A Review of China’s Public Service Advertising Audience Research Based on Idealized Cognitive Models

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Abstract: With the rapid development of new era and new media, opportunities and challenges of the development of public service advertising coexist. Against the backdrop of the times and the development of media, public service advertising needs to incorporate more subjects, so that the audience can pay more attention to and understand such advertisements. Based on the above social background, how to better publicize the mainstream values of society among the public with the help of public service advertising is what the current government needs to focus on and solve. This research combines the idealized cognitive models to elaborate the social value of public service advertising in the new era, with a view to giving suggestions to the state, government, society and other subjects, and contributing to the vigorous development of public service advertising in China.

Keywords: Public service advertising; social value; idealized cognitive models; audience acceptance research.

1. Introduction

The development of public service advertising can trace back to the late 1960s to the early 1970s in the United States. Philip Kotler, a famous scholar, and his colleagues advocated applying the concept of commercial marketing to non-commercial organizations, and using commercial marketing techniques to formulate various promotion activities. As the promotion activities have achieved remarkable results, the concept of social marketing has gradually spread to other organizations in the United States. Since then, the rudiment of public service advertising has sprouted and been used in other areas including China. Since the birth of the first public service advertisement in China in 1987, it has developed rapidly in China. In 1999, a well-known 45s public service advertisement "Wash Feet for Mom" appeared, which set off an upsurge of "washing feet for mom" in the whole country. In 2021, the derivative short video advertisement of this public service advertisement: "The Child Who Washed His Mother’s Feet Grew up" set off a heated discussion in the society, and quickly became popular with the help of social media platforms, with a wide range of spread. The broadcast volume in Weibo reached 17.69 million, and the reading volume reached 140 million, causing 107,000 discussions. [1] It can be seen that under the guidance and function of the short video form, public service advertisements have a great influence on triggering the trend of social speculation. Through the above two examples, it is not difficult to find that public service advertising can promote the public in terms of improving the public's sense of social responsibility, advocating social morality, shaping the public's values, and enhancing the public's artistic aesthetic ability. Modern public service advertising uses commercial publicity methods to arouse individuals' pursuit of "the true, the good, and the beautiful", then promote individuals' development, and show the characteristics of related models in idealized cognitive models.

In recent years, researchers have elaborated on public service advertising from different angles, and made analysis and research on it from different aspects. At present, there are several representative research paths: (1) studying the independence of public service advertising in form and substance from its independent development; (2) studying the level of public service advertising effect under the duopoly framework and (3) studying the psychological function and performance of interest in the graphic design of public service advertising. It is found that at present, the research on public service advertising is scattered, the results are not unified enough, and the elaboration and development of public service advertising are not consistent. In order to better understand and grasp the contents and forms of public service advertising, it is necessary to make categorization. Based on this, this paper uses the idealized cognitive models to study the audience acceptance of public service advertising in China, and takes four models of the idealized cognitive models: proposition model, image schema model, metaphor model and metonymy model into consideration to study the content and expression of public service advertising. This paper also elaborates on the public...
service advertising under the idealized cognitive models from four aspects: the development process and present situation of public service advertising in China, the review and comments on idealized cognitive models of public service advertising, the research of the influencing factors of idealized cognitive models and theoretical contributions and research prospects.

2. The Development Process and Present Situation of Public Service Advertisements in China

2.1 The concept of public service advertising

In the modern sense, public service advertising came into being in the United States in the 1940s. With the continuous development of industrialized production, a series of social problems were caused. In order to arouse the attention and response of the public, public service advertising emerged as a powerful tool. [2]. During the World War II, James Young, a famous American advertiser, put forward that advertising is the modern and quick-acting means of transmission and explanation invented by human beings. In other words, as a powerful mode of communication, advertising's mission is to promote the interests of the public, which is the earliest idea of public service advertising. [3]. It can be seen that when public service advertising was born, it had the characteristics of being related to public interests, and it became a powerful social concern in social problems. In the historical process of the development of public service advertising in China, its definition and concept are often confused, and its boundary is still unclear. Many researchers have different definitions of public service advertising. For example, Gao Ping thinks that public service advertising are non-commercial advertisements that serve the public interest, aiming at spreading certain public service concepts and promoting the construction of social spiritual civilization by advocating or warning. [4]. Tang Zhongpu, a researcher, believes that public service advertising is an advertising activity that is implemented and promoted jointly by the government, associations, media, enterprises and advertising companies in order to promote public interests, arouse people's concern for various social problems and call on people to take practical actions to solve or improve these problems. [5]. In the research made by China scholars, public service advertising focuses on the characteristics of non-profit, multi-initiator, and etc. This study holds that the concept of public service advertising has the following main features: public service advertising is non-profit; and the main sponsors, investors and participants of public service advertising are government, media, organizations and enterprises. Its main purpose is to change public attitudes and behaviors in a subtle way; its audience is the public; and public service advertising uses modern technology to combine creativity and artistic expression to increase attention. To sum up, this study provides a concept for public service advertising: public service advertising is an advertising activity that is aimed at the whole public, initiated by the government, media, organizations and enterprises, not aimed at making profits, and its main content is to publicize current political hotspots and public morals.

2.2 The development stages of public service advertising in China: beginning, formation, prosperity and sublimation

Beginning stage: public service advertising from 1949 to 1985. China's public service advertising originated after the reform and opening up. At this stage and before, public service advertising did not appear formally, there were few publicity works, and the published media mostly spread in a single form. After modern times, although the frequency of public welfare publicity activities has increased, it is more of a response to a historical event. After the founding of China, the number of related communication methods has increased, which is mainly used to carry out publicity work in coordination with political activities. Most of the publicity methods were posters or pinup pictures. At that time, the popular ones were the posters of the Second Field Army of the Chinese People's Liberation Army (see Figure 1) promoting the establishment of the Central People's Government, and the posters promoting the traditional Chinese virtues of respecting the elderly and caring for the young (see Figure 2). Therefore, it cannot be called public service advertising, but public service poster advertisement. [6]. With the development of China's economy, the advertising industry in China is also developing rapidly, driving the development of public welfare activities.

Figure 1 The popular ones were the posters of the Second Field Army of the Chinese People's Liberation Army

Figure 2 The posters promoting the traditional Chinese virtues of respecting the elderly and caring for the young
Formation: Public service advertising from 1986 to 2007. The public service advertising "Water Conservation" broadcast by Guiyang TV Station was born in 1987, which marked the birth of public service advertising in China. According to statistics, the TV program "Publicize Widely" has broadcasted more than 1000 public service advertisements. [5]. While CCTV is constantly improving the quality of the TV program "Publicize Widely", it is also paying attention to the theoretical development and construction of public service advertising. The year 2001 is called the year of public service advertising. At the same time, the participants of public service advertising are diversified. In its development, more subjects participated in the publicity team of public service advertising. [6].

Prosperity: Public service advertising from 2008 to 2015. Since 2008, China has carried out many large-scale public service advertising activities. The government pays more attention to the guidance of public service advertising, which promotes its vigorous development. The continuous updating and increasing of media has brought more ways for the spread of public service advertising. Faced with the rapid increase and development of new media and communication channels, higher aesthetic and technical requirements for the quality and publicity beauty of public service advertising are put forward, as well as many other problems. [7]

Sublimation: Public service advertising from 2015 to present. Since 2015, the rapid development of new media has brought bright prospects for the development of advertising industry. The application of traditional media such as newspapers, magazines, radio and television can no longer meet the needs of people in the new era. Therefore, the public service advertising industry makes full use of modern scientific and technological means to spread and develop. After the outbreak of the epidemic, public service advertising is faced with challenges and opportunities, such as innovation in topic selection, diversification of communication channels and so on. The role of public service advertising in this period is to unite the hearts of the public, so that the public can unite and face the problems of the country together. At the same time, the government has formulated corresponding policies to promote and help the development of public service advertising. [8]

China's public service advertisement started late, but in recent years, relying on the rapid economic development, its value and role in publicity, education and ideological guidance have become more and more prominent. Firstly, the number of public service advertising is increasing, and the social benefits it brings are also accumulating. Secondly, the quality and creativity of public service advertising are constantly improving. The topic selection is more modern and realistic, with the corresponding characteristics of the times, and the artistic expression also pays more attention to the theoretical application. [9]. With the continuous development of modern scientific and technological means, the contents and forms of public service advertising are also flourishing. Therefore, it is of great significance to classify and distinguish public service advertising in detail by combining idealized cognitive models, so as to lay a foundation for the orderly development of public service advertising in the future.

3. Review and Comments on the Idealized Cognitive Models of Public Service Advertising

In order to better study public service advertising, this study combines public service advertising with idealized cognitive models in semantics, and classifies and divides public service advertising by integrating them. Tracing back to the origin of the idealized cognitive models, traditional objectivism semantics holds that meaning reflects the direct correspondence between symbols and the real world, excludes the subjective factors of human beings, and ignores the dialectical interaction between world objects and cognitive subjects, leaving many problems for semantic interpretation. To challenge the objectivism semantics, Lakoff put forward the theory of idealized cognitive models (ICMs) in 1987. [10]. He believes that this model is a cognitive way formed on the basis of the interaction between people and the outside world, that is, the way of organizing and representing our knowledge. Idealized cognitive models refer to the speaker's abstract, complete and idealized understanding of the experience and knowledge in a certain field in a specific cultural background. It is a complex and integrated gestalt structure based on many cognitive models and a complex cognitive model with gestalt nature. Idealization, experience, interaction and gestalt are the outstanding characteristics of ICMs.

Idealized cognitive models can be divided into four models: proposition model, image schema model, metaphor model and metonymy model. Public service advertising can be analyzed and classified by idealized cognitive models. Proposition model distinguishes the theme naming form of public service advertising, image schema model distinguishes the publicity mode of public service advertising, and metaphor model and metonymy model divide the content expression of public service advertising.

3.1 Propositional model

Propositional model is a knowledge structure that shows concepts, characteristics and the relationship among concepts, and has the characteristics of objectivity and judgment. It contains propositional or factual knowledge, and does not need imaginative means such as metaphor and metonymy[10], which are the basic content of ICMs. Many public service advertisements are launched in the form of proposition model. For example, the proposition contest of public service advertisement "Fighting the Epidemic" in the 12th Great Advertising Contest integrates patriotism education, professional skills education and quality education, pays tribute to “angels in white”, volunteers, policemen and other people who fought in the front line of the epidemic, and promotes the positive energy in fighting the epidemic. This public service advertising contest highlights the theme of "fighting the epidemic" and unites the audience. The
public service advertisement "Harmony Is Precious, Diligence Brings Surplus" is jointly released by Publicity Department of the Communist Party of China Education Bureau and China Network Television. Its background is a paper-cut with ethnic customs, and "lotus" and "fish" are homophonic with "harmony" and "surplus" in Chinese respectively. The elements of this public service advertisement activate people's propositional models of "harmony" and "diligence", which contain many propositional contents. "Harmony" is one of the core values of Chinese civilization. From the traditional value of harmony to the construction of a harmonious society in contemporary China, "harmony" also carries the industrious, simple and kind national spirit of China people, which is connected with the proposition of "diligence". "No pain, no gain" is an eternal proposition handed down from generation to generation. By highlighting the propositions of "harmony" and "diligence", this public service advertisement expresses the demands of contemporary China for traditional values.

3.2 Image schema model
Image schema model is a pre-conceptual framework formed on the basis of human's interactive experience of the objective world, and it is the foundation of conceptual structure [10], which is more abstract and generalized than appearance. Image schema comes from the concrete experience of human beings, and through continuous reappearance in human activities, new experiences can be organized and projected into abstract concepts. Some examples of image schema model can also be found in public service advertising.

"Let Love Go Home" (as shown in Figure 3) is a public service advertisement produced by Publicity Department of the Communist Party of China Education Bureau and China Civilization Network for the purpose of caring for children, which aims to remind parents to care for left-behind children and go home more often. In this public service advertisement, a little girl is on the phone, and her shadow is the happy time with her parents. The expression of this public service advertisement comes from our daily life experience: the parents who go out to work will lack the care for their children, and the children will become left-behind children without the care of their parents. All kinds of image schemas are connected with each other to form a network, which help public service advertisements show the theme of the times of "caring for children, starting from me".

Figure 3 "Let Love Go Home"

3.3 Metaphor model
In the metaphor model, the ICMs structure in the source domain is mapped to the corresponding structure in the target domain, and the mapping between them is based on similarity. Metaphor model is based on proposition model and image schema model, especially closely related to the latter. This model is often used in the conceptualization, reasoning and understanding of abstract things. For example, "they started a fierce debate battle", and the structure of the source domain "battle" was mapped to the target domain "argument". The similarity between them lies in a series of factors, such as the existence of opposing sides and the tense atmosphere at the scene. This metaphorical mapping becomes the cognitive motivation behind the word "debate battle"[10].

In public service advertising, for example, "on the road of striving" shows that we need to work hard to achieve our dreams and keep moving forward towards our goals; the "new journey" shows that there will be new goals and journeys in the future, and we should continue to forge ahead. The public service advertisement of the China Year of the Dog Spring Festival "Chinese Seals, Chinese Festival" takes seals that can be seen everywhere in ordinary life as its theme, and records real and moving moments. "Seal" is a traditional element with a strong "Chinese flavor", which may be as big as a promise printed by the authorities at important ceremonies; or small printing that symbolizes a beautiful meaning on the pastry skin that is hot and baked in the old street shop; or, the finishing touch of the dancing lion and the seal of new hope… All those are metaphorical expressions. Many seals form the life track of individuals and even families, and record the past, future and destiny of a country. They inspire the audience's enthusiasm, thoughts and pride in the prosperity of the motherland, and arouse the most delicate and pure part of the audience's heart. By constructing a large number of metaphor models, public service advertising vividly represent grand concepts, and encourage every Chinese citizen to take a steady and firm step to pursue their dreams.

3.4 Metonymy model
Metonymy is a cognitive process in which one conceptual entity (metonymic vehicle) provides a psychological channel for another conceptual entity (target entity) in the same idealized cognitive model. Different from the cross-domain mapping of metaphor, in the metonymic model, the mapping takes place in a single cognitive domain. On the basis of proximity, the part of cognitive domain that is easy to perceive and understand maps to the whole or other parts of the whole. The purpose of metonymic mapping is to activate or highlight a specific level in the cognitive domain. [10].

Metonymy model has also become an effective way to organize and represent the concept of value in public service advertising. For example, the video public service advertisement of "Come Back Home Often" contrasts the loneliness of the grandmother with the excitement of the younger generation, which touches people's hearts and makes people go home more often. This is a metonymic expression. The home in the video is closely related to the
home in the name. Therefore, it is an embodiment of metonymy. In the same cognitive domain, the former is mapped to the latter as a part of the latter, forming a metonymic model of "partial substitution for whole".

It is found that (see Table 1), the related theories of idealized cognitive models of public service advertising are relatively broad, and their existence and connection form the basic network of theoretical research. However, due to the limitations of the theory itself, it can't be fully explained by using a single theoretical model. In the future, it may be necessary to introduce a new theoretical model to study the influencing factors and mechanism of the idealized cognitive models of public service advertising from the perspective of multiple theoretical integration. [17].

### Table 1 Summary of four idealized cognitive models

<table>
<thead>
<tr>
<th>Model</th>
<th>Definition</th>
<th>Characteristic</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propositional model</td>
<td>Knowledge structure that shows concepts, characteristics and relationships among concepts.</td>
<td>Objectivity</td>
<td>The proposition contest of the public service advertising “Fighting Epidemic” in the 12th Great Advertising Contest; “Harmony Is Precious, Diligence Brings Surplus”</td>
</tr>
<tr>
<td>Image schema model</td>
<td>Pre-conceptual framework formed on the basis of human’s interactive experience of the objective world. It is the foundation of conceptual structure, which is more abstract and generalized than appearance.</td>
<td>Experiential</td>
<td>“Let Love Go Home”; “China Steps Forward”</td>
</tr>
<tr>
<td>Metaphor model</td>
<td>In the same idealized cognitive model, one conceptual</td>
<td>Conceptualization</td>
<td>“China Seals, Chinese Festival”</td>
</tr>
</tbody>
</table>


Idealized cognitive models are of great significance and value for studying the content and expression of public service advertising. The application of idealized cognitive models will affect the development of public service advertising by classifying and deeply analyzing them according to such factors as subject content, publishing media and expression meaning. Through an in-depth study of the idealized cognitive models, this paper finds and analyzes three factors that influence the idealized cognitive models: user characteristics, media factors and forms of expression.

4.1 User characteristics

User characteristics (such as age, gender, etc.) are an important basis for group segmentation because they are easy to identify and measure. There is still no consensus on the influence of user characteristics in the academic circle. This study believes that people of different age groups have different preferences and cognition about the four models (see Table 2). [11] Young people and middle-aged people pay more attention to short video public service advertisements, and they are the main users of short video APPs and the main audience of short video public service advertisements. They give prominence to short video public service advertisements that mainly focus on national events. Due to age and ideological reasons, people aged 18 and below pay less attention to short video public service advertisements, and they lack of attention to the state and society, and are basically more interested in public service advertisements with cute style and understandable reason. Therefore, they prefer proposition model or image schema model. For the elderly, they seldom use short video APPs, so they pay less attention to short video public service advertisements, and are basically interested in public service advertisements focusing on national affairs and social news, so their preferences are similar to proposition models.
As for gender, the male and the female have different focuses (see Table 3). The male pays attention to the most important part of the picture at first glance, while the female pays attention to the color and integrity of the picture at first glance. [12]. For the male, it is easier to accept the influence of rational factors, and it is easy to be influenced by advertising content. The female prefers the overall color in short video public service advertisements, that is, perceptual factors, which are more likely to arouse inner linkage. [13]

<table>
<thead>
<tr>
<th>Age distribution</th>
<th>Categories of public service advertisements being paid attention to</th>
<th>Degree of preference</th>
<th>Preference category</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 years old and below</td>
<td>Cartoon, easy to understand</td>
<td>Low</td>
<td>Proposition model and image schema model</td>
</tr>
<tr>
<td>19-30 years old</td>
<td>Grand, artistic sense</td>
<td>Relatively high</td>
<td>Metaphor model and metonymy model</td>
</tr>
<tr>
<td>31-50 years old</td>
<td>Grand, about the country</td>
<td>High</td>
<td>Metonymy model</td>
</tr>
<tr>
<td>51 years old and above</td>
<td>Understandable, about the country</td>
<td>Low</td>
<td>Propositional model</td>
</tr>
</tbody>
</table>

Table 3 Cognitive analysis of different genders on public service advertisements

<table>
<thead>
<tr>
<th>Gender</th>
<th>Focus</th>
<th>Request</th>
<th>Preference category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>The most important part of the picture</td>
<td>Rationality</td>
<td>Propositional model, metonymic model</td>
</tr>
<tr>
<td>Female</td>
<td>Overall color</td>
<td>Perception</td>
<td>Image schema model, metaphor model</td>
</tr>
</tbody>
</table>

4.2 Media factors
At present, the pattern of "two supers and many strongs" in the short video industry has gradually taken shape. The data shows that users who often watch short videos in Tik Tok and Kuaishou account for over 80% of the total, and the trend of short video users concentrating in Tik Tok and Kuaishou is highlighted. [14]. Short videos have the characteristics of sociality and high flow rate, so it is necessary for public service advertisements to re-formulate corresponding plans, which is also an opportunity for public service advertising. Before production, it is necessary to figure out which platform and media to publish and spread them, and make different strategies for the overall content and performance of public service advertising. [15]. Before September 7th, 2021, the title, publisher, number of fans, likes and comments of all videos under the keyword "public service advertising" in the audio and video channels of Tik Tok are collected, and the number of public service advertising videos was 253, of which the highest number of likes was 520,000, and all of them had some comments. [16]. Although Tik Tok and Kuaishou are similar in nature, their communication strategies are different. There are more videos of public service advertising in Tik Tok than in Kuaishou, and more users watch them on Tik Tok than on Kuaishou. Most users like proposition model and metaphor model, and the number of fans will also affect the communication effect of short video public service advertising. Therefore, public service advertising should combine the characteristics of short video platform with four models of idealized cognitive models, and make full use of proposition model, image schema model, metaphor model and metonymy model in short videos.

4.3 Forms of expression
Liu Yingxue (2017) researched and analyzed the content expression forms of public service advertising in short videos, which can be roughly divided into five types: story narration, visual impact, celebrity effect, auditory touch and data analysis. Generally speaking, the forms of public service advertising on short video platforms are not rich enough. Most of them are story narration and visual impact types, and fewer of them are with celebrity effect, auditory touch and data analysis types[17]. Story narration and visual impact are the most commonly used forms of video public service advertising. From the comments of netizens, it can be seen that the protagonist, plot, scene and elements of singing and dancing in advertisements will also receive more attention from people. Short video platform is not limited by time and space, and can stimulate viewers' emotional experience in a short time. According to the 50th “Statistical Report on Internet Development in China” released by CNNIC, as of June 2022, the number of online video (including short video) users in China reached 995 million, of which 962 million were short video users. [18]. With the popularity of mobile terminals and the speed-up of the network, short video, a "short, adaptable and fast" way of spreading flow content on the Internet, quickly gained the favor of various platforms, capitals and fan groups. With the increase of browsing frequency and contact time of short video users to "vertical screen", users' usage habits gradually change to preferring "vertical screen" watching experience. The form of video shooting should also keep pace with the times[19].

5. Theoretical Contribution and Research Prospect
This research studies the public service advertising under the idealized cognitive models and the factors that influence the idealized cognitive models. Firstly, this study systematically sorts out the historical development trend of public service advertising: from 1949 to now, it can be divided into four stages, namely, beginning stage, formation stage, prosperity stage and sublimation stage. From initially the posters to the short video mode, the development of public service advertising in China is characterized by high speed and high quality. Secondly,
this study explores the development and clarifies the influencing factors of idealized cognitive models in public service advertising.

It is worth noting that most of the existing researches still do not pay attention to the influence of idealized cognitive models. In the future, it may be necessary to use more different theories to expand the original theoretical boundaries, consolidate the development of public service advertising in short videos, and then guide the theoretical construction and management practice of public service advertising[20]. There are three main aspects for in-depth research: (1) Renew or define the scope and theory of public service advertising. There are still some related problems in the development of public service advertising in China. The government should give full play to its guiding and leading role to promote the prosperity and development of public service advertising in China. (2) Pay attention to the application of idealized cognitive models in public service advertising. Using four different models of idealized cognitive models will bring different effects. In the future, publishers and producers of public service advertisements should pay more attention to the application of idealized cognitive models in public service advertisements, formulate different design and publishing plans in combination with publishing platforms and ways, and apply the models to production. (3) Construct the mechanism framework of idealized cognitive models in public service advertising. At present, public service advertising and idealized cognitive models can be well integrated, but the framework of the models’ action mechanism is still unclear, and there is no clear conclusion on the classification of the models. Therefore, we should pay attention to summarizing and explaining the key reasons and factors, and determine and stipulate the influencing factors, mechanism framework and other contents of the idealized cognitive models in public service advertising on the basis of previous literature.

6. Conclusion

In the new era, in the context of short video, the development of public service advertising is rapid, and the spread of media is increasing, especially demonstrated in the continuous enrichment of media and the increasing number of publicity channels. These bring great challenges and opportunities for the development of public service advertising. It needs the joint efforts and contributions of the government and various subjects for the development of public service advertising, and it also needs the state and the government to formulate corresponding policies and standards to promote the sound and vigorous development of public service advertising. At the same time, in the creation and publicity of public service advertisements, we should actively combine the metaphor model in the idealized cognitive models, so that people can enhance their love for the motherland in a subtle way. It is necessary to actively combine the background of the times and the innovation of media, innovate and update the creation of public service advertising, combine the excellent Chinese traditional culture, highlight the culture of the Chinese nation, exert a subtle influence on the social audience, and play the role of public service advertising.

References
