao Yang



Whereas traditionally the scholar was in large part responsible for underpinnings of architectural theory, twentieth century theory prior to liberation was similarly rooted in pedagogy. 'Academicism' marked the first wave and 'Modernism' the second. Educated in the late twenties (for the most part in America), the former group are by and large considered the base for the present-day 'traditionalists.' A second wave of prominent architects were later educated in the thirties and forties, (with the Japanese occupation to provide the impetus for their going abroad). The AA in London is reputedly one of the recipients of this migration. These architects were, needless to say, to be subject to the teachings of the 'modern masters;' many of whom have assumed the task of catching up to the modern world--'the modernists.'

Tsinghua University's department of Architecture in Beijing, for example, has encompassed these two waves. Founded in 1946 by Professor Liang Ssu-ch'eng, the Chairman of the department is now the eminent Professor Wu Liangyong, who studied with Saarinen at Cranbrook. Professor Wang Tan (also at Tsinghua) studied with Wright in the 1940s. The same contrast is evident in the south. Liu Dunzhen (University of Tokyo), who was in large part responsible for laying foundations for both domestic architecture as well as Classical gardens, was based at N.I.T.; whereas Professor

O.F. Voong, founder of the department of Architecture at Tongji University (Shanghai), studied at the Bauhaus under Hannes Meyer. Needless to say, the role of education in modern Chinese architectural theory has been instrumental to its development.

Two schools of training-- beaux-arts and modernist-- concurred with the shift from the Soviet theory of the 1950s to its precipitous disposal by the 1960s. This brings us back to the issue of time. We have seen the acuteness of its nuances from the Soviet example, in addressing the future or the present 'utopia.' Time has thus been a key issue, particularly in the pursuit of 'socialist architecture.' The matter of the shuffling or whirlwinding of time has been compounded by the choice of time chosen to 'spot' in the momentum; (and thereafter, more simply a matter of timing). The direction of this choice is a theme which recurs in articles within the last decade of the "Jianzhu Xuebao:" addressing the past with preservation, conservation, and 'traditional continuity;' addressing the present by focusing on 'contemporary lifestyle' (largely derived from the installation of consumerism to counterbalance accumulation); and finally the tune of 'spirit,' still retaining its stronghold of glancing ahead to the future. A centering in the present distinguishes the 1980s from previous decades which tended to focus on either past, revisionist 'tradition' or its antithesis: ultra-modern 'innovation' equally filled with false-bottomed ideologies.

The objective to mediate between tradition and innovation seemed to be clear and open-minded if at no other time than shortly after the founding of the People's Republic in 1949. Professor Liang Ssu-ch'eng made conjectures as to this mediation in his 1952 article entitled: "China's Architectural Heritage and the Tasks of Today." (He was head of the department of Architectural Engineering at Tsinghua at

the time.) The article is enthusiastic, optimistic, and indeed reflects the 'spirit of the times' in retrospect. Although the Professor's intentions were rooted in the past, they consisted of a substance which found contradistinction with that which was yet to come. There was much assurance in his writings that adaptation would occur readily, on any number of levels from a strong traditional foundation; beginning with structure:

The architecture of the Chinese nation forms a distinct system of its own among the great architectural systems of the world. In this system, a skeleton of wood is first built on the stylobate in order to support the upper part of the building. Walls are in fact only "screens" forming the interior and the exterior.

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This method exactly conforms with the principle of the modern use of a steel reinforced concrete skeleton, and provides an excellent foundation for the adaptation of modern materials and techniques to the characteristic features of Chinese architecture.²

in addressing the modernist issue of decoration:

In Chinese architecture, every visible element is at the same time a decorative element. An ornamental element is a structural element which has had additional artistic treatment. Decoration and structure are in most cases completely unified.³

on its adaptability to the changing urban form:

Furthermore, a high degree of monumentalism has been achieved in all-wood construction. This is a singular phenomenon among the architectural systems of the world.⁴

on traditional architecture and architectonics:

... we are drawn to the conclusion that the reason why they possess such durability is because their construction is scientific and conforms ingeniously to the properties of the wood material of which they are built.⁵

on the transmutability of traditional architecture:

Chinese architecture whether in wood or in masonry has preserved throughout several thousands of years a distinct, continuous, and uniformly consistent national character. But China's architects have been adept at absorbing outside influences on the basis of their own tradition. They have thus enriched their art and yet not lost their basic characteristics.⁶

At that point Professor Liang's self-assured involvement with China's ancient tradition begins to falter, revealing an undermining hesitance and precaution. He is quick to identify this self-consciousness (both on his part as well as on behalf of other Chinese architects) with the experiences of the recent past; (and in doing so, he identifies the two most fundamental seeds at the core of architectural theory in his view, which were to surface later, central to his writings: ideology and art).

The aggressors indiscriminately transplanted into China their own architectural forms.... In their arrogance, they looked down upon and destroyed the original style and setting of Chinese cities. Architecture in China lost its independence and individuality. Ideologically and artistically it was degraded.

... the architects became strangers to our finest national traditions which were most regrettably rejected and cast aside. The priceless skill of experienced artisans was allowed to degenerate through disuse.⁷

Having left the distant and recent past behind, Professor Liang continues to proceed with some caution, introducing the 'correct' way to go forth with Chairman Mao at the helm of this new ideology; whereupon the issues of form and content emerge.

What kind of structures, styles and forms should be adopted? All these are momentous questions. Laissez-faire and unplanned development cannot be permitted. The cultural and educational policy of the Common Programme adopted by the Chinese People's Political Consultative Conference has, however, provided them with a working guide.... [This was enunciated by Mao Tse-tung.] Brilliantly analysing the new culture in his On New Democracy he writes that China's new culture is, and therefore [Liang deduces] China's new architecture must also necessarily be, "national. It opposes imperialist oppression and upholds the dignity and independence of the Chinese nation. It belongs to this nation of ours, and is imbued with our national characteristics." [It must] "... have its own form, namely, a national form. National in form, new democratic in content-- such is

our new culture today." China's new architecture must be "scientific"; it must be the expression of an outlook which "stands for seeking truth from facts, it stands for objective truth and for unity between theory and practice..." and [according to Professor Liang:] it must be an art that "has developed out of her old culture ." New China's architecture "... must respect our own history and should not break it up ... respecting its dialectical development, but not eulogizing the ancient while disparaging the modern ..." "... direct them (the masses ...) not to look backward, but to look forward."⁸

Professor Liang's comment with regard to this was, again in the mode of the day's exuberance: "Our architects gained confidence from such clear directions. They will enable us to stride boldly forward and overcome our defects."⁹ But thereafter, he begins to focus on the imminent struggle, as his words become filled with a reserved hope. Having given the Chairman his place, central to the article, Professor Liang closes with an effort to merge his own concerns with those which are rapidly becoming a reality before his eyes; (also a foresight of the General Line for Socialist Construction: "for more, better, faster, and more economical results;" which will emerge in 1958);

Quantity must, within carefully calculated limits, take precedence over quality. But we must constantly look for the earliest opportunity to answer both of these demands simultaneously. We believe that the raising of artistic quality and mass production can and must be linked together.

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The architects of new China ... are at present directing all their efforts to meet the needs of large-scale economic construction, but at the same time they are equipping themselves to greet the upsurge of cultural construction that is coming. Strenuous efforts are being made to improve the quality of our designs. There is a growing enthusiasm in architectural circles for study, understanding, and appreciation of our national architectural heritage. Greater attention is being paid to systematising knowledge of our artistic heritage. This emphasis on the need to master our national tradition in creative work is already a key point in educational policy for the rising generation of architects.¹⁰

And his final words are for tradition, innovation, as well as for ideology:

The Chinese people have every confidence ... that the quality of architectural design will be significantly raised by absorbing the specific features of China's own traditional art. With the use of new techniques and materials, a glorious new architecture will be developed, a new-democratic architecture that is "national, scientific, and of the broad masses"...¹¹

[I have pursued this article in a linear fashion, relatively untouched because it is a foundation of policy at the time of the founding of the People's Republic.]

An earlier article written in 1947 focused on the need to clarify the role of theory itself, in the ongoing overlapping of Western and Eastern forms and methods at that time.

I spent an evening some time ago with a party of music lovers. We had some chamber music and much talk, leading to a discussion of Confucius's contention that one can tell from the music of a nation whether or not it is well governed... [With] our failure to arrive at a satisfactory conclusion [...]. I would say that the course of the discussion was misdirected from the very beginning. You cannot take a statement of Confucius as the basis of a debate in Europe. For there is no theory of music of universal application.¹²

The article, simply entitled: "Chinese Architectural Theory," was written by Charles Chen (Chen Chan-siang), who was a student of architecture and city planning in England during the 1940s. (At that time, Chen also became friends with Robert Maxwell (Princeton) and Colin Rowe (Cornell) at the University of Liverpool.) Chen remained in China after liberation and worked on the Peking City Plan with Liang Ssu-ch'eng, whereby he came to be considered the "Peking regime's expert in municipal planning."¹³ Chen sums up the situation as follows:

Chinese architecture is essentially the work of two persons: the scholar and the builder. What there is of creative work is the former's-- his the social, his the religious and his the literary premises of building. The builder fulfils the needs analysed and formulated by the scholar. He fulfils them in a simple skilful way, but what he does loses its higher meaning if looked at on nothing but its own merits in the manner in which we look at Western building. To study the builder's work to the exclusion of the scholar's would be to study empty shells.¹⁴

Although Chen's article is largely dedicated to elaborating upon the role of the scholar (which has been sorely overlooked), his thesis is clear: "We mustn't look at Chinese architecture from an occidental point of view. They are absolutely two different cups of tea."¹⁵

Equally clear are his statements to a young master's degree candidate from Columbia University, who writes of 'his most perceptive commentator' with zeal. Chen's observations, as recorded by Cohn in 1985, are as pertinent to today as was his 1947 critique with regard to its own era.

Architects are classified as engineers-- now, today.... Too much emphasis is placed on watercolors. Our students are first class draftsmen. But architecture is not something to draw, but something to design. [He continues, ... in a recent national design competition ...] All of the famous architects of the country are brought to a place. The program is, design such-and-such a building, from 120,000 to 150,000 square meters. That is all; that is the brief. The architects draw on the spot, beautiful drawings and very simple plans, in two weeks. Now is that any way to design an important building?¹⁶

To echo this last sentiment; 'is this but an attempt to make Chinese tea out of a Western cup of coffee?' I underscore the citing of very simple plans which was previously presented by Professor Liang; (the virtual absence of plans in the ancient building treatises). Reyner Banham makes the following observations in his Theory and Design in the First Machine Age, in the chapter entitled: "Adolf Loos and the Problem of Ornament;" which are pertinent to these, indeed, different cups of tea; (which nevertheless share some common leaves).

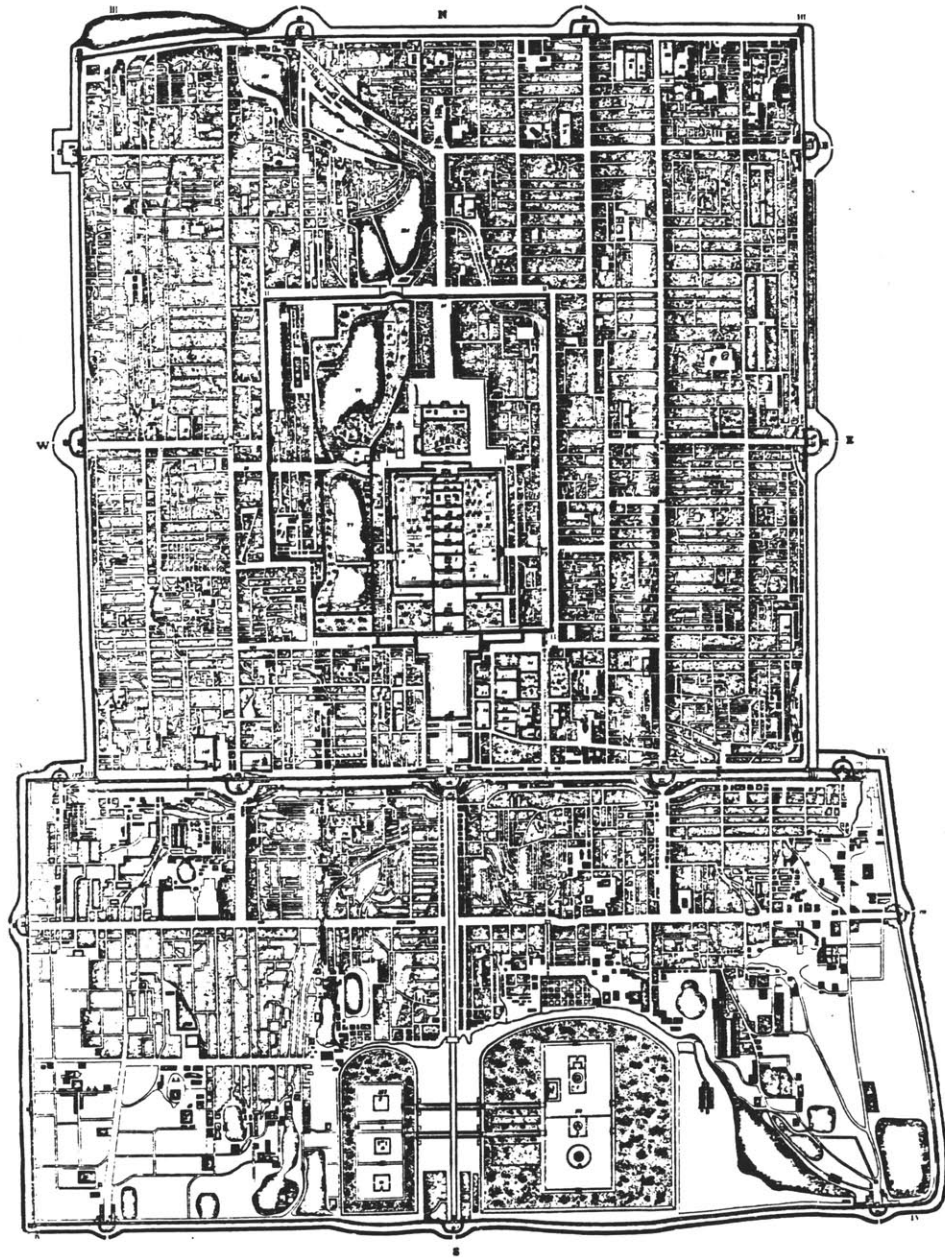
The ancient Greeks are abused for their excessive attention to original detailing and, by inference from the fact that Romans were praised for not doing so, inventing new orders after Doric. The Parthenon is despised for being painted-- a point that later Modern-Movement Classicists were happy to overlook. It is Rome and Roman architecture (as he understood them) that receive Loos's approbation.

From the Romans we derive our social sense and our spiritual discipline [Loos's excerpt follows:]

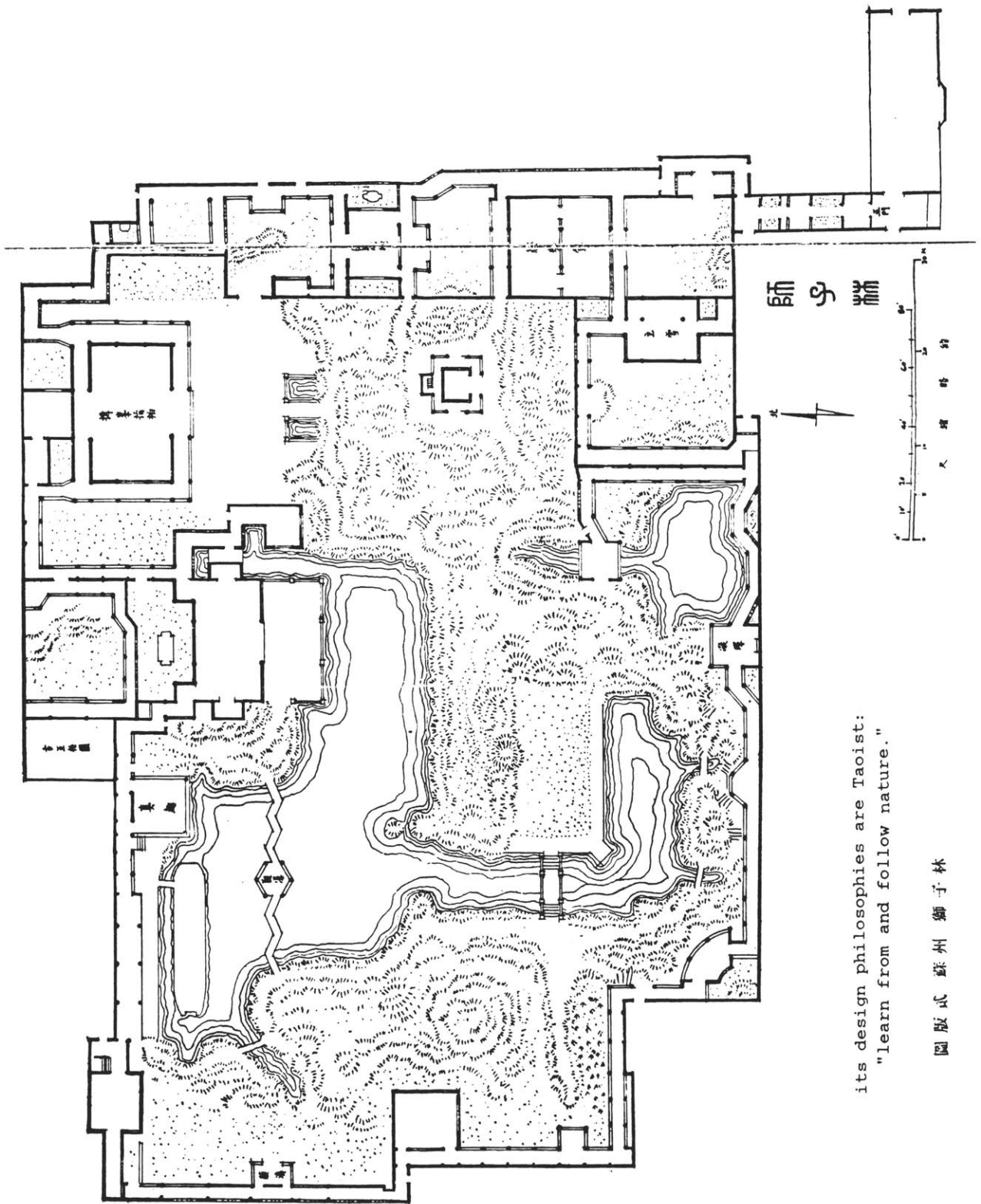
It was no accident that the Romans were not in a position to discover new orders of columns, new decorative styles.... The Greeks squandered their inventiveness on the Orders, the Romans spent theirs on the plan. And he who can resolve the larger problems of ground plan does not concern himself with new mouldings.¹⁷

One may assume that there are similarly phases in the no matter how 'distinct, continuous, and uniformly consistent' development of Chinese architecture, which were more inclined to perceptual ordering than conceptual planning. In Loos's example, however, we are essentially dealing with two classics. In the Chinese lineage there is only one classic tradition; but it has been shaped by the integration of two dominant philosophies: Confucianism--and its antithesis--Taoism. The Imperial City in Beijing (in its entirety) is the quintessential example of this: the ceremony of the strictly hierarchical Forbidden City flanked by the Imperial Gardens. (The classical gardens of Suzhou more aptly depict the Taoist philosophies.) Here is where the perceptual and conceptual orderings first find their division. The principles of gardens are primarily perceptual: a scroll of a painting to unroll as you proceed through it, borrowing scenes and ever-changing views, 'set off by concealment,' 'divide and multiply;' and its design philosophies are Taoist: "learn from and follow nature." By contrast, the principles of architecture are primarily conceptual: hierarchy, the orders of society, clarity and distinction of ranks; and its roots are Confucian.

The juxtaposing of these two principles in architecture and planning are the Chinese source of complexity, just as the Romans source was derived from the manipulation of the plan. The Chinese sense of planning is world-renowned, at any scale, in any application; but when Chen tells us that during a recent national competition, "the architects draw on the spot, beautiful drawings, and very simple plans," is it partially because they are part of a tradition of designing complexes of simple plans? "He who can resolve the problems of the ground plan" in Loos's words, is dealing in a tradition which, by and large, manipulated single objects, either in relation to one another or thereupon to city form; a very different cup of tea, indeed.



its roots are Confucian: hierarchy, the orders of society,
clarity and distinction of ranks



its design philosophies are Taoist:
"learn from and follow nature."

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Chen cites the following excerpt by Lin Hui-yin (the wife of Liang Ssu-ch'eng), which portrays the apologetic demeanor that often arises when individual Chinese buildings are removed from their context:

The essence of a Chinese layout is the grouping of individual buildings with courtyards and gardens over a wide area. Therefore even the most important and grandest palace, when looked at in isolation, and compared with any famous building abroad, will appear small, simple and of inferior appeal.¹⁸

With this in mind, however, Chen continues:

If this is true and buildings were always designed as part of some larger unit, then they should never be criticised independently; the qualities to be judged must be those of the whole. Not that this does not apply to certain European buildings. But a European church or palace can always be considered individual as well, a Chinese temple or palace never.¹⁹

And he acknowledges this difference specifically with regard to the Roman architects who:

... in order to meet the specialized activities of their time, had to develop a host of architectural forms. In China, builders solved their problems by the manipulation of basic units.... These basic needs, which were the only ones concerning the builder, changed only very slowly, if at all, as no changes in structural forms and materials were called for. The aesthetic result is of a seeming monotony which some critics lament. However, looking intently at any one building in China, one cannot fail to admit that with all the limitations imposed on them the Chinese builders have evolved a simple organic style.²⁰

Being that we have pressed the buzzer of 'organic,' we must take this opportunity to expound a bit further. Needless to say, intertwined with the obstacle of Western and Eastern methodological incompatibilities is the outlook on nature.

Chen presents this theme as follows:

It goes without saying that one of the fundamental differences between the Western and Chinese outlook on life is that in Western thought some tension always exists between man and nature, whereas in China "we find no barrier set up between the life of man and the rest of God's creations."

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If that is so, then it is hardly conceivable that a building, the work of man's hands, should be glorified and allowed to dominate its surroundings in defiance of nature rather than be brought into fusion with it.²¹

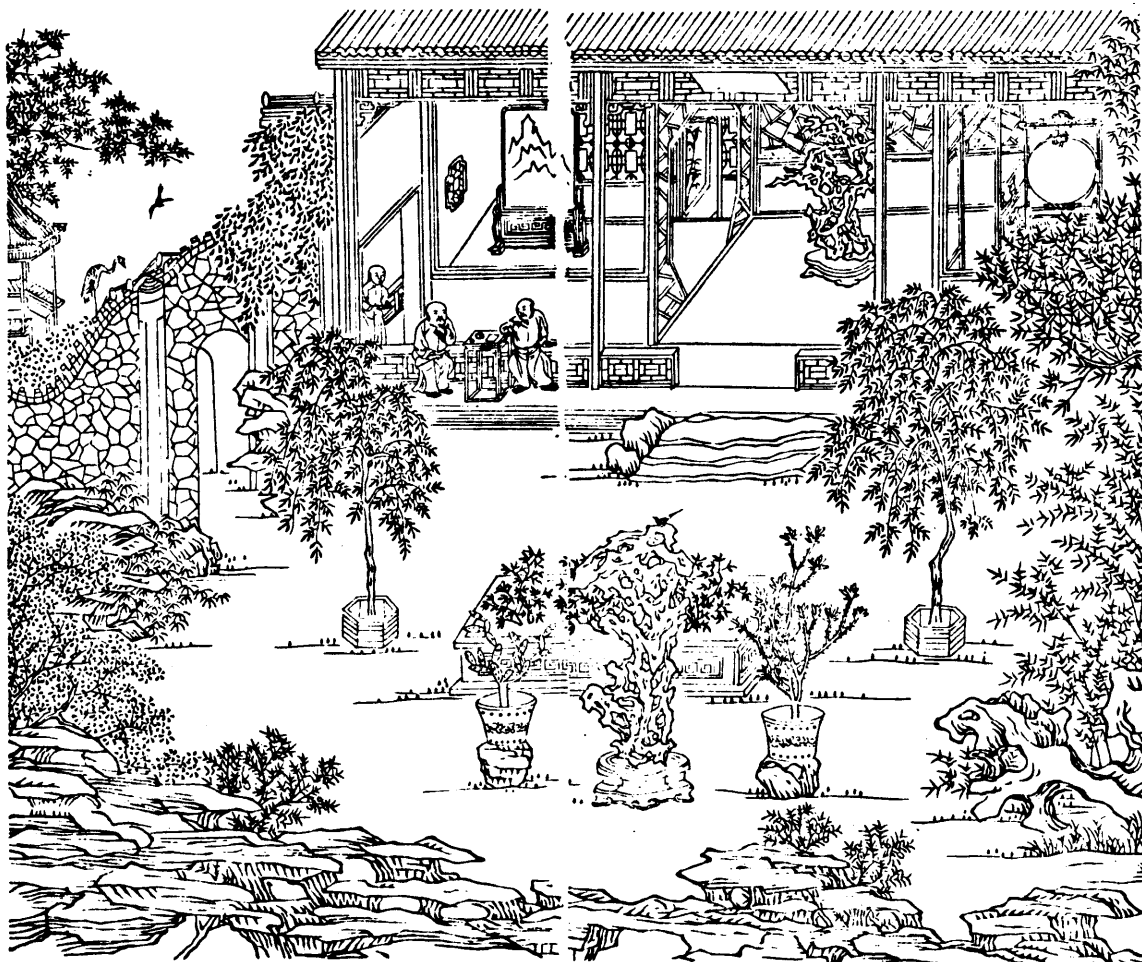
The interpretation of this essentially Taoist philosophy was undertaken by the scholar, whose duty it was to uphold the universals. Chen elaborates further:

Throughout the dynasties, buildings have been meant to express social status. Tou Shih Tsu Cheng, an encyclopedia compiled about 1730, has many chapters devoted to the various systems which throughout the dynasties have governed the relation of buildings to social position and dignity. To judge of this is the scholar's job, and the role of the scholar in the essentials of Chinese architecture is, . . . much greater than the West imagines.²²

House size was limited by social status, determined by the scholar. Social laws were also observed in the laying out of the cities, whose sizes varied in accordance with the rank of the feudal lord. Location of public buildings similarly reflected a social and philosophical hierarchy, and even the sequencing of construction in time had its dictates: the temple to the ancestor was the first in line to be constructed. Moreover, these social codes were inclined to austerity at all levels;

"A saintly king," it was said, "must build according to propriety, not magnificence." Frugality was the golden rule. Tou Shih Tsu Cheng has a collection of memoranda by famous ministers of the past to reproach their kings when they desired unnecessarily grand palaces. The technique of the memoranda is always to show the blessing of frugality supported by the enumeration of crises and disasters which have followed the evil of extravagance. Lavish building has thus never been officially encouraged.²³

The division of a work of architecture into two aims-- practical and emotional-- mentions nothing of beauty and aesthetic standards. Chen maintains that aesthetics did not enter consciously into the creation of Chinese architecture



The Pai Shih pavilion in the Pan Mou garden, Peking. Originally designed by the poet Li Li-wêng in the sixteenth century, it was restored by Inspector-General Lin Ch'ing in the 1840's.

until a very short time ago; as 'beauty' per se, materializes that which is to be left as immaterial. To convey this sense of the 'immaterial,' Chen cites a passage from The Importance of Living by the Ming scholar and painter, Li Li-Wên; whose chief interest, as noted, is living.

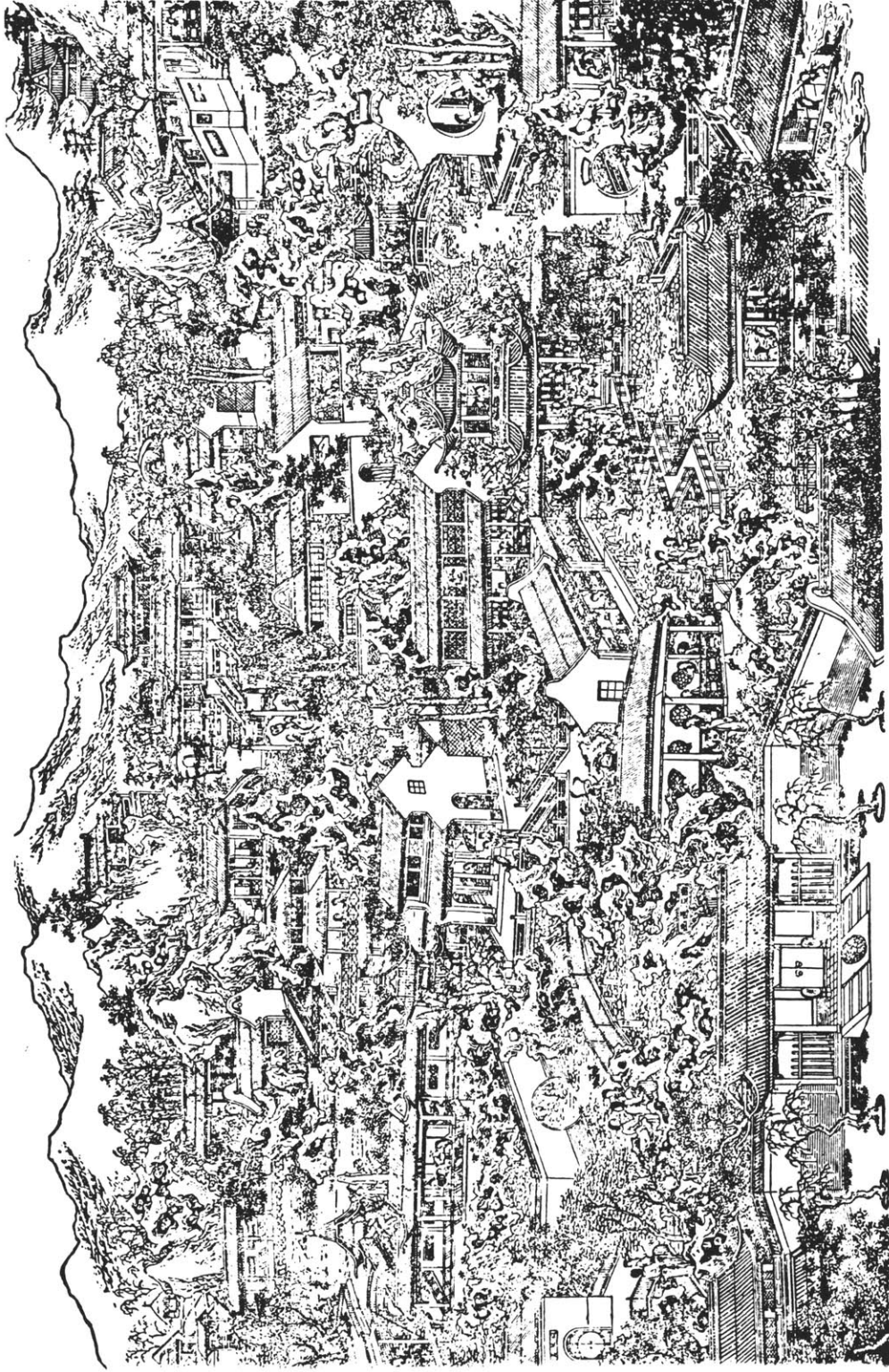
Inside the gate is a footpath and the footpath must be winding. At the turning of the footpath there is an outdoor screen and the screen must be small. Behind the screen there is a terrace and the terrace must be level. On the banks of the terrace there are flowers and the flowers must be fresh.

.
On the rocks there is a pavilion and the pavilion must be simple. Behind the pavilion there are bamboos and the bamboos must be thin and sparse. At the end of the bamboos there is the house and the house must be secluded....²⁴

Indeed, in an emphasis of process over product, the perception of the house is but one detail among many in the non-material Taoist world. "How comparatively insignificant the house in itself, must be in such a system ... [is] obvious."²⁵ This is the 'emotional' task of the scholar.

Li Li-wên's exposition of his ideal house is a typical example of the Chinese attitude. Where he describes flowers, trees, rocks, a pavilion, groups of bamboos, a house, and drunken guests, he is not guided in what he says by his own personal whim but by his knowledge of literature and art. A house at the far end of a bamboo grove would to him probably be desirable because of its association with the Eight Sung Sages and their retreat under the bamboos ... from the vast store of familiar pictures living in the mind of a scholar who has read much and seen much.²⁶

Worthy of note in this last excerpt is the suppression of the subject in the Taoist philosophy, regarded as 'personal whim.' Aesthetics and beauty similarly hold this taboo of self-indulgence, needless to say. One last sojourn down the meandering scholar's path (which Chen maintains is the bottom line for understanding what architecture means) is necessary in order to articulate more fully, his task; for the relationship of the scholar to literature is ultimately what



Kuan Yuan, an imaginary reconstruction of the den in the novel *Dream of the Red Chamber*, from *Tseng-P'ing Pu t'u* Shih-f'ou-chi, Shanghai

constitutes their contribution together, to architecture in China. The following passage from a well-known Chinese novel: Dreams of the Red Chamber, depicts the life of an aristocratic family circa 1780. It further demonstrates that the method of abstraction which the scholar employs to satisfy the 'emotional' aspects of his task, is by association with literary imagery. (From the chapter on the building of the "Garden of the Great Spectacle.")

Very little is said about the making of the garden except that the owner having decided that he wants a house, some outhouses and a garden, sends for an old man called Wu.

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[In less than a morning's time Wu's task is complete. The owner invites a party of guests to give names to various spots of interest in the garden, and to compose poems and couplets.]

Passing the gate, the guests suddenly find themselves in front of a green hill screening off the view. Round the foot of the hill and on one side, there are a number of boulders through which a narrow winding footpath winds . . . to the entrance of a tunnel. Here the party pauses to let literary associations rise. Some suggest names such as "The Piled Green" and "The Embroidered Rock." . . . Nothing so florid should meet us right at the beginning of our perambulations. So the name chosen is more prosaic: "The Winding Path to Tranquility."

Through the tunnel, the party then comes to a terrace surrounded by a balustrade of white stone. In front is a pond of crystal-clear water and at the back, rocks "soaring sky high" with tall trees in great profusion. Through the branches appear the curved roofs of two pavilions like birds in flight. From the terrace, the party crosses another bridge passing another pavilion in the middle of the bridge. The pavilion beyond the rocks reminds the party at once of the wing-like pavilion design in the famous essay An Episode in the Pavilion of a Drunken Old Man by the Sung poet Ou Yang Hsiu. However the parallel is not perfect, for in the Episode no water is mentioned. . . . The second proposal is "Flowing Jade," which is what Ou Yang Hsiu calls the water of the spring used for the distilling of the famous Shansi spirit. . . . The name is objected to as too obvious and in rather bad taste because associated with drinking. So the end of the discussion is yet another name: "Sing Fragrance," passed as highly suitable because the word sing can

mean both the river and "flowing."²⁷

And finally, Chen's acknowledgement of the scholar is to his task of transcending time:

It is due to him that China thinks of architecture in terms of landscape, that is of a good life, close to fields, close to hills and water, where we may live humbly conscious of a vast universe, share our pleasures with all of the great scholars and poets of the past.²⁸

(... end of dream sequence... but while we're on the subject of transcending time,) Chen concludes:

... the problem to keep up the pace of time is as acute as in any country.... As far as architecture is concerned an adjustment must be found between a tradition (a spiritual rather than a formal tradition) and a Western notion of architecture imported only some thirty years ago.²⁹

Needless to say, it is no longer 1947, but 1988; and both the Western as well as the Soviet traditions are now a part of the Chinese tradition. Chen's comments to the travelling student in 1985 reflect well, this awareness:

Now in the present, it is a question of the way of life. Take concrete things-- for example, this hotel. What we cannot master is this life style of the West. Look at this lobby-- it is not one thing or another.

.....
Why must we follow the life style of the West? There must be a Chinese way. I'm sure that our tradition of hospitality would be appreciated by our foreign friends. It is more than a question of architecture. In the process of modernization, we Chinese must have faith in ourselves. Architecture ought to express our life ideals. The old lines of class are gone, and it is a good thing. New things are coming up. We have grass roots organizations, we have neighborliness. It is for the architects to find the forms to express it.³⁰

Once again, in the quest to find a way through this period of transition, Chen entrusts the position of form-maker to the peasant, a convention shared by many. (And there are even those architects of the West who share a corresponding sentiment, advocating a return to the medieval tradition of

`building' as an alternative to this Latin tradition of
`Architecture.') Chen affirms;

I place all my hope on the peasants of China. They carry the long tradition of building, even today. In my native province of Zhejiang, they have mastered pre-cast concrete technology, in their own way, and yet maintain their tradition.^{3 1}

To this, Ji Qi-min of Tianjin University adds;

"The architect is not very important for most people. The Chinese have a lot of experience from thousands of years. The peasants will build their own houses, live in caves even, for another 1,000 years at least. For 1,000 years it will be the same-- how to keep it good."^{3 2}

And if Banham can declare at the end of his essay, "Adolf Loos and the Problem of Ornament:"

"Freedom from ornament is the symbol of an uncorrupted mind, a mind which he [Loos] only attributes to peasants and engineers."^{3 3}

then we can perhaps understand how the evolution of architecture in the thirty years prior to the 1980s on the Mainland held a similarly distrustful view of the architect and his `art'; (art, in its equation to decoration).

The erosion of the art of architecture to that of merely an issue of style was the outcome of its lack of a clear sense of belonging to the architecture of the past, at the time of its twentieth century inception. This was exacerbated by both Soviet and Western influences predominating in the years which virtually `book-ended' liberation. It was further compounded by the association of `art' with the foreigner, externally; and the scholar, internally; and the bourgeois with both. The tail-chasing debates which were to last for a decade, (subsequent to the denunciation of the `big-roof' style, and prior to the Cultural Revolution), were relentlessly centered on style in conjunction with the fragmenting of form; form, which for all

intents and purposes was ruptured from content once the die had been cast in two separate molds. A distant past and a far-reaching future (and little more than a frantic race in-between) were undoubtedly the stretching table of this torturous attempt, whose priorities, moreover, lay elsewhere; in industrialization.

And just as I to this day, cannot make hide nor tail out of a set of translated instructions from any imported Asian product, so too were the words of Western architectural theory to be subject to misinterpretation; words which even in the West were being tossed back and forth like hot potatoes: 'form and function.' "In all genuine architectural advances, the content or function is basic; the form derives from it."^{3 4}

One last word from an editorial for the "Bulletin of the Society for Research in Chinese Architecture" (1944) written by Professor Liang Ssu-Ch'eng, makes explicit the advocacy of continuity and the place of history therein; writing almost eulogistically of the imminent changes which he forsees:

It is to be regretted that painting, calligraphy, and relics have long been valued by the intellectuals in China, but not architecture, the artistic expression of which has been inherited and developed unconsciously by artisans. Unknown master builders of the past left us many great wonders of the world, but no theoretical analyses of their works.... It is to be emphasised that the study of the relation between the appreciation of historical art and the creation in future development is more important than the preservation of historical architecture itself.... All new ideas are brought forth by those who have been nurtured by tradition. Even when foreign influences are abruptly introduced, they are always absorbed with naturalization....

Undoubtedly modern materials and techniques will be adopted in China.... It is really a hard problem to let new branches grow from an old tree...^{3 5}

NOTES

1. Editor, "China's Architectural Heritage and the Tasks of Today," (preface), People's China, No. 21, November 1, 1952, p.31.
2. Liang Ssu-ch'eng, "China's Architectural Heritage and the Tasks of Today," People's China, No. 21, November 1, 1952, p.31.
3. Liang, p.32.
4. Liang, Ibid.
5. Liang, pp.32-33.
6. Liang, pp.33-34.
7. Liang, p.34.
8. Liang, pp.34-35.
9. Liang, p.35.
10. Liang, pp.35-36.
11. Liang, p.36.
12. Charles Chen, "Chinese Architectural Theory," Architectural Review, CII, July 1947, p.19. (I am indebted to Chen for this background for the earlier observations made in this segment.)
13. Gin-djih Su, Chinese Architecture: Past and Contemporary, (Hong Kong: the Sin Poh Amalgamated Ltd., 1964), p.172.
14. Chen, p.25.
15. David Cohn, "The Search for National Forms and Modern Techniques," Architecture, LXXIX, No.9, (1985), p.80. Quoted from an interview with Charles Chen. (I am indebted to Cohn for Chen's biographical information, as well as for his observations on the present day factions of 'traditionalist and modernist.')
16. Cohn, Ibid. Quoted from Chen.
17. Reyner Banham, Theory and Design in the First Machine Age, "Adolf Loos and the Problem of Ornament," (Cambridge, Mass.: M.I.T. Press, 1982), p.96. (no further reference cited)

18. Chen, p.19. Quoted from Lin's introduction to a revised edition by Professor Liang of Ching Shih Ying Tsao Tsa Lin, a book on building published during the Ching Dynasty (221-206 B.C.).
19. Chen, p.19.
20. Chen, Ibid.
21. Chen, Ibid. Quotation therein from: Laurence Binyon, Paintings in the Far East, p.24. (no further reference cited)
22. Chen, p.20.
23. Chen, Ibid.
24. Chen, p.19. Translated by Lin Yutang. (no further reference cited)
25. Chen, p.25.
26. Chen, Ibid.
27. Chen, Ibid.
28. Chen, Ibid.
29. Chen, Ibid.
30. Cohn, p.80. (Quoted from Chen)
31. Cohn, Ibid.
32. Cohn, p.81.
33. Banham, p.97.
34. Chai Li-lin, "The Question of Architectural Form," People's China, No.14, July 1956, p.31.
35. Liang Ssu-ch'eng, Bulletin of the Society for Research in Chinese Architecture, VII, No.1, (1944). (This is quoted in Gin-djih Su, p.?)



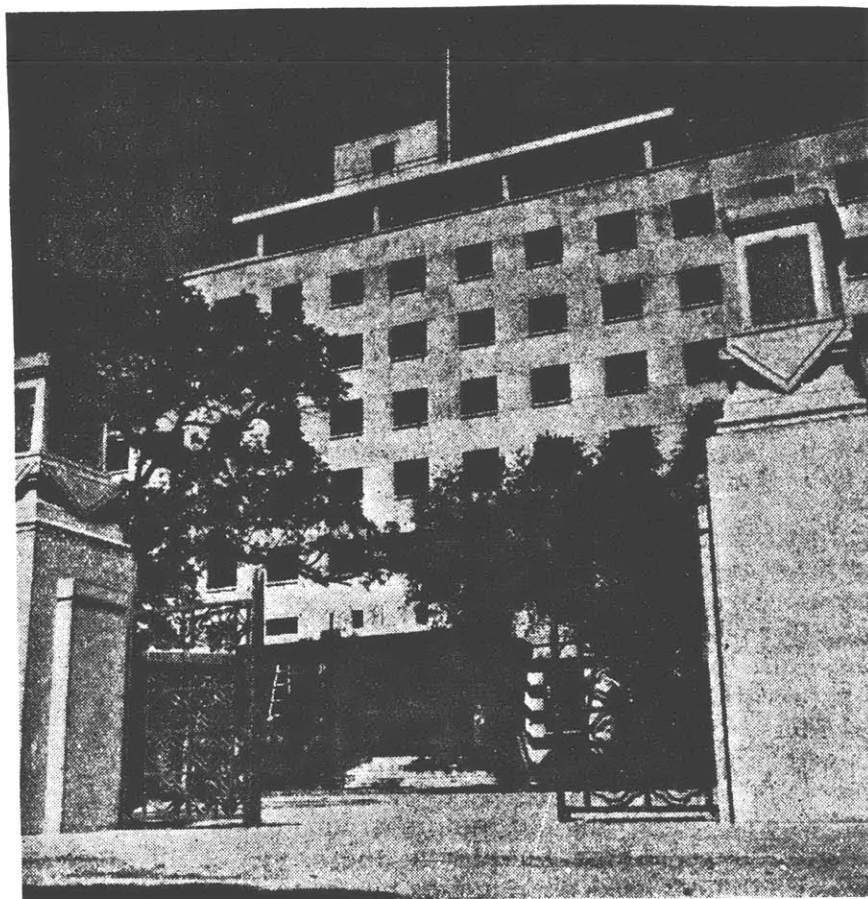
R O O F

Malgré tout, beaucoup d'architectes chinois n'arrivaient pas à croire que cette mauvaise copie de la Renaissance italienne, lourde et pompeuse, tellement à l'honneur en Union soviétique, pouvait représenter une tendance d'avant-garde. Certains, au cours de conférence de travail, faisaient discrètement remarquer aux conseillers soviétiques qu'une architecture progressiste se devait avant tout de répondre le mieux possible à la destination des édifices, de donner le maximum de confort compatibles avec la situation économique du pays, et d'essayer à partir de là d'atteindre à la plus grande élégance avec le minimum de moyens. (Ce qui fut d'ailleurs le propre des meilleurs époques de l'histoire de l'architecture.) Ils se virent vertement critiqués par les Soviétiques qui, pour tout argument, leur reprochèrent de souscrire à des théories "constructivistes," lesquelles étaient, paraît-il le reflet de l'idéologie bourgeois.¹

Instrumental in the direction that architecture was to take in the early years of the People's Republic were the key members of the Society for Research in Chinese Architecture. Professor Liang's thesis to utilize the historic tradition of China's architecture, of China's art; was combined with the Soviet slogan : 'socialist content, nationalist form,' to become the basis for another renaissance of the national style: the Classic Revivalism of the 1950s.

An inventory of the prevailing currents up to that time demonstrates that this was an obvious course to be followed. Western eclecticism, which had flourished in the treaty ports for a full century as an offshoot of nineteenth century academicism was, needless to say, highly inappropriate for the new republic, (and well out of vogue for the West besides).

The Peace Hotel, designed by Yang Ting-pao (1952), provides a noteworthy example of the then new, 'stripped-down' approach inspired by the modern masters, with little or no reference to Chinese tradition. Although it was reprobated by a British planner at the time, the hotel was nevertheless to foreshadow a later inclination toward the 'modern style:'

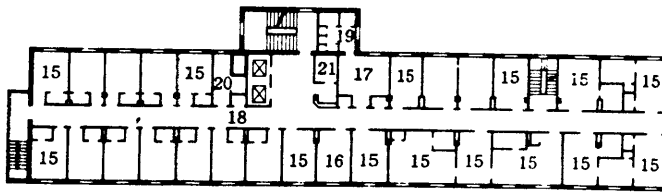
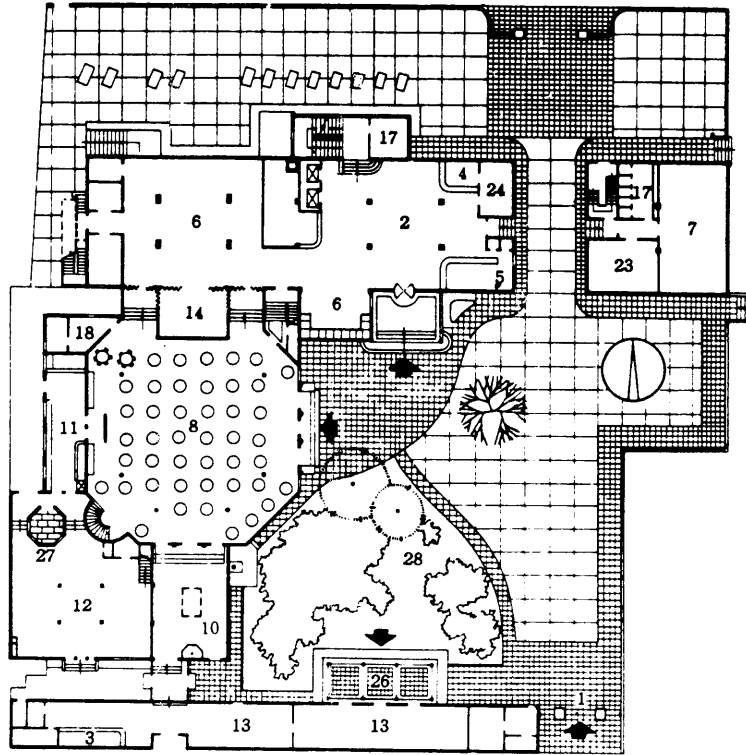


the Peace Hotel, the only large new building in Peking, is in a recognisably 'International' style ...

... to the east of the Imperial City,... [it] has justly been criticised for rearing its imperfectly organised slab forms (less coherent than the photograph suggests) eight storeys high and rudely challenging the palaces and gate houses.²

And by contrast in 1979, although by then, in deference to its principles of planning:

In order to meet the specific functional requirements of the hotel building, the design should aim at creating an intimately-scaled and flexibly-planned organization of outdoor and inner spaces naturally in accordance with the activity routes of its users. The Peace Hotel in Beijing ... erected in the early years after liberation,... may be cited as good example(s) of new trials in the design of spatial composition.³



*Plan du rez-de-chaussée
et de l'étage courant de
l'hôtel de la Paix à Beijing
(1952).*

By the time of the launching of the First Five-Year Plan in 1953, however, (which nominally began in 1952), the Soviet advisors were already well on hand to suggest directions for the architecture of the new socialist republic, as well as to offer criticism for avenues already being explored. Buildings of simple form, fenestration, and at times asymmetrical, which were regarded by the Chinese as avant-garde or modern; were dismissed as being 'functionalist' or rooted in the constructivist theory of the 1920s. This second alternative was thus cast aside. (Needless to say, the Peace Hotel was severely criticized by the Soviets in its exemplification of 'constructivism' and 'cosmopolitanism.')

The opening quote of this segment demonstrates the bewilderment of the Chinese architects at the time. Anatole Kopp echoes these sentiments with his criticism of the equally perplexing architecture of the Stalinian era; (which in turn, can also be applied to the Chinese situation).

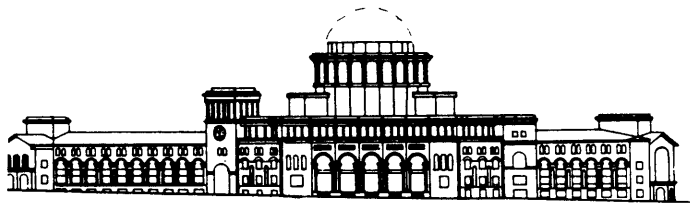
Avant d'aller plus loin ... il importe de noter une caractéristique essentielle de l'architecture de la période stalinienne et qui est son illogisme total, son inadéquation par rapport à la situation existant en U.R.S.S. à cette époque.

Au début des années trente la situation du logement était en U.R.S.S. toujours aussi catastrophique, sinon plus que dans les années qui suivirent immédiatement la révolution. Une attitude en apparence logique, aurait été de développer au plus vite des systèmes constructifs simples, d'adopter des normes de logement minimales et de pousser les architectes sur la voie de la recherche d'une architecture adaptée à cette situation d'urgence. Telle avait d'ailleurs été l'attitude des autorités pendant les années vingt ainsi que celle du groupe des architectes constructivistes.⁵

Nonetheless, any resemblance to the Soviet avant-garde of the 1920s was adamantly rejected. Having eliminated both 'western eclecticism' and 'modernism,' still remaining was an approach which had been earlier inspired by the Society for Research in Chinese Architecture, (and which had, furthermore, been disrupted by the Japanese occupation). The 'national style' embodied Professor Liang's thesis: from tradition to innovation; and moreover, seemed to offer the only indigenous alternative. The arrival of the Soviet experts with their architectural theories and slogans was enough to confirm this direction. A brief digression to the Soviet model for 'national form' provides some insight into their authorization of the Chinese model.

Three architects characterized the trends of the architecture of the Stalinian period. In contrast to the members of the avant-garde of the 1920s, these men were hardly newcomers to the field, having all three been well-established in their profession prior to the Russian Revolution. Kopp

portrays them in correspondence to the styles which each one upheld: I. Joltovski/neo-renaissance; I. Fomine/neo-classicism ; and A. Tamanian/neo-armenian. Whereas the former two were key in establishing the predominant monumental classicism of the stalinian years, Tamanian's work epitomized the flourishing 'national styles.' Under the russified name of Tamarov prior to the revolution, he built for a clientele largely consisting of rich merchants. His native land, however, provides further clues to his work.



*Le Palais du
gouvernement d'Ar-
ménie à Erivan.
Arch. : A. Tamanian.
1926*

Unlike the vast majority of the Soviet continent which was almost solely reliant on wood, Armenia had been privileged with an abundance of natural building materials. This had yielded a regional artistry with a correlating richness of traditional motifs. Moreover, as was the case in other autonomous regions of the U.S.S.R., socialist measures were introduced at a slower rate than in European Russia, which permitted a longer subsistence of artisanry and the smaller construction enterprise. But Armenia itself had not experienced any great surge of building activity since the first century A.D., and its architecture was, as a result, largely rural and limited to habitat. Due to this, the specific contribution of Armenian architecture to the 'national form' became one which was characterized by a treatment of surface with traditional motifs from local artisans. Tamanian pushed this idea yet one step further in his adherence to the ideas shared by his cohorts, by merging the principles of classical architecture and its system of orders with the detailing of armenian motifs.

As for the ideological risks involved in making use of national forms of an architecture of the past without simultaneously rehabilitating its inherent ideas, Stalin responded to this as follows:

Personne ne peut nier ... que les actuelles nations de l'Union soviétique: russe, ukrainienne, bielorussse, tartare ... georgienne, arménienne et les autres se distinguent radicalement des nations correspondantes bourgeois de l'ancienne Russie par leurs structures de classe, leurs conceptions spirituelles et par leurs objectifs socio-politiques.⁶

[To the above, Kopp adds:]

Il n'y a donc pas de risque idéologique a s'inspirer des formes de l'architecture nationale des diverses républiques soviétiques, dont on ne sait par quel miracle les conceptions spirituelles ont changé tandis que les formes artistiques sont restées les mêmes.⁷

(A similar criticism might be made of the repeated use of essentially the same forms on the Mainland; first by the Americans and the British, then by the Nationalists, and then again by the Communists; whose common interests, although rooted in nationalism, were nevertheless decidedly disparate.)

The president of the V.O.P.R.A. (Union of Proletarian Architects), I. Matza, published an article in 1944, which corresponding to Professor Liang's thesis, was entitled "Tradition and Innovation." Citing the material as well as the immaterial, he addressed this theme as follows:

"Peut-on se représenter le réalisme socialiste autrement que comme une phase historique totalement nouvelle dans le développement de l'art mondiale? Mais simultanément peut-on se représenter sa naissance, son développement en dehors de la tradition?

.....
L'innovation ne prend pas appui dans ses investigations que sur les conditions matérielles, socio-politiques et culturelles contemporaines, pas seulement sur les aquis d'avant-garde de la science et de la technique mais aussi sur les traditions positives de son peuple et sur les idéaux progressistes de l'humanité."⁸

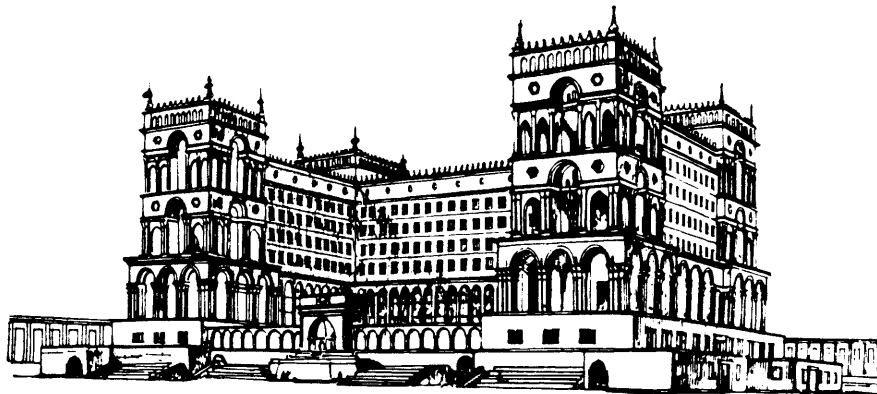
If the previous descriptions had been the tendencies in addressing the 'national style' during the thirties, then

its resumption subsequent to World War II was to be even more exaggerated. Kopp characterizes those years as follows:

Entre 1945 et 1956 on assistera pour l'essentiel à un changement d'échelle. Les principes du monumentalisme s'affirmeront de plus en plus. Les bâtiments auront de plus en plus d'étages, de plus en plus de colonnes, de plus en plus de décors surajoutés. On insistera toujours sur les styles dits "nationaux."⁹

And finally, the quintessential critique made by Tzapenko (the Soviet critic), in reference to the Government Palace for the Republic of Azerbaijan at Bakou in 1949:

"Le caractère soviétique, foncièrement populaire de cet édifice est affirmé par la construction d'une tribune ... et par l'installation d'un monument à V.I. Lenine, devant la facade principale.... L'architecture de cet édifice est ... le résultat du développement de l'architecture nationale dans les conditions actuelles."¹⁰

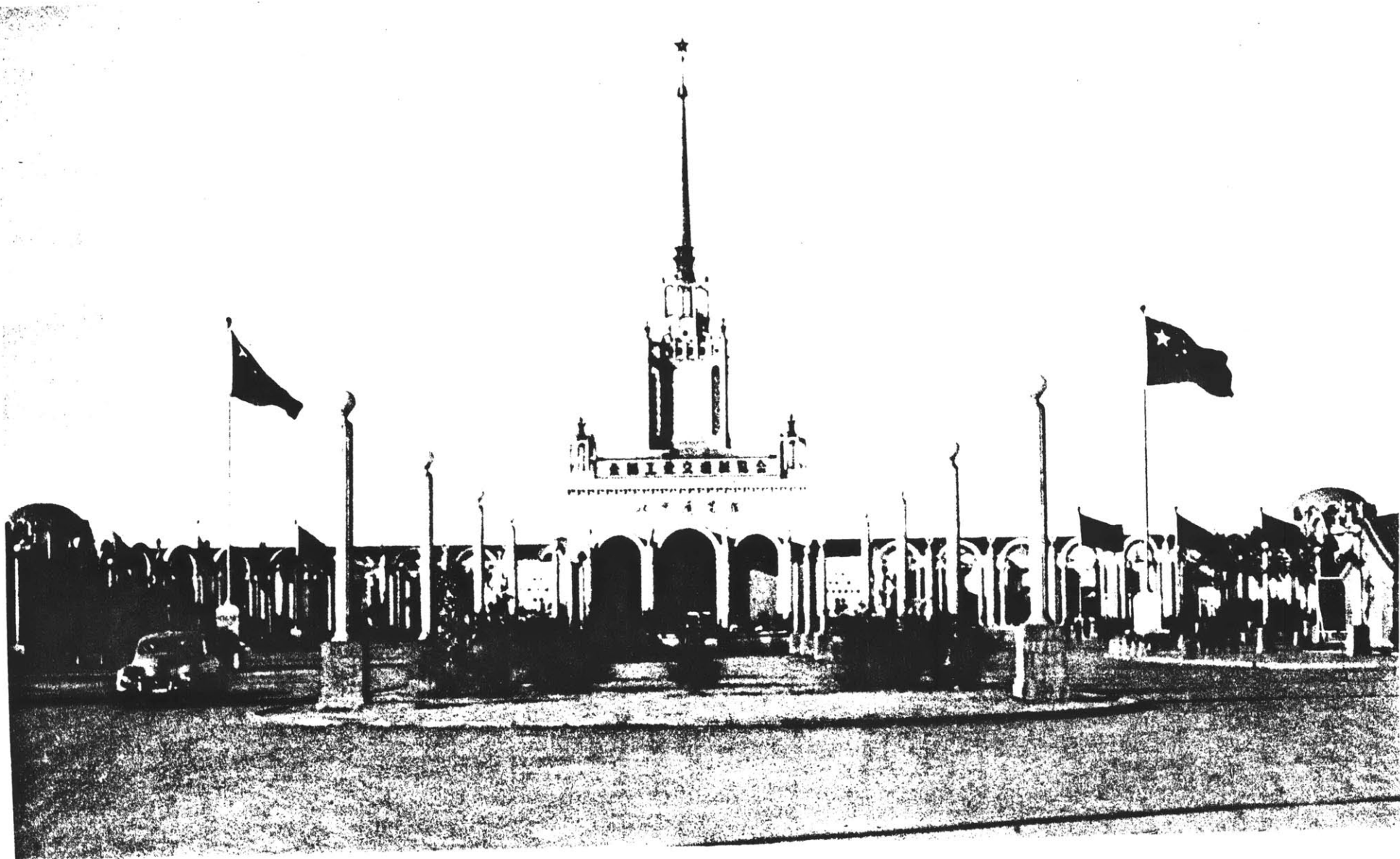


« National dans sa forme », tel devait être le réalisme socialiste. Palais du gouvernement à Bakou. Arch. : L. Roudnev et V. Muntz, 1937-1953

(If this were so, then the same might be said of the hanging of Mao's portrait on Tian An Men, the entrance gate to the Forbidden City.) The extrusion of 'national form' through the application of traditional motifs was evidenced, in any event, by examples which had been newly realized in Peking and Shanghai. The 'Soviet transplant' was thereby added to the long list of styles which had already made their debut on the Mainland. (The Radio Broadcasting Building and the Peking Exhibition Center are noteworthy examples of this.)



Broadcasting House



The Peking Exhibition Centre

The Soviets applauded the Chinese variation on their own theories. The coinciding of this predisposition to 'national style' during the twenties and thirties in China with Soviet theory resulted in a proliferation of the 'big-roof' style throughout the nation, in particular for important public buildings. Hoa points out that any range of solutions was employed according to any range of budget: from varnished to ordinary grey roof tiling; from a roof covering the whole building, to those just covering a few wings.¹¹

Although the 'green light' had been signalled by the Soviets in their willingness to expand architectural form to any size, while simultaneously either shrinking or stretching 'national style' motifs to fit its body; it is evident that the upholding of 'architecture as an art' by Professor Liang and his colleagues was already well en route prior to their arrival:

There is no doubt that the building activities on the mainland were influenced and led by the architectural theories of Professor Liang Szu-ch'eng in the early days after the Communist regime was founded. He considered architecture an art, and demanded that it be treated as such.¹²

.....
He upheld the characteristics of ancient Chinese buildings, such as the platform, the body, the roof, props and truss. These characteristics, he felt, were the grammar of Chinese architecture. He said that architecture should be based strictly on grammar in the same way as writing does. He also said that any building, large or small, high or low, could be constructed in accordance with the traditional Chinese style and grammar. The national style should be presented first in the overall sketch of the buildings, then in the ratio of the doors to the windows, and lastly in the rhythm and anthemia.... the application of colors should be bold; colorful glazed tiles and bricks among the building materials available should be largely used; the hidden decorative power of various colors of paints should be utilized ... and carvings should be made.... His theory and practice prevailed throughout the mainland, from Peking to various other cities and all the provinces.¹³

Needless to say, Professor Liang's argument favoring the 'art' of architecture was largely based on perceptual aspects of the Chinese tradition (upholding section and elevation), with no mention of a means for extrapolating building concept, from either section or plan. For an era in which architecture was explicitly said to correlate ideology with imagery, it is ironic that concept would have been neglected. (But then, we have already gone over this dichotomy extensively.) The embodiment of tradition in the tri-partie (roof, body, stylobate) composition, is a theme which was to remain steadfast to modern Chinese architecture, even to the present day. The big-roof style can perhaps best be seen (in light of this) as an all-out attempt to make a method, largely based on elevation, work; a method which had ironically been initiated by foreign architects, some thirty years prior.

Although it was no doubt Professor Liang's intention for the treatment of new architectural forms in the tri-partie style to automatically uphold 'socialist content' as well, in adherence to the Soviet slogan, Soviet policy was already beginning to show signs of a retraction. With the embarkation on the First Five-Year Plan in 1953, the principles of 'utility, economy, and if possible, beauty' were instituted by the Chinese Communists. Gin-djih Su likens this policy to a variation on a Chinese proverb; from the original: "He wants his horse to run fast, as well as to refrain from eating grass;" to a comparable, less harsh: "The horse should be made to run fast and at the same time eat less grass."¹⁴

Nevertheless, the 'three-section design' of platform, walls and decorative eaves continued to flourish, which Su declares: "With a strong indication of the national style, they have amply presented building as an art."¹⁵ Yet another way of looking at the same situation is aptly articulated by the following: "In a regime as bombastically nationalistic as the Communists were in their first years of power it was

perhaps inevitable that immediate architectural instincts were to promote the "national" style in all its glory of glazed tile roofs and replicas of past greatness."¹⁶

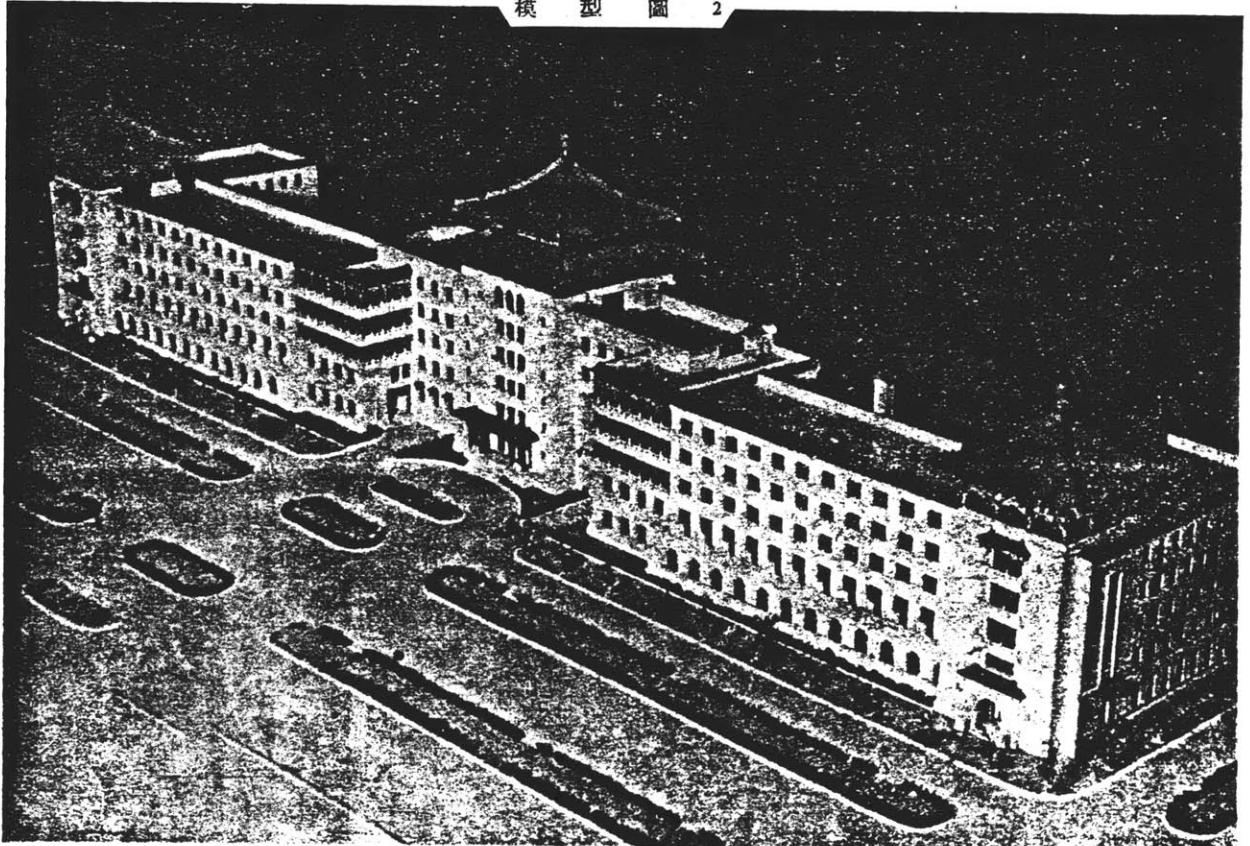


Friendship Hostel, Hsiyi Road, Peking.
(北京西颐路女青年馆)

This early, nonetheless Sino-Soviet collaboration is characterized by perhaps the most famous example of the big-roof style, the Friendship Hotel. Known for its conformity to Soviet taste since its conception (*la maison d'accueil des experts sovietiques*¹⁷), the design is a lasting testimony to the era. The following critique by Léon Hoa points out the absurdity of the Soviet mechanistic version of the French classical garden, there constructed to the rear of the hotel: "... dont le dessin géométrique oblige le promeneur à faire de nombreux "à gauche, gauche" et "à droite, droite" pour aller d'un endroit à un autre."¹⁸

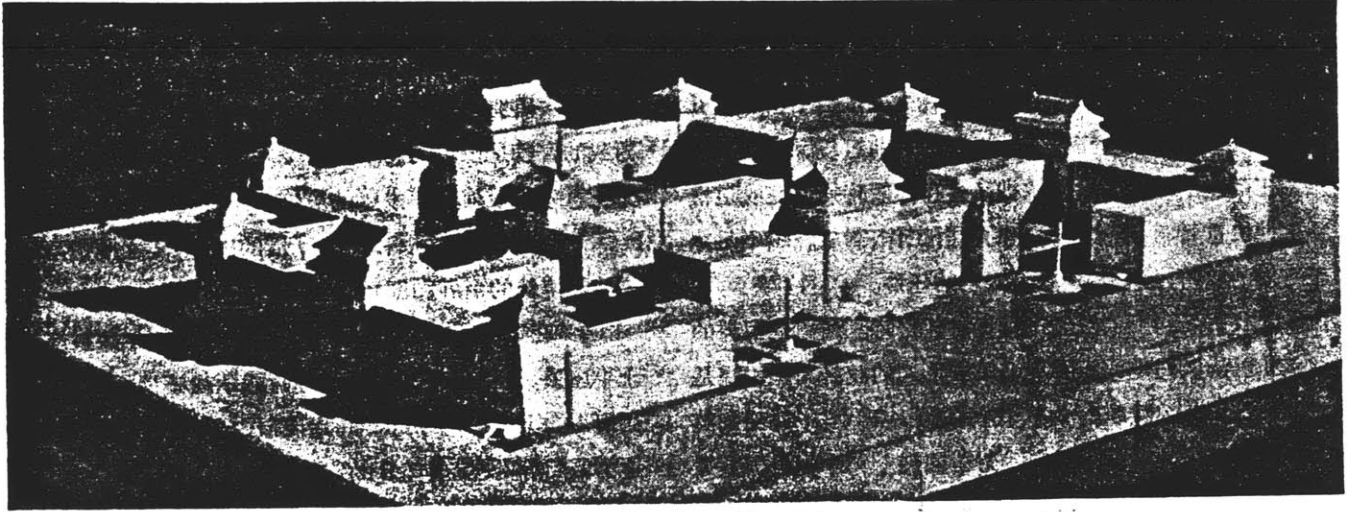


模 型 圖 2

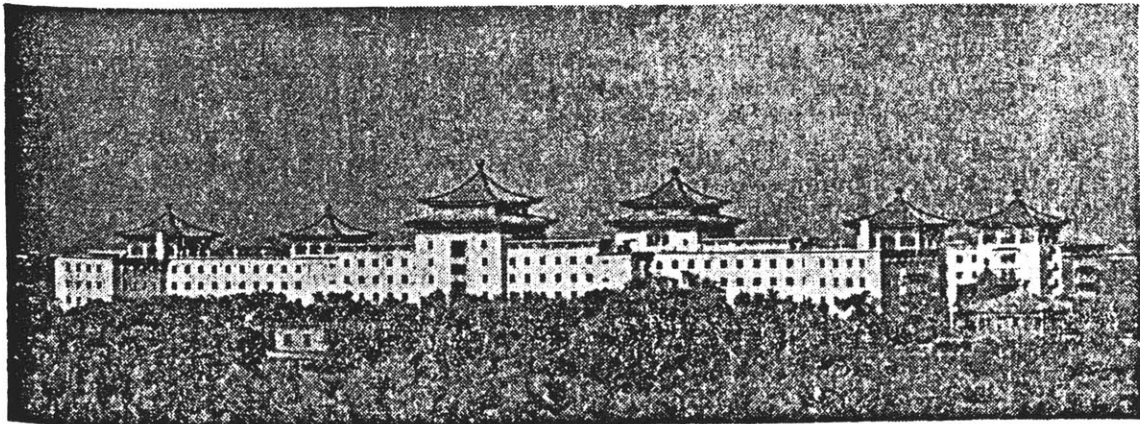


模 型 圖 3

1954 年

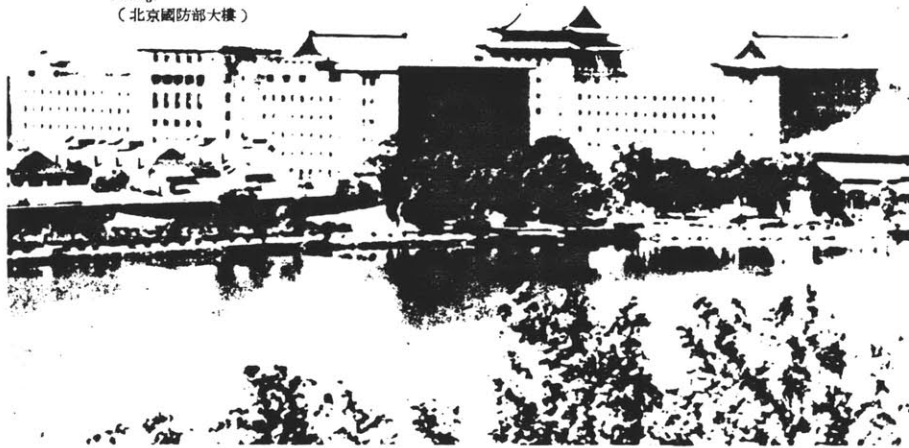


模 型 鳥 瞰 圖
 (第 一 期 工 程 將 建 築 外 圍 的 三 座 大 樓)



Here we have a building erected in Peking in 1955—a strange mixture of the modern and classical. Most people now think the decorative roofs incongruous and a sheer waste of money

*Office building of the Ministry of Defence,
 Peking.*
 (北 京 國 防 部 大 樓)



In December 1954, a conference was held in Moscow by the Central Committee of the Party and the Council of Ministers, bringing together architects, engineers, technicians, and administrators. Presiding at the conference was the Secretary General of the Party, Nikita Khrushchev, who denounced the 'excessiveness' of construction in preceding years. Kopp delineates the event as follows:

L'architecture, sujet mineur, y fut néanmoins abordée et nombre de ses incohérences tournées en ridicule. Mais pour le secrétaire général du Parti, les responsables de ces "excès" et de ces débauches de "décorativisme" qui avaient fait montrer inutilement les prix de la construction et souvent ajouter des éléments d'inconfort à des constructions qui depuis des décennies sacrifiaient l'utilité à la "beauté," c'étaient les architectes.¹⁹



This marked the end of the stalinian period in Soviet architecture, as well as the end of 'socialist realism.' By February of 1955, a cartoon was published in the People's Daily. The conversation between the Empress Dowager and the architect read: "You certainly know how to spend the money. I never thought of using glazed tiles for the kitchen when I built the Summer Palace." At the same time, the Communist Ministry of Building called a meeting, thereupon declaring the Party's policy as one of anti-formalism, anti-reactionism, and anti-waste. This had been violated by the architects, in

particular Liang Ssu-ch'eng. The February 1955 issue of the "Jianzhu Xuebao" published the following criticism of the professor and his ideas:

Mr. Niu Ming condemned Prof. Liang's viewpoints in Chinese architectural study as capitalistic idealism. In his emphasis on the artistic value of the building, he had neglected the economical, utilizability and technical importance of building. As a result of his promotion of the national style and reactionism, he had stressed too much on the style, but neglected the contents.... It did not reflect the Party's fundamental principles.

Mr. Wong Ying personally admitted that he had committed the same mistake.... He pointed out that the basic mistakes in building ideology of formalism and reactionism lay in the unilateral emphasis on the ideological importance of the building.

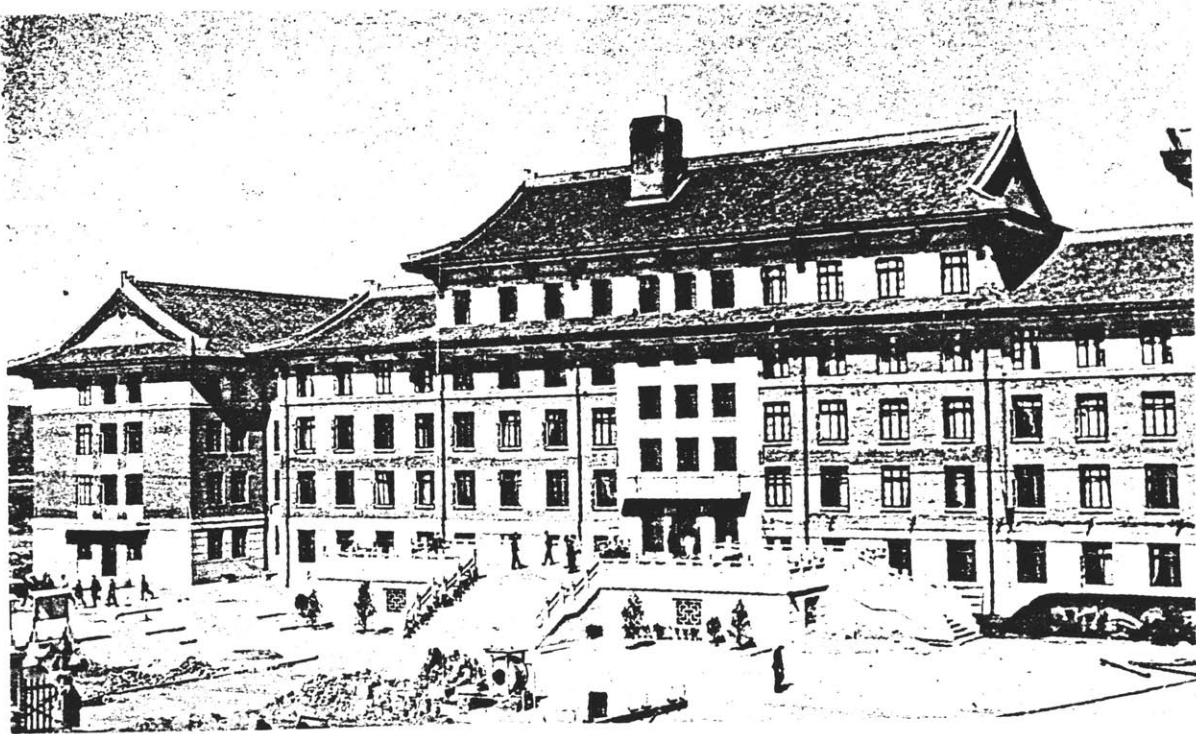
.....
it should be made first to satisfy people's material desires and then their spiritual ones.

Mr. Liu Kuei-sien, director for the preparatory committee of the Harbin Branch, the Society for Research in Chinese architecture, also admitted that he had suffered from the poison evil of formalism and reactionism.
He criticized Prof. Liang for committing the mistake of unilaterally emphasizing the building's artistic features and thus neglecting its practical efficiency and the national austerity policy.²⁰

During the second session of the First National Popular Assembly in July 1955, Vice Minister Li Fuchun addressed the issue of "practicing a strict regime of economy" in his report on the First Five-Year Plan in progress:

"Dans la construction des bâtiments improductifs des gaspillages effroyables se sont produits en raison de l'adoption aveugle du prétendu style national, de l'attachement injustifiable à la magnificence des extérieurs et aux décorations somptueuses et de l'emploi excessif de matériaux coûteux ou spéciaux, au mépris du principe de l'utilité, de l'économie d'emploi et de la beauté dans la mesure du possible. De vastes toits surplombants du style ancien des palais, par exemple, ont entraîné un gaspillage de 5 400 000 yuans pour les trente-neuf bâtiments construits à Beijing par différents administrations. Le bâtiment de l'Institut

de géologie de Changchun qu'on à baptisé le Palais de géologie est célèbre pour sa magnificence.... Du fait de nombreux embellissements et ornements inutiles le coût du bâtiment revient à 220 yuans le metre carré, dépassant de 140% le plafond de 125 yuans fixé par le gouvernement... Tout ce luxe dans les constructions improductives n'est pas désirable car il va à l'encontre de principes de notre industrialisation socialiste..."²¹



Institut de l'Industrie.

If 'Beauty, at the expense of utility and economy' was the claim made by the Party and colleagues alike, then a similar claim might also be made on behalf of Chinese architectural heritage itself: 'Roofs, at the expense of a far richer, and more subtle tradition.' The near-sighted, singular focus on the Chinese roof, which was an outcome of the national-style revival, disregarded the far broader substance of Chinese spatial planning. The unilateral emphasis on the 'palace style,' as opposed to extracting principles of an equally accessible domestic tradition was similarly a source of objection.

However, just as had been the case in the Soviet Union, with the architects being given the position of scapegoat (on more than one occasion), so too had the accusatory finger been targetted on the Mainland's architects. There was no mention of the 'Soviet transplant' buildings plugging up the excessively scaled streetscapes which had been created through the advice of Soviet planners. (The squandering of land is surely the greatest waste that one can be guilty of in China; and we will come to this tendency to 'look the other way' with regard to the Soviets, presently.)

The impact of the criticism of the big-roof style was at least three-fold. The nomenclature: from 'classic revivalism' simply to 'reactionary,' therein held its own critique. By the early 1960s, 'revisionist' will be substituted for reactionary, thereby adding the new disdain for Soviet policy to the already long list of 'shouldn'ts.'

A second outcome was the equation of 'art' with sumptuousness and embellishment, and their encapsulation in the roof. The denunciation of 'art' with 'beauty' together, was the dismissal of a truncated version of the art of architecture, thereby closing out the possibility of a broader interpretation for the inclusion of the conceptual as well as other perceptual aspects of art. Due to this fragmentation, however, a third by-product arose: the opening of debate.

Architects have never been so busy. It is in the midst of this vast upsurge of activity that they are debating basic questions of architecture, putting forth new views and new work for mutual discussion and criticism. Naturally, this has brought us face to face with the question of architectural style.

.
A modern national style, however, cannot arise in a vacuum; it must find its roots in the legacy of the past.

Both Chinese and foreign students of Chinese architecture used to give most of their attention to the palace and religious architecture in and around Peking. They tended to ignore the various provincial styles and those of the national minorities. We think

this was wrong. In recent years, Chinese architects have given more study to local styles, which are, after all, direct products of the people's life, highly expressive and a source of inspiration.²²

The identification of a new direction for the investigation of the nation's architecture had been initiated prior to the big-roof debacle. In 1953, a research department had been established at the Nanking Institute of Technology, at the request of the East China Building Designing Company. This was due to the increased demand for the national style since 1952. The broadening of reference materials was targeted, through the study of private houses. (Professor Liu Dunzhen headed this research department.)²³

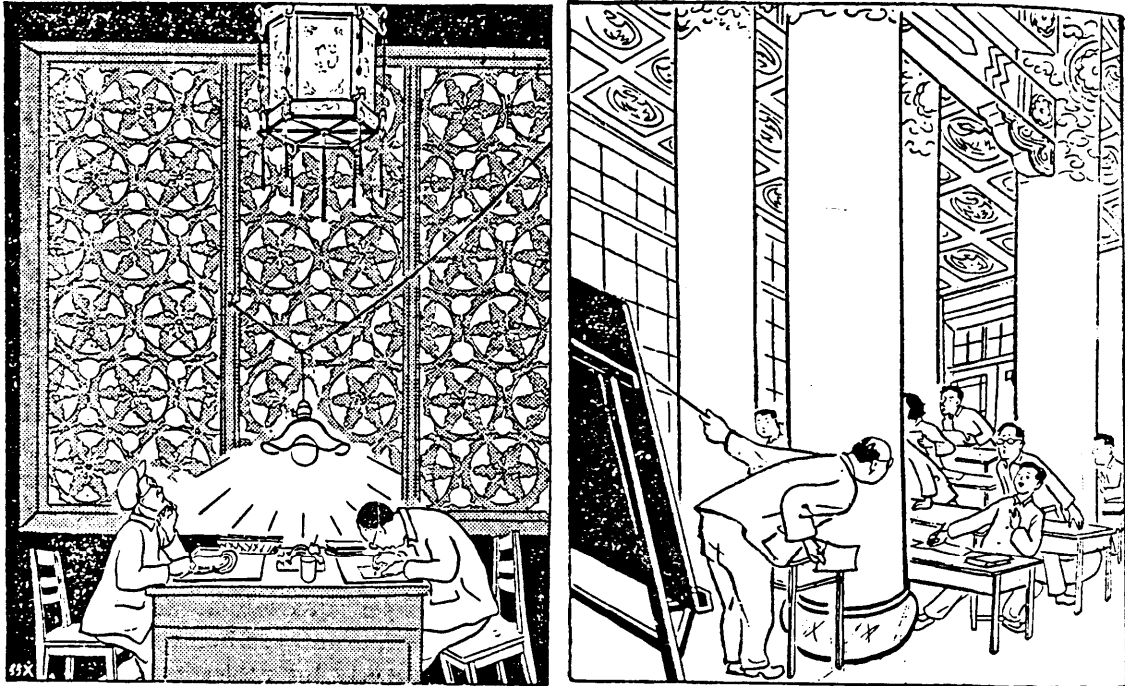
Although it will later be noted that the criticism of the big-roof style was not theoretically based, but rather one which was made in the context of a lopsided emphasis on economy at the time;²⁴ an objection to the squandering of materials is certainly valid in either case. Moreover, the opportunity to open debate was ripe, regardless of its initial impetus.

The constraints which were set at this crucial time of rapid modernization were only to become more intensified by the end of the decade. Although one cannot deny that elaborate detailing should not have been the order of the day, even for the nation's most prominent buildings, it should also be noted that one of China's richest resources is her abundant manpower (as was soon to be acknowledged in the Great Leap Forward); a resource which is not entirely contrary to an, at least, well-crafted building.

Added to this melee were the impending Western theories, on hand to feed this already out of water fish:

The architects ... did not consider function. One hostel built in Peking imitated the old solid foundations with a false stylobate having a basement inside. Unwilling to spoil the external view they left out the many side windows so that in the basement the

"BEAUTY" AT THE EXPENSE OF FUNCTION:



Ornate windows obstructing light and useless lanterns

Redundant columns

Cartoons by Han Shang-yi

electric light had to be kept on day and night.²⁵

This is the antithesis of the critique on the Mayor's Office in Shanghai. Another example from the same source tells the story of a building initially constructed at a cost of 18 yuan psf of floor space:

Two years later an ornately tiled palace-style roof was added at the cost of 37 yuan per square foot. But the building had been in full use before the roof was put on. Clearly the roof contributed nothing at all to its function.²⁶

Thus, already by 1956, the denunciation of the big-roof style was to elicit a polarization of form and art on the one hand; with content/utility and content/ideology, on the other. The broken alliance of art and ideology (which had been a last stronghold for the propagation of architecture as an art) was to render 'art' taboo before too long. This was made evident in Chai Li-lin's conclusion to "The Question of Architectural Form: "

... the greatest mistake that these architects made in their search for national style was the arbitrary separation of form from content. In all genuine architectural advances, the content or function is basic; the form derives from it. It is said that socialist content cannot be expressed except through national form. But what of national form into which the uses of socialist life will not fit? It can only be an abstraction, without meaning or life. So the trouble with the classical revivalists was that they did not see form and content in their proper relation.²⁷

Chai goes on to cite the eight-storey Peace Hotel in Peking by Yang Ting-pao as a successful example of "practicability, economy, and beauty;"²⁸ the very same building that had been dismissed by the Soviets a few years earlier as an example of 'constructivism' and 'cosmopolitanism.'

Moreover, Chai's conclusion is evidence of an imminent overlapping of a well-known Western slogan: 'Form follows function;' with the Sino-Soviet slogan: 'socialist content, nationalist form.' This made for a 'do-si-do' that was to lead the players to 'promenade, two-by-two' for a good additional twenty five years to come. The disintegration of these slogans will in effect, leave architecture thinking it has two legs to walk on, when instead, it will be barely left with one. (To set this in terms of the other slogan of the day), 'Utility, economy, and if possible, beauty,' having lost its comrade, 'beauty,' will be left with only 'utility and economy' to fight it out. And while utility held on in the name of function, or content, or even modern 'technique;' history was already underwriting the policy that economy would be victor in this arena of non-productive investment.

By that time, with the high tide of socialism (late 1955 to early 1956) a shifting of gears was about to take place, and architecture (with a capital 'A') was about to be put on the back burner for a long time to come (with the exception of one last bright light in 1959...).

The launching of Mao's 100 Flowers Campaign in May of 1956 met with a surprising reaction; among others, from the architects of the time. Mixed responses 'bloomed' and by June were suppressed by the 'anti-rightist' movement, and Mao's faltering judgement.

Gin-djih Su provides an extensive discussion of the reactions to the 100 Flowers Campaign, highlighting its debates:

Tung Ta-yiu: acting chairman of the Art Sub-Committee of the Society for Research in Chinese Architecture;
He disagreed with the theory that economy should be given priority. However he considered it a mistake to emphasize beauty and neglect the problem of economy. He opposed the change from one extreme to the other.

Mr. Tung considered that during the stage of searching for creation in the dark, encouragement, not restriction, should be made to allow development of various schools in accordance with their own thoughts, ...²⁹

Professor Ta Chih-ngang: Faculty of Architecture, Tsinghua University;
Formerly, due to the lack of basic rule, architects worked on their own individual viewpoint. They tried to demonstrate something different in order to set up a milestone for their own work.

To demonstrate something new and establish something different by strictly following the fundamentals laid down by the Party was a piece of creation, and that was what the people wanted, ...³⁰

Mr. Pao Ting: chairman Wuhan Branch, Society for Research in Chinese Architecture:

... two phenomena developed in a certain period in the movement of anti-formalism and anti-reactionism. Firstly, any building which was built after the design of ancient architecture or capitalist countries, was considered "all bad." Similarly, everything that had the Soviet stamp on it was considered "all good," and one has to admit it without reservation, whether in content or architectural basis...³¹

Mr. Lin Ke-ming: chairman Canton Branch, Society for Research in Chinese Architecture:

In the past a lack of creativity existed in architectural planning, and the designs were generally inferior. This was due to the fact that the creative

power of architects was not strong enough, and that their understanding of architectural theory and practice was superficial...^{3 2}

Although Mao put the lid on the blooming flowers with his Rectification Campaign in the summer of 1957, the over-boiled kettle was to continue to seep criticism in the autumn of the same year, and by then, even Liang Ssu-ch'eng was to join in the plea, demanding "that they should deeply examine and criticise themselves, otherwise they would be deemed as intending to cut themselves off from the people."^{3 3}

Su cites the telling article: "Architects or Drawing Machines," (which will raise the same issues as Professor Liang's earlier apprehensions) by Chen Chan-xiang, vice-director of the Fifth Planning Section of the Peking Municipal Planning Bureau, and former chairman of the Peking Municipal Planning Committee. (Chen is also the author of the earlier article on Chinese architectural theory):

... among the ten (sic) of hundreds of square meters of buildings completed by the planning bureau in its many years of work, some outstanding plans should have reasonable been produced, and a number of experts should have been trained as a result of their long practice. On the contrary, these "officialised buildings" scattered all over the country, were disliked by the people who were not accustomed to them. The people in the planning bureau themselves were not satisfied with their plans which had been termed "dull and monotonous" by their counterparts in Shanghai. Should the situation continue, the large square meters of buildings completed were so high in number that it would appal any of the other advanced nations. Yet their quality was far below that of international standard. The "merit" should go to the huge organisation which turned architects into drawing machines. The "machine" was provided as spare parts with "targets," "rules," "united performance and standardisation to save brain labor." For its maintenance, there were the examination section, the calculating section, the section chiefs, and a variety of examination meetings. For its administration, there were the director and the bureau chief. The larger the project, the more officials were made available. Architects were so busy in drawing with their hands that they could not

use their brains.... In these circumstances, "officialised buildings" were bound to be produced. The mistake lay in their violation of the basic character of the trade.
Chen Chan-Siang considered that all was in vain if architects could not avoid being turned into drawing machines. He hoped that everyone would contend and try to elevate not only the quantity but also the quality.^{3 4}

And if the above article focused on the methods set down by the Party to obtain rapid modernization in the field of 'construction,' then the following was aimed straight at the Party's priority:

Hua Lan-hung: chief sixth planning section, Peking Municipal Planning Bureau;
... the national standard for building was not fixed. Sometimes, it was very high, departing from the economical conditions and the people's living standard. No attention was paid to the [actual] need ... by calling for big projects at the expense of very insignificant sums of money [needed for other projects]. At the time when housing could not catch up with the increase of the population, an extremely expensive large building (the office building of the Peking Municipal Branch, Communist Party) was built in the eastern suburbs. The building was designed and completed between 1955 and 1956. Its construction work started at the time when the anti-waste campaign attained its peak.^{3 5}

Needless to say, both of these men recanted. The so-called 'open debate' which followed the initial 1955 denunciation was to continue its purgatorial tradition in a nationwide study forum, held by the Building Science Research Institute of the Ministry of Building in June, 1958; under the chairmanship of Wang Li-chih, the presiding institute director. (Decentralization had already begun in the Fall of the previous year, and by the Spring of the subsequent year, the policies of the Great Leap Forward were to be instituted.) The topic was Chinese building history, and the earlier naming of 'historicism' as 'reactionism' was to forewarn this turning point in the Party's policy, (as cited by Gin-djih Su):

It was pointed out at the forum that a general tendency prevailed in the teaching of history and architecture and scientific research and that people used to emphasize too much on the past to the neglect of the present. This ... was due to the Society of Research in Chinese Architecture, which under the pretext of separating politics from study, had led people to depart from reality for triviality of research, with the view to dissolving the people's revolutionary spirit. From 1949 ... until the end of 1958, the general ideology of quite a number of architects, led by the society, ... was packed with the conception of esteeming the old and belittling the new.... Dr. Wang Li-chih, therefore, advocated the liberation of ideology and urged to replace the "white flag with the red flag" in the teaching and research of the history of Architecture. To sum up, the main objects (sic) of the forum were to strictly criticise the bourgeois direction and methods of study and research.^{3 6}

This, in effect, dissolved the Society. Chief targets again in this criticism, were its sponsors Liang Ssu-ch'eng and Liu Dunzhen. Thereupon, the former "admitted that the Society had done more evil than good. The research methods used by the society, which were of reactionism and formalism, were learned from Capitalist countries including America and France."^{3 7} The latter also chose self-criticism, declaring: "He turned the art of architecture into something super - society and superclass, leading to the worship of the past and the despising of the present,..."^{3 8}

The Society's work was, in short, a departure of theory from practice; and thus by the same method of putting the strings of the puppet into the hands of the Party, the Chinese succeeded, as had the Soviets, in 'discouraging' research in whoever's hands it happened to be (the Society, the Constructivists) by confining debate to an increasingly shrinking forum bounded by taboos; and ironically in both cases, without being caught in their own self-contradictory ideologies. The return to the architecture of the past through the Leninist method of 'critical' assimilation of cultural heritage, which had simultaneously discarded the Constructivists' search for

an architecture to suit the changing future society; was then, in effect, passes along to a budding socialist nation in the slogan 'socialist content, nationalist form;' as well as through the vast building program initiated by the Soviets during the First Five-Year Plan. This was then largely taken up by the hands of the Society for Research in Chinese Architecture, and again denounced as bourgeois or capitalist, as much for its 'reactionary' forms as had the Constructivists been criticized for their 'extremist' tendencies and 'forward-looking' approach.

Although one should always take heed to 'look both ways before crossing the street,' in both cases, it is clear that no matter which forms had been chosen to express whatever ideas, they were simply not on the Party's agenda, and hence the equation of these antitheses both as bourgeois and capitalist.

Thereafter, the builder's 'practical' task, to satisfy physical needs (material), coupled with the scholar's 'emotional' task to satisfy personal needs (immaterial), having been transformed through the fifties slogans; emerge as but a barely recognizable vestige of their once inseparable unity. I am no doubt romanticizing a bit by making such a declaration, but I do so in the interest to trace what has happened to 'the spiritual needs' which so many of us feel have been left behind, shut out by 'modernization.' The scholar's 'art' (as distinguished from the builder's artisanry) was largely for the intent of satisfying the 'spiritual needs,' (at least at one point in time during the seventeenth century). The intervention of the Soviet slogan, 'socialist content, nationalist form,' was to result in a dichotomy for architecture, instead of fulfilling the prophecy of dialectic materialism for which it had been intended. At that time, the scholar's 'art' was handed over to the second component of the slogan, 'form' as the vehicle, science as the

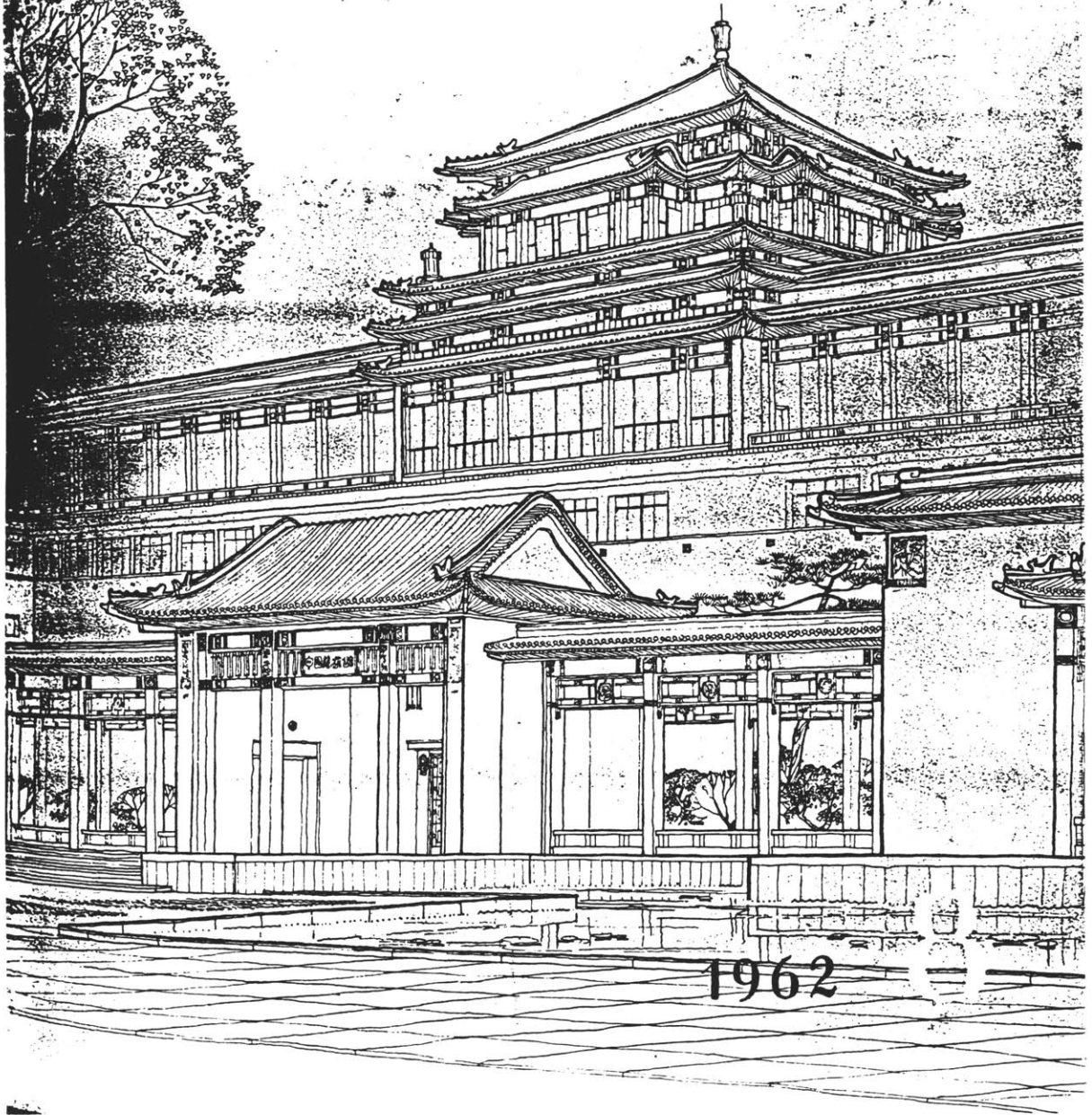
technique; to convey the socialist content. Thereupon, the 'spiritual needs' was shifted to the hands of 'socialist content' as: 'the spirit of the people;' rather than staying with the faction that both Chinese and Western convention commonly associate with the 'art' of architecture. The socialist content addresses the needs of the people (beginning with politics). The equation of national form with beauty in the 1955 denunciation of the big-roof style effectively cancels out form, just as it cancels out beauty. Content is left holding the bag for 'spiritual needs,' and is, as a result, a last haven for 'quality' as well. However, content loses 'spiritual' when it becomes intertwined with function (treated as program), a somewhat uneven exchange. Function is not only more akin to 'utility and economy,' but it also comes with a spare part: form (about as powerful as a triple A battery), which can be re-inserted back into 'nationalist,' in any size or shape, as long as it satisfies 'utility and economy.' It is no wonder that the mere concession of 'styles' were to become the center of debate (by the early sixties), as it was a last stronghold for the architects to reconstruct their argument back to the full arena of architecture, both as an art and a science, by the 1980s.

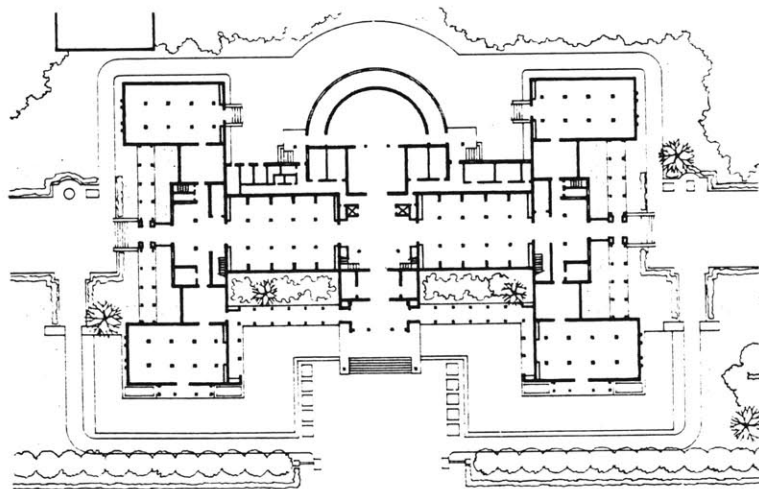
NOTES

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(I am indebted to Hoa for his background on the 'big-roof adventure.')
2. R.T.F. Skinner, "Peking 1953," Architectural Review, CXIV, October 1953, p.258.
3. Feng Zhongping, "New Approach to Space, Environment and Architectural Style," (Eng. Abs.), Jianzhu Xuebao, No.4, (1979).
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6. Kopp, p.223. J.V. Stalin: cited by M. Tzapenko, in: Des bases realistes de l'architecture sovietiques, (Moscow, 1952).
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8. Kopp, p.221-222. Quoted in : I. Matza, "La tradition et l'innovation," Arkhitektura S.S.S.R., No.1, (1944).
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10. Kopp, p.340. Quoted in: M, Tzapenko, "O realistitcheskikh osnovakh zovietskoi arkhitektury," (Moscow, 1952).
11. Hoa, pp.85-86. Hoa goes on to cite a large administration building at Sanlihe for the state plan committee, which bears curved roofs only on its lateral wings and not on its central body. It is a manifestation of the sudden termination of the big-roof style.(p.90)
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14. Su, p.156.
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16. A.C. Scott, Literature and the Arts in 20th Century China, (Great Britain, 1965), p.117.

17. Hoa, p.75.
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19. Kopp, p.357. Conference proceedings were cited in Pravda, December 9, 1954.
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21. Hoa, pp.91-92.
22. Chai Li-lin, "The Question of Architectural Form," People's China, July 16, 1956, pp.29-33. (The author was an associate professor at Tungchi University at the time.)
23. Su, p.188.
24. Yan Fengxiang, "Retrospect and Prospect on Architectural Theory," (Eng. Abs.), Jianzhu Xuebao, No.9, (1984).
25. Chai, p.31.
26. Chai, Ibid.
27. Chai, pp.31-32.
28. Chai, p.28.
29. Su, pp. 165-166. Cited from: Jianzhu Xuebao, No.5, (1956), pp.58-59.
30. Su, pp. 167-168. Cited from: Jianzhu Xuebao, No.5, (1956), p.59.
31. Su, p.168. Cited from Jianzhu Xuebao, No.6, (1956), p.49.
32. Su, p.169. Cited from: Jianzhu Xuebao, No.6, (1956), p.50.
33. Su, p.178. Cited from: Jianzhu Xuebao, No.9, (1957).
34. Su, pp.172-173. Cited from: Jianzhu Xuebao, No.9, (1957), p.42.
35. Su, pp.174-175. Cited from: Jianzhu Xuebao, No.9, (1957), pp.43-44.
36. Su, pp.183-184.
37. Su, p.185.
38. Su, p.187.

建筑学报





The National Art Gallery, Peking.

S T Y L E

... style is the reflection of a whole social ideology-- determined by such factors as history, natural conditions, social systems, politics, economics, culture, science, technology-- especially of class ideology.¹

At a symposium for the tenth anniversary of the People's Republic (Shanghai 1959), a speech entitled "Creating a new Chinese Socialist Style of Architecture" was given by the Minister of Architecture and Engineering, Liu Xuifeng. The minister pointed out the misconceptions of architectural theory, emphasizing that change can only come about gradually, through the evolution of architecture, and not from certain models or simply from theories.² The possibilities for a renewed outlook on the role of architecture in modernization, (having been substantiated by the 'Big Ten' commemorative projects in Peking) were, however, soon to be disrupted.

The imminent Soviet withdrawal, three years of drought (beginning in 1959), and an increasing tension due to the Great Leap Forward's virtual failure, were to put the issue of architecture on hold. Premier Zhou En-lai's 10 Point Program in the Spring of 1962 placed agriculture first in line, with light and heavy industry to follow, giving food the top priority. The year 1961 furthermore witnessed the headstrong confrontation of the ongoing struggle between Mao's 'politics-in-command' and Liu Xiao-shi's 'technique-in-command.' Until its resolution in 1966, three categories of investigation were pursued for the new socialist style, as follow.

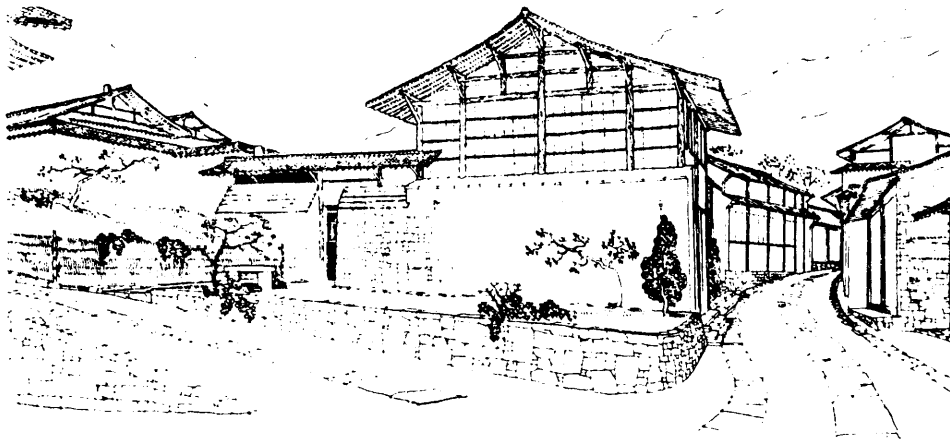
The 'palace style' was reincarnated in the China Art Gallery (1961), which having removed a few of its neclaces, was nevertheless reminiscent of its predecessors. Although it indeed made use of traditional construction methods, it was essentially seen as non-pragmatic.³

The investigation of domestic architecture, which distinguishes the early sixties, became a second stronghold in

the issue of style. Its emphasis on the single dwelling unit, however, limited its application to that of materials resource development. The era's focus on communes and residential units largely rendered the research incompatible. Nevertheless, the domestic tradition as a source for modern architecture was thereby asserted.

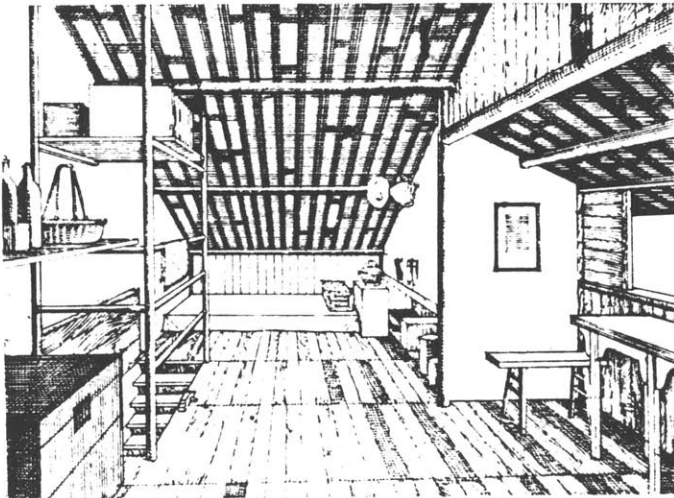


Maisons au bord de l'eau à Linhai.



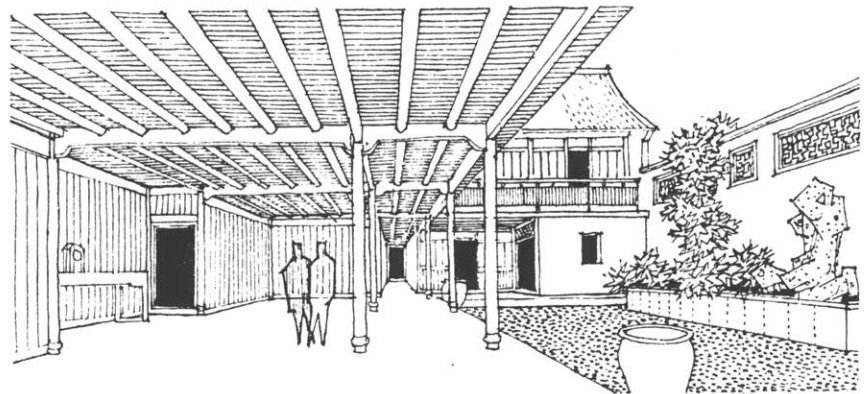


Grande maison à
Huangyan, pour onze
familles paysannes.

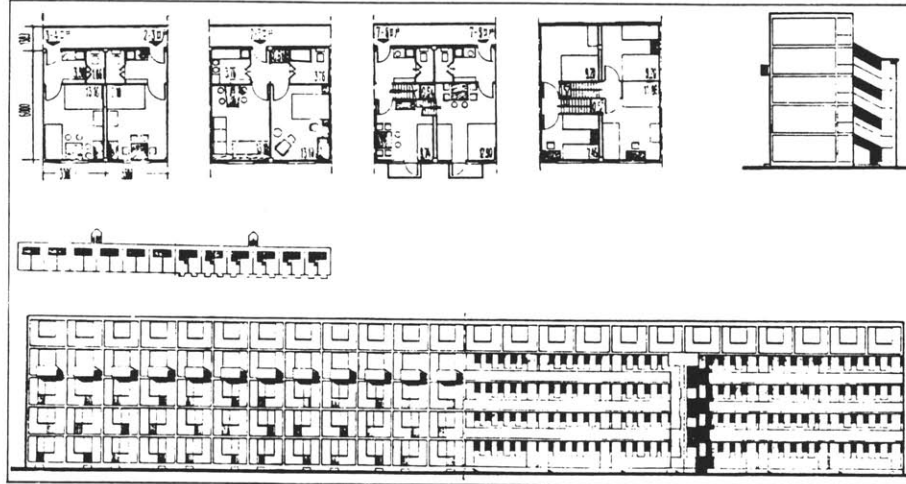


The attic, showing rational use of space.

Drawing by Shang Kuo



Drawing by Shang Kuo



progetto di nuove abitazioni nella zona di Shanghai (in J.X., 2, 1963).

A third source was encapsulated by the term 'technology,' which continued to be the magic word. Needless to say, its association with the foreigner also persisted. The emphasis on a 'suitable' choice of foreign examples directed research to Cuba, North Korea, and North Vietnam; but there is little doubt that in spite of the recent Soviet withdrawal, their assistance during the previous decade made it conducive to a continuing use of their technology. As for the West, the term 'foreign techniques' began to be favored over the previous use of 'Western concepts,' as an indication of the shift in the application of principles from theory to practice. This category (technology) was to increasingly predominate over the others, in direct correlation to the prevailing architectural programs of the early sixties: housing and factory construction.

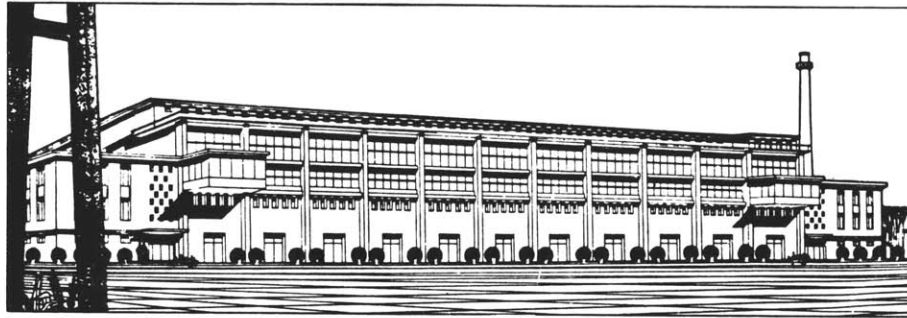
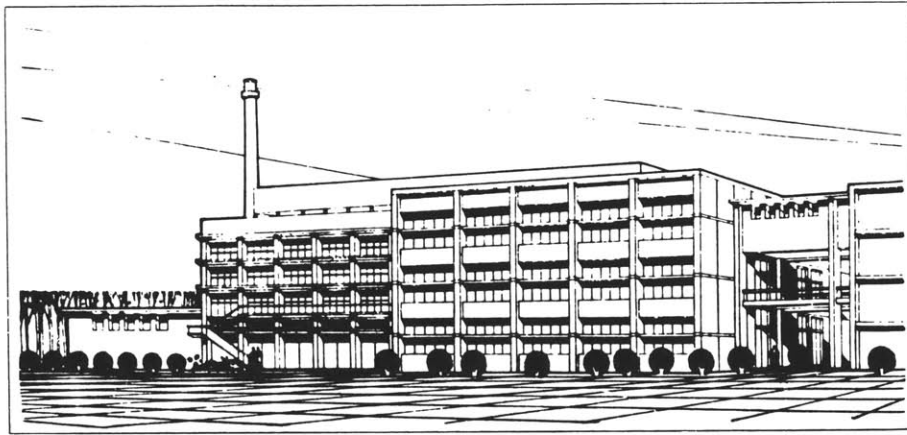


图 3 原料车间透视图

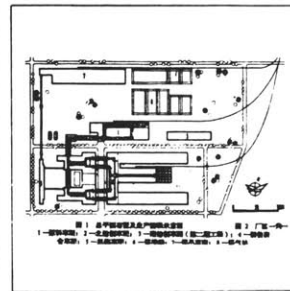


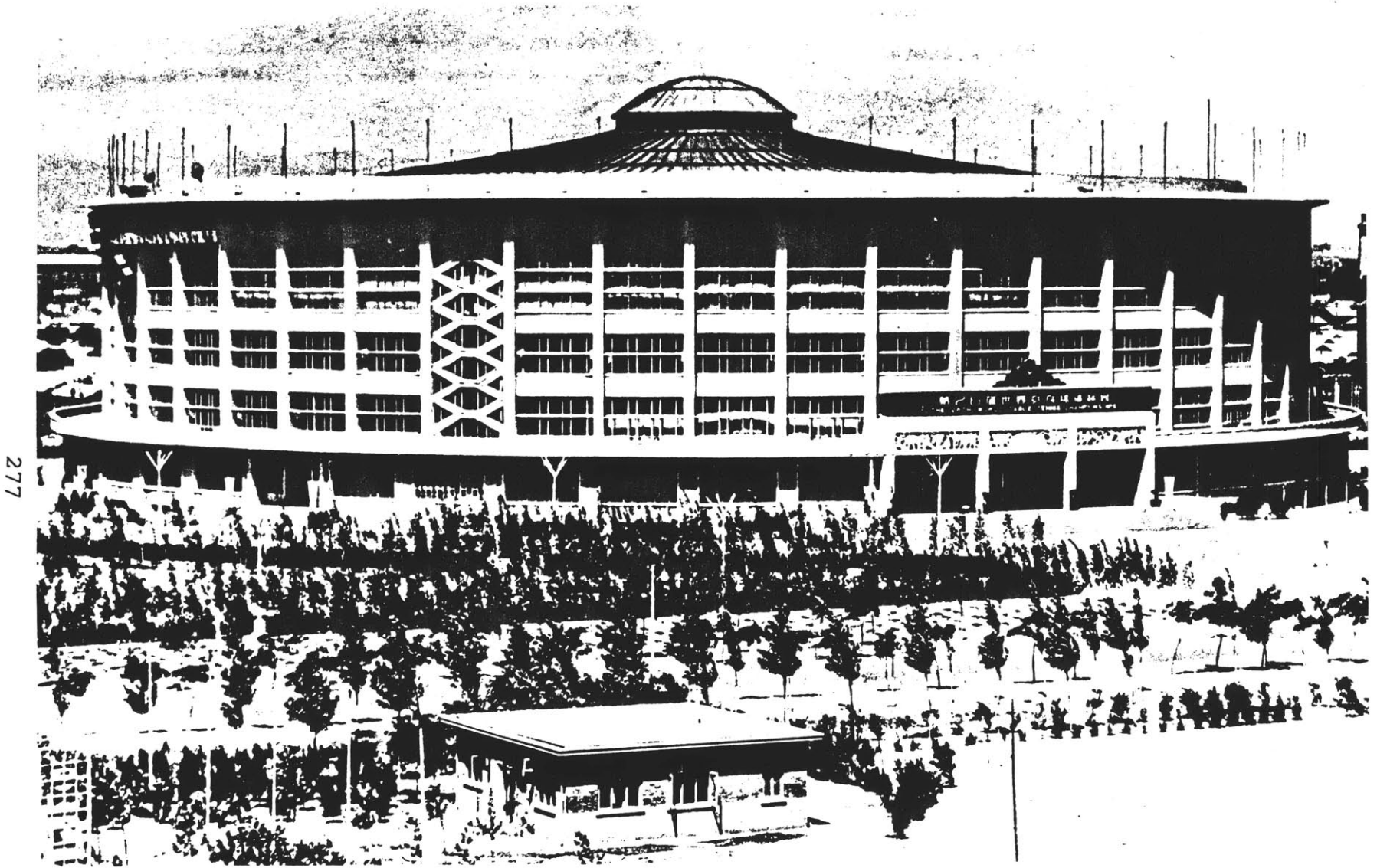
图 1 原料车间平面布置图
1—原料车间 2—办公室 3—休息室 4—更衣室 5—浴室 6—厕所 7—食堂 8—宿舍 9—车库 10—大门

The emphasis on technique had been made explicit during the Great Leap Forward with the insertion of the policy: 'walking on two legs' to replace the earlier slogans, in 1958. Its inception as a means of encouragement, however, ultimately resulted in a dilemma between the foreign leg of technical expediency and the domestic leg of traditional resources, due to the undercurrent of 'socialist' versus 'revisionist.' Nevertheless, the means rather than the ends were thereafter to be emphatically central to the debate of style. Although all of the aforementioned ingredients were in the batter for the making of style, needless to say, the electric mixer was 'politics.' The citing of 'technique' (and its equation with science) brought the conventions of 'art and science' fully to the forefront. With the imminent economic recovery by 1962, architectural debate had resumed. Once again, Professor Liang Ssu-ch'eng put in his bid for quality, having had his faith restored by the 1959 'Big Ten' projects and its unprecedented scale of 'cultural' building. "Architecture as an Art" was published in 1961, reprinted from a newspaper interview in the Kwangming Daily. Therein, the professor makes a conscious effort to effectively broaden his base, with the help of a few old friends:

[with regard to the newly completed Peking Worker's Gymnasium ... it is, he said:] another victory for the Communist Party's policy of erecting buildings that are practical, economical and under given conditions, beautiful.

"The fact is architecture has the twofold role of being both a work of engineering and an art: aesthetic consideration is given a structure subject to the requirement of first satisfying the material demands of living and production. We attach great importance to the aesthetic side of architecture because our buildings must not only satisfy the people's material demands, but their spiritual demands and their visual and artistic demands as well."⁴

Professor Liang thus introduces 'aesthetics' as a formal consideration, at the same time as 'spiritual demands' are again raised; thereby reviving the role of the architect



The gymnasium at the Peking Workers' Stadium



Peking Workers' Stadium and Peking Workers' Gymnasium. (1) Bird's-eye View

The Peking Workers' Stadium, built in 1959, has a total building area of 72,300 square metres and 80,000 seats.

The Peking Workers' Gymnasium, built in 1961, has a total building area of 42,000 square metres and 15,000 seats. The roof, 94 metres in diameter, is a circular double-layer suspended cable structure. The 26th World Table Tennis Tournament was held there in 1961.

as most closely approximated by the scholar. And yet he yields to the fifties' slogans which had once caused him such disgrace, embracing their contribution beneath this very large umbrella which he is constructing to shelter his argument. It is, however, ironic that aesthetics would be the first to resuscitate spiritual demands, as it is considered extrinsic to the concepts of Chinese architecture. Nonetheless, having stated his priority, he goes on to address the dialectic of form and content: (indirect quote)

... a design which satisfactorily meets both material and spiritual needs must, first of all, be a design which is good in content. However, that is not enough. We need at the same time to create good forms, where the content allows and demands it. The relationship of form and content ... can be explained in this way: Utility is the content of an architectural structure, or quite simply, ... a building's content is its usefulness. Beauty is the emotional response produced by the form embodying that content. This form takes shape, through its structure, after satisfying the requirements of the content. If the form evokes our aesthetic appreciation, it has achieved beauty when the structure has satisfactorily met the conditions of being practical and economical...⁵

Having jammed the lid of art open with aesthetics and beauty, the professor goes on to find a more substantial wedge to keep it open: (indirect quote)

... every architect in designing and handling the aesthetic side of architecture is guided by a sense of aesthetic principles. Different social classes react differently to the same set of aesthetic principles and apply them differently.... [They] are not unalterable but are constantly modified as social ideology, science and technology develop.

.....
[And from there, the substitution of style for aesthetic principles is inevitably made:]
... architectural style is the result of the unity of technology and social ideology.⁶

Having thus identified a new dialectic: technology and social ideology, Professor Liang presses on to the crux of his argument. In comparing the half-timber construction of

Shakespearean England with Chinese timber framing, he observes that their construction is essentially the same, but their styles are entirely different; from which he deduces:
(indirect quote)

... social ideology rather than materials and technique determine the style of architecture.

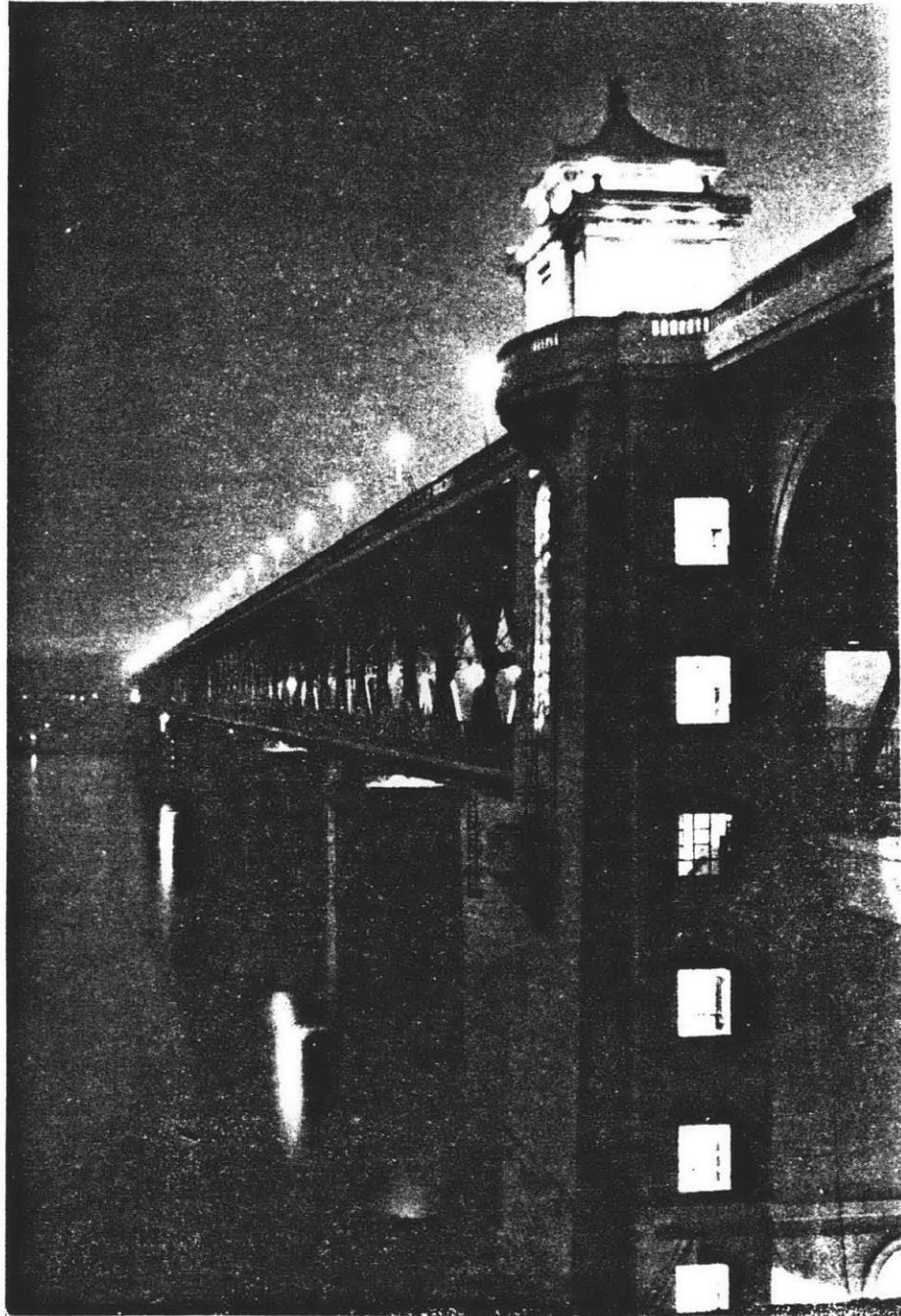
... new materials and new technology only provides (sic) new and even broader possibilities for the creation of new styles, while their application is carried out as the result of man's mental processes. So, in the final analysis, it is man's ideology that determines architectural style.⁷

To press the point one step further, Liang states:
"If we think that new materials and new technology mean a new style, and attempt to imply that these in themselves represent the spirit of the steel and plastic age, it is the same as saying the spirit of the times is determined by material things. As I understand it, the spirit of the times is the spirit of the man and the society of that age. It is not determined by materials or technology."⁸

We thereby return to the incontestible: ideology and the spirit of the times. Any argument which is upheld with such indelible marks of Marxist-Leninist via Maoist theory are safe ground for the user, even if it is a means to reinstate the art of architecture; a topic which becomes seemingly inconsequential in Professor Liang's declaration:

[Citing the Big Ten, the Lu Hsun Memorial (Shanghai), the bridgehead pavilions of the Yangtze River Bridge at Wuhan, and so on...]
Whether simple and unembellished or splendid and imposing, whether employing advanced techniques and modern materials or simple techniques and locally available materials, or a combination of both, these structures all convey a bright, joyous and vigorous spirit.... We have found the correct direction and correct method of creation. A Chinese and socialist new architecture is beginning to take shape."⁹

It is obvious by now that Professor Liang is well versed on his political background. One no longer has to read between the lines of his statements, as they are now written



The bridgehead pavilion of the Yangtze River Bridge at Wuhan.

Li Chi-

in a staggered manner: one for the Party, one for the art of architecture and its tradition. The concluding remarks again cover all angles for an architect who has suffered much disheartening defeat, and moreover, a man who was clearly impassioned with his work.

"Personally, my understanding of the key question of art in architecture is whether the building designed by the architect as superstructure, meets the demands of the economic base."

.
[To this he adds:] "My opinions may not all be correct, that is why I am stating them. I believe that academic debates and discussions, exhibitions and competition in design, in short, the policy of 'a hundred flowers bloom,' will all provide more favorable conditions for a better creation and development of our new socialist architecture."¹⁰

A series of seven forums were held in Kwangtung Province a few months after the publishings of the interview, and presented, once more, in China Reconstructs; entitled: "Debate on Architectural Style." The question of style centered upon Liang Ssu-ch'eng's controversial contention that man's ideology, in the end, determines style. The participants included architects and engineers from sixteen provincial and municipal departments, as well as students and professors from the South China Institute of Engineering in Canton. Essentially three views were expressed; the first of which was based on economy. This was supported by two engineers who maintained that although art and class ideology are part of the superstructure of a society, they are both determined (indirectly or directly) by its economic base. "Therefore, a style is not the product of man's subjective ideology but the reflection of objective reality. This is made up of . . . social system, economy, science and technology, conditions of climate and terrain, and national customs."¹¹

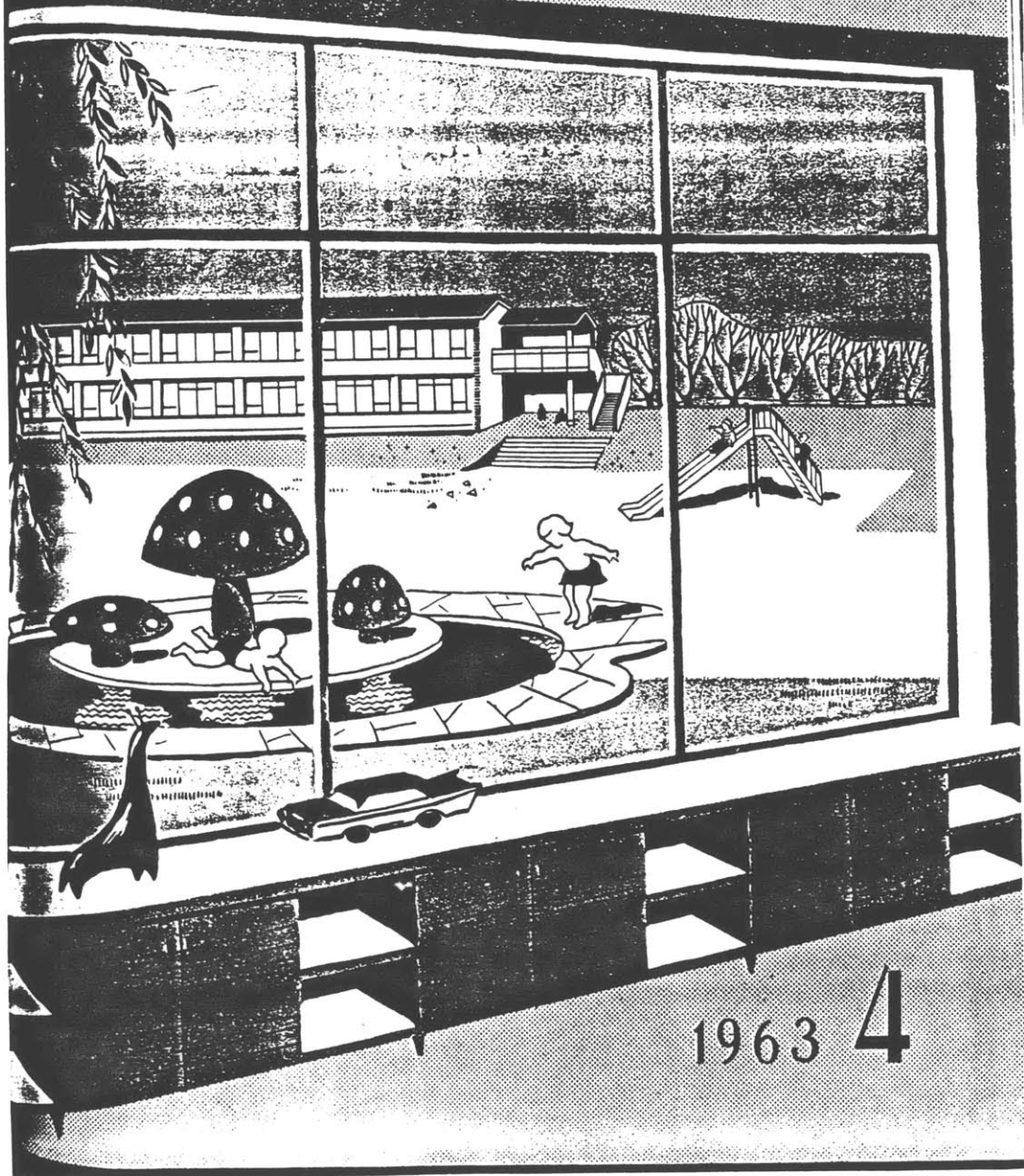
A second faction basically agreed with Professor Liang, but added to social ideology; the level of science and technology, and methods of design under given historical

conditions, as determinants of style. Again they emphasized local customs, geography and climate, as well as material resources. A third opinion was offered by Chen Po-chi, who rather than object to the given interpretations of style, simply tried to define it. His finding that "Style is composed of the characteristics common to all buildings in a given place and under similar conditions,"¹² fully underscored the prominence of 'regionalism,' which distinguished the former half of the sixties.

The centering of debate on architecture, per se, was not to be seen for some time to come. From the mid-sixties until 1979, events which pertained to architecture were to be subordinated to the politics of the day. Educational reform and its corresponding impact on architectural practice more aptly chart the era.

建筑学报

JIANZHU XUEBAO

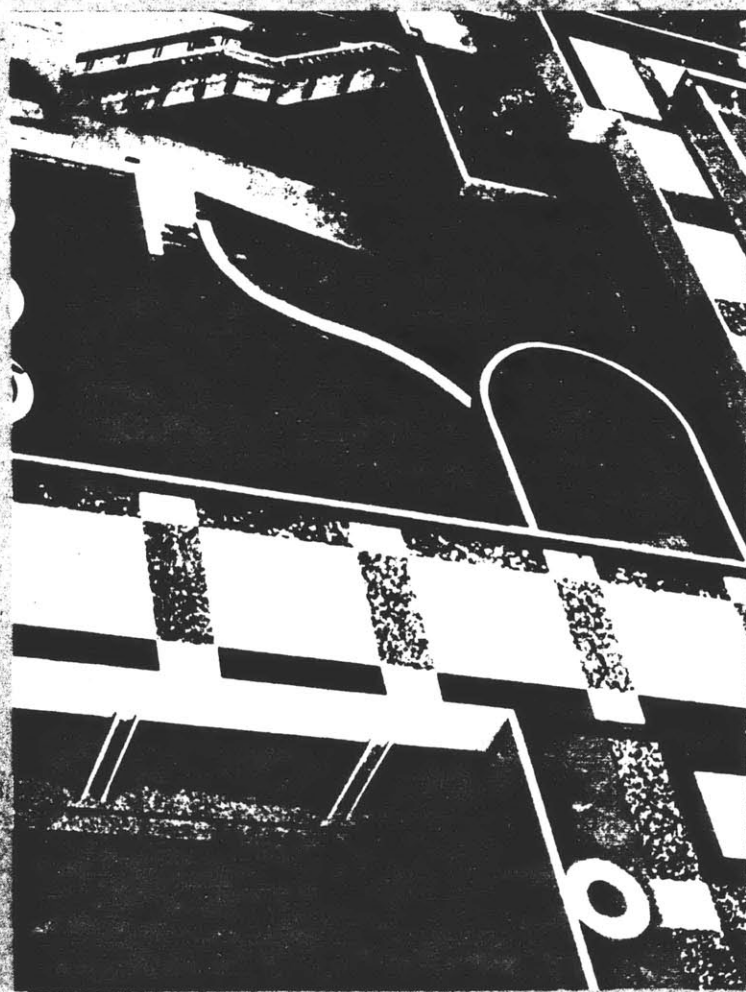


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N O T E S

1. Published interview with Liang Ssu-ch'eng to reporters of the Kwangming Daily, "Architecture as an Art," China Reconstructs, X, July 1961, pp.20-25.
2. "Creating a New Chinese Socialist Style of Architecture," Jianzhu Xuebao, No.9, (1959). (Incidentally, the nomenclature, "Big Ten" is not Chinese given, but my own.)
3. The designs of the gallery as well as the Beijing Hotel (1974) have been attributed to the eminent Dai Nianci in: "Prize Winning Blueprints for Rural Housing," Asian Building and Construction, February 1982, p.21.
4. Liang, pp.20-21.
5. Liang, p.21.
6. Liang, pp.21, 24.
7. Liang, p.24.
8. Liang, Ibid.
9. Liang, Ibid.
10. Liang, p.25.
11. "Debate on Architectural Style," China Reconstructs, October 1961.
12. "Debate on Architectural Style," Ibid.

建筑学报



RE

1984

Q U A L I T Y a n d t h e I N D I V I D U A L

Clients prefer a traditional design if they can afford it, but most work is done in a modern style. As one architect put it, "what you call 'modern' we call 'save money'."¹

Although the Great Leap Forward's 'General Line for Socialist Construction' called for 'more, faster, better, and more economical results;' the decades which followed were to become scarred by 'economy,' in the supposed name of quantity. (The disregard for housing must here, again be underscored.) Although the Gang of Four was officially implicated in a plot to overthrow the government in the Fall of 1976 (immediately following Chairman Mao's death in September), they were not to be brought to trial until a full four years later in Beijing 1980, and thereupon sentenced in January of 1981. A policy of 'economic readjustment' was instituted in the Spring of 1979 and with it, the shift from 'productive' to 'non-productive' investment activated the consumer-factor. By July, the "Law of the PRC on Joint Ventures using Chinese and Foreign Investment" took effect. Also in the Fall of that year, the People's Daily printed an article which declared that Mao Tse-tung was not a sage or god, that "No political party or individual is free of mistakes."²

The calls for quality and 'aesthetic consideration' were the first pleas to reverse the trend of the Cultural Revolutionary years and its aftermath. The focus on the art of architecture was thus resumed with the drive for design creativity; and thereby, the 1980s are to be distinguishable from former eras through its accommodation of the individual in determining China's socialist architecture.

An article which appeared in the "Jianzhu Xuebao" early in 1979 characterizes the thematic concerns of the eighties. Once again the fifties' slogans were summoned. Top priority was given to the three-part slogan; now altered by the substitution of 'aesthetic consideration,' for the former term

`beauty.'

First, the problem of guideline. In civilian-building design, this has long been manifested in the principle of "utility, economy and aesthetic consideration when conditions permit." The three elements stated here are indeed the criteria in the assessment of architectural design. But the "gang of four," in attempting to usurp Party and state leadership, had sabotaged the principle. It is of cardinal importance at present to reaffirm it. To do so does not at all imply a lowering of aesthetic standards, but on the contrary is true.

Second, the problem of unshackling the minds to pave the way for creative expressions. The article goes on to give an account of the ideological regimentation imposed by the "gang of four" and its detrimental effects. To remedy the situation, it is suggested that while endeavouring to eliminate the after-effects of the "Gang of Four" disaster, a stress on the implementation of the policy of "letting a hundred flowers blossom and a hundred schools of thought contend" is quite necessary. Thus, academic discussions as well as studies of theoretical or technical problems should be promoted and encouraged, for these in themselves are a process of freeing the minds and a means to produce dynamic influence on architecture. Third, the problem of how to create a rich variety of styles. In light of the spirit of "making the past serve the present and foreign things serve China,"... Chinese architects should take over from their own cultural legacy and at the same time be informed about and susceptible to advanced contemporary expressions and innovations abroad, so as to improve, and ultimately create, their own new styles.³

Other articles were published throughout the year which similarly addressed `architectural creation;` and although conflicting views on the prioritizing of the slogan's principles persisted, (needless to say), there was general accord that the three previously cited `problems` were the key ones to be addressed.

A later reiteration of the aforementioned themes went on to identify yet another concern which was to mark the eighties: the pragmatic concern for standardization; and with it, a clarification of the means, both traditional and technological, for achieving it.

... the development of ideas of architectural design in the past thirty years has followed a zigzag road. Especially since 1966, Lin Biao and the gang of four had fastened on the designers many mental chains and even now the influences still suffocate their minds and make them dare not create boldly. Therefore, the most important problem at present is to emancipate the mind, and only with this can the designers make more contributions to the to the realization of the four modernizations.

... the leading cadres concerned should not only well handle the carrying out of the Party's policies and principles, but should also encourage and support the designers to create boldly.... Moreover, stress should be laid on doing things in the light of scientific laws. The architectural design work needs its specific rules and regulations. Those procedures of capital construction, which ... have been scrapped under the interference of the gang of four, should be re-established as soon as possible. Design criteria and quality indices of different building types should be enacted again and strictly observed.... It is necessary to further implement the Party's principle of "utility, economy and aesthetic considerations when conditions permit." Design concept should be considered functionally, and the trend of blindly seeking after form without paying attention to function should be objected. But, under the influence of the gang of four the design personnel dared not talk about architectural style and plastic arts, and consequently at present there exists a trend of neglecting aesthetic considerations.⁴

The Fifth Congress of the Architectural Society of China (ASC) was held in October 1980. It was the first such congress held since the fall of the gang of four, and also the most distinguished gathering since the founding of the People's Republic. (The first ASC Congress was inaugurated in October 1953, with the First Five-Year Plan.) Yang Ting-pao, (designer of the Peace Hotel) was elected president of the ASC. The meeting focused on urban and rural construction, and the development of architecture toward modernization.

Two basic ideas emerged from the congress, central to architecture in 'academic activity,' (as featured in the

"Jianzhu Xuebao"). First was the call to straighten out the ideas of architecture in relation to the world's modern architecture (and the role of technology therein), as well as with regard to China's own theories of modernization. The Vice-President of the ASC, the eminent Dai Nianci, specifically addressed this with his paper entitled: "Modern Architecture or Fashionable Architecture?"; which elaborated on the absorption of modern architecture as follows:

(the essence of modern architecture as he sees it,) lies firstly in the full use of modern industry and scientific technique as a means to fulfill the demands of modern living; secondly in the overcoming of the negative factors to material and spiritual environments of inhabitants brought forth by modern industry. [And he went on to reiterate the aim to use foreign experiences to serve China, while cautioning to:] not demand of perfection, which will undoubtedly lead to mediocre (sic) and stereotypes; know how to absorb the quintessence from the opposites, and not to be eastward one moment and westward the next...⁵

The second basic idea (central to architecture) was the emphasis on the integration of city planning and architectural design. The problem of urban and suburban land abuse, which was already well under way by the time of the First Five-Year Plan, is fundamental to this. The initial bias toward heavy industry with the subsequent lack of regulations during the GPCR, had resulted in urban chaos by the 1980s. An earlier article had called upon the necessity to strengthen city planning specifically in reference to architectural form, as follows:

The organic connection between ... building groups in a city forms a continuous flowing space.

.
The design of individual buildings must accord with the spatial composition of the building group. In particular, attention should be paid to the coordination between the modelling, massing and scaling of the buildings so as to achieve a unity of streetscape. Moreover, the configuration and facade treatment of small- and medium-sized buildings should be as simple as possible, and it is necessary to attain a lively and

unified effect of spatial composition through an organic relationship in plan and height between the buildings.⁶

And on the other hand, although design regulations have here been cited as a solution to one aspect of the problem, a later article addressed the other side of 'standardization.'

After 1949, China witnessed a massive reconstruction programme which invariably raised issues of considerable concern regarding the problem of creating environmental harmony with new buildings. Admittedly, we are still ill-equipped to understand the multiple relationships between architecture and environment so as to attend to the grave issues. In general, architects and planners also vow their dissatisfaction toward the monotonous and overstandardised architectural and urban landscape.⁷

Having gotten the 'modern style' 'down to a science,' in a manner of speaking; its cultural heritage now, too, was to be added to the list of 'critical assimilations.' The theme of 'not copying'/'not imitating,' whose sources lie in this criticism of the 'modern style,' was to appear repeatedly in the 'academic discussions' of the eighties.

Also central to this urban chaos in the realm of architecture, were the rise of preservation and conservation; issues, which in many ways, were ultimately to be the significance of Professor Liang's contribution, (even though this was not as he had intended it to be). By working to establish the conceptual framework for such an attitude, in which none per se had previously existed, the Society had essentially laid the foundation for the preservationists.

The issue of a wholistic treatment of built form and the environment, however, came to the forefront not only due to rapid growth on an urban scale, but also due to the unprecedented rise in rural growth which was elicited by the implementation of the Responsibility System in December 1978. (Needless to say, with the overall clarification of problems and priorities in the 1980s, housing, both urban and rural,

immediately assumed a primary position.)

The old-comer slogan 'socialist content, nationalist form' also resurfaced in the early eighties (but in the adjective form) raising a new kind of controversy, in addition to some of the old ones;

The principles of "socialist realism" and "socialistic content, nationalistic form" in literature and art were improperly introduced into architecture.... The basic content of architectural renovation (sic) is to transform construction from a handicraft trade to a mechanized industry, to transform architecture from an art to a scientific technique.⁸

[And still another version:]

the slogan of "socialistic content and nationalistic form" is self-contradictory, as architectural style in the modern age of capitalism has become the individual style of the architect in place of the nationalistic style. In the period of socialism [such as this], there is no need all the more to bring styles of [a] thousand architects into one single style so called nationalistic.⁹

Concurrent with this reassessment of the slogan was the disassociation of 'national form' with the taboo of classical revivalism. The contention that it was necessary to "realize the national form afresh" appeared in the March 1980 issue of the journal, in which Wang Shiren pointed out that the organic relation between the ensemble and individual buildings is among the most prominent aspects of traditional national form.

With the relinquishing of architectural form from 'national form' to a broadening variety of styles (and its relation to the individual), a further probing of 'form' began to be pursued. Wang Huapin addressed the key point thereof as the unity of conception and delineation; conception being the intended purpose of the building and delineation as the expression of the building's essential character through architectural image.¹⁰ Wang Tianxi regarded "Form in Architectural Design" ("J.X." No.5, 1985), as an objective reality. He rejected the equation of architectural form to

beauty, and broadened the term as a reflection of the spirit and technique of the age as well as the continuity of historical tradition, with the concerns of the architects' conceptions at the time of the building's design. Moreover, in his view, form is not contradictory to economy, nor to function; and he advocated its position as one of importance.

An inventory of the numerous ideas which have thus far been presented in this segment yields four distinct but interrelated thematic concerns. First is the call for quality; quality in terms of 'aesthetic consideration,' and quality of building form, (both in terms of its own as well as the urban environment). Directly related to this first issue is the reinstatement of 'principles.' The fifties slogans were once again called for specifically in dialectic unity, through a reassessment of each of their components.

A second theme is epitomized by the call to 'let a hundred flowers bloom' in the interest of variety in architectural styles; both in terms of the artefact as well as in deference to the architect, (and needless to say, their relation thereof to the user). Design conceptions are to act as mediators. 'Architecture' per se became increasingly referred to in terms of 'architectural design,' and correspondingly, architectural theory was to come into its own, to record the ideas and ideologies of this process of 'design.' The allowance for architectural theory (and with it, criticism) has been key to an augmenting autonomy, which for architecture had been usurped during the previous decades.

In direct relation to this encouragement of 'letting a hundred schools of thought contend' is a unique feature of the eighties, and its most distinctive corrolary: the summoning of the individual. This was initiated in 1979, and by the mid-eighties, the architect was to be instrumental to the 'flourishing of architectural creation.' Also key to this 'thriving' was the criticism of the 'modern style,' by which

architectural style began to be seen as an outgrowth of collective concerns originating with the individual, instead of something which was to be predetermined or pre-ordained.¹¹ By 1984, (to fully illustrate the extent of these new concerns), Zhang Qinnan was to contend that: "Lastly, China should have her own Kenzo Tange, to open the way for modern architecture, rooted in Chinese society."¹²

Standardization (in the affirmative) was cited as another one of the discarded components of the 'ten years of chaos.' Its reinstatement is of fundamental concern to both architecture and urban planning, for the purpose of restoring 'brass tacks guidelines' in conjunction with 'principles.' It goes without saying that such a reform is necessary, but the means to achieve such a standardization, both in terms of tradition and technology, are as hotly-debated items as ever.

A more obscure but distinctive trait which is the last of the key thematic concerns of the 1980s, is the issue of time. This old familiar friend rears its face once again to reflect the 'spirit of the times;' and for once, the architecture of the eighties is said to equally mark, as well as be marked; by time. The quest 'for the year 2000' still defines an undeniably rapid-modernization program, and in as much as this is so, the 'time' in consideration is still very much in the future. But by now, the future is not so very distant, the recent past is also much closer to the present, and the present is seeking to find increased integrity in its centering on quality, (at least in theory). In practice, however, there is no doubt that, as Lo-Yi Chan (an American architect who has worked with the Chinese) points out, the main problem, indeed, is time:

They can't spend the time we might making choices....
If they can't pull the stuff out of a drawer and get it on paper, then its too late. Once they've solved a problem, or think they've solved it, they repeat it a hundred times, a thousand times.¹³

A reiteration of the problems inherent with rapid modernization and the amorphous 'internationalization' comes from the master's degree candidate from Columbia, David Cohn:

Chinese architects told me again and again that it is mainly Westerners who oppose the rapid pace of development. The American architect, invited as a "foreign expert" to China, is likely to find himself in the impossible position of trying to give the Chinese their own architecture, only to find that they don't really want it. They seem to envision their future entirely in Western terms.¹⁴

Nevertheless, the efforts for a reciprocal bridging between practice and theory as a means to combat this pressing genericism are also evident. The Systems Reformation was instituted in 1983 for the purpose of addressing quality, initiative, and overall efficiency; scaling down the profession to individual design work virtually for the first time; (as covered in the earlier segment on the architect's role). By February 1985, the first "Symposium on Flourishing Architectural Creation" was to be held in support of the profession's reform. It was sponsored by the Bureau of Design, the Architectural Society of China (ASC), and the Ministry of Urban and Rural Construction and Environmental Protection (MURCEP). Dai Nianci (President of the ASC and Vice Minister of MURCEP) chaired the symposium, citing the architect's conception as the key problem in the stereotyping of architectural design. To address the issue of 'flourishment,' he stressed the following five points:

... emancipation of the mind to breakthrough from the conventions; realization of the policy of "letting [a] hundred schools of thought contend;" enhancement of architectural theory, including introduction of foreign trends; reformation in structure of design institutes; support towards the flourishing of architectural design from all parties concerned, including organizations of construction, planning, administration and public opinion.¹⁵

With the construction of the Kunlun Hotel in 1985 (Beijing), another keystone was re-inserted into the annals of

modern Chinese architecture. Therein, the old scholar's role was resuscitated through principles for defining its interior design. Although I am sorry to say that the overall building form is yet another version of the well-known 'megabolt' hotels, (possibly with a rotating restaurant atop the single bundled column which bolts down the otherwise horizontally striated building mass-- a world's fair motif, no doubt); its experience as an interior may well be an altogether different matter. In any case, the treatment of the interior design is noteworthy;

... designed to have Chinese characteristics,... the conception of interior design [is explained] in the following points:

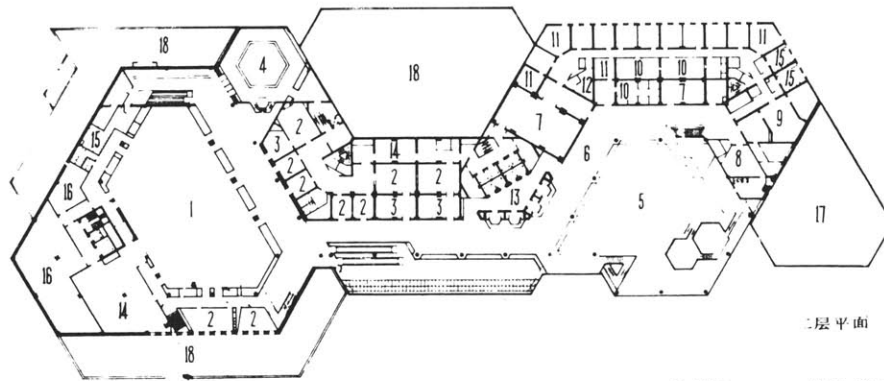
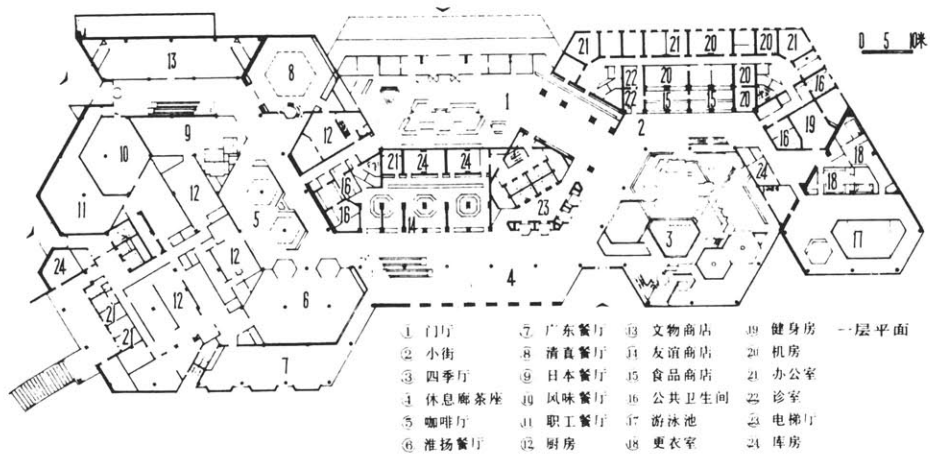
1) style and taste.... most of the hotels recently built with foreign investments, in which modern high class materials are used, are usually luxurious in effect but vulgar in taste. Architecture, as a work of art, is bound to be bad in taste if it only affects one in sensation but not in spirit.

2) Environment and conception.... In Chinese traditional art, they are called "scene" and "emotion" respectively. It has usually been considered as art of high order to have scene and emotion mingled. Conception is different from taste. The latter only affords an atmosphere, while the former is intermingled with ideological emotion.

Kunlun ... is the highest mountain range in China, the place where the Chinese people originated, and the symbol of Chinese civilization. Therefore, "Eight Scenes of Kunlun" have been chosen as the motifs of interior design.

3) Space and time. In the traditional treatment in Chinese architecture, it is emphasized to arrange spaces in gradual succession instead of seeing everything at a glance. Such an arrangement brings the element of time into the art of spaces.¹⁶

Indeed, hotels in China often embody the stalemate between pleasing the West, with a dash of Eastern exoticism amidst modern conveniences; and pleasing the Chinese, with the look of modernity and its advanced technology. Nevertheless, the problem of a building's exterior decidedly concealing its



外景 Kunlun Hotel

(郭长福 王如刚绘)

interior, remains an irony for many of the latest hotel designs. Furthermore, their abruptness in the urban environment, which originates in their choice of site, is also due

cause for reprobation.

A second symposium on 'flourishing design' was held in 1986, and featured in the "Jianzhu Xuebao" throughout the year (Nos.2,3,4,7), further addressing concerns of the 1980s. Featured on the cover of the journal's February issue was the accepted design of a complex for the "Home for Architects and Builders;" a telling approbation. The lead article was once again, from a paper by the eminent Dai Nianci, entitled: "On Architectural Style, Form and Content;" which aptly prefaced other papers given during the symposium, while presenting Mr. Dai's own concerns;

As an architect, I would like to express my personal opinions on the following points for discussion:

1) Architecture is a science as well as an art. This is my basic idea which I would like to emphasize, as there are different views towards the artistic value of architecture at present.

2) Style is the incessant repetitive expression of some common characteristics. It refers to the features formed in the architecture which has already existed rather than something under development. What we mean by the style of Chinese socialist architecture can only be the result of historical development rather than something to be followed.

3) Innovation [is] based upon good tradition. Innovation and tradition should be looked at dialectically rather than [with] total and uncritical acceptance or repudiation.

4) Content and form should be considered as an (sic) dialectic unity. In architecture, the content refers to the total factors required by the human life: physical, spiritual and social. Under certain conditions, there can be different forms for the same function, and vice versa. Old forms can be utilized for new contents, while new forms can also be utilized for old contents.

5) Nationalistic forms and socialistic contents should be encouraged. In architecture, the whole content consists of physical, spiritual and social functions, ... the last two [of which] are related to ideological problems and thus to social systems. In China, therefore, the demand for socialistic content is an objective reality, and disregard of unconsciousness of which will make architecture unable to serve fully for the development of material and spiritual civilization.

6) To learn foreign experiences should be distinguished from following fashionable architecture ... we have to absorb foreign experiences critically...¹⁷

Thus, after numerous years of tossing so many ideas about as if they were bingo chips in a spinner, somebody finally filled their card. With this as a base, other architects further expounded. In sum, dialectic unity continued to be emphasized as a means for integrating theory with design and practice, underwritten by the most fundamental of stipulations: that architecture is both science and art. Copying and imitation were repeatedly booed, and by contrast, originality-- which leads to diversification-- continued to reinforce the individual status of the architect and his design work. In conjunction with this was the appeal for seeking their own principles with which to guide practice, and the call to understand Western architecture with respect to its own historical and theoretical development; not only for the purpose of encouraging the clarification of their own 'course of exploration,' but also with the intent of discouraging 'western fever' and its stereotypes.¹⁸

Pragmatic issues continued to be based on the standardization of building design requirements, particularly in relation to urban planning. By now, the industrial era is almost long-gone, and the technological revolution in the building industry is well under way. Economy was re-emphasized in light of the increased proportion of building cost due to the new technology.¹⁹ The note was also made to take heed in the shift from the primacy of political movements to the present 'flourishing' of academic discussion, whose application has furthermore, been encouraged through the systems reformation.²⁰ Finally, the suggestion was made for a broadening of practice to be explored through new programs, not only in terms of their functional requirements, but also in terms of social and economic effects, (undoubtedly in reference to joint-ventures).²¹

Needless to say, fully straddling both theoretical and pragmatic concerns is environmental design, which was cited at the symposium as the number one source of design conception;²² and what more inherently Chinese principle could there be than this? The rural housing boom--already well under way in 1979--with its yearly competition for design solutions, have yielded impressive results in this aspect. (Had the Chinese taken to 'New-Jersey suburbanism,' then westernization would have dealt its final blow ... and such a proposal was included in the twenties' Nanking City Plan proposal.) Instead, building by complex is alive and well, and the variety and richness of solutions in recent years attest to the mastery of building and environment; an indeed, Chinese leitmotiv.

With the distinct concern for urban environment in the 1980s, the principles of traditional architectural planning have become a topic of investigation for urban metamorphosis. One such analysis follows:

... traditional Chinese architecture is conceptually aspired to a remarkable degree of harmony and artistic unity and would never fail to evoke a vision of totality in the sense of emphasizing the collective complex rather than the individual parts.

[And from there, inevitably the parallel is drawn:]
... it is tempting to relate the thematic issues underlying the aesthetic appeal of traditional Chinese architecture with ancient Chinese philosophical thinking which basically attends to the supremacy of unity and harmony. The seminal philosopher Lao zi put a great deal of emphasis on the complementary roles of existential matters in developing a dialectic, though primitive, style of thinking. He deduced that observable phenomena such as the agreeable weather, the calamity-free natural environments, the consensus of opinions, the bumper harvest, the well-endowed nature and the popular leadership are all in all manifest outcome of the non-conflicting role of worldly matters. In consequence, it can be argued that traditional Chinese architecture is underpinned by a way of thinking which is generally conceived of as bipolar alternation and cyclical periodicity. That is, the periodic interplay of theme and variation is structured in accordance with seasonal periodicity. Through the

profuse overlapping of spatial themes a vision of totality is evoked.^{2 3}

The author, Mr. Bao Shixing, goes on to cite an observation made in 1931 by Mr. Cai Yuanpei, a famous scholar and educationalist:

"new architecture is becoming more universally adopted by our people.... It is likely that Chinese architecture will be subject to a series of irreversible yet challenging changes, but leaving the worry aside, we can be assured of the continuing of one particular theme, that is the principle ... of architectural and environmental harmony."^{2 4}

Thus, the Chinese plan finally emerges as a source of both 'practical' and 'emotional' inspiration. With regard to this, I call upon the architecture of the Stalinian era once more. The adoption of Lenin's 'cultural assimilation of cultural heritage' to which the Stalinist Soviets added 'critical,' thereby transformed it to an architectural methodology for achieving "nationalist form." Suffice it to say that the inclination to regard 'national form' solely as a perceptible object, lead to numerous and quite literal readings of traditional or classical architecture. (Although there is no doubt that architectural form is, in large part, perceived; I believe it is fair to say that it must first be conceived.)

We return to Kopp's analysis of 'socialist realism' in architecture, in which the contrast between the approaches of I. Fomine and M. Guinzberg, to the problems of applying 'architectural heritage,' are quite telling. I. Fomine, (Mr. Neo-classicism), is cited by Kopp as one of the 'incontestible stars' of the period. He is also the inventor of the coupled column which distinguishes the facades of his buildings; and moreover, one of the inventors of the style-- 'classique-proletarian.' Fomine's reasoning for the infamous column is as follows:

"J'aime la colonne qui s'élève droite à partir du sol.

Actuellement, en raison de la hauteur des bâtiments que l'on construit, les colonnes s'élèvent souvent jusqu'au 5e ou au 6e étage et atteignent souvent deux mètres de diamètre. Elles semblent pourtant aussi minces que des allumettes. Voilà pourquoi j'ai inventée la colonne couplée et engagée, qui pour une même hauteur ne fait qu'un mètre de diamètre et paraît tout à fait monumentale."²⁵

M. Guinzberg, (the leader of the Constructivists), offers the following advice, by contrast, in response to a discussion which had been opened by the revue "Sovietskaia Arkhitektura" in 1933, regarding the issue of `assimilation of architectural heritage:"

"On peut ... dégager plusieurs orientations: la première c'est le pastiche. C'est là une position parfaitement conséquente. Elle consiste à choisir dans l'histoire de l'architecture un bel exemple et d'en faire une copie conforme. (...) Mais pour ce faire, il faut un instant oublier que de nombreux siècles sont passés et que, de plus, sur un sixième du globe, il y a eu "quelques petits changements." La deuxième orientation (...) consiste (...) à prendre un "bon" édifice du passé, à lui faire subir une opération chirurgicale; on lui rajoute ceci, on lui retire cela, on rallonge autre chose, etc. Enfin, il existe une troisième orientation, relativement radicale.(...) Elle peut se résumer de la façon suivante: "N'imitiez pas les formes du passé, mais seulement les règles compositionnelles."

[Guinzberg interjects:] Mais il n'existe pas de règles de composition éternelles.

... Etudier dans telle ou telle réalisation les règles de composition mais ce sera pour comprendre le mécanisme de l'apparition de la forme architecturale. (...) La conséquence est claire (ce qu'il faut chercher) c'est une compréhension génétique de l'apparition des formes artistiques.²⁶

Having more fully made the distinction that perception is not just perceptible, but also conceptual; we can now return to concrete examples, and their significance.

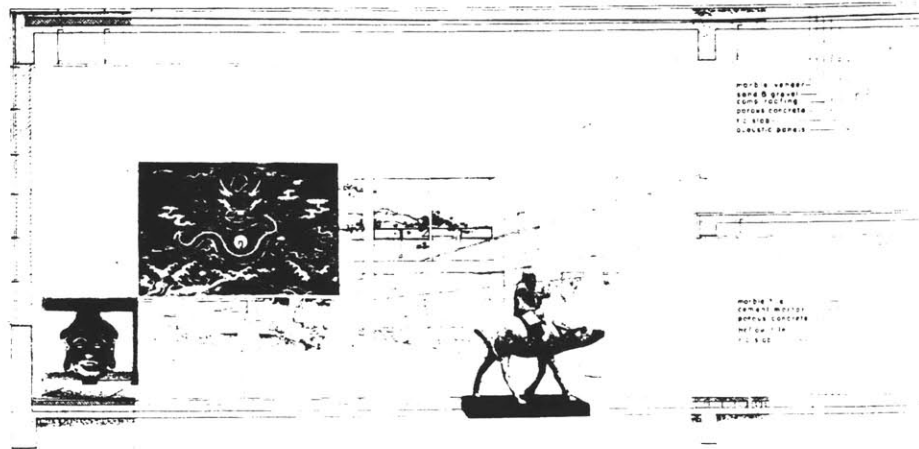
The Chinese garden embodies the theme: architecture and environment. Although the Gardens of Suzhou provide the quintessential example of this, there are many variations on the juxtaposing of Confucian and Taoist principles in gardens of Buddhist complexes as well as in domestic complexes of former prominent citizens; (for example, the Prince's Palace, Kung Wang Fu, in Beijing). Also to be noted, are the gardens of ordinary citizens, which undoubtedly attain an equal degree of splendor. With all of these, variations in the ranges of formality also follow: from assymetry and the absence of axiality, to hierarchical symmetry and procession. One such early example of an abstraction of a meeting ground between the two extremes, is from a young student at Harvard in 1946. A museum for Chinese Art in Shanghai,

planned to replace an inadequate structure that occupies a site within the city's new Civic Center, plans for which were completed in 1933, this design for a museum "befitting the dignity of the city of Shanghai" is developed as an integral part of the civic plan. The structure is low in relation to surrounding buildings; hence the architect has carried the marble facing right up onto the roof to give it visual importance equal to that of elevations. He hopes the treatment will "enhance the plastic and sculptural quality of the structure."

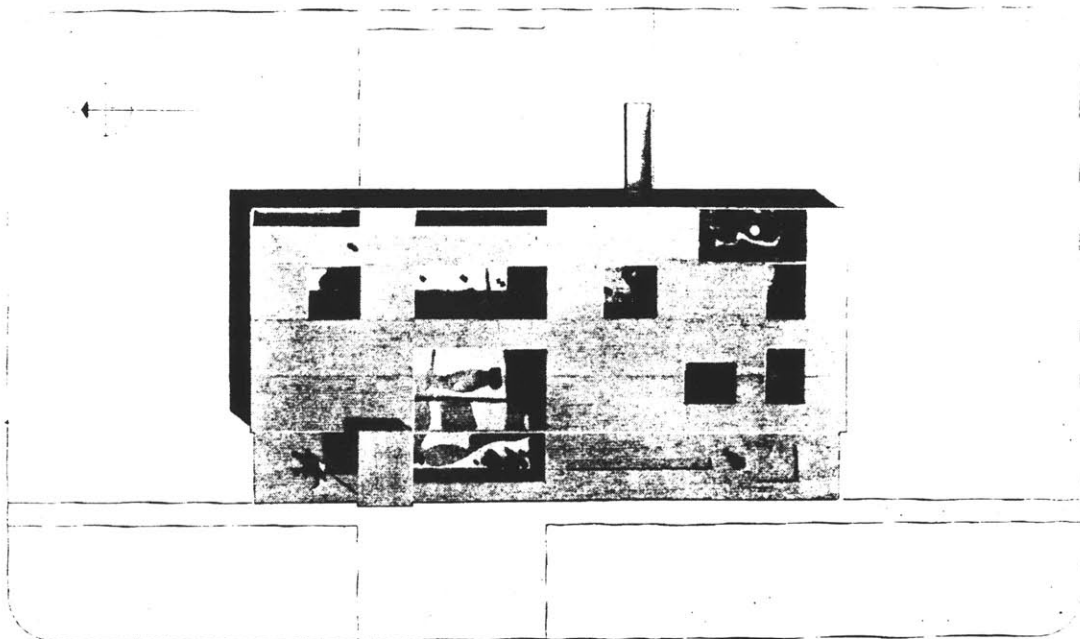
Dr. Gropius gives his opinion of its importance [as follows:]
This project for a museum in Shanghai, China, was designed by Mr. Ieoh Ming Pei in the Master class of Harvard's Department of Architecture under my general direction. It clearly illustrates that an able designer can very well hold on to basic traditional features-- which he has found are still alive--without sacrificing a progressive conception of design. We have today sufficiently clarified our minds to know that respect for tradition does not mean complacent toleration of elements which have been a matter of fortuitous chance or a simple imitation of bygone esthetic forms. We have become aware that tradition in design has always meant the preservation of essential characteristics which have resulted from eternal habits of the people.

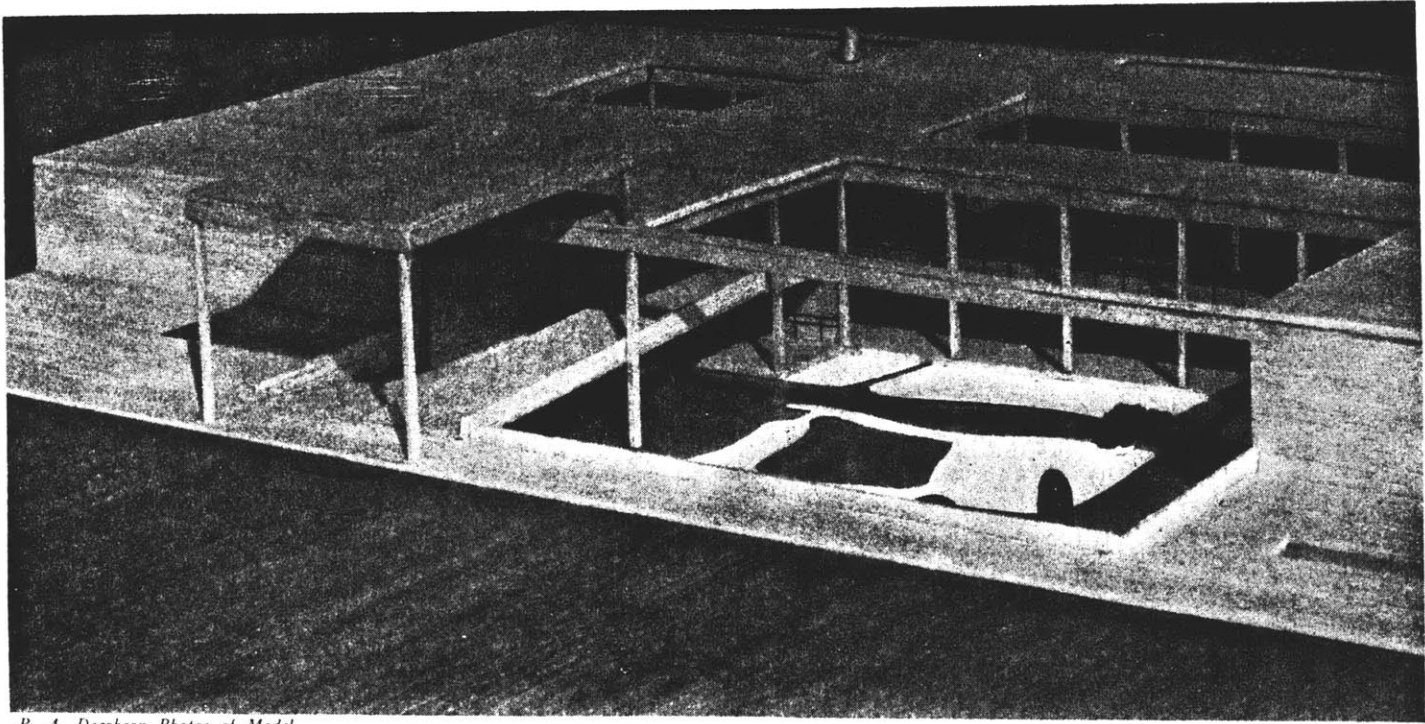
When Mr. Pei and I discussed the problems of Chinese architecture, he told me that he was anxious to avoid having Chinese motifs of former periods added to

public buildings in a rather superficial way.... We tried then to find out how the character of Chinese architecture could be expressed without imitating such form motifs of former periods. We decided that the bare Chinese wall, so evident in various periods of Chinese architecture, and the small individual garden patio were two eternal features which are well understood by every Chinese living. Mr. Pei built up his scheme entirely on a variation of these two themes.²⁷

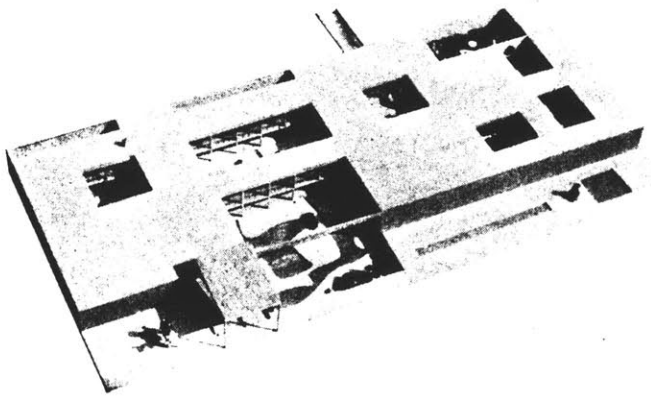


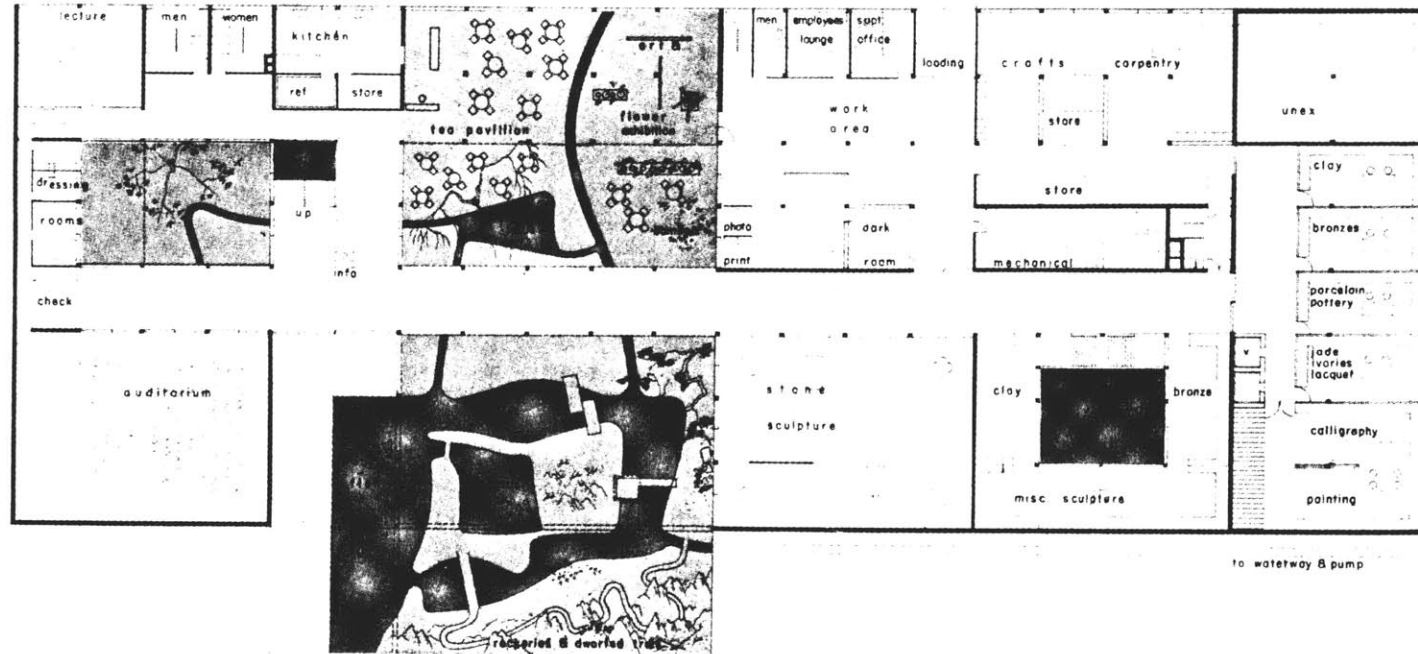
SECTION THROUGH LARGE GALLERY: Radiant heat, integral light sources, and continuous finishes. This section looks toward the entrance garden court, at right of which is a modern translation of the traditional Chinese Tea Garden. Usually located in the market place, or near the temple grounds, to serve men of all classes as a social center and place for intellectual exchange, its inclusion here in a museum is with the hope that it will help make the institution a living organism in the life of the people, rather than a cold depository of masterpieces.



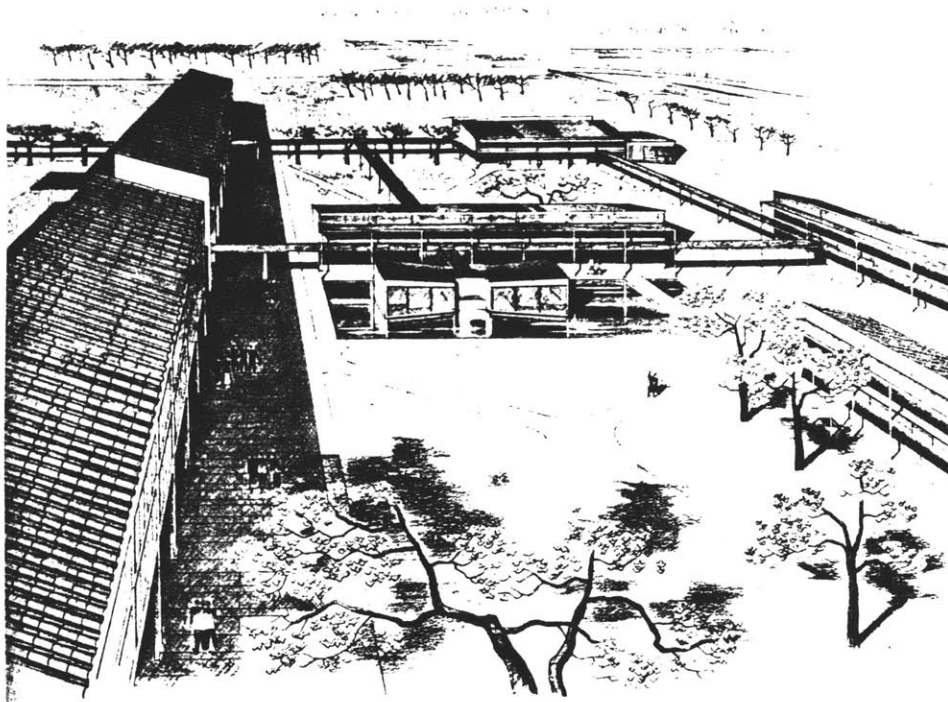


P. A. Dearborn Photos of Model





LOWER FLOOR: Tea Garden in center extends through building to walled court at rear; two-story gallery at right of this area entered from lower floor or viewed from upper-floor gallery. "The traditional Chinese garden is literally a garden of walls," Mr. Pei explains. "This building is sunk half a level below ground in order to create walls for the main garden while permitting a view into it from outside."



Stilt-legged buildings criss cross among courtyards and ponds. Part of the Academic Sector, the Major Arts and Sciences Courtyard, is shown above. Two lecture halls are anchored in pool. Gatefold opposite is panorama of the residential areas.

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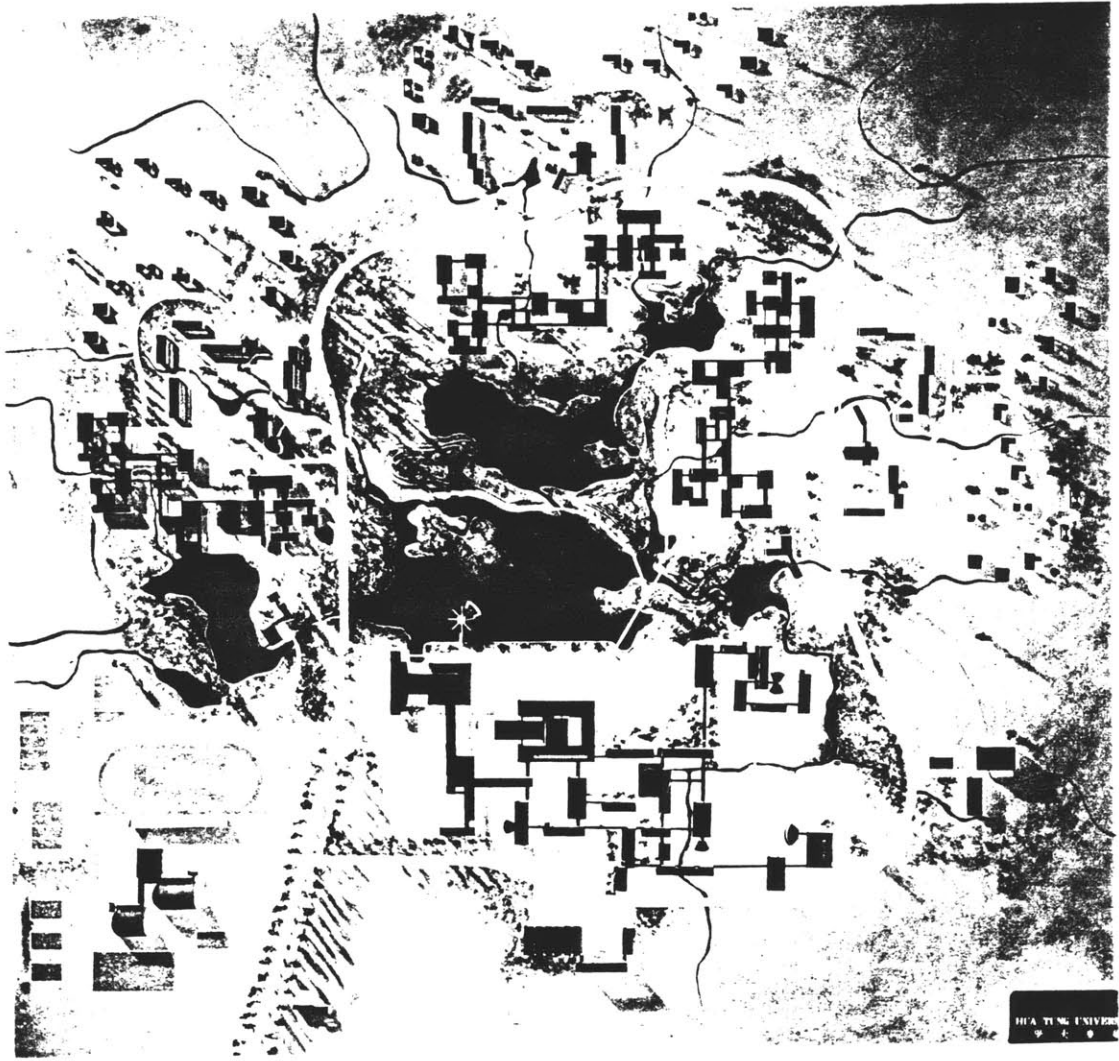
hua tung christian university

the architects collaborative:

A contemporaneous project by The Architects Collaborative for Hua Tung Christian University (Shanghai), also with Pei's assistance, addressed these same issues, as follows:

Both TAC and Pei realized that the problem was not of choosing between modern western architecture, a meaningless foreign imposition, or traditional Chinese architecture-- equally meaningless because the tradition, already defunct, could be made to function only through mechanical imitation. It was, in fact, not a problem in architecture at all, but one of planning a city-sized space in sympathy with the Chinese landscape and the Chinese way of life, not to mention meeting the requirements of economy and function.

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The 150-acre site is the former Hung Chiao airfield west of Shanghai. Three residential areas—for Methodists, Presbyterians, and Episcopalians—group themselves on three sides of the square around the central ponds. On the fourth side, to the south, are the larger structures of the Academic Sector. There is no gridiron and no superblock, only long buildings around courtyards oriented on a north-to-south axis and interlocked with covered, open walks—"langg."

The visual spirit of Chinese architecture has been retained by keeping the buildings low, by slanting the roofs and making them the dominant weight in the design. They no longer curve up, however, and are of tile, not the obsolete timber carpentry of yore.

.....
The space between buildings is as eloquent as the buildings themselves, and architecture is blended with landscape to produce a preconceived mood.²⁸

Numerous examples of the adaptation of degrees of both order and disorder in principles of planning are again to be found in recent years of the "Jianzhu Xuebao." One such example is the Chinese Institute of Painting, Beijing; which consists of 1-2 storey buildings connected with covered walkways, articulated by simple grey tiled roofs. ("J.X." No. 4, 1984).

Needless to say, building-by-complex again inevitably raises the issue of the Chinese roof. And although it is unlikely that the exaggerated large-scale roofs of the 'Chinese Renaissance' and 'Classical Revivalism' will reappear any time soon; since the 1955 denunciation, one must note that they have already been featured in the aforementioned China Art Gallery (Peking, 1961) in a scaled-down version, as well as in several of the commemorative 'Big Ten' projects in Peking 1959.

During a seminar lecture given by the late Paul Sun at M.I.T., the well-respected architect spoke of his preference for the big-roof style, as he felt there was much more room to learn from and improve upon this better-suited treatment of architectural scaling than to turn to the scaleless high-rise as a solution. (Scale is indeed the crux of the situation.) Paul Sun shared the sentiment that the peasants will work their way out of this dilemma of a self-imposed modern styling.

White-walled complexes trimmed with grey tiling have also been added to the theme of 'portraying tradition,'



图 10 业务楼、大画室和去创作室的联廊



从后花园看建筑群



图 11 从门厅看白塔

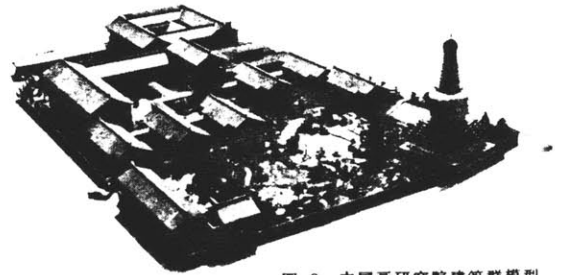


图 2 中国画研究院建筑群模型

the Chinese Institute of Painting, Beijing

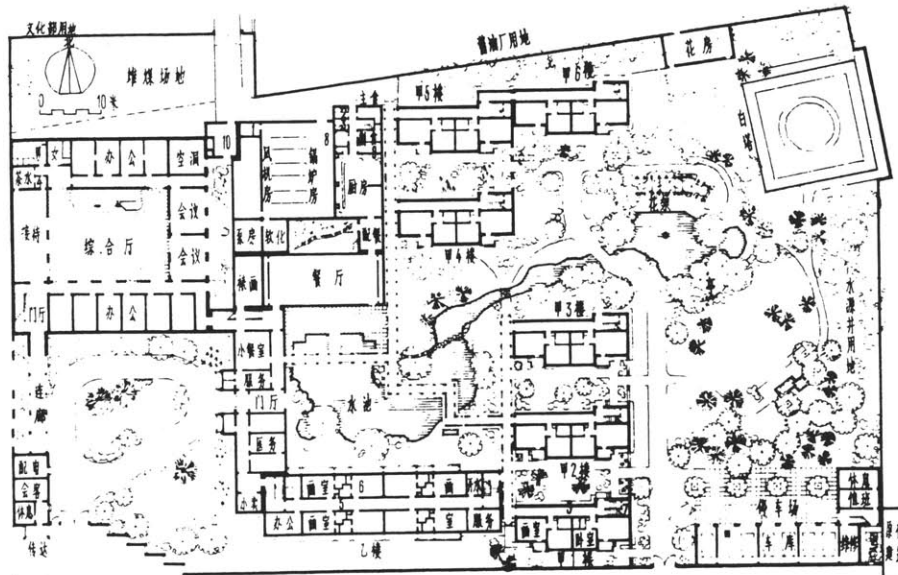
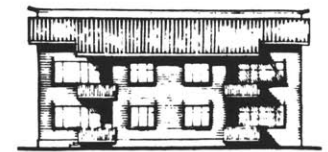


图 3 建筑群首层平面

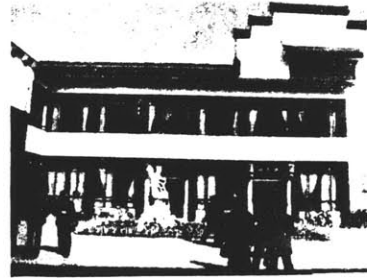
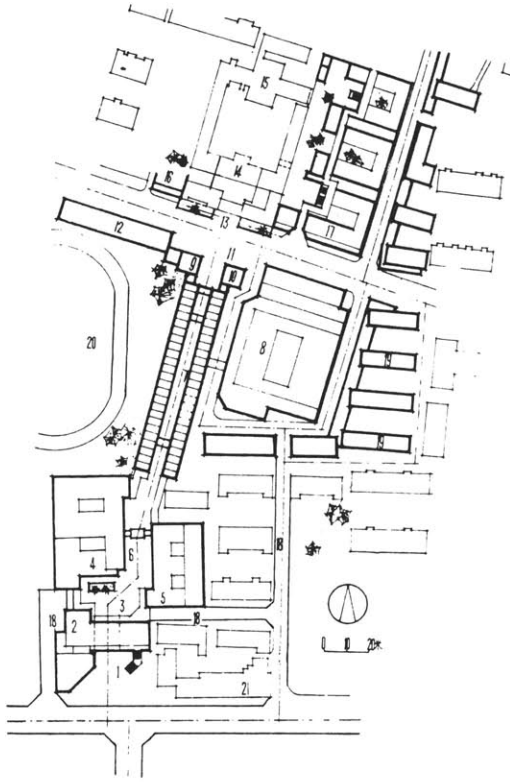


南立面



首层平面

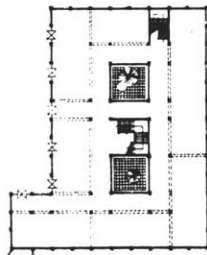
图 7 甲种创作楼



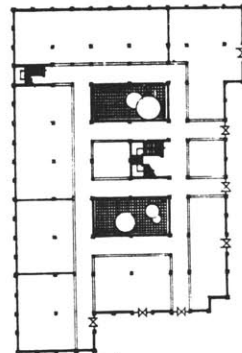
西商场



东商场



东商场平面 5



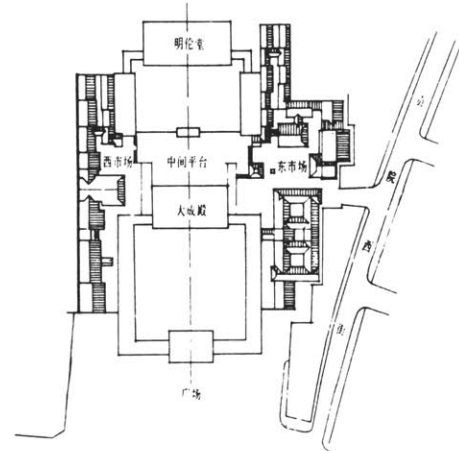
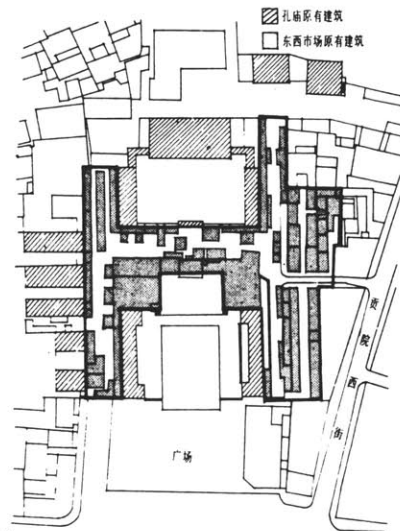
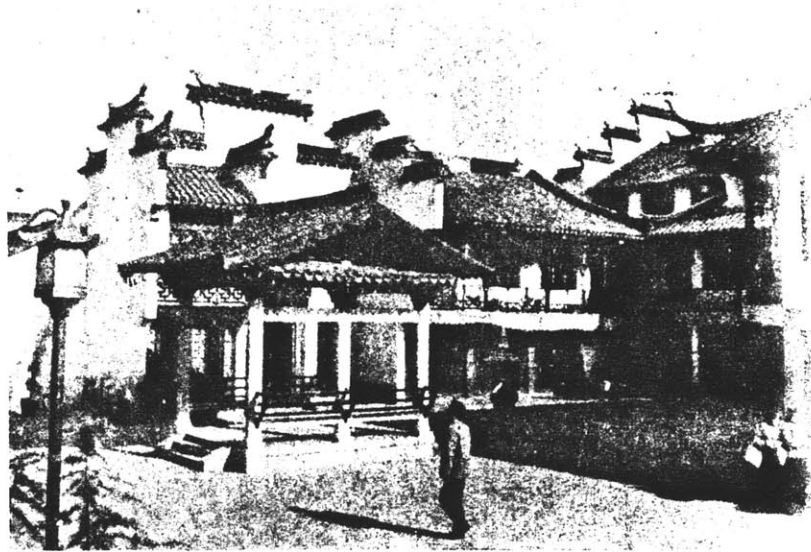
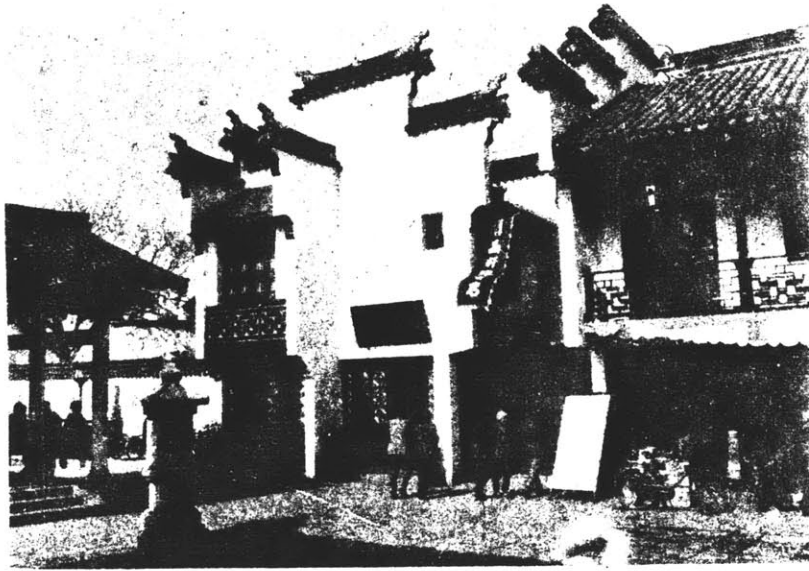
西商场平面 4

the Chengguang miao commercial center
Hefei, Anhui Province





undoubtedly a derivative of the early sixties emphasis on domestic architecture. This southern garden style (made famous by I.M. Pei's Xiangshan Hotel) is known for its simplicity and elegance. Market complexes such as the Chenghuang miao commercial center in the Old City in Hefei, Anhui Province ("J.X." No.6, 1986), and the Fuzimiao marketplace in Nanjing ("J.X." No.5, 1987) have donned this latest garb with their emphasis on the non-bearing parapet wall. A more pronounced reference to 'garden' is to be found in memorial projects, such as the Qi Baishi Memorial Gallery in Xiangtan ("J.X." No.1, 1986), a suitable program for the use of austere white walls. The accepted design for the "Home for Architects and Builders" also makes use of the white parapet in its extensive building-by-complex, which like the aforementioned memorial project, draws from a nearby river for its gardens.



the Fuzimiao marketplace

- 1 齐白石美术馆:
- 2 传达室:
- 3 水泵房:
- 4 沉淀池:
- 5 化粪池:
- 6 桥亭:
- 7 路灯:

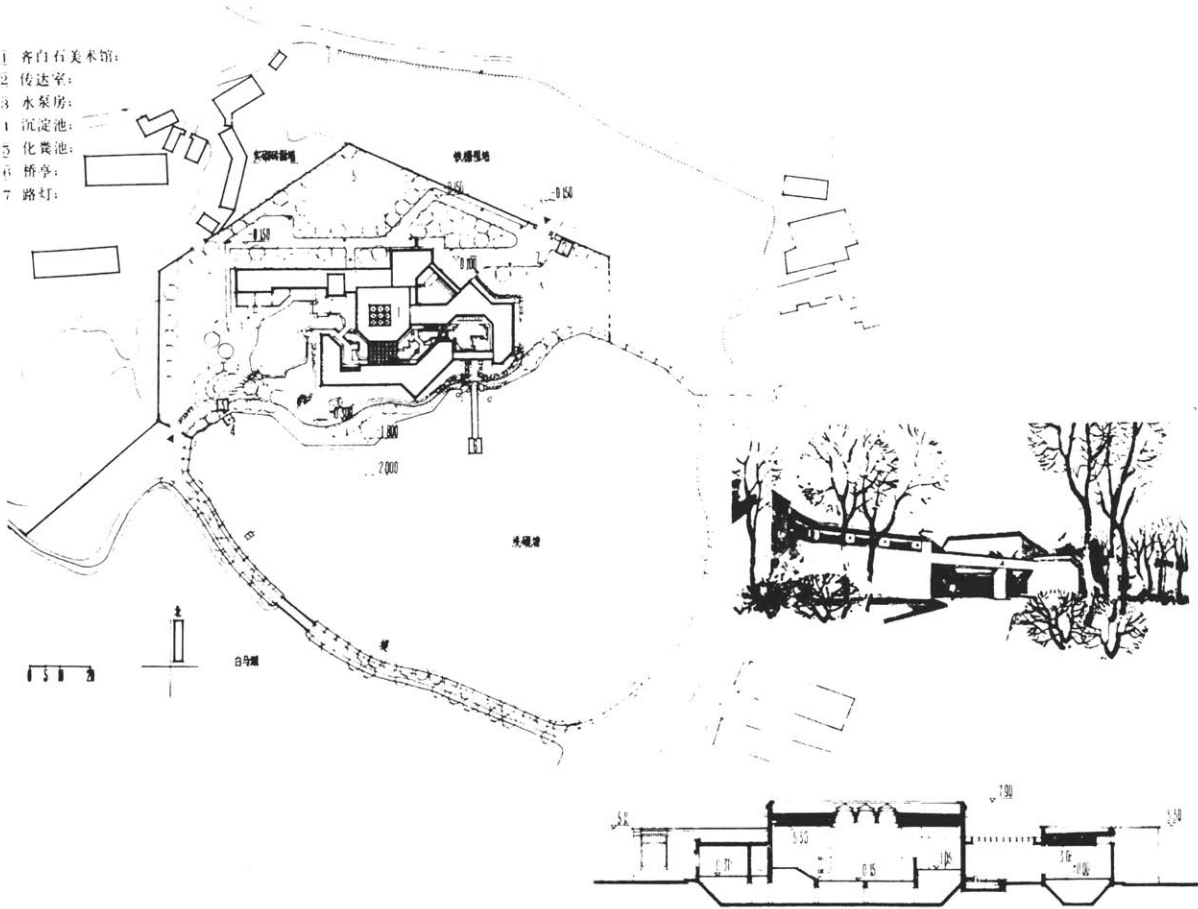
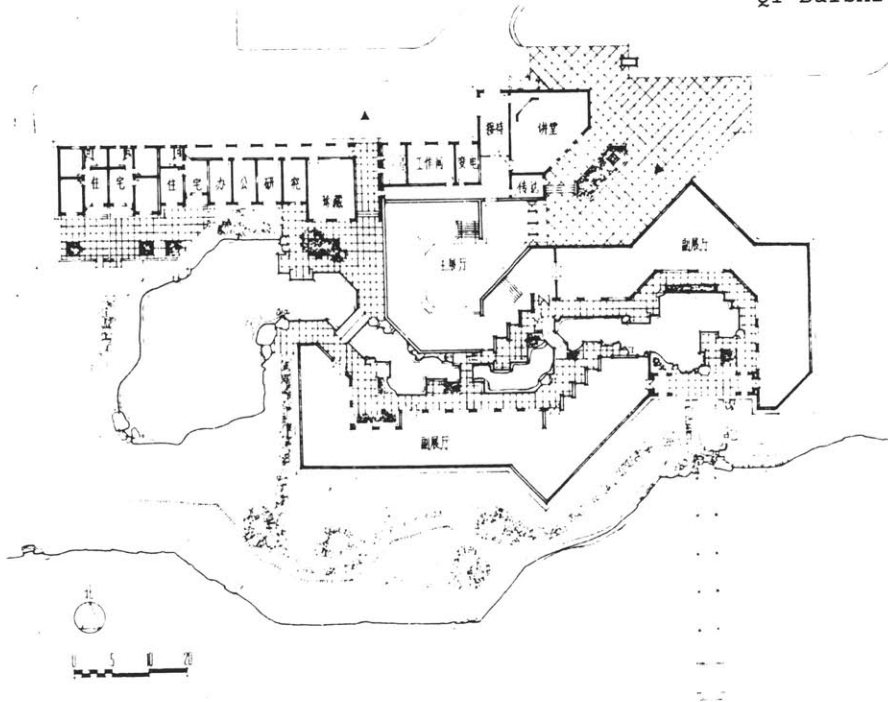
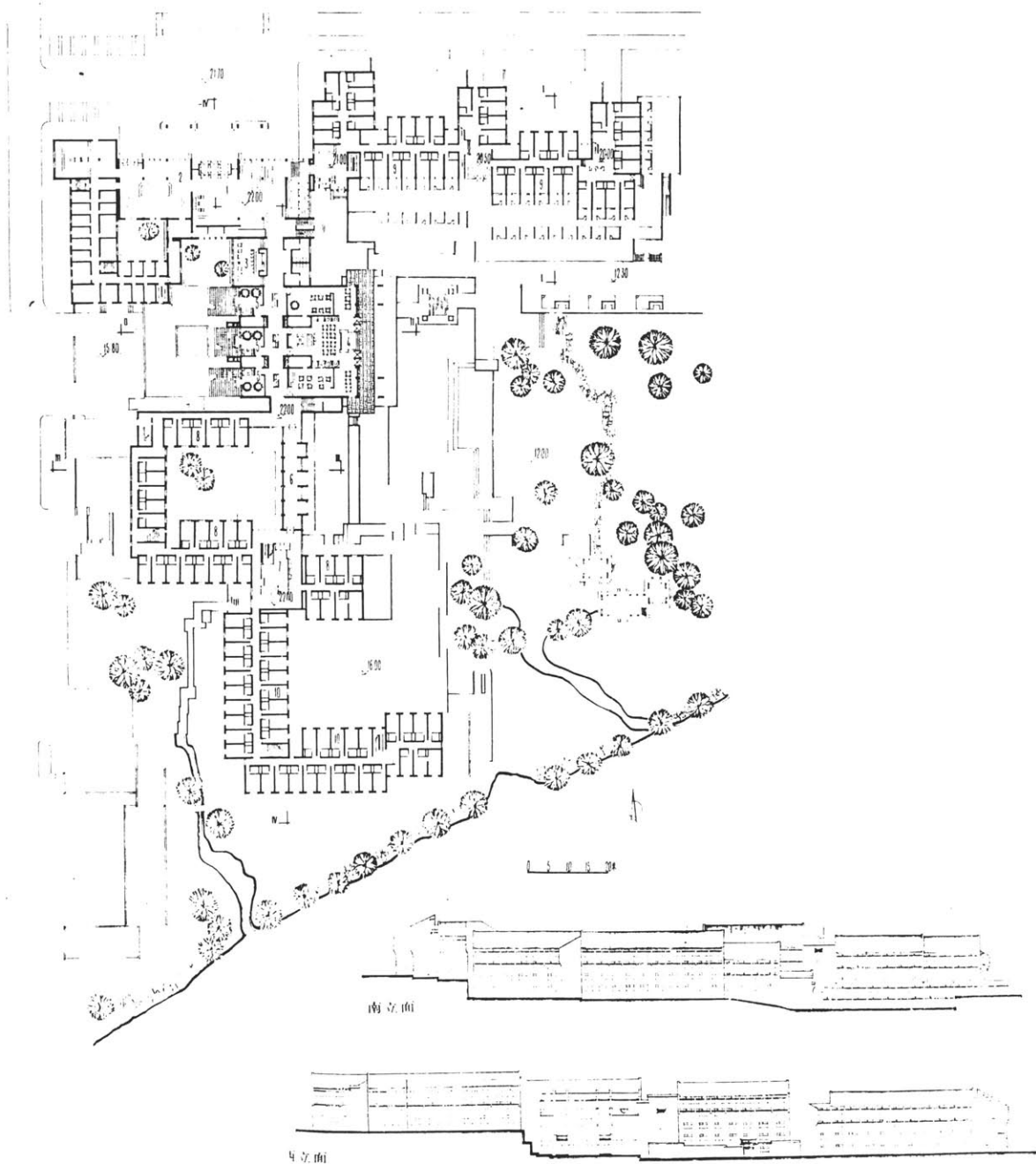


图 6 剖面图

Qi Baishi Memorial Gallery





Home for Architects and Builders



图 7 教学楼内院舞蹈教室入口

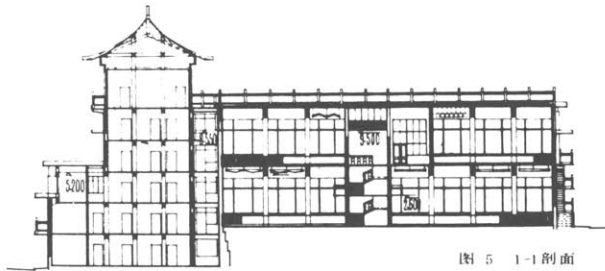


图 5 1-1剖面

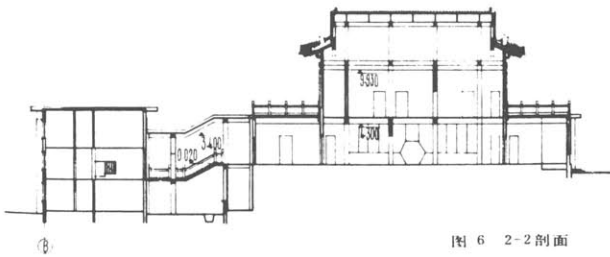


图 6 2-2剖面

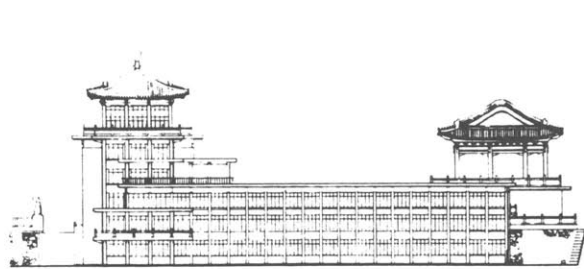


图 2 教学楼北立面

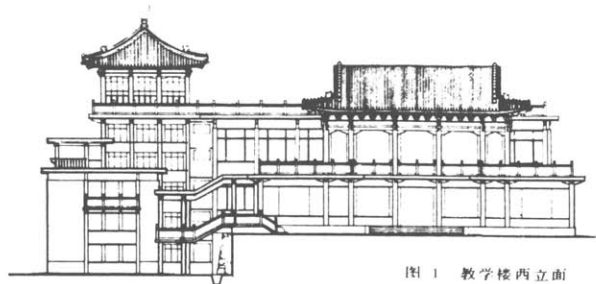


图 1 教学楼西立面

The Art Department Building of Northwest Institute for Nationalities

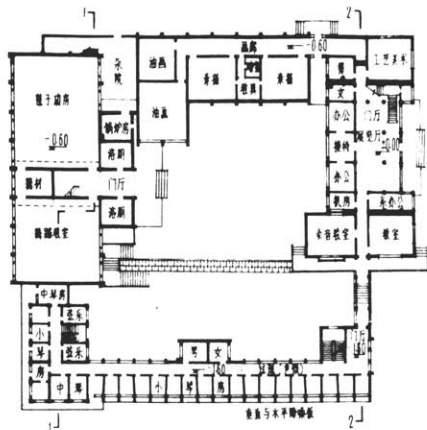


图 3 艺术系教学楼平面

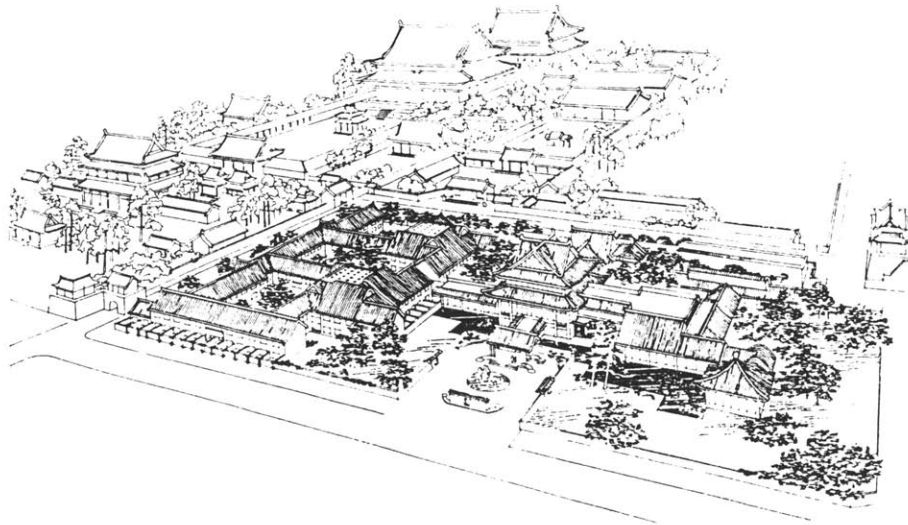
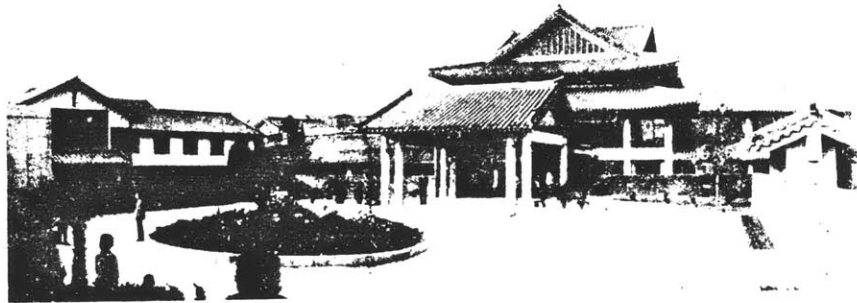


Although the vocabulary of the southern garden has made its way to the projects of the north, ordinary grey walls and roof tiling are featured as well. The Art Department Building of Northwest Institute for Nationalities ("J.X." No.8, 1985) makes no effort to conceal its block construction. This complex bears just two Chinese roofs, (one with top-knot, and both with painted beams under the eaves); on its otherwise cantilever roofed buildings. The Art Department Building is an example of the contemporary warranting of 'traditional' treatment for historically-oriented programs.

The Queli Hotel in Qufu, designed by Dai Nianci, provides yet another example of this return to building by complex. The architect accepted the design job explicitly to put into practice an affirmative solution which he believed would address several of the problems of the interrelationship of building function, traditional architectural form, modern technical innovation, and preservation of an historical

building environment. Furthermore, he stated;

My conception of the design is to submerge the hotel among the building group of Confucius' Temple and Kong Family Mansion instead of making it attractive [conspicuous]. In order to keep it in scale with the historical monuments, the layout of the hotel is conspicuously dispersed to avoid a large mass. Plainness and elegance have been pursued as the main characteristics of the design, with neither glazed roofing tiles nor polychrome decorative paintings. The original boundary wall is left untouched to preserve the environment. As Qufu is a historical city of culture, it would not attract the attention of businessmen and pleasure-seekers. Visitors to the city will be those who are interested in ancient Chinese culture and architecture. Therefore, no sumptuousness is emphasized. The aim of the interior design ... is to afford an appropriate atmosphere for the reverie of ancient culture.²⁹



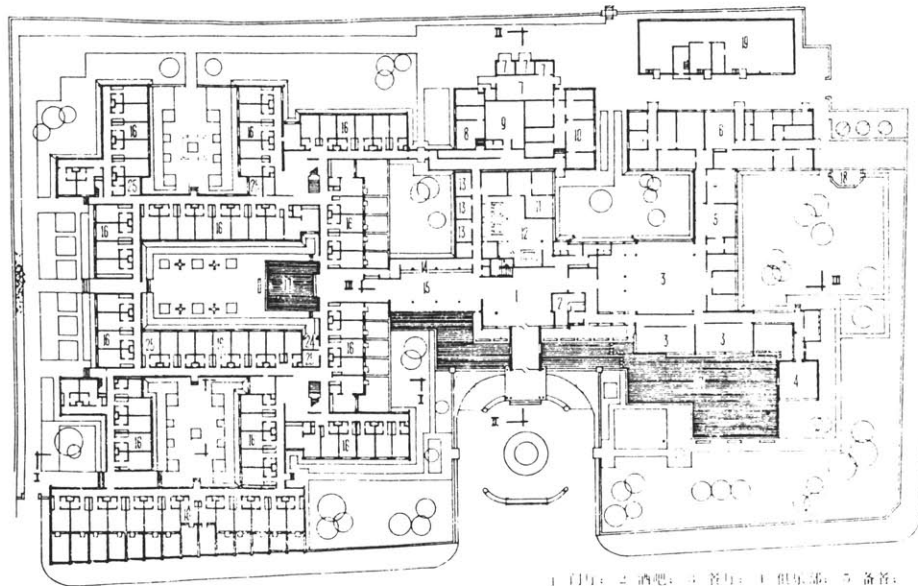


图 2 底层平面

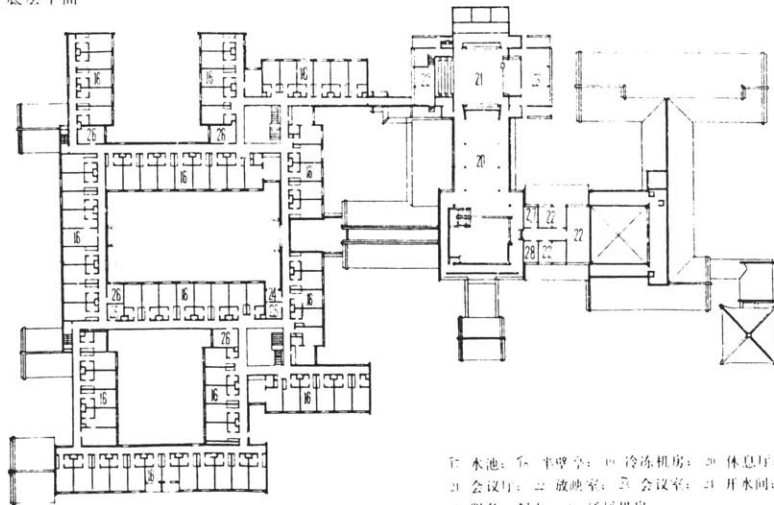


图 3 二层平面

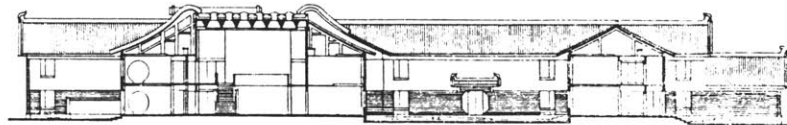


图 4 1-1 剖面

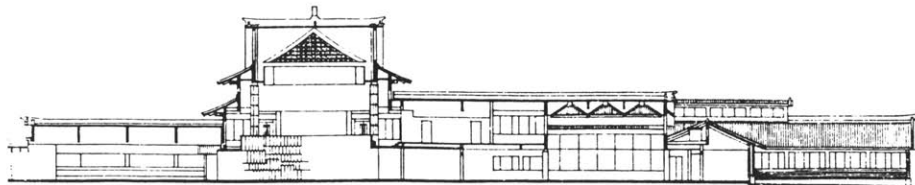


图 6 III-III 剖面

0 2 4 6 8 米

The Queli Hotel

Comments on the hotel design are also noteworthy with regard to the issues of 'architecture and environment' and the Chinese roof. In brief, they are as follow:

Zheng Xiaoxue: ... The particular environment has been well grasped in the design. The hotel is in harmony with and subordinated to the existing buildings of historical importance. It is only two-storeyed, built with local traditional materials yet innovative in treatments.³⁰

Zheng Kaiji: The hotel has no negative effects on the environment of historical monuments, but positive effects on the innovation of traditional architectural style. With the rooves in traditional style, however, the building proper below the eaves is quite innovative.³¹

Zhou Ganshi: ... From this example, it can be seen that control by protective zoning in urban planning is not the only thing to be emphasized, but also the control of architectural design.³²

Guan Zhaoye: In the present misty atmosphere of ostentations and vulgarity, the Queli Hotel is somewhat like a refreshing breeze. The sloped roof, which has improperly been rejected as "revivalism" in architecture for many years, is ingeniously combined with modern technique of shell construction. The whole design bears no sign of old-fashion, but full of brand-new treatments...³³

Li Daozeng: ... The roof is square in plan, with crossed hip-and-gable of traditional form and modern shell in construction. However, the gables are not solid as in tradition but with windows instead. The shell construction is exposed, following the basic principle of Chinese architecture.³⁴

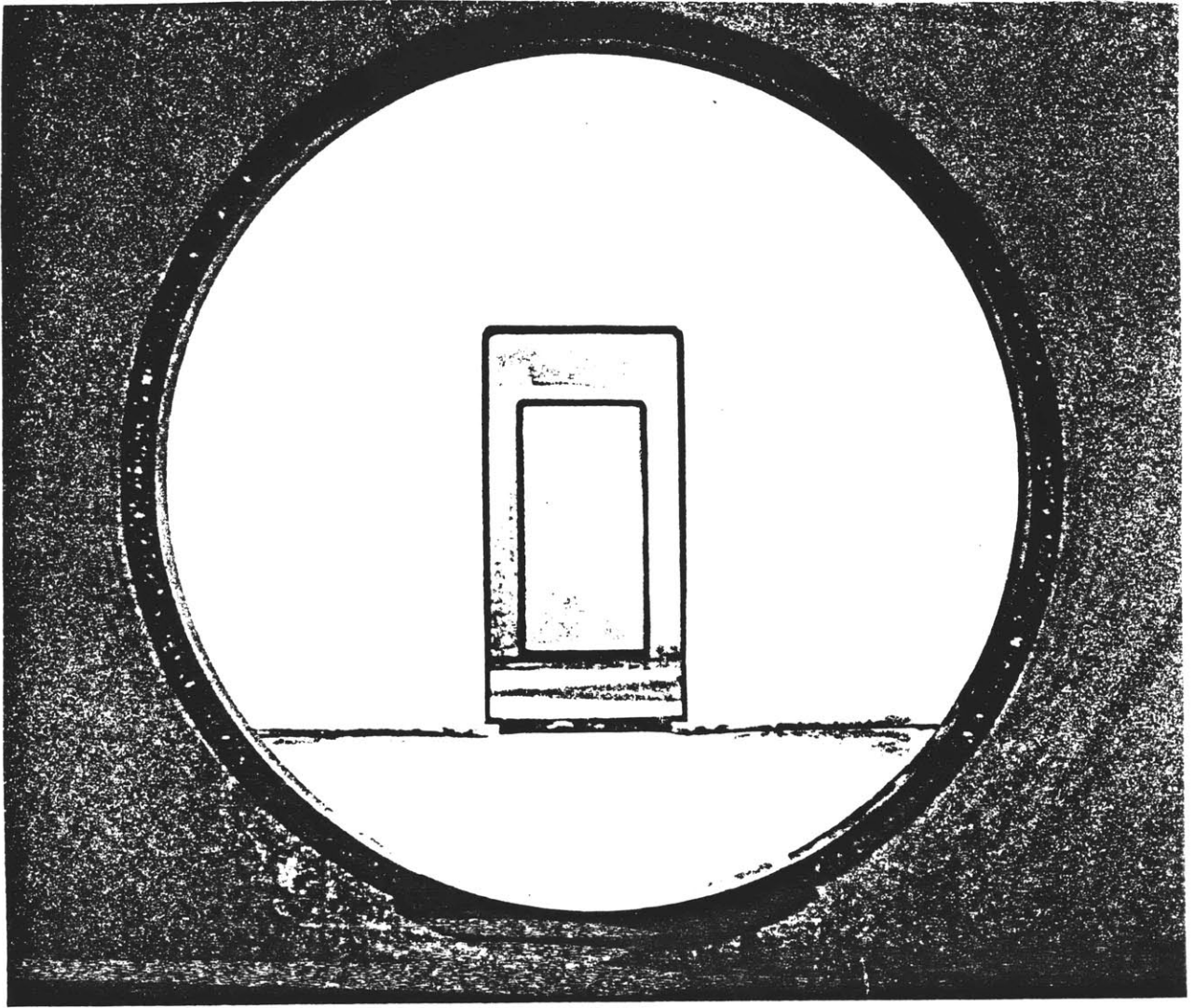
[And finally, to bring us face to face with the present, the eminent] Wu Liangyong: The architect has made cautious and meticulous considerations in the design ... always with the relationship between the hotel and the historical in mind. In such a hard task, the architect has not been contented with passively considering harmony and subordination, but has actively made much efforts in innovation and creativeness. The hotel has duely become a member of the family of historical architecture, yet it is obviously a member of the younger generation whith (sic) its own individuality. ... However, I would like to point out that successful as it is, from which inspirations may be drawn, but it is not to be blindly followed, especially in the selection of site in the present hotel-fever.³⁵

As we can see, building-by-complex is now providing a viable alternative to the monolithic approach; and moreover, it is a significant embracement of the Chinese architectural heritage. The inescapable association of the axial composition with the feudal order has undoubtedly been instrumental in preventing an earlier comeback of the complex, and rightfully so. These adaptations of their principles in terms of the integration of solid and void, however, clearly demonstrate that there is no need to convey a reactionary or overly nostalgic intention, while moreover conveying an essential continuity. Hopefully landscape architecture will increasingly be emphasized in view of this renewed orientation, as the hand of nature can best be felt when it is welcomed. There is also greater room for abstraction in the Chinese plan than has by and large been demonstrated, (both by complex as well as its application thereof to 'objects'); but this will come in time with the assured hand. Principles of section are also not to be forgotten, as they are the true source of a sense of mediation between the indoors and outdoors.

In view of the transformation afforded by the principles of plan and section, one might begin to derive that the role of architecture in relation to its environment corresponds to the position of the individual (architect or otherwise) in conjunction with his fellow man:

"... what is significant is not the architectural artefact itself, but the enhancing effect of the collective environment. Individual techniques and individual mannerisms all come to support the vision of the whole."³⁶

.....
It thus appears that the subtle balance and interdependence between the constituent parts of a composition is a striking quality in Chinese architecture and planning.... Traditional Chinese architecture seeks to harmonise form and content such that the constituent parts are mutually enhancing and complement the efforts of one another.³⁷



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