

Internet Thinking and Spatial Pattern Analysis and Landscape Design of Ancient City

Na Liu

Shaanxi Xueqian Normal University, Xi'an, 71000, China

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Abstract: As a cultural product in a certain historical development stage, the ancient city's ancient city has attracted more and more attention to the value and significance of its existence, and it is imperative to study its protection. The ancient city has large-scale official buildings: for example, the Taizhuang Mansion, the Defense Department, the General Armed Forces Division, and the participating agencies. The architectural styles of these buildings often reflect the traditional style of official buildings, which are mostly reflected in the vertical ridges and right ridges. They often use rows of ravines, dripping cylinders and Wagfan doors and windows, and large carved tiles. Internet thinking is a way of rethinking the market, users, products, the corporate value chain, and even the entire business ecosystem in the context of the continuous development of technologies such as the Internet, big data, and cloud computing. Therefore, in this paper, we discuss the Internet thinking and spatial pattern analysis and the landscape design of ancient city as the integrated study. The graph theory is applied to construct the theoretical modelling scenario and the data mining models are used to construct the connection link integration. The performance of the model is validated through the experimental overview.

1. Introduction

As a cultural product in a certain historical development stage, the ancient city's ancient city has attracted more and more attention to the value and significance of its existence, and it is imperative to study its protection. The ancient city was economically, politically, etc. in the process of development.

The influence of various factors has left a mark of social development on the spatial form. The ancient city is the home of residents and the carrier of local traditional culture. An objective study of the spatial characteristics of the ancient city provides the basis for future protection work. However, in the urban center area, especially in the Old City, due to historical reasons, the lack of planning and construction of forward-looking, high-density buildings, high floors, and super-strength development and construction of the city's overload have resulted in fewer green spaces and low openness in the old urban areas. The historical defects such as fragmentation and uneven distribution have become common problems in the transformation of old cities in China. How to create a pleasant living environment in the process of landscape design, integrate architecture and greening, and coordinate the development of the ancient city's ecological environment with society and economy is a problem that designers of gardens should consider.

Space syntax is a theory and general method for studying the relationship between spatial organization and human society by quantifying the spatial structure of human settlements including architecture, settlements, cities, and even landscapes. Spatial syntax combines the relationship between urban space and human behavior in the study of spatial characteristics. It uses objective data to quantify the spatial features and abstracts the space into a mathematical model, which eliminates the subjective judgment in traditional research methods. The transformed data information can more accurately analyze the value and utilization of space, clarify the restrictions on the activities of people in space due to different spatial forms, and thus better plan the development of spatial patterns.

Internet thinking is relative to industrial thinking. A technology needs to go through a long process from the attribute of the tool, from the application level to the social life. From a new technology to changing the textile industry, Jeanne spinning machine was later defined as the beginning of the industrial revolution, affecting the economic structure of East and West, and its span needs at least several decades. However, because this effect is lagging behind, we will inevitably be among the paralyzed identities: the old system and the new era will form a dislocation in our minds. The more successful the company is, the more difficult it is to transform. This is the “innovator's dilemma.” Now many companies in traditional industries face this situation.

Internetization will become the most crucial vocabulary in the next wave of business. At the Nikkei 2013 Global ICT Forum (Information and Communication Technology, ICT for short), Hu Houkun, who was the CEO of Huawei at the time, said: “In the era of the Internet, the biggest challenge traditional companies face is the disruption of the Internet. To meet this challenge, traditional enterprises must first change their ideological concepts and business concepts, and dare to look at the future from the perspective of the end and discover more opportunities instead of imagining the future with today’s thinking. Just see the threat.”

“The Internet is becoming one of the true infrastructures of modern society, just like electricity and roads. The Internet is not just a tool that can be used to increase efficiency. It is an infrastructure that builds future production methods and lifestyles. More importantly, Internet thinking should be the starting point of all our business thinking.” Any urban system consists of two parts: space objects and free space. Space objects are mainly buildings. Free space refers to the space that is separated by space objects and in which people can freely move. Free space has a continuous feature, that is, any other point that can reach the space from any point. For space syntax, free space is a very important concept, sometimes called open space. For the urban environment with dense construction or building groups, the space syntax is usually expressed by axis method. Its basic principle is: first, draw a longest axis to represent a street, and then draw the second long axis intersecting with the first line, until the whole free space or street network are connected by a series of axis, the axis of the painted figure called a map of axis. That is to say, the axis map is composed of the longest line of the least objective, which can guarantee that the axis diagram can represent the basic structural features of urban form. Therefore, we should emphasis the following issues.

Table 1 the Challenges For Considering

Challenges for Considering	Information Hub
The unlimitedness of development and the limited space	Generally thought that the development of the discipline in the worst and special cases such as discipline integration, derivatives, and always on the rise, the discipline level changes with limitless, although discipline development path has the characteristics of typical logistic curve. Look from actual, if a conventional development, so it inevitably has its rationality, and the reasonable will change as time constant was given and adds new meaning, as the subject to the attention of a social group and look forward to continue to rise with s-shaped curve shape spiral nature, as long as in the development of society and times in progress, this rising trend generally does not change, unless some unexpected power block, and discipline will in one cycle of a breakthrough in level or beyond.
The precision and complexity of spatial evaluation	The original appraisal attention is to manifests the thing characteristic the linear comprehensive attribute to reflect that, mainly and through gives the varying degree from exterior shape angle to each kind of attribute regarding, the present spatial appraisal has entrusted that with the thing itself bright vitality, considered from the structure whole, also pays great attention to the life body shape consideration, pays great attention to the intrinsic constitutive composition the influence.
The temporal and spatial nature of horizontal meaning	As for the point from small to large, from scattered to change, will each have a time span, the implementation process of our local discourse description is “disciplines”, of course, specific forms are different, it is dependent on the construction in time series continues in between attributes and subject the level of synergy and higher quality, attribute points, point set strength is strong, the discipline level can be improved, the discipline development is very fast, the subject will gradually reach a new state. In general, this is a dimensional understanding of the level of discipline, based on the time span, and reflects the timeliness of the level.

2. Internet Thinking and Spatial Pattern Analysis and Landscape Design of Ancient City

2.1 Internet Thinking

Every time the human society undergoes a major leap, the most critical thing is not the material catalysis, or even the technological catalysis, and the essence is the iteration of thinking tools. A technology often needs to go through a long process from the attributes of tools to social life to changes in the values of groups. Jeanne spinning machines changed from a new technology to a change in the textile industry and were later defined as the beginning of the industrial revolution, affecting the economic patterns of the East and the West. The span of the Jeanne spinning machine took at least several decades, and so did the Internet.

In the 14th century, with the development of the handicraft industry and commodity economy in the workshop, the “people-centered” renaissance trend of thought rose in various Italian cities, and then expanded to countries in Western Europe and became popular in Europe in the 16th century. Promote the spirit of humanism, affirm the value and dignity of human beings, advocate the goal of life in the pursuit of happiness in real life, advocate the liberation of individuality, oppose the theology of ignorance and superstition, and think that people are the creators and masters of real life. The Renaissance Movement brought about a period of science and art revolution, unveiled the prelude of the history of modern Europe, and was considered as the boundary between the Middle Ages and modern times. Marxist historians believe that it is the boundary between the era of the feudalism and capitalism. In the Internet age, the unprecedented development of informatization technology has changed people's lives and thinking, infiltrated and transformed all aspects of social, economic and economic development.

Some brought new impetus to development, realized the upgrading of the industry, the industry continued to grow and develop; some brought disruptive influence, and great development forces quickly impact the traditional business model of the dam. The traditional industries are transparent enough to be involved in too many enterprises and overcapacity. The situation of oversupply leads to serious deviation of price and value, and the labor cost of general production cost is still rising to change the traditional enterprise's production status and also improve the profitability of enterprises, on the one hand, need to national macroeconomic regulation and control, actively promote the reform of the supply side, especially our country's energy production, completes the structure adjustment, compression excess capacity.

On the other hand, the enterprise is the main body of market, every enterprise must from their own research, keep up with the trend of The Times development, using the Internet thinking, to the basic enterprise production scale, product type, cost control, marketing analysis and control, reduce production cost, production of marketable products, optimize the product type, completes the innovation and development, to then promote our country enterprise especially reconstruction work of oil and other energy companies. The growth of data center business is increasing rapidly, and the requirements for operation and maintenance personnel are constantly improving.

In order to ensure the normal operation of the system, it is necessary to increase the input intensity of hardware and software equipment, and also pay attention to the training of the operation and maintenance management personnel. In the traditional IT environment, the installation or maintenance of OS and software is required for the application of the system to increase, upgrade, and maintain. This work needs a lot of time and energy. Virtualization technology can be completed quickly and simply, without considering the preparation of new hardware devices. It only needs to add or modify the computing resources needed by the business system in the resource pool.

This Internet revolution and the Internet thinking behind it are triggered by the speculation of such people as “product managers.” The most typical product manager is Apple's founder Steve Jobs. He does not possess a truly great material invention. Personal computers and smart phones are not his original. His greatness lies in defining the role of “product manager” and applying “Internet thinking” to the extreme. Today, this thinking is no longer confined to the Internet. Like the “Renaissance” of human history, this kind of thinking is gradually spreading and it has begun to have a profound impact on the whole era.

The “post-industrial era,” which is now in the third industrial revolution, means that the industrial age is transitioning to the Internet age. The standard thinking mode in the era of industrialization is: large-scale production, large-scale sales, and large-scale dissemination. These three “big” can be referred to as the “trinity” of business operations in the industrial era. In the era of industrialization, resources and products are scarce. Resources and production capacity are considered as the competitiveness of enterprises. But in the Internet age, these three foundations were deconstructed.

Business thinking in the Internet era is a kind of democratic thinking. At the same time, consumers become producers and distributors of media information and content. The pattern of inducing consumer behavior through one-way broadcasting of one-way media and manufacturing of hot commodities is not established. The power of producers and consumers has changed and the age of consumer sovereignty has really arrived.

2.2 The Formation and Development of Taigu Ancient City

Taigu County is located in the central part of Shanxi Province, in the northeastern part of the Jinzhong Basin, and the county seat is 34 km away from Jinzhong City. The county land is flat. Taigu City has been relocating from Yangshuo Village since the later Zhou Dynasty WudeJiande four years (AD 575). After that, it has been built as a city. It has a history of more than 1,400 years and is one of the birthplaces of merchants.

Influenced by the traditional etiquette culture, the traditional city pool in northern China is shaped and structured. It is derived from the Zhouwang City model. The location of Taigu Ancient City in the city and the overall layout direction follow the traditional planning ideology. However, in the summary of the literature, it can be found that the scale of the ancient city and the number of gates are not as good as those of the ZhouliKaogongji because of the insufficient grades during the construction of the city. Describe the city system. Since the ancient city of Taigu, since the city was built, all the dynasties have been constantly repairing the city walls. During the Ming and Qing dynasties, the city construction reached its peak. The city walls, Yongcheng, turrets, moats, water gates, and enemies were all available. At that time, the achievements in urban construction were not under Pingyao and Jixian. .

After the liberation, it began to demolish the city walls for the construction of public facilities in the city. The city walls that have experienced nearly 1400 years have begun to disappear. Since the reform and opening up to the present, most of the roads in the ancient city have been rehardened and conditions have been widened and reformed. After 1992, the speed of urban construction accelerated year by year, and many modern buildings were built.

2.3 The Space Form and Landscape Design of the Ancient

Although the city walls and towers have all been dismantled, the old site of the city base has long been difficult to trace. The spontaneous renovation of houses in the city has mixed the old and new buildings in the city. However, the ancient city still retains the county office in the middle of the street, with the Drum Tower as the center. The history of wells. In the ancient city, traditional houses with courtyard houses and street pavilions were used to learn the traditional style. The inner streets and lanes of the city basically maintained the original standards. Some ticket numbers, money shops, and pawnshop sites of Dong Street and West Street were still intact. From the sale of Zhuxixiang, Qianmianmiao Lane, XieXie Street and Donghou Street, south of Nansi Street, Xiaonan Street, east of City Hall Street, Dongsiyuan Alley and west of Zhaojiaxiang The house is well preserved. Therefore, it is very necessary to protect the ancient city.

The space referred to in space syntax is not an object that can be measured by the mathematical methods described by the Euclidean geometry, but is a relationship represented by a topological relationship. The above morphological variables can be used to describe the structural characteristics of the space at different levels. The connection values, control values, and structural features at the local level are described, and the overall level of integration is a structural feature at the overall level. In this way, two types of morphological variables can be distinguished: the local

and global. Usually there is a correlation between these two types of variables, namely a space with good local connectivity, and a high degree of integration as a whole.

Due to the changes in some of the large residence estates, the original deep dwelling complex of one household has become a mixed-use home where several households or even a dozen families live together. Although the building masses in the ancient city have also changed little compared to the body mass scale during the Ming and Qing Dynasties, they have increased and many small streets and alleys. The gardens in the ancient city are dominated by private gardens, and the famous Confucius Park House, Zhao Tieshan Homestead, Wujia Garden and Mengjia Garden are more famous. There are 2 public gardens, Dongsi Garden and Xiyuan Garden, but the overall greening rate in the ancient city is not high.



Fig.1 The Ancient City of Taigu during the Ming and Qing Dynasties



Fig.2 Today's Taigu Ancient City Plane Map

During the period from the construction of the ancient city to the Ming and Qing Dynasties, with the Drum Tower as the center, the main streets of 3 sub-districts were radiated east, south, and west, and they were extended to form other spaces. During the Ming and Qing dynasties, the streets of the Taigu Old Town were highly integrated, including East Street (2.7002), West Street (2.7002), North Street (2.44376), Xidao Street (2.44376), South Street (2.22047), and Xiaonan Street (2.02515). South Temple Street (2.02515), Sweet Water Lane (1.92072), etc. (Figure 5). These streets are shown as warm colors in the map, indicating that these spaces are highly accessible during the development process.

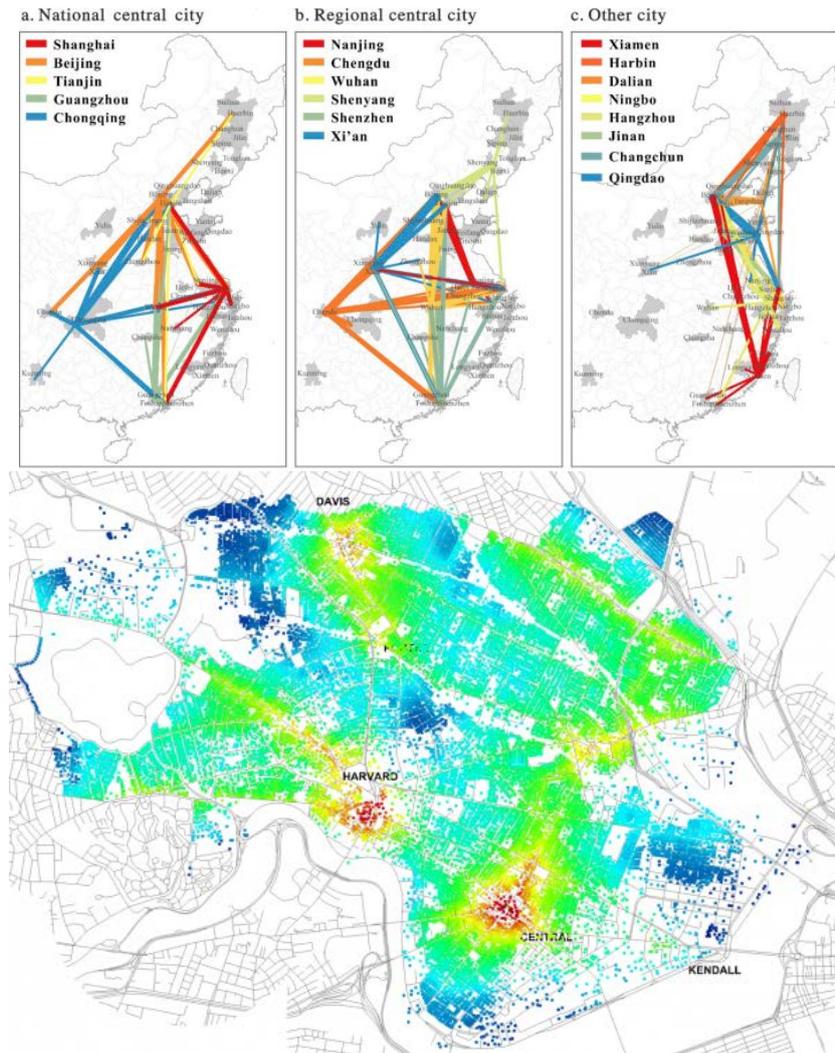


Fig.3 The Finalized Pattern for Analysis

For a space with high degree of integration, residents have more activities and the degree of crowding is higher. Increasing greening can better beautify the urban environment. The traditional roads are generally narrow, and public greening can be combined with the greening of each family's own planting. Place flower beds and increase greening rates without affecting traffic. The newly-reconstructed road takes into account the social requirements for the development of urban space, and there is more space for afforestation design. In such spaces, road side belts can be fully utilized. They should be designed according to the nature of adjacent sites, protection and landscape requirements, and should maintain continuous and complete landscape effects within the road sections. When the local greening width is more than 8 m, it can be designed as a place for residents to visit and rest.

3. Conclusion

To create a vibrant small town, its landscape space must be integrated and coordinated as a whole, with distinctive features. Conceptually, ecological and cultural protection should be taken into account. The details should reflect the needs of humanity, so as to increase the sense of belonging of the residents and meet their outdoor needs. The needs of the event. Through the use of Internet thinking to analyze the shape of the ancient city space, it not only obtains some characteristic description values of the ancient city streets, but also understands the shape of the ancient city itself, and more specifically arranges the landscape design for the layout of the city's structure and function. The landscape design of the ancient city needs to have its own characteristics, and it must coordinate with other elements and coordinate development from the whole to the local.

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