

SOCIAL ATTRIBUTES OF URBAN TRAFFIC AND ITS CATEGORIES

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Abstract: Urban traffic problems are increasingly serious. At present, many domestic and foreign research facilities are dedicated to traffic engineering, traffic behaviour, traffic psychology and other areas, and there are many achievements. However, researches on social perspective are rare. This paper treated urban traffic problems from the social point, discussed the significance of social attributes of urban traffic, and mainly explored content and the division of social attributes of urban traffic. In addition, the paper made suggestions on the development of topic word list of social attributes of urban traffic.

1 THE SOCIAL ATTRIBUTES OF URBAN TRAFFIC

Traffic has always been there and in-depth study on traffic occurred in the 19th century to 20th century. The studies on traffic distribute in industrial theory, economics, urban studies, ecology, geography and environmental science. As viewed from the academic research, only engineering, management, economics and other scientific phenomena on the traffic study has been carried out in-depth; from the perspective of education, professionals in the field of traffic are essentially cultivated by the construction, locomotive manufacturing, transportation and information and communication disciplines. This structure of traffic study and the separation of sociology are not commensurate with the social attributes social status and social relations of traffic. Traffic study based on that is difficult to reflect the common mechanism of the relationship between various elements in the dynamic conditions under the human-activities-centered system dynamics.

As viewed from the development of traffic disciplines, transportation system has been studied as artificial systems which providing transport services as products and aims to maximize the efficiency of the existing road system, and "protect the safety, increase efficiency, improve the environment and conserve energy". City traffic people commonly referred to is the one that built on the basis of its sound operation. Not the purpose of

urban traffic vehicles move, but to achieve movement of people and things. Traffic engineering is mostly people-oriented and tries to meet needs of the community. On the other hand, studies on one particular social attributes has been a long time when viewed from the development of traffic disciplines. Legal, environmental, and folk customs studies of the city traffic are performance that social attributes of city traffic are increasing accepted by specialists and scholars. As city traffic is concerned, these subjects generally ignored the social characteristics of the traffic and systemic features of urban facilities, limiting the improvement of urban traffic and the improvement of urban residents' satisfaction in life. View was expressed that traffic sociology related to sociology, traffic management, traffic engineering and transportation economics is an important field of traffic and sociology. Zhongyuan Gu who is a sociologist mentioned in his article: traffic sociology follows social properties of city traffic and history of functions and studies traffic problems with a view of society as a whole based on multiple social attributes and functions of traffic. The purpose of this subject is to seek the relationship between social factors and traffic, and the actual purpose is the application of these laws to promote virtuous circle of traffic and various elements in social life to coordinate and resolve all kinds traffic problems in order to make our traffic function better. The development of transportation-related disciplines especially the emergence of

traffic sociology proved the social attributes characteristics of urban traffic.

Traffic, one of human's needs and survival instincts, has become the content of human life with humanitarian and sociality. As we all know, people has social attributes. Thus, urban traffic which human subjects involved in is bound to reflect the basic characteristics of human society by a large number of social factors. The operation of urban transport needs support of traffic facilities and general urban traffic has a significant difference with ordinary city facilities. Urban traffic facilities are closely connected to people's daily lives and have a profound impact on the lives of urban people. The scope of ordinary city facilities is limited, confined to the space and time that facility is located in. With the existence of the city, city traffic is entering every corner of the city in-depth. Therefore, from the perspective of urban social operation, urban traffic inevitably reflects the unique sociality and humanity.

In order to live better, human beings stay in the city, and the city's long-term development is creating a unique urban social structure. The relationship between urban social structure and urban transport development is close and complex. Social attributes of things often contain many features, some meet the requirements of social development, and some impede social development. Urban traffic and related social factors may be mutual promotion and a coordinated development; they may hinder each other and be uncoordinated development. Social attributes of city traffic makes urban transport system must be run under the conditions of society, and the purpose cannot be reached ignored the large number of social factors. In order to get better exchange and traffic, people choose a compact urban living, but that has resulted in the accumulation of urban traffic congestion, disorder, loss of life and property, waste of social resources. Based on this basic contradiction, this paper argues that the content of social attribute of city traffic should do the following understanding. Social attributes of city traffic expresses as a dynamic, complex interaction between the urban traffic and other elements of urban social systems formed in long-term survival and the development process of the main body of the city. It can be direct and indirect or inhibited and promoted, and improving to the urban transport based on the social points is feasible and necessary.

Huimei Zhang considers the present traffic pattern cannot effectively ensure the operation of social system, it is necessary to study traffic phenomena using social science methods. This structure of traffic study and the separation of

sociology are not commensurate with the social attributes social status and social relations of traffic. Some scholars in urban traffic and urban sociology believe that the study of social attributes of city traffic is a pressing and significant thing. Reaches on social attributes of urban traffic is to study the interaction between the overall operation of our city and the city traffic system from a sociological point, and then identify the causes of urban traffic disharmony in society. Purpose of the study goes to the analysis of the urban traffic status based on the analysis of the mechanism of related social factors, improving urban traffic conditions by taking relevant measures of social factors, higher living standards and people's life satisfaction of the city and promoting urban harmony.

2 THEORY OF SOCIAL CATEGORIES STUDY ON URBAN TRANSPORT

According to the problem content and the feedback mechanism to ascertain the boundary of things are important and basic theoretical research work. Different definitions of the subjects will lead to different categories of various theories. The division of urban transport properties Category should be based on the purpose of urban traffic social property study. As the logic point, category is the basic concept, reflection and summary of the things and phenomena in general on the human mind. Each discipline has its own unique range of areas. Category of urban traffic social attributes is the one the social factors have an impact on the emergence and development of urban transport. Category division is to classify these factors as a class or a type, such as: education, regulations, customs and so on.

2.1 Theory of Category Division

The concept of "the classical theory" or "aristotle theory" once unified the world. Theory is that category is defined by the necessary and sufficient features, the category has definite boundary, within the confines, and the members have equal status. (Taylor, 1995). The "prototype theory" is proposed by roach on the base of research. He thinks most natural categories cannot develop a set of necessary and sufficient standards, and the necessary standard is often inadequate standards. Categories between the certain members are not identical, some members (prototype members) have a special

position, are considered as the formal members, a prototype members are endowed with informal member status according to its similarity degree with prototype members. Additionally, some documents think the boundary of the category is obscure, so a natural category should have typicality, similarity and fuzziness three characteristics. According to this theory, prototype members have cognitive significance and they are the easiest to store and retrieve. In the process of forming concept, they are closest to people's expectation and anticipation, the notable degree level declines from prototype members to atypical members. Natural category division is not historical events, nor accidental product by certain people. Generic partition is a process of concept formation. It must satisfy the requirements of the human cognition to the conceptual formation. This makes the human experience underlie category divided theory.

2.2 The Principles of Social Attribute Categories

To ensure the quality of categories, we need certain criteria to limit the screening constraints. There is a basic work to do is developing the principles of social attribute categories, and then select screening factors according to the set of basic principles. The standards established referenced to related literature of category development and summarized combined with the status of the existing urban transport reaches.

(1) The Principle of Purpose: urban traffic itself is a system and its existence and operation aimed to support residents travel and operation of the city. In order to support research and meet the needs of problem-solving, goal-oriented and address urban transport problems must be the principles of category division.

(2) The Principle of Parallel: category is used to reflect different aspects of the same thing. In order to avoid confusion in understanding, the internal members should be kept parallel relationship. Study in this paper fully considered the parallel relationship between the categories, which is also the basic requirements of the division of city traffic social attributes.

(3) The Principle of Simplification: urban transport system itself has a very complex structure, and to facilitate research and ensure the quality of the results, this paper will minimize the scope of the border to ensure a clear structure of social attribute categories. We will control the number of the factors of social attribute categories according to the degree

of influence and inclusion relations of different elements.

(4) The Principle of Effectiveness: social structure in different cities will be different. With the given purpose, the scope of the categories should be distinguished by the different characteristics of different cities. We should present the city's urban-related social factors according to the general characteristics of cities in the course of this study, and then make the city's own choice of factors combined with its features to ensure the factors are effective.

(5) The Principle of Evolvement: both city and urban traffic are in their own continuous developments. Under the combined effect of various factors, social factors may appear and the old-obvious factors may become less significant roles. Insist the dynamic evolution of social factors of city traffic is an important principle to ensure the improvement of traffic problems, and promote the harmonious development of urban.

3 THE RESEARCH AND DETERMINE OF THE SOCIAL AREAS ON URBAN TRAFFIC

The results of study indicate that category division is a theoretical and highly integrated area. There are some specific methods of category division as follows: literature analysis, expert interviews, open-ended questionnaire survey and statistics and so on.

3.1 Methods of Category Division of City Traffic Social Attributes

(1) Literature Analysis: social attributes of the traffic is persistent, we can find some existing research results through the relevant literature. With the help of relevant or related category literature we can study the issue.

(2) Discipline Classification: development of the disciplines can reflect the level of awareness for the field. The idea of disciplines classification of the transport sector is to find the social category of urban traffic through the development and history of related disciplines.

(3) Expert Interviews: knowledge of experts is a very valuable asset and their understanding of the area which will be more comprehensive and profound. Expert interview is an important method

to obtain, enhance social category classification of urban traffic social attributes.

(4) Group Interviews: people are the participants of the city traffic, and the categories can be refined, supplementary and verification by group interviews for given traffic scenarios. The feelings and personal experiences of participants in transportation will make category more authentic.

3.2 Application of Methods of Category Division in City Traffic Social Attributes

In this study, a variety of methods is used to collect multiple sets of subject category, and a final category of the topic will be produced after the screen to summary subjects in the context. On outcomes of existing research, this article query from the relevant literature analysis and subjects classification. In addition, this paper got statistical indicators of social category of beijing and shanghai as the basis for selection and studied literature on urban transport system through top-down and bottom-up methods. For example: zhongyuan gu mentioned in "sociology of development on transport research issues " that attributes of human existence, social interaction attributes, socialization attributes, social operation attributes are the original social attributes of traffic. In addition, cultural communication, politics and economic attributes is also some social attributes of urban traffic. " interaction between urban traffic and the social and economic development in beijing, ", a paper studied the relationship between urban transport and beijing's economic and social development from the quantitative aspects, listed a number of social attributes like population, consumption, income level and so on. Moreover, information technology, urban land, means of transportation, urban layout, traffic management, quality and level of civilization of traffic participants and the urban traffic policy are all objectives of the research literature.

Development of transport subjects mainly related to transport economics, transport planning, urban culture, traffic behavior, traffic laws and traffic sociology six social attributes related disciplines. The existence of related disciplines is the proof of rationality. Thus, we can sort out the economic, transportation planning, culture, habits, laws and regulations five social attributes. In group interviews on social properties of urban traffic, population, employment, consumption, education, culture, energy, environment, investment, prices, technological progress and the tertiary industry had been proposed. Finally, the study got guidance of

traffic expert professor liren duan. Interviews with middle and old stressed the coordination of the three themes of environment and culture. Coordination, environment and culture are stressed in the interview with professor duan.

3.3 Screening and Identification of Category Topics

Already mentioned above, the scope of the subjects can be initially identified by expert scoring. First, the experts determined the theme of the initial rate and calculate the average scores of all category topics. And then, the experts gave the second scores according to the average scores. Ultimately, there is a set of category keywords. This paper obtained the following category topics: "population", "economy", "culture", "management", "facilities" and "psychological", "education "and "environment". This eight category topics above is the topics in first layer of thesaurus identified in this paper.

3.4 Thesaurus of Social Attributes on Urban Traffic

Form the classical theory of category, later prototype theory to jaekendoff "dominance rules system", subdivision of category is a complex and highly controversial work. Considering the quality of research and practical applications, this paper argues that combination of the prototype theory and the semantic component analysis model (ca) generated by classical theory can be useful in overcoming the shortage of ignoring the lack results of human experiences caused by using classical theory alone. Figure 1, we can visually show research ideas of thesaurus of social attributes on urban traffic. The topics in first layer of thesaurus were identified in this paper only, and we hope it can give further help to this issue.

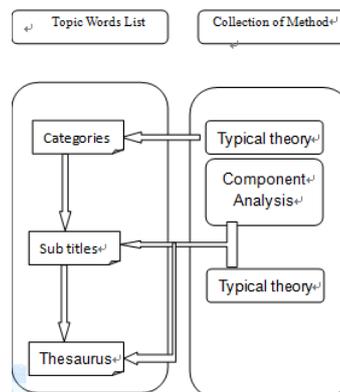


Figure 1: Research route of thesaurus of social attributes on urban traffic.

4 SUMMARY

This paper discussed the social attributes of urban traffic, objectives of urban traffic social attributes researches and the principles of categories of social attributes, described method to determine category and Beijing's urban traffic on social categories are discussed. Some suggestions were given on the establishment of topic word list of urban transport social attributes at the end of this paper. Since category needs update as the development of object, social attributes of urban traffic areas cannot be static and category members will be in the process of dynamic evolution. The category division of urban traffic social attributes is only the beginning, and there must be inadequacies which need to be improved in the process of theoretical research and practical application.

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