THE PROBLEM OF URBAN HIERARCHY

Dedicated to Professor Dr. S. Kiuchi

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I

All over the world the process of urbanization works as pace-maker for the modernization of human societies. It seems very surprising that comparative studies about the basic pre-industrial patterns of urbanization are neglected till today. Mostly, we know the take-off and the stages of urban development, the structures and special functions of several towns and cities, but we have few knowledge about the main forces and the leading functions of the pre-industrial urban system in general.

In his well-known work: "The Preindustrial City, Past and Present" Gideon Sjoberg has pointed out that political centers with administrative or military functions are unquestionably the dominant cities in the pre-industrial society¹⁾. Thus, the capitals mostly combined with religious and educational functions are dominating all other cities in the feudal order. According to Sjoberg's conception of the political power structure and the development of technology, all economic functions, far-distance and near-distance market relations, appear as being of secondary significance.

But it seems to me that Sjoberg's generalizations are neglecting too much the basic differences between geographical regions and cultures. And just these differences between the specific urban forces demonstrate the very essence of the city system²⁾. A second point: It is not enough to find out the specific framework of functions and the degree of specialization within these functions. For the understanding of the process of urbanization the whole complex of urban density, diversification of size and functional levels and the degree of the supremacy of primate cities are important. In comparative studies a key-problem is the pattern of urban hierarchy.

Since the time when Robert E. Dickinson by his empirical studies³⁾ and Walter Christaller by his outstanding work "Die zentralen Orte in Süddeutschland"⁴⁾ discovered the laws of central place relationship, we have a new, deeper and more differentiated understanding of urban hierarchy. There may be further doubts and discussions about the number of functional levels in each time and society, but the existence of a scale of urban hierarchy is out of question⁵⁾.

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1) G. Sjoberg: The Preindustrial City. Past and Present. 1960, 87~91.

2) H. Bobek: Die Hauptstufen der Gesellschafts-und Wirtschaftsentfaltung in geographischer Sicht. Die Erde 90 (1959), 259~298.

3) R. E. Dickinson: The Distribution and Functions of the Smaller Urban Settlements of East Anglia. Geography VII (1932), 19~31.

4) W. Christaller: Die zentralen Orte in Süddeutschland. Jena 1933.

5) B. J. Berry, W. L. Garrison: The functional Bases of the Central-Place Hierarchy. Econ. Geography XXXIV (1958), 145~154.

Furthermore it is correct that Christaller's system concerning the hierarchy of centers and their integrated hinterlands is not limited to economic functions. It has a much wider meaning. The whole complex of human societies and their organization is based on hierarchical relations. Each developed power structure needs distinctive levels of delegation, located in subordinate centers. The political principle of administrative organization demonstrates the pattern of urban hierarchy most clearly. But very often this systems of administrative hierarchy is not identical with the system of economic and religious functions.

And what is different too are the density and the intensity within each system, the leading forces and the gap between primate cities and secondary and tertiary towns. I think that the development of these different patterns down the ages is most important for the understanding of the process and of the problems of urbanization. Examples from China, Japan, India and Central Europe will demonstrate some main types of urban hierarchy and their changes.

II

In East Asia the early primacy of administrative functions caused a clear and distinct scale of city hierarchy, culminating in the role of the main capital, the city of the emperor. The traditional Chinese city was the walled center of a hsien (district or county), fu (prefecture) or sheng (province). As Sou-Dou Chang has shown, in each dynastic period since Han times the hsien capital was the numerically predominant city-type, and it is likely that its distribution represents quite well the spatial pattern of urban growth in China⁶⁾. The hsien cities as the residence of the ruling class, functioned as sites for temples, storage of agricultural surpluses and as fortresses against invasions. The formation of permanent settlements in the frontier regions – already since Chou times – was usually followed by the establishment of walled cities for both defense and trade.

But in his excellent research about “Marketing and Social Structure in Rural China” (1963) William Skinner found no complete coincidence of the political-administrative centers and of the central places based on economic functions. Skinner distinguished five levels of central places: The Standard Market Town, the Intermediate Market Town, the Central Market Town and finally two higher levels: The Local City and the Regional City⁷⁾. His analyses suggest that only a minority of intermediate market towns served as capitals of hsien or higher administrative units, whereas a clear majority of the central places at the three highest levels had such a political status. The hsien capitals could serve as intermediate or central market towns, fu capitals as central market towns or local cities.

Skinner's results show very clearly that the problem of urban hierarchy cannot be solved by simplifying the administrative forces too much. For towns ranking among the lower and lower-middle class in the hierarchy the economic market functions are more important and more independent.

6) Sen-Dou Chang: The Historical Trend of Chinese Urbanization. *Annals Ass. Amer. Geogr.* 53 (1963) 109~143. Also: Some Aspects of the Urban Geography of the Chinese Hsien Capital. *Annals Ass. Amer. Geogr.* 51 (1961), 23~45.

7) W. Skinner: Marketing and Social Structure in Rural China (I). *Journ. Asian Studies* 24 (1964), 3~43 (p. 7~10).

In Japan, there was the contraction of the Chinese system to a highly centralized pattern of two levels during the Tokugawa age. Economic functions were mainly attached to the new political centers. From the 17th to the 19th centuries, the jokamachi, the castle town as the capital and leading center of a feudal territory developed to be one of the most complex and powerful city-types in urban history. The concentration on only one dominating castle town in each territory increased the economic power of the primate cities and developed a striking relation, according to size, rice production and industrial activity in the tributary hinterland.

Below this level the system of minor central places was rather weak. It seems that a greater number of specific market towns developed only within the wide coastal plains and the basin regions, especially in Kinki. Thus minato-machi (port towns), shukuba-machi (station towns) and monzen-machi (temple towns) had to function as service and exchange centers in rural Japan⁸⁾.

In contrast to the rational and centralized urban system in Japan, the hierarchical pattern in India appears less uniform, much more complicated and much less clearly defined. In greater parts of India the older system is characterized by the gap between small service centers and big temple and palace cities⁹⁾ as well as between indigenous and colonial settlement structures. Religious functions, which are only accidental in East Asia, are essential for cities in South Asia. These cult centers represent the most stable city pattern in India, while administrative and foreign trade centers formed different and more mobile urban systems. It is the Indian problem that the trend in conjoining of the heterogeneous hierarchies started rather late.

III

In Western and Central Europe urban development was conditioned by the predominance of economic functions. During the 11th century, the central urban market was established as a permanent place of exchange. In Southern Germany around Lake Konstanz, a three-level hierarchy existed at the end of the 12th century¹⁰⁾. A great number of small towns (Landstädte) with their rural Umland were integrated in the hinterland of middle-sized central cities like Schaffhausen, Überlingen, Freiburg. Higher regional centers—such as Zürich, Konstanz and Basel—offered specialized services and continuous far-distance trade relations with the world markets.

A classic example for the possibility that the hierarchy of international trade cities and local central markets (Fernhandel and Nahmarkt) could coincide was the Hansebund, which

8) K. Fujioka: Senshichiiki oyobi Toshiiki no Kenkyū. Kyoto 1955, 261~438. – S. Kiuchi: Urban Geography. 2. Ed. Tokyo 1956. – J. Yonekura: The Historical Geography of Settlements in East Asia. 1960. – K. Yamori: On the Regional Structure of Japanese Castle Towns. 1970.

9) But in city size distributions India has a "lognormal" (rank-size) system like other countries with long urban traditions. See: B. J. L. Berry: City Size Distributions and Economic Development. Economic Development and Cultural Change IX (1961), 573~587.

10) H. Ammann: Schaffhauser Wirtschaft im Mittelalter. Thayngen 1948. – P. Schöller: Das Marktproblem im Mittelalter. Westfäl. Forschungen 15 (1962), 43~95 (p. 90).

was formed during the late middle ages. The Hanse, a social and economic federation of cities in Northern Germany and Northern Europe around the Baltic Sea, had a very distinctive but variable and changeable system of three to four city ranks: Quartierhauptstadt, Vierstadt, Prinzipalhauptstadt and Beistadt¹¹⁾. The pattern of urban centers with different levels and economic relations determined the whole city structure and survived the decrease of the Hanse, especially in North-western Germany. The following era of absolutism and feudal territories could change the leading political and administrative centers but it did not destroy the established urban structures.

IV

As we compare the different formations of urban hierarchy in China, Japan, India, Central Europe and other regions, we will come to three conclusions:

- 1) In relation to the aptitude for modernization and industrialization the degree of differentiation within the urban network is important. A variable system of numerous functional levels supports the success of modernization and innovations.
- 2) Important centers of trade and of industry are fundamental for the social and economic progress. But only a well developed system of central functions and urban hierarchy guarantees regional stability.
- 3) The coincidence of political, cultural and economic functions is most favourable.

11) In some areas we can find a fifth level: "Zugewandter Ort". See: L. V. Winterfeld: Das Westfälische Hansequartier. Der Raum Westfalen II, 1. Münster 1955, 255~352.

都市階層の問題

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洋の東西を問わず都市化の過程は人間社会近代化の先導者の役割を果たしているが、都市化の基礎となる工業化以前の都市体系では何が中心的な営力であったかは殆んど研究されていない。

ショバークは行政、軍事機能を有する政治の中心地を工業化以前における卓越都市と指摘したが、それは経済活動を軽視し、地理的地域と文化の間に存在する根本的な相違を無視したものであった。都市化の過程の比較研究のためには都市階層のパターンを把握することが最大の課題であり、ディッキンソンやクリスターラーはこの研究に関して中心地理論を発表した。

行政機能は都市階層のパターンを最も鮮明に表現するものではあるが、経済や宗教の体系とは同一でない場合が多く、都市化の過程や問題を理解する上では異なった都市体系のパターンを比較することが重要であると考えられるため、世界四地域の都市階層をとりあげてみた。

東アジアでは行政機能が早くから発達しており、都市階層が明瞭であり、中国では帝都を中心として都市の空間的配置がうまく形成されていた。日本では17～19世紀に中国と同様極めて中央集権化された二つの中心地と城下町が発展し、これ以下の規模の小さな町は集中力が弱かった。インドでは都市階層は一樣ではなく、宗教の及ぼす影響力が大きく、これに行政、外国貿易の中心地が組み合わさって複雑な様相を呈していた。西部および中部ヨーロッパでは都市の発展は経済機能の卓越性に規定され、国際商業都市と地方中心都市との階層性がハンザ同盟以降形成された。その後絶対主義体制下の北ドイツでは政治の中心地は変更され得たが、既設の都市構造は破壊されなかった。

これらの異なる都市階層の形成を比較すると次の三点が結論となる。

1. 近代化・工業化の傾向に関しては都市体系内部における分化の程度が重要である。数多くの機能水準が変化し得る体系であれば近代化や革新は達成されやすい。
 2. 貿易や工業の重要中心地は社会・経済的發展にとって根本的なものではあるが、中心地機能と都市階層のよく発達した体系のみが地域的な安定に結びつく。
 3. 政治・文化・経済各機能の一致が都市階層の体系にとって一番望ましい。
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