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qui aura le dernier mot, car il aura choisi ce qu'il aura voulu. On ne pourra pas le convaincre, on ne pourra qu'influencer son choix.

Kenzo Tange avec Yoshikatsu Tsuboi et Uichi Inoue

Palais nationaux de Sport à Tokyo

(page 39–44)

Pour les Jeux Olympiques de 1964 Kenzo Tange et Yoshikatsu Tsuboi et Uichi Inoue ont présenté un projet pour deux palais de sport. Le premier est le plus grand, et destiné aux sports nautiques et à la lutte (judo). Pour la première de ces deux manifestations, 11.112 places fixes et 2.134 places mobiles sont prévues. En recouvrant les bassins de natation, 11.112 places fixes et 5.134 places mobiles permettront d'assister aux ébats des lutteurs. L'autre palais, plus petit, est réservé au basket-ball et à la boxe. 3.391 places fixes et 540 places mobiles sont prévues pour assister aux jeux du ballon, alors que 3.371 sièges fixes et 1.980 sièges mobiles sont destinés aux spectateurs du pugilisme.

La plus importante des deux halles est base sur un plan de deux planchers opposés identiques. De ce fait, l'accès aux entrées principales s'effectue de deux façons bien définies. Le spectateur accède au palais par l'entrée située au 1er étage alors que le sportif utilise l'entrée située au rez-de-chaussée. Une ceinture circulaire partage les visiteurs et leur permet d'atteindre les sièges aménagés en forme d'arène.

Un filet supporte le toit. Dans son axe longitudinale deux câbles suspendus, de forme parabolique, maintiennent les piliers auxquels est accroché le filet. Un lanterneau a été fixé au-dessus des deux câbles principaux. Il donne un éclairage naturel et suffisant pour toute la halle.

Il a été prévu de couvrir le filet avec des plaques de tôle de 4–5 mm d'épaisseur.

Le 2ème palais révèle un plan en forme de volute. L'entrée est tout naturellement placée dans la partie ouverte de la construction. La conception du toit est la même cornue pour celle de la 1ère halle.

Summary

Juergen Joedicke

Utopias and Realities of Town-Planning Notes on the theme of this Issue

(page 1)

About one year ago several architects and town-planners were invited to contribute to the present Issue. The theme set was "Architecture and Planning Today and Tomorrow".

With a view to coming to closer grips with the problem, certain themes which seemed to us to be essential were selected in advance. The important thing was to bring out the relationship between architecture and the urban structure. Thus, for example, we proposed the theme "urban building" and "urban reality" or again, "architecture", "sociology" and "psychology".

Unfortunately only already well-known architects and town-plannerswere able–more or less by chance–to participate in the creation of this Issue. The "younger generation", then, will not have been consulted. Nevertheless, it is mainly for them that we have made this Issue.

The title "Utopias and Realities of Town-Planning" expresses in brief form all the possibilities, but at the same time, all the difficulties inherent in present-day town-planning.

As regards "reality", it can be said without exaggeration that it stresses only the draw-backs of current town-planning. In fact, it is possible to discover here and there various buildings of value which will certainly go down in history. But what are the lasting creations of our time?

When we go more thoroughly into the present state of affairs, we shall discover that the architecture practiced around 1920 was practically concerned only with the home, its amenities, its rights. The rationalized home expressed the very specific programme of the CIAMs.

However, after the Second World War the CIAMs themselves realized that there was a profound lack: the urban setting. The clear expression of an urban programme that is well defined is a rarely attained postulate.

After the war, the various reconstruction projects concerned themselves not only with the home proper but also with the total urban setting. Unfortunately, the principles of the housing complex were applied to town-planning.

Moreover, architects devoted themselves to the task of breaking what is called "monotony". This attitude gave rise to the staggered building line. This is the method: After blocks have been aligned in rows on a model, the latter is then rapidly shaken. The new "order" created can be seriously regarded as the breaking up of a monotonous system, or so it is claimed. In the meantime two trends seem to be leading us toward a new phase of development.

After the CIAMs at Bridgewater in 1951 defined the four principles: "housing unit", work, leisure and traffic, they added the principle of "urban setting". Thanks to this new element, the agglomeration is no longer merely an assemblage of houses and individuals; it becomes a "community". The town-plannning projects of Bakema, Candilis and Smithson are a striking demonstration of a forward-looking town-planning philosophy. To be sure, this tendancy, at the outset purely architectural, becomes dangerous when the architect applies himself to playing the role of "social reformer". Moreover, the close ties between town-planning and architecture also give hope for further progress. Plainly men of science will never be able to foresee the future; sociologists and psychologists can at the very most analyze the data and so provide essential indications to town-planners and architects. Plainly it will be necessary for men of science and architects to elaborate a new operational idiom, which unfortunately is still lacking. Also unfortunately, scientific research in the field of architecture and town-planning is not a recognized discipline.

We should point out in conclusion that this Issue has been got together to be read and not to be skimmed or imitated.

Kenzo Tange, Tokio

A Plan for Tokyo, 1960

(page 2–15)

My research team and I are presenting here a plan for the structural reorganization of Tokyo. Based on studies which we have made over several years, it is an attempt to solve the many problems that exist today and at the same time to open a path for future development.

The cultural advances and economic expansion of the twentieth century have led to the appearance at various points in the world of great pivotal cities with populations of 10,000,000 or more. In our opinion, this has not been an abnormal development, but a neccesary one, arising from the fact that these cities are needed to perform functions that are vital to contemporary society. In drawing up a plan for Tokyo, our first task was to determine just what these functions are, and how they differ from the urban functions of the past. Our studies lead us to the conclusion that the city of 10,000,000 is of fundamentally different character from a city of 100,000 or 1,000,000, and that its needs cannot be met by the same means that have been employed in the past.

At present the cities of 10,000,000 or thereabouts, Tokyo included, are in a state of confusion and paralysis. The reason is that the physical structures of the cities have grown too old to cope with the current rate of expansion. Though the very nature of the cities is such as to cause ever-increasing movement, the existing urban systems no longer provide adequate space for this movement. In the latter half of the twentieth century it will become increasingly necessary for society to face up to the difficulties confronting the mammoth cities, to overcome the inconsistencies, and to give expression to the true nature of such cities. The responsibility for creating new urban systems that will satisfy human hopes is ours.

We have drawn up a plan which will, we believe, change the old Tokyo in such a way as to make it capable of containing the new mobility and activity of the times. The plan calls both for the gradual reconstruction of the existing city and for expansion into Tokyo Bay – two movements which, in our opinion, will aid each other along. We propose a civic axis which will replace the present nucleus of the centripetal urban pattern.

The first step in creating the civic axis is to build a cycle transportation unit above the present center. The first unit would extend from Ichigaya to the present downtown Tokyo; the second, from downtown Tokyo to Tsukiji; the third, from Tsukiji to Harumi. The points of interchange would be at the Outer Moat in Ichigaya, above the control area at the old Tokyo Station, and above bay beyond Tsukishima. The points of interchange would touch the ground, but the remainder of the highway would be suspended some 40 meters above the ground and 50 meters above the bay. In other words, the highways would be huge suspension bridges, which would run above the existing buildings. If space were obtained for piers at intervals of about one kilometer, the construction of these bridges would be possible. As the axis is extended out over the bay, the first installations moving to the new area should probably be the national government and its administrative organs. The foreign embassies and foreign business would doubtless follow, and then the central functions of finance, production and consumption control, and mass communication. The research centers necessary to technological development would probably concentrate in the vicinity of the industrial pivot. Eventually department stores, amusement centers, cultural facilities, and welfare organizations would follow. Hotels would become necessary, along with apartment houses for persons whose work demands that they remain close to the center.

For mass transportation we propose monorail. It would be possible to transfer from the present Chuo Line of the National Railways to the monorail at the Ichigaya point of interchange, and at the Tokyo Station interchange the subway and various outer railways would be similarly linked with the axis.

Automobiles would move from the present streets and the proposed high-speed highways to the axis at the same interchanges. Each link in the cyclical transportation system would therefore provide systems for both mass and individual transportation.

It is expected that in twenty yars 5,000,000 people will move along the axis in varied patterns. The cyclical system will be adequate for this amount of traffic, for it will permit a flow of 200,000 cars per hour – far more than any high-speed highway system now in existence. The axis will operate like a giant conveyor system, carrying a flow of people that is necessitated by the fundamental nature of the city. The entire population of Tokyo will be able to approach the axis on parallel thoroughfares branching out perpendicularly from it and then to move quickly along the axis to any point. The axis will be the stage for life in a moving city and the symbol of urban living.

If the entire area within each link were used for parking, the capacity would be 60,000 cars per link. We consider it feasible to use 70% of the space, or enough for about 40,000 cars. In the finished axis, which would contain 23 links, it would be possible to park 920,000 automobiles.

A system of streets will extend out from the axis in parallel lines. Traffic along these will also be one-way, outgoing vehicles proceeding along one street and incoming vehicles along the next. Each pair of streets will thus from a loop similar in some respects to the links of the central axis. These loops will bring subcenters such as Shinuku, Shibuya, and Ueno into the system. We consider these subcenters as regional centers of consumption – the loci of the tertiary consumption functions. The tertiary production functions will be located along the axis, but the consumption and production functions will be closely linked to them by the axis itself and by the loops extending from it.

The streets radiating from the axis will provide communication between residential areas and the central area. This connection is particularly clear in the districts built over the bay. The branch streets on the bay will also be provided with mass transportation which links with the mass transportation on the axis. Within twenty years some 5,000,000 people will probably live on the bay. Some of the residential districts will stand on reclaimed land, and others on platforms supported by piers sunk directly to the ocean bottom.

We propose to construct a new central railway station for Tokyo on the civic axis. It is not desirable for interurban traffic to pass through the crowded center of Tokyo, as it does now.

One reason for the confusion that prevails in Tokyo today is that the Tokaido Line, the Tohoku Line, the Joban Line, and the Chuo Line of the National Railway System converge upon the central district of Tokyo, which is already too crowded. The vast control system needed for these various railways should not be allowed to cut across the functions of the metropolitan center.

We propose to build a new Tokyo Station over the bay, to link it with the Tokaido Line at Kawasaki by means of underground railways, and to allow the Chuo Line to branch off at the same place. Other underground lines would connect the station with the Tohoku and Joban Lines at Funabashi. It would be possible to move the control system out of the present center. In the new system, passengers would arrive on the axis, while cargo would be unloaded at the Keihin Industrial Area of the Keiyo Industrial Area.

We propose the construction of a harbor for passenger vessels, and at Haneda, where the underwater section of the Tokaido line would emerge, an international airport could be made by enlarging present facilities. At the point where the underwater lines to Funabashi emerge, a new domestic airport could be built. The airports would then lie on a straight line with the new station and be connected with it and with each other by underwater railways.

The reclamation of land for the Keihin and Keiyo Industrial Areas must be carried out in accordance with a comprehensive plan.

The two areas in question are rapidly being reclaimed, but the work is being carried out without a general plan. The city of Tokyo, Kanagawa Prefecture, and Chiba Prefecture are all proceeding on their own, each vying with the others to attract new factories. The land gained is being sold willy-nilly to large industries without reference to the purpose for which it will be used. Before these areas are disposed of, there should be a comprehensive plan for roads and water facilities within them.

We propose a new system of transportation for the industrial areas.

The snarling traffic along the two existing highways between Tokyo and Yokohama indicates the need for a basic system of industrial traffic. The countless trucks moving along these routes account for half of the traffic between factories in the Tokyo-Yokohama area and between the cities of Tokyo and Yokohama, and they represent a vital link in the chain of supply for Tokyo. With the development of

industries in the area between Tokyo and Chiba, highways here will soon become just as crowded.

We believe that for communication between factory and factory a simple cyclical system can be built in each industrial center, with an underwater highway parallel to the underwater railways linking the Keihin area with the Keiyo area. New routes should be constructed as supply lines for the central axis. We propose a new highway running northward along the Tamagawa River from Kawasaki and another running north along the Edogawa River from Chiba. From Kawasaki and Chiba the routes could be directed inward to the axis.

Supplies intended for the industrial areas should not be allowed to enter the central area. As they are now. Instead, there should be cargo stations near of the industrial centers.

Since there is no limit to the number of lanes at the points of interchange, the cycle transportation system is capable of handling from ten to thirty times as much traffic as the high-speed highway now in existence.

The lowest level of the three-level cycle transportation system has ten lanes for vehicles moving at a rate of 60 km/h. Six fingers lead from this level to the parking area underneath the buildings within the cycle. The second level has ten lanes for traffic moving at 90 km/h, and the third, the lanes for traffic moving at 120 km/h. A monorail system is suspended from the second level. On the lowest level there is a link per kilometer along the axis; on the second level, a link each three kilometers, and on the third, a link each nine kilometers. Since the overlaps occur at odd-numbered intervals, traffic at the interchange points is moving in the same direction on all levels.

The streets branching out at right angles to the axis are linked to the axis in similar fashion. Since they too are one-way, they constitute traffic cycles similar to those along the axis.

Transportation today is changing the relationship that links the city structure with traffic and architecture. Indeed, the automobile is completely overturning this relationship. In the past, people walked along a street until they arrived at their destination and then walked directly into a door. This fact has since ancient times determined the system of traffic and architecture in cities. The appearance of the horse and carriage created no need for a new system, and even when railways and trolleys were invented, people felt no serious doubts about the old one. The problems that these new modes of transportation created were solved by means of stations.

In our age the automobile has altered the relationship between streets and buildings, but the old system remains in existence. The confusion that prevails in our cities today results largely from the fact that the automobile and the street system are incompatible.

The appearance of the automobile has led to the division of vehicles and pedestrians, with the result that the relationship between streets and buildings has come to resemble the relationship between railways and buildings. Even though buildings open on a street, it is usually impossible to park cars in front of them. There is need for a new sequence in which the automobile moves from high-speed highways to low-speed highways and then to parking spaces from which the passengers in the automobile can approach buildings. In other words, there is need for a new organization in which the urban system, the traffic system, and the architectural system are organically unified.

The smallest unit in the cycle transportation system is a square measuring one kilometer on each side. This unit of area is also the unit for construction work, or, in other words, the operation scale. At the same time, it is the unit which gives organic unity to architecture and transportation. In principle, the space under this unit of area would be devoted to parking. The architectural prototype would be a system consisting of cores laid out on a grid of squares approximately 200 meters on the side and of ten- or twenty-story office buildings resting on the cores.

The cores would contain elevators, ducts, and the other installations needed to provide for the movement of men and energy. At the same time they would serve as columns. Between these, buildings with seismic walls would be suspended as needed. The walls as a whole from trusses, and office buildings or hotels would rest on horizontal slabs supported by trusses on both sides. The height of the cores would be from 150 meters to 250 meters, the height of the open space under the buildings about 40 meters, and the length of the span about 200 meters. The structures would therefore have a scale and a spatial arrangement which would be compatible with the variable flow of automobiles on the ground. The cores would serve not only as supports for the buildings, but as the arteries of traffic. This type of architecture may be thought of as a development to urban scale of the pilotis and core arrangements that our team has experimented with in the past.

Constantinos A. Doxiadis

Ecumenopolis – Toward a Universal City

(page 16–17)

"Why worry about a universal city when we are struggling unsuccessfully with so many existing urban problems – slums, traffic, housing, urban renewal, and the corresponding difficulties of legislation, administration, designing, etc.?" Nevertheless, we are heading towards ecumenopolis, and it seems that the solution to any of our urban problems requires the recognition of the truth.

It has been only when the era of the city state or the feudal castle was succeeded by the era of larger states, usually national states, that our cities began to change. Regardless of whether it started from a castle or a city, the basic settlement now grows and expands into the countryside now serving much larger areas and usually joining one of the knots of a pattern of transportation lines connecting all urban settlements of the national state. Its main characteristic now is its continuous growth, and the fact that it is a part of a network of urban settlements. The countryside is covered by villages of several sizes and functions. In this era the city is turning into a new type of human settlement, into a dynamically growing settlement or Dynapolis. This phase, which is due to the creation of broader states, usually of national states, is the stage of an early Dynapolis.

The next stage of the development of human settlements is the one due to the industrial and railroad era. By now the dynamic growth of urban settlements is much greater, much more apparent. This is the stage of dynapolis which grows in all directions, reaching the villages close to it and swallowing them up. The villages around Dynapolis also grow, some of them to a very considerable size. In contrast to the early city, which was static and the early dynapolis which had broken the walls and spread into the countryside, Dynapolis is by now a continuously growing settlement.

This continuous growth eventually takes it beyond the limits of its rural area into other urban areas. Thus a continuous settlement is created consisting of many urban areas which have grown towards each other and a much greater number of rural settlements which have been incorporated into the urban body. This takes us to the metropolis, which is a product of the motor car era.

The main characteristics of Metropolis are:

a) Continuous growth,

b) merging together of many urban and rural settlements. Some of the urban settlements which have been incorporated are Dynapolises and some are cities.

Thus, Metropolis incorporates within itself the previous types of settlements, i. e., villages, cities, and dynapolises, in the same way in which Dynapolis incorporated within itself villages and minor urban settlements close to it. The continuous growth of Metropolis into even broader areas is leading to the formation of chains of metropolises which are interconnected, such as the area from Boston to Washington D.C., or a great urban area in the Netherlands and Belgium, the Greater London area, the Eastern coast of China, some areas in Bengal around Calcutta, etc.

Megalopolis was born in our generation. It is in its very beginning. More and more megalopolises are going to spread around the world. They mean the beginning of a new era.

The main characteristics of Megalopolis are:

a) Continuous growth,

b) the incorporation within the same urban area of several metropolises, dynapolises, cities and villages.

In this way we can draw the conclusion that since the creation of Dynapolis, about one century back, every new type of settlement has devoured the previous ones. Thus, Dynapolis has devoured the city and villages; Metropolis has devoured dynapolis, cities and villages; and Megalopolis has devoured metropolis, dynapolis, city and village. It is now understandable that in order to look at Megalopolis we have to change the scale of our observation and expand our field of research into much broader areas.

It is now apparent that if the main characteristic of Megalopolis is its continuous growth, and the same is valid of Metropolis and Dynapolis, and if we take into consideration that the most important settlements of the world are now Metropolis, Megalopolis, and Dynapolis, we shall witness a continuous growth of these settlements until they are all interconnected in a network of settlements covering the whole earth. In this way we will have one settlement which will cover the whole earth and thus it will become a universal settlement. Thus, we will reach the stage of Ecumenopolis.

In the USA, for example, the result of all forces which are now already in full development has been lately demonstrated by a special team of research workers in relation to the northeastern part of the USA. This team which works under the geographer Gottman has presented the megalopolis in the USA and has predicted that the trends of its growth will connect the eastern megalopolis with the one developing around Pittsburgh.

Another very characteristic megalopolis in Great Britain, covering the area from London to Birmingham, Manchester, Liverpool. This megalopolis is taking the shape of a continuous settlement but no specific studies have yet been carried out to predict when the merging together of the several areas will be completed.

A similar megalopolis has already developed in continental Europe, mainly in the region of the Netherlands and Belgium down to Western Germany and to the Ruhr area. It is expected that, especially with the full economic consolidation of the countries of the European Common Market, the existence of megalopolis will become more and more apparent.

An analysis of the trends of the population around the world which show that the population is now growing at an average rate of 2% – a rate which may be accelerated in the near future – shows that it is very probable that humanity is going to multiply its numbers by 10, 15, or 20 times within a century. Actually, even the most conservative estimates show that even under very strict policies of birth control, the population of the earth will be more than 12 billion in one hundred years from now and as it is not probable that such strict policies will be implemented immediately everywhere, humanity will reach a minimum of 25–30 billion people. Some people are estimating maximum figures of over 100 billion people, but it is very reasonable to assume that the figures of 50–60 billion people will be reached before the end of the next century.

It is thus reasonable to assume for all practical purposes that within a century from now, the population of the earth will be 15 times larger than at present, i. e., of the order of 45 billion people. Thus Ecumenopolis, which is in the process of being born out of the megalopolises, will be completed within a maximum of one century from now. By then it is quite probable that the population of this earth will remain stable and if our predictions are right, Ecumenopolis will have the following characteristics:

a) It will cover the whole earth with a continuous network of settlements,

b) it will be a static city in balance with its countryside in the same way as the feudal cities or the city states were in balance with their countryside.

Humanity by then will have reached another important stage in the development of its settlements, the stage of a colossal static settlement covering the whole earth, a settlement in balance incorporating all natural resources, one that will remain in the same stage of development unless unforeseen major forces of revolutionary impact appear in the life of man.

If we now try to understand the causes of these trends which have led within a century from the dynapolis to the dynamic metropolis, to the dynamic megalopolis and will lead towards ecumenopolis, we will discover that they are the following:

a) The unprecedented growth of population,

b) the unprecedented growth of income which has created a much greater demand for urban goods and building activity,

c) the trend to socialization which irrespective of political system tends to the equal distribution of goods to all classes of the population,

d) the constant urbanization due to increasing productivity which requires a smaller percentage of people to remain in the rural areas,

e) the impact of the machine as a means of transportation and means of production. This has meant that the cities which were once inhabited by human beings and some animals are now inhabited, if we speak in terms of sizes and dimensions, mainly by machines and cars and secondarily by people and a very few animals.

In order to understand the problems which are created for the human settlements within Ecumenopolis, we have to consider for a moment a population increase of 15 times for every one of our major expanding centers. It means, for example, that New York will have to serve a population of 150,000,000 people instead of the 10,000,000 it is serving now.

Not only will the population increase but also the proportion of mechanical means of transportation and production per capita. Thus the demand for urban space and its more elaborate formation will be much larger. We will have a greater number of vehicles and other means of transport, and also a greater daily mileage per person, greater numbers of the existing means of communication, telephone, television, etc., as well as new and unknown means.

These phenomena will be of such importance that they will precipitate the death of our cities. This is already beginning, in their very hearts, as we can show by such facts as the fragmentation of the centers by highways or the bad, inefficient functioning of them where no such major surgery takes place.

If we want to avoid death, if we want to lead towards a city of life and turn our universal settlement into a source of new ways, worthy of the cradle of a new kind of life, then we have to understand one basic rule, that we cannot increase the pressure on the existing cities and existing types of settlements which have not been planned or meant for such pressure. There is an imperative necessity to create a new network of transportation and communications with new settlements which will function in order to serve the needs of the future.

On the basis of the principle that our present settlements should remain as the cells of ecumenopolis and not the hearts and focal points of it, we will be led towards a network of transportation lines linking new hearts of a new type of settlement which will be designed and equipped so as to let this whole colossal earth-covering network function regardless of the pressures exercised on it.

It is possible for us to turn Ecumenopolis into a city of life, and even more, into a city of new life for all of us. If this is accomplished, a century from now we will have achieved the following major targets:

a) All our present settlements will survive, and will be continuously ameliorated.

b) Fourteen-fifteenths of the new universal settlement is going to be completely new, conceived in a new imaginative way corresponding to future needs and not to the conceptions of the past.

c) The whole ecumenic city is going to depend on a network of transportation lines and centers of transportation which will meet all its needs, in peace or war.

d) We will have been given the chance to create new settlements on a completely new basis, within which we can create a new and better pattern of living, where man will be able to regain his dominating position as the master inhabitant of this world, and not as the slave of the machine which now rules over his settlements.

Our real duty is to decide not if Ecumenopolis is going to be created. This is already happening. The process has already been started, and it wuld be childish to overlook it. Our real challenge is to decide if Ecumenopolis is going to be a settlement of death or a settlement of life.

Ecumenopolis is going to be the largest settlement ever created by man. It is going to be unique in size. By its nature Ecumenopolis, when completed, will be static for an undefined period which may range from generations to centuries or milennia. Its change towards dynamic settlement will require new conditions of revolutionary importance which we cannot foresee at present.

Ecumenopolis is going to achieve a complete balance of the natural and the man-made landscape. It will be a continuous network of centers and lines of communications between which major communities of life will be created. In contrast to the past, when settlements were small, built-up islands within the sea of the countryside, in Ecumenopolis the countryside will consist of islands both small and very big within the network of continuous settlements.

In the network of Ecumenopolis, all parts of the settlement and all lines of cummunication will be interwoven into a meaningful organism, otherwise no part of the settlement or the countryside can function or even be saved. Within Ecumenopolis the main parts of settlements should cease to remain on the main lines of transportation and communication or in the main centers. If they do, it will be impossible for them to function. There is no reason to keep the present settlements as the hearts of a new network of a new type of settlements. The reasonable solution is to create the new centers so that they will serve us in the best possible way without the additional burden of the residential areas bring accumulated upon them.

To pave our way to Ecumenopolis as a city of life, we have to keep in mind seven basic points. The first is that Ecumenopolis is going to be created, whether we like it or not, as the largest human settlement to exist on this earth.

The second point is that in order to face our problems we need to study them on the largest possible scale on every occasion. We are moving by necessity towards the formation of larger places in all parts of the world. In all parts of the world, wether democratic or communistic, this fact has been overlooked and everywhere humanity has met with failures.

The third point is that we need a new network of settlements consisting of a new pattern of central settlements and new basic lines of transportation and communications. The existing ones cannot stand any more pressure. If we add pressure to them we are going to contribute towards their death by strangulation.

The fourth point is that we have to study the role of every existing settlement, of every existing region, of every existing part of a settlement within the general framework of Ecumenopolis, which is indispensable for our survival and towards which all of us have to work.

The fifth point is the necessity to proceed with total programmes covering all expressions of life within the human settlements. It is impossible any more to proceed with separate town plans, separate urban renewal programmes, and separate housing schemes. We have to strengthen as much as possible total programmes comprising the totality of expressions in every settlement. Such programmes are indispensable irrespective of the local political system. In the USA such decisions will be taken by bodies elected in a different way from in Russia. In practice, however, the decisions to be taken are the same regardless of the country and the political system we support. We have to save our ways of living, and there is only one way to do that–namely, to conceive the proper solutions and to implement them with courage.

The sixth point is the necessity to have a programme and a plan for every settlement as a part of the programmes and plans of the broader areas around them, so that its function and its role is refined within the broader area of which it is an integral part. Unless we do that we are going to fail in every effort for the creation of a programme and a plan for our cities.

Alison and Peter Smithson, London

The open City

(page 18–19)

Berlin has what every other city in the world is beginning to wish it had – an open centre. In all the other metropolitan cities – with the exception of Los Angeles – development pressure has slowly brought about a condition of overbuilding. They are all cities kept in action by a vast deployment of mechanical devices, underground railways, lifts, escalators, travelators and so on, and by a layering of activities one above another, apartments, shops, servicing, parking etc., sustained by an equally vast deployment of air-conditioning and ventilating equipment, and pipework generally.

For the ordinary user, enjoyment of the city tends to get squeezed out in the layers, and certainly the metropolitan cities have lost that sense of structure and feeling for use which we associate with the ordinary villages and towns of the past.

It is the demonstrative and communicative function of architecture to provide such structuring, and such guidance, that we can use our cities as naturally and as unthinkingly as we breathe.

To get immediately to cases, let us take the question of the "interchange". In Paris, in London and in New York, the old main-line stations are being re-developed by the addition of "commercial development" – office buildings, shops and so on. Now, traditionally the station spoke clearly, gave adequate guidance as to its use as terminal ... big engine hall as at King's Cross in London, or big concourse as at Grand Central in New York ... but they are no longer "terminals" they are "interchanges", and what is the shape of Interchange?

An Interchange is a nodal event relating major transportation systems one to another.

Certainly we know that the transportation needs of the next half-century will need more space, not less, than in the last half-century. And we know that in some way the direct servant functions of "Interchange" ... restaurants ... hotels ... meeting-spaces ... shops ... etc., have to be woven-in with the car-parking, taxi-ranks, bus-terminals and underground entrances in such a way as to make clear what is going on, land that these too will need space to make themselves clear, to work sweetly and not be so tightly knitted-up as to be incapable of change.

We are so used to overcrowding, we even accept it when presented as an ideal – and ideal of a layered-up city with servicing facilities and circulation routes entirely below ground, permanently locked into the systems above. But few who have actually experienced life in the service area below State Street in Chicago, or in the parking shelters of Stockholm would voluntarily repeat the experience daily or opt to work there, as many people have to do to make them work.

Where now a minority are permanently below ground, soon we shall all live part of our lives in circulation sewers. And such systems of servicing and access, as systems, tend to be compromised geometrically and rendered inflexible by what goes on above – for example by columns or bay sizes carrying down from above restricting turning circles, parking bay sizes, etc.

It is fundamental to system-building that sub-systems should be capable of change. In our discipline both the needs of human use and the needs of system growth demand space.

And it is space that Berlin has. She must use her present situation positively and build towards a new image of the metropolitan city.

An open city is nothing to be afraid of. Aristocratic cities in the past were like that – Jaipur or Karlsruhe for example, and so too was Rome right up to the end of the 19th Century. When the Romans withdrew from England their towns were re-occupied in a new way with gardens and fields within the walls: and when Rome herself ceased to be the capital of the Empire, within her walls were built the villas and palaces of the Renaissance princes with their fabulous gardens, and the city was restructured in an entirely new and more open way. The availability of space was seized for a new sort of city.

What seems screaming-out to be done in Berlin is to take similar advantage of the present situation. It is suggested:

1. That the area adjacent to the Tiergarten and the area from the Mehringplatz up to the Wall, should be planted-up at once, as a simple grass and trees park, with certain of the roads shut off from vehicular traffic.

2. That the idea of gradually getting back all the old street blocks by the spotting-down of single isolated buildings over the whole area should be abandoned, and a policy of grouping buildings into substantial clumps or "land-castles" for the visual re-occupation of the centre be adopted.

3. That the new image of the central area would therefore be of a park with big lumpish "land-castles" around which servant activities would cluster.

4. That modern architecture of the "Brasilia type" (such as at the Hansaviertel) would be unable to sustain such a concept and that an architectural discipline more formally cohesive would need to grow with the general idea.

5. That, should the Anhalter-Bahnhof be re-developed, it would be an opportunity to create a real pioneer "Interchange", related to the South-tangential road, to the U-Bahn, to a general parking and service strategy such as was suggested in our Mehringplatz project.

6. And finally, on the other side of the Wall, the areas alongside the Friedrichstrasse up to the Unter den Linden should be planted up as a park. The Tiergarten carrying straight on as in Scharoun's Hauptstadt plan with the historical buildings bedded into it. These buildings already have the sort of cohesive place-form we are searching for for the land-castles of new development and they would stand as a measure of our capacity to develop analogous new disciplines towards place-form.

Jacob Berend Bakema

Identity and Intimacy of the Great City

(page 20–23)

Every city is a place of encounter, at least, it offers such a possibility. Thus the canals or the highway intersections have come to be the nuclei of large Dutch towns or of a city like Brasilia. Great seaports come into being where rivers meet the sea:

The Grand Canal in Venice
The Alster in Hamburg
The Amstel in Amsterdam
The Maas in Rotterdam
The Seine in Paris
The Danube in Vienna
The Tiber in Rome
The Thames in London
Lake Michigan in Chicago
The Lake of Zurich in Zurich, etc.

Everywhere these geographical features are elements of identification for the residents of these cities. Moreover, these elements have almost always been at the same time elements in the economic structure.

Now then, cities grow and their peripheries become ever farther removed from their elements of indentification. The residents of these outlying districts lose all contact with this centre of identity. New York is not truly "New York" unless one senses the proximity of the East River or the Hudson River; this awareness is the only thing that makes one feel at home.

To feel "at home" means that one designates an indefinite area as being "one's own". The Grands Boulevards as well as the Seine are elements which permit Parisians to feel "at home".

After 1945, just when the urban periphery was beginning to sprawl, the old city centres underwent a change of appearance. The new administrative cores were born.

By planning and building gigantic thruways, it is hoped to canalize traffic, Nevertheless, the "waves of metal" do not flow as freely as was hoped in Los Angeles or in Tokyo. There is a perennial hope of finding a solution by talking in terms of traffic, routing and parking. However, it seems to us that the essential question has not yet been raised. How can the scale of ever more sprawling cities be made to correspond to the scale of the "table" or the "bed"? Or, to put it in other words, how can we ally spatial gigantism and the sense of identity? And in this case "identity" means "to feel a part of something", "to feel responsible" for the whole. Modern town-planning ought to be capable of expressing this engagement, this intimate connection. We are living in a democratic age in which the goals to be achieved are goals common to all.

To construct the city of the year 2000 it will be necessary therefore to draw up a programme of urban needs; consequently there will be needed a list of basic data having to do with the realities of urban living:

1. The resident of a housing complex is what can be called an "anonymous owner". That is to say, he does not know and will never know the architect.

2. The working hours of this anonymous resident are becoming ever shorter, his leisure activities are consuming ever more time.

3. The separate members of the family, wife, child, husband, are becoming, within the family, more and more independent.

4. The housing created for this type of resident is characterized by the principle of repetition. Its design is the outcome of badly conceived building codes. These codes claim to know the needs of the "anonymous owner", but this is not the case.

5. The monotony of cities is one of the consequences of this state of affairs.

6. Monotonous town-planning is not in keeping with the needs of our society. Each individual has the right to choose the house design that suits him.

7. "To be a human being" means "to be conscious", i. e., to ask oneself: what am I? where am I? what shall I be and where? what am I going to become? The housing unit ought to be a milieu likely to furnish meaningful answers to these questions. But to reside also means to identify oneself with the total spatial milieu.

8. The given disposition can be an active enterprise on the part of the anonymous owner only if he can participate actively in this disposition.

9. The monotonous city is an expression of the passive man.

10. The present-day technique of prefabrication has still more intensified the principle of mass production in housing. And this all the more as manufacturers observe and imitate what has already been done.

11. Over and above this, prefabrication entails the advantage of cores which can be expanded as the family grows (cf. the flexible house in No. 4/1963).

12. The core residence is an integral part of a housing complex. Each of these groups will comprise 300–500 units. This primordial structure will be fixed in accordance with town-planning criteria; the substructure will later on be finished off by the residents themselves.

13. Several housing units of this type will constitute a complex with schools, traffic routes, shops, workshops and offices.
14. Each programme (likewise for the offices, workshops and stores) comprises small-scale and large-scale elements; the architecture ought to emphasize these differentiations.
15. As in the case of residential zones, the other groups of buildings can be arranged in such a way that the low silhouettes help to accent the larger structures.
Let us imagine a future archaeologist discovering one of our cities. Will he think that it represents a democratic civilization or rather a human mass living in slavery?
It is therefore high time town-planning restored his identity to the anonymous man and his right to participate in the affairs of his city. It is on this sole condition that the anonymous owner will be able to regard his home as "his own".
The true architect will win the confidence of his fellows only if he respects this principle.

Josef Lehmbrock

Town-planning:
a Political Responsibility
(page 29–34)

The following article describes and criticizes European town-planning in general and that of Germany in particular. The author does not believe that town-planning can be the work of a "Great Architect". According to him, town-planning grows out of the marshalling of a great number of decisions, both short and long-range ones. To Lehmbrock town-planning is a political matter; he tells us: Most planners evaluate the effectiveness of their designs in a strangely optimistic manner. When we call to mind the living conditions endured by a John Steinbeck or a James Joyce or even of a Henry Miller, it is difficult to agree to what Bakema maintains when he says that man shapes his abode and that the latter in turn exerts a moulding influence on him. It is true that man can be influenced in a bad sense (monumental squares and avenues) but has there never been a design capable of having a good influence on the spirit, on culture and on mankind in general? When Bakema criticizes housing projects of recent construction by saying that they are the expression of bondage and not of a democratic age in which each individual has his rights and desires, he seems to forget, truly, that bondage and design are two entirely different things.
The urban groupings that surrounded the edifices of the aristocracy were consummate and they were inhabited by serfs, whereas people today live in the buildings that Bakema criticizes and have been emancipated from slavery, crushing poverty and famine, serfdom having been replaced by the service contract. The right of the individual is no guarantee of beautiful design; on the contrary, every liberation entails, at its outset, chaos of form.

Kenzo Tange with Yoshikatsu Tsuboi and Uichi Inoue

National Sports Arenas in Tokyo
(page 39–44)

For the Olympic Games of 1964 Kenzo Tange and Yoshikatsu Tsuboi and Uichi Inoue submitted a plan for two sports arenas. The first is the larger of the two, and is intended for swimming events and judo. There are a planned 11,112 fixed seats and 2,134 movable seats for the former events, and 11,112 fixed seats and 5,134 movable seats for the latter, with the swimming pools being in this case covered over. The other arena, the smaller one, is reserved for basketball and boxing, with 3,391 fixed seats and 540 movable seats planned for basketball games, and 3,371 fixed seats and 1,980 movable seats for boxing matches.
The larger of the two arenas is based on a plan comprising two identical opposed floor decks. In this way access to the main entrances is kept on two different levels. The spectator enters the arena via the entrance located on the first floor while the participant uses the entrance located on the ground floor. There is a circular gangway feeding the spectators into the amphitheatre seats.
The roof is supported by a net construction. In its longitudinal axis two suspended cables, forming parabolas, hold up the pillars to which the net is attached. A skylight has been installed above the two main cables. It provides the whole arena with adequate natural daylight.
There is a plan to cover the net construction with sheet metal panels 4–5 mm. thick.
The second arena displays the shape of a helix. The entrance, naturally enough, was located in the open part of the structure. It has the same kind of roof as the first arena.
Emancipation involves the total acceptance of the individual freedom of others. Most planners have not yet realized this fact, still believing in their apostle's role, for which no use is made of squares and avenues; they have another idiom in which it is a question of dominants, of neighbourhoods, of spatial structures. In short, there is not only an abuse of design on the part of the dictator, but there is also a formal dictatorship on the part of the designer; both are straitjackets intended to confine our formal conception.
The present-day town-planner is no longer a Great Man; he is neither orchestra conductor nor creator of leading ideas; nor is he the final instance. These sovereign pretentions no longer exist; they are not in keeping with the character of the society in which we live.

It will be necessary for us to mobilize public opinion, that is, the spokesmen of the people, and to convince them of the necessity of the total freedom of each individual when it comes to selecting the design of the house he is to live in.

The architect plainly will then have lost much of his prestige. Moreover, it will be necessary to counter certain defects in the law governing land tenure and other abuses.

We regard this programme as absolutely indispensable if we wish to avoid the "design monstrosities" that the town-planners are going to inflict on us. The citizen has the right to choose his urban design in keeping with the needs of his society. Architects must adapt themselves to this state of affairs.

The citizen must be convinced that any kind of violence is bad, because violence destroys what is specifically "human". Neither the architects nor the planners will elaborate the society or the city of the future; this task is incumbent on free citizens alone. It is indispensable for architects to take into account this principle and tone down their ideas of integral town-planning. To Lehmbrock's observations we should like to add the following: The city, to be sure, needs the concerted strength of all its citizens, but as Alfred Andresch rightly said, it is the individual who will have the last word, for he will have chosen what he wants. It will not be possible to convince him, it will only be possible to influence his choice.

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