Research on the Effectiveness of Network Agenda Setting of Tourism Destination Image Dissemination: Take Ganzi as an Example

Yuan Zhang , Yuxin Jing*

Shenzhen Campus, Jinan University, Shenzhen, China, 518052

* Corresponding Author Email: jingyuxin@stu2020.jnu.edu.cn

Abstract. This paper selects the push articles of the WeChat public account of Ganzi County Tourism. From the perspective of the media communication effect, based on the network agenda-setting theory, the media agenda and the public agenda are compared and analyzed. The research proves that the public agenda of Ganzi's tourism destination image is significantly related to the media agenda, which shows that the media has the agenda-setting ability in destination image communication. This result verifies the network agenda-setting theory in the tourism destination image display. It has a certain reference value for the study of the effect of network agenda-setting.

Keywords: Network Agenda Setting, Tourism Destination Image, Social Network Analysis.

1. Introduction

"Ganzi, a Secret Land of Western Sichuan." Ganzi Tibetan Autonomous Prefecture in Sichuan Province is a famous tourist destination in China. The reason why it can leave a deep impression in the public mind is inseparable from its efforts in network publicity. In recent years, Ganzi has created new images of net stars such as Ding Zhen(the image spokesman of Ganzi) and Liu Hong (a charming tourism secretary) through online platforms. With their influence, they filmed many short videos and promotional films and gained a good crowd. In this process, the media took the initiative to select and set the topics, showcasing Ganzi to the public and guiding public opinion; the public also received information and absorbed opinions through the media, forming a deeper image perception of Ganzi as a tourist destination.

First proposed by McCombs and Guo Lei, network agenda-setting is the third level of agenda-setting theory, explaining how it continues to be useful in this era when journalism has become increasingly "networked." Because of the origin of the theory, it has been studied more in the context of political issues, and less attention has been paid to tourism destination images. However, many studies have shown that media publicity can play a key role in constructing the image of tourist destinations.

Based on network agenda-setting theory, this paper presents an empirical study on the media's effect in delivering the tourism destination image of Ganzi, Sichuan. Through content and social network analysis, this study aims to verify the applicability of network agenda-setting theory in tourism destination image dissemination. At the same time, collecting public agendas allows us to understand the public's perception of Ganzi's image so that improvements can be made to enhance the effectiveness of media messaging.

2. Literature Review

2.1. Agenda Setting Theory

Up to now, agenda-setting theory has undergone more than fifty years of evolution and development, roughly divided into the following three stages.

The first layer of agenda-setting theory, also known as basic agenda-setting research, is to study the impact of the media agenda on the public agenda with the topic's prominence as the starting point.

McCombs and Shaw hypothesize that the salience of the media agenda has an impact on the public. Through the "Chapel Hill experiment," they give a testable form to agenda-setting theory.

The second level of agenda setting is "attribute agenda setting. "In 1972, McCombs et al. began to focus on mass media's influence on agenda setting attributes. Becker and McCombs(1978) found that the correlation between the media agenda and the public agenda rose from 0.64 to 0.83 compared to the pre-experimental period in their study of the role of the media in determining the public's reaction to the presidential primaries. It proved that the different attributes emphasized by different presses for a particular issue can have different effects on the values of the public[1].

However, although the agenda-setting theory of the first and second layers is valid, they tend to study the salience of discrete topics or attributes rather than images of the network of associations [2], which is inconsistent with human cognitive representations [3].

Based on it, Guo et al. propose a third layer of agenda setting, the network Agenda Setting (NAS), which uses social network analysis to examine the impact of media agendas on the public agenda from a network of related issues.

Guo and McCombs (2011) reanalyzed the agenda-setting effect of the 2002 Texas gubernatorial election and compared the relationship between the media's (newspaper) description and the public's description of the personal qualities of the two gubernatorial candidates.

This study confirms that the media's propaganda network agenda setting will affect the audience's network agenda setting. The news media can not only tell us what and how to think but also construct an associated network of issues or attributes for the audience, that is, to determine how the audience connects different issues or attributes through association networks.

2.2. Tourism Destination Image Dissemination

Scholars have not yet unified the concept of tourism destination image. However, they generally agree that tourism destination image is a mental representation of the destination formed in the minds of tourists and is a subjective interpretation of reality by tourists [4].

With the development of transportation, the choice of destinations available for people to visit has increased. The development of Internet technology has greatly improved the efficiency of people's access to information. When choosing a destination, tourists have become accustomed to searching for relevant information online to form an initial impression of the destination. Deng(2004) pointed out that the destination image is the overall impression of the destination formed by tourists through media (such as television) or after travel. Wu (2014) argues that forming a destination image is similar to taking the "pieces of information" about the destination already acquired in their minds and putting them into a puzzle.

Tasci put forward that the tourism destination image is an interactive system of tourists' ideas, concepts, feelings, and willingness to revisit by combing the research literature on tourism destination image [5].Based on previous studies, the tourism destination image can be regarded as a system formed by interacting various elements [6].

Nowadays, the image of tourist destinations relies on the network to spread. Many empirical studies have shown a deviation between the image of tourist destinations disseminated by the media and the image perceived by the public[7-8]. In order to improve the effectiveness of tourism destination image communication, it is of practical importance to examine the agenda network of online media and the public on the image of specific tourism destinations.

3. Research Design

This study constructs an agenda network of media dissemination and public perception for Ganzi's tourism destination image. In order to explore the relationship between media and public agenda networks, this paper proposes the following research hypotheses to test the effect of network agenda setting :

Hypothesis 1: There is a significant correlation between the media agenda and the network of public hidden agenda attributes in the image communication of Ganzi tourism destination.

Hypothesis 2: There is a significant correlation between the media agenda and the network of public explicit agenda attributes in Ganzi tourism destination image communication.

3.1. Data Collection

3.1.1 Case selection

In recent years, the Ganzi government has made use of the development of new media to vigorously promote scenic spots in the autonomous prefecture on the Internet. With the internet celebrity Ding Zhen and local tourism director Liu Hong becoming increasingly popular on the Internet, Ganzi's popularity has also greatly improved. Ganzi has gradually become a tourist destination that many tourists yearn for.

The official microblog and official WeChat public account are the main venues for promotion, mainly promoting the natural scenery and historical stories of Ganzi. Due to the different reading habits of the active users on the two platforms, the layout formats are slightly different. However, The promotional articles on the two platforms overlap in content. Comprehensively speaking, the articles on the WeChat public account have a higher degree of completeness and are more viewed by users. Therefore, the article on the WeChat public account of "Ganzi County Tourism" is selected as the sample of the media agenda.

3.1.2 Media agenda data collection

In this study, Python languages were used to collect promotional texts on the public account of 'Ganzi County Tourism. 'Since the establishment of the public account in 2014, more than 1,300 articles have been published as of November 15, 2022, introducing Ganzi's natural scenery, cultural customs, and historical stories. A total of 1343 valid articles with 1,349,238 words were retrieved after eliminating the text unrelated to publicity, such as epidemic prevention and control notices, and deleting invalid spaces, URLs, and English characters.

The content analysis was based on articles collected before, and the coding entries focused on attributes related to Ganzi's image characteristics that were frequently mentioned. By combing the articles on the public account, it can be found that many near-sense or synonymous expressions were grouped together in the collation. Referring to Beerli et al.'s criteria for classifying the perceived image of destinations and Gan et al. (2013) 's study on the perceived image of Tibetan destinations[9], a total of 12 main attributes of Ganzi were identified, including food culture, religious landscape and folkloric activities.

Since network analysis is to identify the co-occurrence of attributes in articles, this paper uses binary coding for the 12 attributes. For example, if two attributes are mentioned in the same natural segment, it is counted as '1 '. Otherwise, it is not recorded. The attribute refinement criteria are shown in Table 1.

Table 1. Attribute refinement criteria

	Attribute	Example Words
1	Food Culture	Barley, Buttered Tea, Tsampa.
2	Religious Landscape	Temple, Prayer Flags, Monk
3	Folkloric Activities	Folkways, Khampa, Tap Dance
4	Tibetan Characteristics	Tibet, Tibetan, Tibetan Opera
5	Revolutionary History	Cave Dwelling, Revolution
6	Mountains and Lakes	Yalongjiang River, Lake, Hot Springs
7	Distinctive Architecture	Baita Park, King Gesar City, Ganzi Ancient City
8	Snowy Plateau	Gonggar Mountain, Kangzang Plateau
9	Animal Husbandry	Grassland, Grazing, Yak

10	Sightseeing Resort	Scenic Beauty, Landscape, Ecological Harmony
11	Mystery and Sanctity	Legend, Sanctity, Myth
12	Freedom and Openness	Freedom, Tranquil, Simple, Natural

3.1.3 Public agenda data collection

For the public agenda, data were collected employing questionnaires. The questionnaire survey was mainly conducted using a mind map, and there are precedents for measuring the public agenda [10].

The keywords of the mind map consisted of 12 attributes summarized from the media agenda. First, respondents were asked to select up to 5 keywords from the 12 to describe Ganzi to measure the implicit association between attributes; after that, if respondents perceived a connection between two words, they were also instructed to circle the two related words together for measuring the explicit association between attributes.

In addition, to ensure the validity of the questionnaire, respondents were asked to answer five basic questions related to Ganzi, including its geographical location and landscape, before filling out the questionnaire. If respondents answered all questions correctly, they would proceed to the agenda collection session.

The questionnaire was distributed through the Tencent questionnaire platform, and a total of 195 questionnaires were obtained. Among the respondents, 86 were male, accounting for 44.1%, and 109 were female, accounting for 55.9%; among them, 178 complete and valid questionnaires were used for data analysis, with a recovery rate of 91.3%.

3.2. Social Network Analysis

In this study, Ucinet 6 is used for network analysis. In practice, for the media agenda network and the public agenda network, when the two attributes appear in the same paragraph or are selected by the same interviewee simultaneously, the two attributes are considered to be related. The more the two attributes appear simultaneously, the greater the value, which means that the correlation between the two attributes is stronger.

Based on content analysis and questionnaire survey, three matrices of 12 rows and 12 columns are formed, representing the relationship between the attributes of media agenda, implicit public agenda, and explicit public agenda, respectively. The value in each grid represents the number of co-occurrences between two attributes.

3.2.1 Visualization Analysis

Net Draw software presents data visualization of media and public agenda networks. In the illustration, each node represents an attribute, and the line segment connecting any two nodes represents the degree of association between the two nodes. The thicker the line segment between the nodes, the stronger the association between the two attributes in the matrix and the more co-occurrence; the larger the attribute node, the more central the node is in the agenda network, and the higher its degree of centrality factor.

3.2.2 QAP Analysis

The quadratic assignment procedure is a method of comparing the similarity of elements in two matrices. That is, to compare the elements in the square matrix and give the correlation coefficient between the two matrices, along with a nonparametric test. QAP analysis includes correlation analysis and regression analysis. The larger the correlation coefficient obtained from QAP correlation analysis, the greater the correlation between the matrices; the larger the regression coefficient obtained by MR-QAP regression analysis, the greater the influence of independent variables on dependent variables.

4. Research Results

4.1. The attribute network of media agenda and public agenda

Through the visual analysis of Net Draw software, we can get media agenda pictures about Ganzi tourism destination image. Next, the results of degree centrality analysis with Ucinet 6 are as follows: "Tibetan Characteristics" (5185), "Religious Landscape" (4050), "Sightseeing Resort" (3741), "Snowy Plateau" (3472), "Mountains and Lakes" (3211), "Distinctive Architecture" (2732), "Animal Husbandry" (2615), "Mystery and Sanctity" (2587), "Folkloric Activities" (1822), "Revolutionary History" (1780), "Food Culture" (1609) and "Freedom and Openness" (1463). As measured by Ucinet 6, the first six are the core attributes in the media agenda network, and the last six are the marginal attributes.

Thus, the Ganzi tourism publicity media's coverage of the destination image frequently links these attributes. Furthermore, as shown in Figure 1, the points of "Tibetan Characteristic" and "Religious Landscape" are more central, so the nodes are larger. The lines between them and other attributes are thicker, representing their stronger correlation with other attributes, which indicates that they are at the core of media coverage.

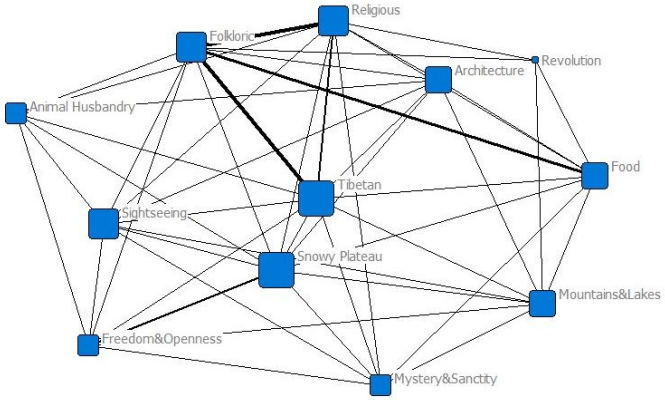


Figure 1. Media agenda network of Ganzi tourism destination image

Net Draw was also used to visualize the implicit public agenda and presented the public agenda network, as shown in Figure 2 below. In descending order of degree centrality, results are: "Mountains and Lakes" (497), "Tibetan Characteristics" (450), "Sightseeing Resort" (339), "Animal Husbandry" (261), "Distinctive Architecture" (252), "Religious Landscape" (171), "Freedom and Openness" (158), "Folkloric Activities" (144), "Mystery and Sanctity" (122), "Food Culture" (102), "Snowy Plateau" (89) and "Revolutionary History" (49).

Among them, the nodes of "Tibetan Characteristics," "Mountains and lakes," and "Sightseeing Resort" are large, indicating that they are at the core of the implicit public agenda.

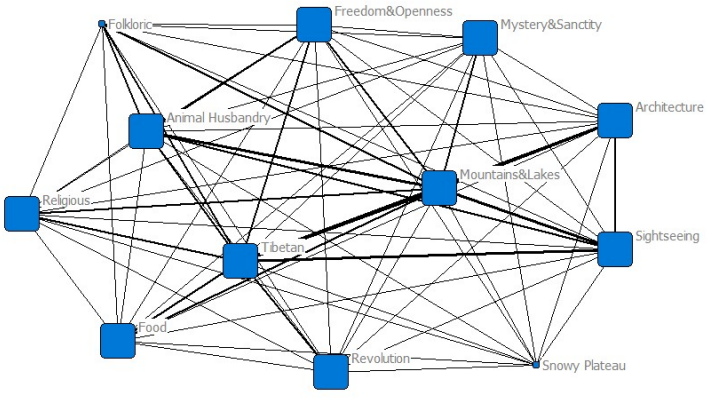


Figure 2. Implicit public agenda network of Ganzi tourism destination image

The results of the Net Draw visualization of the public's explicit agenda are shown in Figure 3. The attributes are listed in descending order of degree centrality with the following results: "Folkloric Activities" (224), "Tibetan Characteristics" (194), "Religious Landscape" (154), "Snowy plateau" (88), "Food Culture" (78), "Mystery and Sanctity" (54), "Freedom and Openness" (50), "Distinctive Architecture" (48), "Mountains and Lakes" (44) "Sightseeing Resort" (40), "Animal Husbandry" (26) and "Revolutional History" (8). As can be seen from Figure 3, the attributes at the center of the explicit public agenda network are "Folkloric Activities," "Tibetan Characteristics" and "Religious Landscapes"

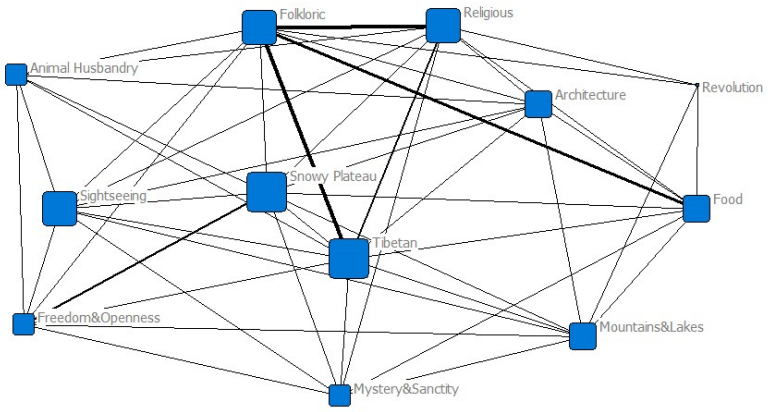


Figure 3. Explicit public agenda network of Ganzi tourism destination image.

By comparing the media agenda networks with the public's implicit and explicit agenda networks, it can be seen that attributes such as 'Tibetan Characteristics' and 'Religious Landscape' are at the core of all agenda networks, which shows the effect of media agenda setting to a certain degree.

4.2. Analysis of agenda-setting effect in Ganzi tourism destination image dissemination

As mentioned above, QAP correlation analysis is used to test the correlation between media agenda and public agenda, and regression analysis is used to test the causal relationship between media agenda and public agenda. As shown in Table 2, there is a significant positive correlation between media agenda and public agenda at the significance level of $P < 0.05$. The data showed that media agenda was associated with implicit public agenda ($r = 0.352$, $R2 = 0.124$) and explicit public agenda ($r = 0.337$, $R2 = 0.114$). That is, the media agenda shows a strong positive agenda-setting effect on both the public's implicit and explicit agendas. Hypothesis 1 and hypothesis 2 are both valid.

Besides, the media agenda is more closely related to the public's implicit agenda than the public's explicit agenda.

Table.2. The effect test of agenda setting

	Media Agenda	
	Correlation Analysis (Pearson`s r)	Regression Analysis (R-squared)
Implicit Public Agenda	0.352*	0.124*
Explicit Public Agenda	0.337*	0.114*

*p<0.05

5. Conclusion

This study collected 1,343 media texts and 178 public agenda samples about Ganzi, Sichuan, to compare and contrast the tourism destination images in different agendas. The research is based on the third level of agenda-setting theory, using content analysis and social network analysis. The study found that the content of the public agenda is closely related to the media agenda when constructing the image of a tourism destination, suggesting that the media plays a considerable agenda-setting role in image construction.

It is also an attempt to test the effect of media network agenda setting in disseminating the tourism destination image represented by Ganzi, Sichuan. It provides insights into constructing a tourism destination image in the post-epidemic period. Tourism promotion departments should be more adept at using related attributes for dissemination, establishing logical links between the various elements of attributes that a tourism destination possesses in order to improve the power of information dissemination, subconsciously shaping the public's perception of the destination's image, and achieving all-round and multi-angle promotion of the destination.

However, research has also shown that the public's rational analysis can influence the effectiveness of the media's agenda-setting. Therefore, when promoting the image of a tourism destination, the media should choose and match the issues (attributes) wisely to improve the ability to deliver the message.

Due to the limited level of research, this study has some things that could be improved. First, the sample size of the public agenda is limited, which is not enough to fully demonstrate the influence of the media agenda on the public agenda. Secondly, the source of the media agenda is only the textual content of the "Ganzi County Tourism" WeChat public website, ignoring the significance of the audio-visual resources disseminated through social media platforms such as ShakeYin and Flash. Therefore, there is room for improvement in constructing the media agenda network.

In future research, firstly, the number of samples can be increased for data mining to explore a more reflective and profound research conclusion. Moreover, promotional materials on different social media can also be selected to explore the impact of online agenda setting for supplement and improvement.

References

[1] Tahamtan I, Potnis D, Mohammadi E, Singh V, Miller L.The Mutual Influence of the World Health Organization (WHO) and Twitter Users During COVID-19: Network Agenda-Setting Analysis.J Med Internet Res 2022;24(4):e34321

[2] R. Lance Holbert, Elizabeth S. Baik, Meghnaa Tallapragada, Colleen M. Tolan, Heather L. LaMarre, Bruce W. Hardy. (2022) “Balancing Field-General and Subfield-Specific Contributions When Addressing, Utilizing, or Assessing a Theory’s Explanatory Power”. Journal of Broadcasting & Electronic Media 66:4, pages 515-539.

[3] Stern, S., Livan, G. & Smith, R. E. (2020). A Network Perspective on Intermedia Agenda-setting. Applied Network Science , 5, 31.

[4] Bui, V., Alaei, A. R., Vu, H. Q., Li, G., & Law, R. (2022). Revisiting Tourism Destination Image: A Holistic Measurement Framework Using Big Data. Journal of Travel Research, 61(6), 1287–1307

[5] Asli D. A. Tasci and William C. Gartner and S. Tamer Cavusgil. Conceptualization and Operationalization of Destination Image[J]. Journal of Hospitality & Tourism Research, 2007, 31(2) : 194-223.

[6] Wang J Y, Wu J F, Wang A M. Tourism destination image perception process-an exploratory study based on rooting theory[J]. Human Geography,2018,33(06):152-160.

[7] Li J L, Zhu M. A comparative study on the projected image and tourists' perceived image of Wuyishan National Park[J/OL]. Resource Development and Market:1-9[2022-11-24].

[8] Abdallah M. Elshaer, Asmaa M. Marzouk. (2022) Memorable tourist experiences: the role of smart tourism technologies and hotel innovations. Tourism Recreation Research 0:0, pages 1-13.

[9] Gan ,Lu ,Wang. An empirical study on domestic tourists' perception of Tibetan tourism image[J]. Tourism Science,2013,27(02):73-82

[10] Zhang, Li. A study on the effect of agenda setting in county-level integrated media centers: the example of the "new crown pneumonia epidemic"[J]. China Cable TV,2022(09):49-54.