

THE EVOLUTION OF SETTLEMENT LOCATION AND DISTRIBUTION IN URBAN-RURAL INTEGRATION

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ABSTRACT: The urban-rural integration is an inevitable outcome of regional economic development in a certain stage and is objectively exhibited as the evolution of settlement location and distribution, that is, the turning from spot-distribution to area-distribution of the settlement in developed areas, while in less developed areas, from spot-distribution to linear distribution. The evolution of the settlement location and distribution is an inevitable result of economic development in the urban-rural integration, which is restricted by factors affecting economic development, on the other hand, it is also an important factor affecting and restricting economic development. In the process of the urban-rural integration, modern transportation orientation, modern market orientation, modern industrial orientation and modern population orientation are important motive force, and influence the basic pattern of the settlement location and distribution, which plays a speeding or delaying role in regional economic development.

KEY WORDS: urban-rural integration, settlement location, settlement distribution, function district

I. INTRODUCTION

“Settlement”, also called “residential area”, is a fundamental spot for human production and living, mainly consisting of residence, street, and productive and living utilities. It is a spatial complex with many functions, and a basic unit to sketch the human spatial distribution as well. Generally speaking, the settlement usually consists of cities, towns, villages, sanatoriums, the living districts of farming, forestry and livestock farms and all village hamlets, in addition, livestock area's tents and isolated houses in the regions with sparse population, such as cottages, railway stations, highway maintenance squads, hydropower stations, weather stations and border sentry boxes, etc. are all regarded as settlement by some scholars.

From apparent substance, the urban-rural integration is exhibited as a new settlement structure evolution in the human living space. In the view of human geography, the urban-ru-

ral integration is a new human landscape evolved from country settlement in developed areas, which is of profound implication in economic, social and human sciences. As a human landscape, the evolution of settlement distribution reflects a trend of human-land relationship development with the social development, and reveals a series of objective laws governing the development of society. The evolution of the settlement location and distribution is a necessary result of economic development, and varies with the phases of economic development. The evolution of the settlement location and distribution has its own intrinsic law, which not only is adaptable to the economic development, but also affects the speed and progress of regional economic development, and is an essential restricting factor to influence regional economic development. By exposing the evolution law of the settlement location and distribution in the progress of human society, the authors are attempting to reveal the environment orientation and basic rules of settlement location and distribution in the urban-rural integration, and to probe into the effect of evolution of settlement location and distribution upon regional economy, so as to deal with the relationship between the settlement location and distribution and economic development, and speed up the sound development of regional economy.

II. TRADITIONAL ENVIRONMENT ORIENTATION OF SETTLEMENT LOCATION AND DISTRIBUTION

The settlement location and distribution is closely related to the level of human society development. Then, the pattern and environment orientation of the settlement distribution varies with different phases of human society development. From primitive society to farming ages, then to industrialized period, every social progress had resulted in the great changes of settlement location and distribution and left a deep brand. The motive force of early innovation came from increasingly enhancement of human ability to remake and utilize nature, with which human try to cast off the fetters of nature in a certain extent and to build the best living space which is suitable for human existence and development.

1. Primitive Society

In primitive society, human productive level was very low. They supported their existence and development by hunting and gathering, and depended seriously upon abundance of gifts of nature and searched for suitable settlement with advantageous natural conditions. In the view of archaeological findings, since the old stone ages, ancient human had learnt to select living environment. According to geomantic omen (Fengshui in Chinese) theory, the ruins of ancient human are of important geomantic omen study value. Ancient human lived mainly on hunting and gathering, so most of them lived in mountainous areas. Because of lacking ability to construct houses and needing to avoid enemy and to adapt to natural periodic law, they had to search for suitable shelters. They dwelled in natural caves. So far more than ten natural caves where the

old-stone age's men dwelled have been found in China. Most of them are located near lakes or valleys, while the cave mouth is usually 10– 100 metres above water surface, and out of the chilly wind. Very few of them face north or by-north. Meanwhile, inside of the cave, where there is usually little stalactite, is relatively dry. So mankind mainly dwelled near the cave mouth. Not until about clan commune, did people learn to build houses, to begin to go out of the cave and to dwell on the ground.

Under the circumstances of lower productive force, the environment orientation of human settlement in the primitive society chiefly presents the following features: (1) an abundance of food resources to support human existence and development; (2) closing to water resources for the convenience of water supplying and agricultural irrigation; (3) locating at the cross of rivers for the convenience of transportation; (4) locating at the shining slope generally; (5) locating at the river terrace where there is cultivated soil and no flooding.

Taking the clan hamlet during Yangshao culture for example, we can learn the environment orientation of human settlement in the primitive society, which is centered on Guanzhong, western Henan, Banpo, Miaodigou, Xiwang village in southern Shanxi etc., the Yangshao culture covered extensive middle reaches of the Huanghe(Yellow) River where there were more than one thousand ruins. In the period of great prosperity of the Yangshao culture, these regions were humid climate with dense forests, flourishing and green grasses. There were not only rich river plains, but also swamps with plenty of water and lush grasses. All these provided very good conditions for human residence, production and living. So clan hamlets were generally distributed on the loess terraces of the Huanghe River's branches, which was near forest and stone available, and near water and no flooding. Moreover, primary loess was easily dug as house because of rich vertical joints and convenience to live for warmth in winter and cool in summer. In order to get water conveniently, they used to live at turn-spot or cross of rivers, where natural environment favoured productive activities, such as cultivating, husbandry, hunting and fishing etc.

2. The Environment Orientation of the Settlement Location and Distribution in Recent Times

With the social development and technological progress, human cast gradually off the fetter of nature and show stronger creativity. In order to be advantageous to production and activity, human settlement location and distribution shows apparently periodic evolution, which is basically correspondent to human development stages. Owing to limited space, we only make a brief summary for the primary features of the environment orientation of settlement location and distribution in recent times.

Economic development in modern society presents obvious regional differences. So the settlement location and distribution also presents various patterns. In developed areas, the environment orientation and basic pattern of the settlement location and distribution have the following features. Firstly, owing to economic multiple development, linkages among regions be-

come a restricted factor which affects regional economic development and residential living level. Convenient transportation is, therefore, an important condition of settlement location and distribution. Secondly, because the process of modern hi-tech products has cast off in a certain extent, strong dependence upon resources distribution district, the massive production becomes an important management way to raise economic benefits and corresponding settlement distribution turns from spot-distribution into area-distribution, and comprehensive settlements appear continually, showing obvious market orientation. Thirdly, for necessity of market orientation, modern settlement ought to open in all directions so that population and materials flows fluently get into social system. Therefore streamline-distribution along transportation lines become an optimum settlement pattern(Liao, 1993), while in the less developed areas, it still relies upon the natural resources extremely and presents random distribution.

III. THE ENVIRONMENT ORIENTATION OF SETTLEMENT LOCATION AND DISTRIBUTION IN THE URBAN-RURAL INTEGRATION

The urban-rural integration is the symbol of developed economy, and also a new kind of objective body which grew up on account of modern transportation, market-demand, industrial and population distributions. So, in spatial pattern, the urban-rural integration presents area-distribution of settlement location and distribution, which is profoundly affected by the factors restricting economic development such as transportation, market-demand, industrial and population distributions etc., so resulting in many kinds of distribution orientation.

1. Modern Transportation Orientation

With modern transportation stepping into high speed ages, high-speed transportation lines, especially expressways' emergence has changed people's understanding of the transportation lines' effect on the settlement location and distribution. Before high-speed transportation lines appeared greatly, traditional views believed that transportation lines provided a linkage opening in all directions for material, energy and information flows necessary to human production and living, So the factory location and settlement distribution present a linear pattern along transportation lines. However, the appearance of high-speed transportation lines change this situation, that is, closed-expressway does not provide convenience any longer for residential production and living beside it. On the other hand, it is just as a higher wall blocking the exchanges of material, energy and information along the expressway. So high-speed transportation lines play not only a linkage role but also a cutting role in the settlement location and distribution. Moreover, in a certain sense, these cutting actions are bigger than linkage for area-distribution settlement. At the same time, except for high-speed transportation lines, other traffic lines can still play a role of linkage which is open in all directions. Considering these, modern settlement location and distribution must choose new transportation orientation, i. e., must

change the original linear pattern connecting with transportation lines in all directions into modern area-pattern or circular-pattern connecting with expressway's entrances and other transportation lines-aid in all directions.

As far as modern high-speed transportation is concerned, the settlement in the urban-rural integration may only, to some sense, be regarded as a gathering-scattering spot of the population and material flows in entire social system. Because of screening of high-speed transportation lines, the settlement can't open in all directions, only throughout expressway's entrances, population and material flows can get into main circulation. In order to assure settlement population and material flows to get fluently into a big social system, we must choose favorable pattern of settlement location and distribution, i. e., area-pattern or circular pattern connecting with expressway's entrances and other transportation lines-aid in all directions.

2. Modern Market Orientation

Under the urban-rural integration, settlement is a multi-function complex with product, living, trade, exchange, entertainment and recreational functions, etc. To bring all kinds of functions into full play, besides transportation orientation in the settlement location and distribution, we must consider market orientation, i. e. the sources of material and energy, the market of goods in process of production, the approaches to supply articles for daily use, the material flow channels and exchanging spots in trade activities; the scale and trend of entertainment and recreation market, etc. Being more complicated comprehensive function than pure residential area in primitive sense, the settlement of urban-rural integration relies strongly on market. Since every function is relative to special market environment, market fluctuation has decisive significance to modern settlement rise and fall. So the market orientation of modern settlement evolution is obviously exhibited in apparent forms.

3. Resources and Energy Orientation

Although the development of science and technology has improved, to a great extent, the human existence conditions, human still depend upon the natural resources and energy extremely. Resources and energy orientation is still one of the most important factors affecting settlement distribution and settlement location. But, what is worth of mentioning, modern settlement does not depend on all kinds of resources extremely. On the contrary, it only depends selectively on some resources, for instance, water resources, land resources, etc. So in resources orientation, we must know clearly the variety and quantity of restricting resources, so that we can take respondent measures and choose optimum plan. Generally speaking, as the settlement of the urban-rural integration, its location ought to be selectively related to resources and energy orientation.

“Return” in modern geomantic omen theory has given a great deal of effect on the settlement location and distribution, modern geomantic omen’s value orientation has greater similarity to that of comprehensive natural environment while in settlement distribution, the spatial model of geomantic omen and architectural aesthetics are like twin flowers on one stalk. The urban-rural integration expectation is both rapid development of regional economy and happy human living. As a result, many scholars put forward the geomantic omen’s value orientation in town’s planning. The benefit and resources value of geomantic omen are still a question for discussion. But, it has been proved by a great number of facts that Fengshui orientation can influence human health, physically and mentally, and arouse some human fervor (Yu, 1990).

IV. SPATIAL STRUCTURE AND FUNCTIONS OF SETTLEMENTS

The settlement of urban-rural integration is a comprehensive multi-function settlement. To bring regularly all kinds of settlement functions into play, a variety of function districts must be divided clearly in settlement distribution. The settlement of the urban-rural integration has the following function districts: productive function (including industrial and agricultural production) district; living function district (mainly referring to residential quarters); commercial function district (central business district); administrative function district (the location of administrative bodies); cultural function district (the location of schools and other cultural facilities) and other facilities aid districts, etc. Each function district has its particular demand and effect on environment. So there are different distribution rules. The urban-rural integration is exhibited economically as a community which pursues comprehensive whole-economic benefit. Therefore, it demands each function district to be coordinate and reasonable. In the social formation, the urban-rural integration is exhibited as a residential area with multi-functions. Modern inhabitants chase easy and comfortable lives, so each function district must be mutual non-interference, reasonable distribution, regular function, timely service, excellent quality and so on. In short, the settlement of urban-rural integration ought to be an excellent municipal planning. In order to accomplish the general target of planning, we must not only divide and coordinate rationally function district, but also make it adapt to request of regional economic development and benefit inhabitant’s lives.

Under the traditional sense, municipal planning usually divides settlement spatial structure into three parts: residential quarters, support district and function district. Residential quarters are urban districts, where there are social and economic activities possessed by cities and towns. Support districts include urban districts, surrounding suburbs and related regions, providing water, food and energy resources and so on for urban districts. Function districts consist of all areas which can feel urban system effect. Settlement is a system consisting of the above-mentioned three parts. No matter how the systematic structure is, these three parts’ behaviors can

be divided as the follows: the residential quarters, which bring about pollution, consume energy, produce and consume goods; the support districts, which produce resources produce and consume goods; the function districts, which produce and consume goods. The relationship between the spatial structure of the settlement and the behaviors of the function districts can be described with the behavioral matrix (Yu, 1991). The traditional concepts are very effective on settlement describing under a primitive meaning. However, upon describing the settlement of the urban-rural integration, they must be corrected.

According to the general demand of the settlement of the urban-rural integration, we know it has a variety of functions. Therefore the settlement ought to consist of more function districts, and each one carries out a kind of function. According to the nature of a variety of functions, some function districts can be merged, then the settlement of the urban-rural integration may be divided into residential district, production district, consumption district, support district and development district in general planning. Every function district has a regular behavioral model. By using the relationship between settlement spatial structure and behavioral model, we can obtain the behavioral matrix of the settlement. So as to provide operative optimum means for settlement distribution and planning.

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