Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.
Gentle or rude? A study on China's publicity of epidemic prevention and governance of urban and rural areas based on anti-epidemic slogans

Yu Hou a, Tianxing Wei a, Zixin Zhan a, Fang Wang b,*

a College of Urban and Environmental Sciences, Peking University, Beijing 100871, PR China
b NSFC-DFG Sino-German Cooperation Group on Urbanisation and Locality (UAL); College of Architecture and Landscape Architecture, Peking University, Beijing 100871, PR China

ABSTRACT

COVID-19 has swept through the world, challenging countries’ ability to respond to crises and their public governance. One of the difficulties of public governance in China is the knowledge gap caused by the urban-rural dual structure. This study takes anti-epidemic slogans in China, a traditional means of information governance as its research object in the context of COVID-19. Independent sample tests and cluster analysis were conducted to measure the knowledge gap between urban and rural residents in acquiring epidemic information, and compare the different slogans posted in urban and rural areas, as well as the feedback they received. Based on this, the study explores the different logic of urban and rural governance in China. The results show that, although slogans cannot convey the latest information, they can make the public aware of the severity of the epidemic. Urban residents were found to give lower evaluations to slogans, although they acknowledged that slogans had the effect of rendering an anti-epidemic atmosphere, whereas rural residents were more accepting of rude and threatening slogans and control measures. Slogans with scientific guidance were more likely to trigger changes in their awareness and behavior. The study is significant as it can be a reference for other regions’ and countries’ publicity work and governance approaches in the prevention and control of infectious diseases.

Keywords: Information governance, Urban and rural governance, Crisis response, COVID-19, Anti-epidemic slogans

1. Introduction

On account of COVID-19, “more than half of the world’s population resided in countries enforcing a lockdown” in April 2020, “resulting in a hugely disruptive impact on individuals, businesses, and entire sectors of society” (Sachs et al., 2020). The huge and rapid population flow across the world today means that all cities and villages are facing a lot of pressure in terms of epidemic prevention and control. The prevention and control of infectious diseases require everyone to mobilize, and publicity work is an essential part of achieving this. As a microcosm of social public opinion, slogans have corresponding implications, including economic, political, and cultural ones. They also constitute an important part of the social and cultural environment. To a certain extent, they reflect the individual demands and social wishes of local residents in a specific period (Liu, 2013).

In the context of China, slogans are a traditional means of governance that play an important role in language. Although mass media has been attracting more public attention over time, slogans are not likely to be taken off the stage as historical carriers of public policy communication; as such, slogans continue to have value in the context of urban and rural China. A large number of the anti-epidemic slogans that emerged during the anti-epidemic period have been widely discussed on social platforms.

Since the 1980s, China has adopted the market economy system, through which it has been integrated into the global market and rapidly developed its economy. However, at the same time, the imbalanced development between urban and rural areas has become more and more obvious (Fan et al., 2020). Although the development of mass media has, to some extent, achieved the equality of urban and rural access, the urban-rural digital divide still has a great negative impact on urban-rural integration (Alicia et al., 2017). Against this backdrop, the government of China’s urban and rural areas has shown contrasting responses to the epidemic. Extreme means including “Road closure, village closure, traffic ban” together with rude slogans, are frequently used in rural areas; in contrast, urban information access and facilities are more advanced. More prudent measures and gentle slogans are taken to realize high-quality management of the community in preventing and controlling the epidemic.

* Corresponding author.

E-mail addresses: houyucues@pku.edu.com (Y. Hou), weitianxing@pku.edu.cn (T. Wei), zhanzixin@pku.edu.cn (Z. Zhan), wfpbd@pku.edu.cn (F. Wang).

https://doi.org/10.1016/j.cities.2022.103901
Received 30 July 2020; Received in revised form 17 September 2021; Accepted 2 August 2022
Available online 18 August 2022
0264-2751/© 2022 Elsevier Ltd. All rights reserved.
Why are there such differences in publicity and governance of epidemic response between urban and rural areas? This paper will start from the characteristics of anti-epidemic slogans and analyze the language preference used in urban and rural publicity in China. Further, this paper analyzes the feedback of urban and rural audiences on the slogans, which provides a bottom-up perspective for rethinking the effectiveness of different publicity means, such as whether the slogan has changed the audience’s awareness of prevention and action.

2. Literature review

2.1. Different development and governance models in China's urban and rural areas

There are many gaps between urban and rural development in China. Urban and rural residents have unequal housing facilities (Wang et al., 2020), education quality (Hu, 2015), children's level of health (Wang, 2019), and the provision of community services for the elderly (Zhang et al., 2020). Since the 1990s, China has implemented various national policies and plans to alleviate the urban-rural income gap; yet, economic duality still exists even in the most developed regions (Chen et al., 2020). Since the 1990s, China has implemented various national policies and plans to alleviate the urban-rural income gap; yet, economic duality still exists even in the most developed regions (Chen et al., 2018). The utilization of medical and health resources in rural areas is still insufficient compared with those of urban areas (Li et al., 2018).

There are many differences in knowledge background between urban and rural residents in China. Due to the differences in knowledge reserve and structure, education opportunities, understanding and memory ability, social communication scope, and so on, different social groups have a gap in the information obtained through mass media, which is called the “knowledge gap” (Tichenor et al., 1970). While urban residents can acquire knowledge and information quickly through the Internet, rural residents get information behind, resulting in a “knowledge gap” between urban and rural areas (Zhang, 2019). The same gap exists in access to epidemic information. One of the most direct reasons for this knowledge gap is the digital divide; although China is the largest information and communication technology market in the world, rural mountainous areas in the southwest, as well as poverty-stricken areas in the central and western regions, remain low in the digital development index (Song et al., 2020). The digital divide between urban and rural areas is not only manifested in the inequality of “enjoyment opportunity,” but also in the degree of “effective utilization” (Ye, 2018). In addition, the general non-repetitive weak relationships in urban stranger societies bring more information, while the homogenous repetitive strong relationships in the rural acquaintance society limit the villagers’ access to information (Burt, 1995; Granovetter, 1973). This, in turn, exacerbates the knowledge gap between urban and rural areas.

There are many differences in social organizations and governance systems between urban and rural areas in China. In terms of social organization, people correspond to stranger societies that are organized by the organic unity of relying on functional differentiation in urban areas, while rural areas maintain the characteristics of acquaintance society based on blood and geographical relations, with high homogeneity of social structure (Fei, 2013; Yeh et al., 2013). In terms of governance systems, urban governance relies on the government's effective management, and governments and departments at all levels are the main body of power, with a strong top-down approach (Ye, 2014). Some innovative models, such as “community small cell management” model and “grid service management” model, have improved the governance efficiency. Rural governance is based on villagers' autonomy, where the “village council” model is the tool to increase the initiative of villagers to participate in governance (Wong et al., 2017). Rural governance is limited by the resources and capabilities of the national government and relies on informal social endogenous resources for autonomy (Huang, 2008). Establishing a high-density interpersonal trust network can achieve better rural grassroots governance (Wu et al., 2020).

China is experiencing the transition from unitary governance to pluralistic co-governance (Yu, 2008). The government and stakeholders need to actively respond to the public's preferences in a timely manner according to their understanding of public value, and effectively deal with the issues most concerned by the public, so as to create public value (Moore, 2016). Public value can be measured by a triangular evaluation system. The three evaluation indicators include Public Value, Legitimacy and Support, Operational Capability (Moore, 2013). Public Value, that is, voters require government departments to achieve social goals or generate some important public interests. Legitimacy and Support mean that the value obtained by the governor ought to be the social value consistent with the purpose of the voters. Operational Capability is the ability to motivate voters to become “partners” and “co-producers” of governors. Social governance needs to take full account of public values.

2.2. Crisis response and anti-epidemic publicity

Due to the profound political nature of health policy and planning decision-making, urbanization poses a growing challenge to global health governance (Fidler, 2020). At the same time, the epidemic has exacerbated social inequalities such as class and race, mobility patterns, access to health facilities, and the ability to isolate, which also causes difficulties in responding to the epidemic (Connolly et al., 2020). Urban and rural areas are facing different epidemic response pressures; in cities, densely populated residential areas and public service facilities accelerate the spread of the epidemic (You et al., 2020). At the same time, major developed cities are the key nodes of information diffusion, and people respond to crisis events through social material networks at the city level (Dou et al., 2020). Whereas, the lower population density in rural areas slows down the spread of the epidemic to some extent, but the lack of health facilities and medical treatment remains an essential problem (Diop et al., 2020).

Crisis response is a test of governance. Governance is based on reconciliation rather than domination and involves both public and private sectors (Yu, 2000). It is not a formal system, but a cooperative and interactive relationship between the government and citizens (Gaudin, 2010). In China, slogans are usually issued by the government, but not an official medium like TV news, which are written with some personal or folk thought and language style. This paper holds that slogans can be seen as a form of governance. Slogans are one of the routine means of publicity and governance by the Chinese government, and it has also been an important tool in the prevention and control of COVID-19. Publicity is a kind of social behavior that tends to use various meaningful symbols to spread certain information to guide and control people’s actions (Xu, 1989). Slogans propagate the language symbols containing political information to the public, then people process and transform them according to their values, and produce corresponding behaviors after selectively digesting and absorbing; as such, the language of policy discussion often has a practical impact on public understanding and policy generation (Marcuse, 2015). Chinese slogans are a continuation of the government’s tradition of carefully planning social language to support the system that has been ruling for hundreds of years (Karmazin, 2020). This is effective in that slogans encourage and educate people to see themselves as “co-citizens” of the country (Song & Gee, 2020). Slogans need to be adjusted and selected according to the objects and targets of publicity. Taking environmental governance as an example, government slogans or resolutions in government work reports do not necessarily translate into actions. The formalism of responding to slogans with slogans often occurs in local governance (Shi et al., 2019); what is more, language violence in rural family planning slogans reflects the violent tendency of rural grassroots government movement when implementing this policy (Wang, 2018). In the current context, the anti-epidemic slogans in rural areas had similar characteristics.
3. Research design and methods

3.1. Research design

This study takes anti-epidemic slogans in China as its research object in the context of COVID-19 (2020) and uses the Knowledge Gap and Public Value Theory as the framework to measure the epidemic prevention mode and the feedback difference between urban and rural residents under the urban-rural dual structure; following this, the different logic and advantages and disadvantages of urban and rural governance in China is discussed. In this study, knowledge-gap indicates that there is a gap in the ability and channel of information acquisition between urban and rural groups, and there is also a gap in the cognition of anti-epidemic slogans. Public Value is an indicator of whether the slogans can effectively bridge the knowledge gap between urban and rural areas and reduce the public risk of the epidemic; Legitimacy and Support refer to people's recognition of slogans and their political symbols; Operational Capacity indicates the extent to which the public's attention to the epidemic has changed after receiving the slogans and their willingness to take action.

In the dissemination of epidemic information, there was a knowledge gap between urban and rural audiences. On the one hand, urban and rural governments issued different slogans to disseminate information and mobilize people against the epidemic, to bridge the knowledge gap. On the other hand, slogans aroused different feedback (public value) from urban and rural audiences. On this basis, the governance model is evaluated (Fig. 1).

3.2. Data and methods

This study focuses on the top-down expression of slogans and the bottom-up public feedback of slogans. The data of top-down slogans are from Microblog, the largest stranger social platform in China. By the end of 2019, Microblog reached 516 million monthly active users. Using “anti-epidemic slogans” (Kangyibiaoyu) as the keywords, we searched the Microblog platform and crawled the text data and interactive data from January 25th to March 29th using the GooSeeker web crawler tool. The text content of anti-epidemic slogans was screened out from the data set, and 956 slogans were extracted, including 831 slogans with urban and rural attributes, 568 urban slogans, and 263 rural slogans. The text evaluation index system of anti-epidemic slogans was constructed. After the evaluation and scoring, K-means clustering analysis was conducted by Stata 14 to classify the slogan samples.

The bottom-up public feedback data were acquired from the questionnaires and interviews. The questionnaire was issued on the Internet platform to investigate the respondents' cognition of different types of anti-epidemic slogans, the acquisition of epidemic information, and personal basic information; a total of 435 valid questionnaires were received, and the proportion of urban respondents and rural respondents was 51.95 % and 48.05 %, respectively. Based on the survey data, SPSS 18.0 was used for the correlation analysis, and an independent sample test was conducted to analyze the different performances of urban and rural audiences in the acquisition of epidemic information and cognition of anti-epidemic slogans. The purpose of the interview was to investigate the respondents' intuitive feelings about the anti-epidemic slogans, their cognition of the knowledge gap, and the cognitive functions and symbols of slogans. In total, there were 30 interviewees, 15 from urban areas and 15 from rural areas. The analysis based on the interview data aims to explore the specific performances of the knowledge gap between urban and rural audiences and the value reasons behind the cognition of the slogans (Fig. 2).

4. Results and analysis

4.1. Epidemic information and the knowledge gap between urban and rural areas

In terms of the timeliness of epidemic information acquisition, the questionnaire survey showed that there was no significant difference between urban and rural residents (chi-square test as a likelihood-ratio test, sig = 0.191). Most of the respondents (77.7 %), in both the rural and urban areas, had heard of COVID-19 by January 20th (when the existence of human-to-human transmission was announced).

The time difference of information acquisition before January 10th was mainly reflected in different groups within urban and rural residents, not between urban and rural residents. The professional domain knowledge and ability of the network to retrieve information determined this time difference. In the middle and late stages of the epidemic (after January 10th), the response of the population in rural areas was slightly slower than in cities. On January 20th, when the existence of human-to-human transmission was officially announced, even the individuals with relatively backward information in the cities were almost informed of the epidemic situation. Nearly all residents changed their attitudes at that time. Some people with low cultural literacy in rural areas did not get information from their relatives or grassroots cadres until January 25th, when the government “closed the door directly without letting others visit” (R3-8-1).\(^1\)

There was a significant difference between urban and rural residents in their initial access to epidemic information (chi-square test as a likelihood-ratio test, sig = 0.004). Online media and TV news are the two kinds of media that spread the fastest and have similar accessibility levels for both urban and rural audiences. However, the epidemic information obtained by acquaintances in urban areas was more than that in rural areas.

During the epidemic period, the Internet was the main channel for people to obtain news and popular science information in both urban and rural areas. Television also had a lot of influence through releasing news of major events. Official mainstream media including CCTV network, People's Daily, as well as private mainstream media including “Southern Weekend, Financial Weekly” (U14-7-3) had high credibility. In addition to the channels for obtaining epidemic information for the first time, acquaintance communication, and radio or car broadcasting had a greater impact on urban residents, while network platforms like Baidu and video websites had a greater impact on rural residents. In addition, anti-epidemic slogans have a greater impact on rural respondents in the awareness of epidemic seriousness (Table 1).

4.2. The urban-rural differences in the form of slogans

4.2.1. The attributes and types of slogans

The slogan content represents the position and attitude of the government, and also conveys the specific instructions, preferring the words of administrative orders or war mobilization. Part of slogans is emotional and humanized, which often uses threats, exhortation, and caring language to urge residents to observe epidemic prevention regulations. Certain language expressions are usually adopted to achieve the purpose of wide dissemination, such as dialect, rhytm, or antithesis rhetoric. The evaluation index system of slogans was constructed based on these multi-dimensional attributes (Table 2).

Based on three aspects (vocabulary preference, emotional expression, and sentence structure), each slogan was scored based on 9 indicators. Five subscales were used, 1 being the worst and 5 being the best. Following this, all anti-epidemic slogans were clustered with K-means by Stata's cluster K-means command according to the scores

---

\(^1\) Microblog releases the fourth quarter and annual financial report of 2019 (February 26, 2020). [https://m.weibo.cn/1642634100/447631305721329](https://m.weibo.cn/1642634100/447631305721329) (2020/2/5).

\(^2\) Interview data number: U (urban)/R (rural) respondent number - Section numbers - Statement number.
obtained in the 9 linguistic characteristics. The distance function takes the default Euclidean distance squared. According to the observation of the sample matrix and repeated attempts to value $k$, the clustering effect is in line with the expectation when $k = 6$. According to the scores of various slogans in vocabulary preferences, emotional expression, and sentence structure, six types of slogans are summarized: warm guidance, local admonishment, dangerous warning, scientific guidance, rude threats, and administrative mobilization. The number and characteristics of the slogans are shown in the table below (Table 3).

The Chi-square analysis and tau coefficient measurement were carried out on 831 slogan samples with urban-rural attributes as the independent variable and slogan type as the dependent variable. The Chi-square test value was 25.775 with $\text{sig.} = 0.000$, < 0.05. Tau coefficient was 0.006 with $\text{sig.} = 0.000$, < 0.05. Therefore, through the test, the types of slogans were found to be significantly related to the urban-rural attribute. The proportion of admonishment and violent threats in rural areas was far higher than in urban areas, while the proportion of administrative mobilization and warm guidance in urban areas was far higher than in rural areas. The differences in the proportion of scientific guidelines were not significant. Comparing the average value of each attribute of urban and rural slogans, we also found rural slogans to be more threatening and persuasive. At the same time, their language expression was more localized, concise, and easy to remember, whereas urban slogans were more war-like and administrative, with more caring written language (Fig. 3). This result reflects the different publicity strategies adopted by urban and rural governors. Emotional and colloquial expressions were used in the anti-epidemic publicity in both urban and rural areas. Urban governors also used official terms and more humanized language to convey the anti-epidemic measures and their urgency. Villages tended to use local or crude language to urge residents to stay home and to reduce gathering.

4.2.2. Slogan scenes

As the urban and rural environments are different, slogans present different scenes in both contexts (Fig. 4). In urban areas, slogans appear on building screens, road electronic screens, streets, and community entrances. The overall characteristics are as follows: (1) Diverse forms. Because of the diversity of urban hardware facilities, the display of slogans also has a variety of unique urban forms such as electronic screens. (2) Larger scale. The slogan can be bigger and more eye-catching, with a strong visual effect, due to the large building volume and wider road square. (3) Unconsidered placement. Many slogans are political slogans placed on roads with few pedestrians, indicating a lack of ideas in terms of posting positions from the perspective of regulating citizens. In rural areas, slogans appear at the entrance of villages, village walls, small vertical boards, and roadside structures, among other
Table 1
The differences between urban and rural residents in the first access and perception channels of epidemic information.

| Perception channels                  | The first time one heard about COVID-19 | The first time one realized the severity of COVID-19 |
|--------------------------------------|----------------------------------------|-----------------------------------------------------|
|                                      | Urban areas                           | Rural areas                          | Total       | Urban areas                           | Rural areas                          | Total       |
| Anti-epidemic slogans or posters     | 1.3 %                                  | 1.0 %                                | 1.1 %       | 0.4 %                                  | 1.4 %                                | 0.9 %       |
| TV news                              | 16.8 %                                 | 19.1 %                               | 17.9 %      | 36.3 %                                 | 34.0 %                               | 35.2 %      |
| Mobile media (Microblog, WeChat, etc.) | 60.2 %                                | 51.7 %                               | 56.1 %      | 42.9 %                                 | 42.6 %                               | 42.8 %      |
| Network platform (Baidu, video website, etc.) | 5.3 %                                  | 12.9 %                               | 9.0 %       | 6.2 %                                  | 11.5 %                               | 8.7 %       |
| Radio or car radio                   | 2.8 %                                  | 0.0 %                                | 0.9 %       | 0.4 %                                  | 0.0 %                                | 0.2 %       |
| Interpersonal communication (online and offline) | 13.3 %                                | 10.0 %                               | 11.7 %      | 8.4 %                                  | 3.8 %                                | 6.2 %       |
| Company, school, or community notice | 0.9 %                                  | 2.4 %                                | 1.6 %       | 4.0 %                                  | 6.2 %                                | 5.1 %       |
| Other                                | 0.4 %                                  | 2.9 %                                | 1.6 %       | 1.3 %                                  | 0.5 %                                | 0.9 %       |

Note: The numerical value is the column percentage, indicating the proportion of people who heard or perceived the news through the channel and the total number of people with the same urban-rural attributes.

Table 2
Evaluation index system of anti-epidemic slogans.

| Index of 1 class | Index of 2 class | Description |
|------------------|------------------|-------------|
| Vocabulary       | preferences      | War         | Connection or similar degree with war mobilization |
| Emotional        | expression       | Administration | The number of direct administrative orders and the strength of the imperative tone |
|                   |                  | Threat      | The degree of sensationalism and the strength of the “threat” felt by the audience |
|                   |                  | Admonishment | The ability to make the public have a good understanding of the correct anti-epidemic measures |
|                   |                  | Care        | The warmth of the slogan and its guiding effect on positive emotions |
| Sentence         | structure        | Formality   | Formal and normative use of words in written expression |
|                   |                  | Locality    | The extent affected by local oral language habits |
|                   |                  | Memory      | The difficulty of memorizing the content of the text and the retention time of memory |
|                   |                  | Concreteness | The length of slogans and the common degree of vocabulary and sentence patterns |

places. The overall characteristics are as follows: (1) Simple forms. As the rural slogan carrier is less, most slogans are red banners. (2) Smaller scale. Small building volume, narrow roads, lack of squares, and limited size of slogans. (3) Considered placement. Slogans’ location is more consistent with the villagers’ activity track. With less public space in rural areas, it is easier to cover the scope of villagers’ activities and locations using slogans, thus affecting their behavior.

4.3. Public value differences between urban and rural areas reflected by slogans

4.3.1. Public value of slogans
Slogans are no longer able to convey real-time information with the development of modern media, but they still have the value of reminding the audience, enhancing memory, and creating atmosphere due to their full space coverage. Governors tend to choose slogans that can attract attention, inspire people to spread. Therefore, the content and language expression of slogans reflect the value identification of the governor himself and the audience. The public value of slogans is mainly reflected in the atmosphere creation and knowledge dissemination. Specifically, slogans mainly affect the audience’s judgment of the severity of the epidemic, the seriousness of prevention and control, and the understanding of epidemic prevention knowledge. In terms of slogans’ influence on the judgment of the severity of epidemic situation and popularization of epidemic prevention knowledge, urban audiences’ evaluation of the value of slogans is significantly lower than that of rural audiences (sig < 0.05 of independent sample t-test). However, there is no significant difference between urban and rural audiences in the value cognition of slogans highlighting the seriousness of epidemic prevention and control. Urban and rural residents all agree that anti-epidemic slogans are an important medium to convey the seriousness of epidemic prevention and the determination of the government (Table 4).

Slogans appeared in many places on January 23rd after the closure of Wuhan city. As a means of governance and control, the value of slogans in the field of information popularization was quite limited, especially for the vast majority of urban residents without network barriers, but it still had a more direct effect on rural information blocking groups. Compared with other publicity methods, the most prominent value of slogans is that “their coverage is very large.” “As long as there is a grass-roots government, it can be publicized” (U13-14-1). Therefore, it can cover almost all urban and rural residential areas. The basic epidemic prevention measures such as “Washing hands frequently, wearing masks, ventilating frequently, and not gathering in crowds” (U15-14-1) were also well implemented. People with relatively narrow channels for receiving information and “rural people left behind” (U11-11-1) are regarded as the target groups of slogans.

Although the actual role of slogans in protecting people’s basic right to know, as well as bridging the knowledge gap between urban and rural areas, has been affirmed to some extent, some people have pointed out that the role of slogans in the rural context also has great limitations. “Villagers can’t understand the whole picture of things only by looking at slogans” (R13-15-2). Other offline publicity methods besides slogans are also indispensable and sometimes even more important, such as “mobile loudspeaker” (R15-16-1). It would thus be better if “village heads and
staff come to visit, remind and seriously ask, and convey the work requirements to everyone” (R5-14-4). In addition, because of the huge difficulties in the implementation of rural grassroots epidemic control measures and punishment, the warning role of slogans in rural governance was more often emphasized. In rural areas, “even those who don’t know how to read know it is a serious matter when slogans are published”
4.3.2. Legitimate support of slogans

The evaluation of the slogans by the urban audience was generally low, as people had a deeper understanding of Chinese political culture and understood the slogans' role as a political symbol. Rural audiences generally had a high degree of acceptance of slogans, including when they were rude threats, and generally had an understanding of the political significance of slogans.

In terms of the legitimate support of slogans, >80% of urban and rural residents agreed that it was necessary (28.51%) or absolutely necessary (56.09%) to post slogans for epidemic prevention and control. However, there were great differences in the acceptance of different types of anti-epidemic slogans between urban and rural residents. Specifically, rural audiences' recognition of six types of slogans (warm guidance, local admonishment, dangerous warning, scientific guidance, rude threats, and administrative mobilization) was significantly higher than those of city audiences (independent sample t-test sig < 0.05).

Among them, the difference between the two groups' approval of the local admonishment, dangerous warning, and rude threats was the most significant and strongest (sig of independent sample t-test was < 0.01, and the absolute value of mean difference was greater) (Table 5).

As a whole, rural residents tended to support slogans as a form of publicity and were more likely to tolerate relatively vulgar and crude governance. In fact, there were two reasons for the attitude of rural residents towards the means of governance. First, many rural residents thought that the management of epidemic prevention and control was irrelevant, and ignored the government's instructions that did not involve their own economic interests. "Most people in the countryside hardly glance at the slogans, or they never care. They just do what they want."

In Table 4, the relative values of mean difference were greater than those of city audiences (independent sample t-test sig > 0.01, the opposite is true).

Note: If the Levene's test of variance equation sig ≤ 0.05, then the overall variance is not equal, indicating that there is significant difference between the two groups of samples. If sig > 0.05, the opposite is true.

4.3.3. Operational capacity of slogans

Although China is a socialist country under the people's democratic dictatorship, publicity with slogans can mobilize the enthusiasm of people across the country to fight the epidemic together. More urban residents tried to consider the issue from the macro-perspective of governors, providing legitimate support for governance means from Chinese basic national conditions and political system. They also had a deeper understanding of the historical background of Chinese slogan publicity. Mr. U14 (a government member of staff) affirmed the need for slogans, "we have had a kind of slogan culture in China since ancient times. Our Chinese Communist Party has been carrying out publicity with slogans" (U14-4-1). Ms. U2 (a politics teacher for senior high school students) also evaluated it highly, "China is a socialist country under the people's democratic dictatorship. Publicity with slogans can mobilize the enthusiasm of people across the country to fight the epidemic together" (U2-4-2).

Most urban residents agreed that "anti-epidemic slogans were originally a political symbol" (U7-12-1). "Slogans are supposed to reflect the current political needs in different periods" (U7-12-2). Although the cultural literacy of some rural residents is not high, they still had a certain understanding of the political meaning of slogans. "Although they don't know what the words are, they know what they mean" (R3-12-2).

Table 4

| Category | t-Test of mean value equation |
|----------|-----------------------------|
|          | t  | df  | Sig. | Mean difference |
| The influence of slogans on the judgment of the severity of the epidemic | Unequal variance | -3.408 | 432.991 | 0.001 | -0.419 |
| The influence of slogans on the seriousness of prevention | Equal variance | -1.957 | 433 | 0.051 | -0.225 |
| The influence of slogans on the popularization of epidemic prevention knowledge | Unequal variance | -4.148 | 432.492 | 0.000 | -0.469 |

Note: If the Levene's test of variance equation sig ≤ 0.05, then the overall variance is not equal, indicating that there is significant difference between the two groups of samples. If sig > 0.05, the opposite is true.

Table 5

| Category | t-Test of mean value equation |
|----------|-----------------------------|
|          | t  | df  | Sig. | Mean difference |
| Warm guide | Equal variance | -2.333 | 433 | 0.020 | -0.220 |
| Local admonishment | Equal variance | -3.023 | 433 | 0.003 | -0.321 |
| Dangerous warning | Unequal variance | -3.432 | 432.984 | 0.001 | -0.393 |
| Scientific guidance | Equal variance | -2.141 | 433 | 0.033 | -0.179 |
| Rude threats | Equal variance | -3.671 | 433 | 0.000 | -0.475 |
| Administrative mobilization | Equal variance | -2.450 | 433 | 0.015 | -0.240 |

Note: If the Levene's test of variance equation sig ≤ 0.05, then the overall variance is not equal, indicating that there is significant difference between the two groups of samples. If sig > 0.05, the opposite is true.
### Table 6
Change of consciousness after seeing six categories of anti-epidemic slogans: an independent sample test in urban and rural areas.

| Category                  | t-Test of mean value equation | t  | Df  | Sig. (two-tailed) | Mean difference |
|---------------------------|--------------------------------|-----|-----|------------------|-----------------|
| Warm guide                | Equal variance                 | -2.362 | 433 | 0.019           | -0.251          |
| Local admonishment        | Equal variance                 | -3.658 | 433 | 0.000           | -0.391          |
| Dangerous warning         | Equal variance                 | -2.615 | 433 | 0.009           | -0.288          |
| Scientific guidance       | Equal variance                 | -3.557 | 433 | 0.000           | -0.358          |
| Rude threats              | Equal variance                 | -3.461 | 433 | 0.001           | -0.399          |
| Administrative mobilization| Unequal variance              | -3.370 | 432.262 | 0.000     | -0.398          |

Note: If the Levene’s test of variance equation sig ≤ 0.05, then the overall variance is not equal, indicating that there is significant difference between the two groups of samples. If sig > 0.05, the opposite is true.

### Table 7
Change of behaviors after seeing six categories of anti-epidemic slogans: an independent sample test in urban and rural areas.

| Category                  | t-Test of mean value equation | t  | Df  | Sig. (two-tailed) | Mean difference |
|---------------------------|--------------------------------|-----|-----|------------------|-----------------|
| Warm guide                | Equal variance                 | -3.805 | 433 | 0.000           | -0.404          |
| Local admonishment        | Equal variance                 | -3.205 | 433 | 0.001           | -0.361          |
| Dangerous warning         | Equal variance                 | -3.576 | 433 | 0.000           | -0.402          |
| Scientific guidance       | Equal variance                 | -3.113 | 433 | 0.002           | -0.305          |
| Rude threats              | Equal variance                 | -4.137 | 433 | 0.000           | -0.506          |
| Administrative mobilization| Equal variance                 | -3.342 | 433 | 0.001           | -0.365          |

Note: If the Levene’s test of variance equation sig ≤ 0.05, then the overall variance is not equal, indicating that there is significant difference between the two groups of samples. If sig > 0.05, the opposite is true.

### Conclusion and Discussion

#### 5.1. Rational governance model under the urban-rural dual structure

The differences in attitude, emotions, and communication intention between urban and rural audiences reveal the differences in public values of urban and rural audiences regarding and governance model. The reason for the difference in public value lies in the knowledge gap between urban and rural audiences. First, the rural audience, especially elderly people, had limited access to the epidemic information. Although the existence of anti-epidemic slogans could not convey detailed information related to the epidemic, it could create a tense atmosphere and convey the determination of the government’s work. Second, the urban audience had a stronger ability to obtain information, and timely and accurate public information had a stronger appeal to them. The slogans that could not convey such information were not highly valued. Third, urban audiences, especially intellectuals, had a deep understanding of the political logic and policy measures of national governance. Although they believed that some specific means actually had a limited effect, they still affirmed its existence and significance to a certain extent.

The differences in public values affected the difficulty and focus of urban and rural anti-epidemic work, leading to differences in the government’s approach to urban and rural areas. First, rural audiences were limited by information acquisition and their lack of awareness of prevention. Governance measures related to their direct economic interests, even if put rudely, could prove to be more effective. Second, urban audiences had stronger information acquisition ability and awareness of prevention which led to a better understanding of, and higher cooperation with, various epidemic prevention measures. At the same time, the mild and civilized publicity language and the humanized management model were given higher evaluations.

Whether it is anti-epidemic slogans or anti-epidemic measures, there is a top-down release process and bottom-up reception process in governance models. It reflects the consensus and conflict between the governance and the audience; (1) For anti-epidemic slogans, rural audiences and publishers reached a greater consensus (that is, rural audiences recognized the type of violent and threatening anti-epidemic slogans), while urban audiences and publishers showed a certain value conflict (that is, there are some doubts about the language style and management effectiveness of the slogans). (2) For anti-epidemic work and the governance model, the urban audience and the governance reached a consensus to some extent, as the urban audience's information acquisition ability was stronger and more in line with the government's epidemic prevention work; in contrast, due to their limited knowledge, the rural audience's behavior was more difficult to manage, and the government tended to take personal interests into account in their management of the crisis.

Based on the knowledge gap and the difference of public value between urban and rural audiences, we should adopt differentiated measures in the actual slogan publishing and governance work. As such, more effective management methods should be adopted in rural areas that are devoted to knowledge dissemination and information communication, while more intelligent and humane management methods should be adopted in urban areas.

#### 5.2. Gentle or rude?

During the epidemic, China’s urban and rural areas showed differences in the public values of their audiences and the management of the...
governors, from anti-epidemic slogans to other epidemic prevention measures; rural areas were more inclined to use simple and brutal measures; rural areas were more inclined to use simple and brutal whereas urban areas used diverse, differentiated governance models and governance models and gain positive recognition from the audience, governors, from anti-epidemic slogans to other epidemic prevention measures; to some extent, such measures can be counted as “excessive,” causing inconveniences to production and life, and affecting the normal development of the local economy and society.

In terms of the actual results, the epidemic prevention measures in rural areas of China may be seen as “excessive.” As of May 13th, there were no epidemic outbreaks in >1300 counties in China. According to a spokesman for the China National Health and Care Commission, “through the monitoring of high, medium and low-risk counties, as of March 14th, the vast majority of counties are low-risk.” Therefore, it appears that although the epidemic in China’s county-level regions and rural areas is not very serious, these areas used the same means of management as the areas that faced severe outbreaks (including the use of road closures, door closures, and other extreme epidemic prevention measures); to some extent, such measures can be counted as “excessive,” causing inconveniences to production and life, and affecting the normal development of the local economy and society.

In terms of medical level and residents’ habits, the epidemic prevention measures in rural areas of China were not excessive, but a reasonable move in the “transitional” period of differentiated development under the urban and rural dual structure. Although the incidences and transmission risk in rural areas are not high, once infected, the cluster outbreak is more serious. For example, this was the case in the 24 cluster outbreaks in the village of Putian, Fujian; and the 15 cluster outbreaks in the town of Tongxin, Ningxia. In January 2021, the epidemic situation returned to Hebei Province, and 39 cases were confirmed between January 2 and 6, of which 34 cases came from 6 villages, accounting for 87%. At the same time, the epidemic prevention and control in rural areas face some difficult problems, especially the lack of awareness of self-protection. In addition, the rural medical health capacity is not strong, and the number of personnel is inadequate. In the context of the knowledge gap between urban and rural audiences, the difference in public values, and the gap between urban and rural medical levels and supply security, urban and rural areas adopt different degrees of governance that may be inconsistent with the actual epidemic; given this, rural areas’ prevention measures are not excessive.

As the epidemic becomes increasingly fierce around the world, different anti-epidemic slogans have appeared in many countries. For example, Italy published the slogan “either you stay at home or we all die” to persuade citizens not to leave their houses, and “after Istanbul, there is always Athens” to encourage citizens to firmly hope for success in fighting the epidemic; similarly, Malaysia published the slogan “to gather is to seek death; to visit friends is to harm” and “one person infected, the whole family died, all the property went to recipients,” which is more obviously rude and threatening. In each country or region, the role of the media, including slogans, should be given full attention, especially in terms of the role they play in arousing national awareness and shaping the social atmosphere. The deployment of epidemic prevention measures and their publicity needs to take into account the knowledge gap of the audience and the differences in public values. In China, the differences in the level of health care and the level of knowledge of citizens caused by urban and rural differences are significant. The knowledge gap and public value differences between different ages, economic levels, and occupations also need to be taken into account. In areas with perfect facilities, sufficient materials, and high quality of citizens, intelligent management can be adopted to control and isolate the outbreak in a small scope, while ensuring the daily life and normal economic and social operation of other people in the city or region. Stricter control methods, such as grid management, can be adopted in areas where materials are scarce, medical treatment level is low, citizens’ awareness of epidemic prevention is poor, and residents gather more. More attention should be paid to the allocation of epidemic prevention materials and facilities, the supply of subsistence goods, and the residents’ mental health.

CRediT authorship contribution statement

Yu Hou: Methodology, Investigation, Data curation, Writing – original draft, Validation. Tianxing Wei: Software, Visualization, Investigation, Writing – original draft. Zixin Zhan: Software, Visualization, Investigation, Writing – original draft. Fang Wang: Conceptualization, Writing – review & editing, Funding acquisition, Project administration.

Declaration of competing interest

None.

Acknowledgement

The authors would like to thank all the anonymous reviewers and editorial board of Cities for their constructive comments during the review process.

Funding

The authors disclose receipt of financial support for the research, authorship, and/or publication of this article from the Peking University’s Humanities and Social Sciences Special Project (Grant No. 34).

References

Alicia, H., Zhou, Z., Fang, Y., & Shi, L. (2017). The digital divide and health disparities in China: Evidence from a national survey and policy implications. Journal of Medical Internet Research, 19(9), E317.

Burt, R. (1995). Structural holes: The social structure of competition. Cambridge, Mass.: Harvard University Press.

Chen, C., LeGates, R., Zhao, M., & Fang, C. (2018). The changing rural-urban divide in China’s megacities. Cities, 81, 81–90.

Connolly, C., Ali, S. H., & Keil, R. (2020). On the relationships between COVID-19 and extended urbanization. Dialogues in Human Geography, 10(2), 213-216.

Diop, B. Z., Ngom, M., Pougue Biyong, C., & Pougue Biyong, J. N. (2020). The relatively young and rural population may limit the spread and severity of COVID-19 in Africa: A modelling study. BMJ Global Health. https://doi.org/10.1136/bmjgh-2020-002699

Dou, M., Gu, Y., & Xu, G. (2020). Social awareness of crisis events: A new perspective from social-physical network. Cities, 99, Article 102620.

Fan, F., Li, M., Ran, T., & Yang, D. (2020). Transfer-based decentralisation, economic growth and spatial inequality: Evidence from China’s 2002–2003 tax sharing reform. Urban Studies, 57(4), 806–826.

Fei, X. (2013). Earthbound China. Beijing: SIX Joint Publishing (in Chinese).

Fidler, D. P. (2020). The world health organization and pandemic politics. Thinck Global Health, April 10. Available at https://www.thinkglobalhealth.org/article/world-health-organization-and-pandemic-politics.

Gaudin, J. (2010). What is governance. Beijing: Social Sciences Academic Press (in Chinese).

Granovetter, M. (1973). The strength of weak ties. American Journal of Sociology, 78(6), 1360–1380.

Hu, A. (2015). Can education make us healthier? An urban-rural comparative analysis based on the Chinese general social survey of 2010.1. Social Sciences in China, 36(1), 64–82.
Huang, Z. (2008). Simple governance of centralization: Semi formal grassroots administration with quasi officials and dispute resolution as the main task. Open Era, 02, 19–29 (in Chinese).

Karmazin, A. (2020). Slogans as an organizational feature of Chinese politics. Journal of Chinese Political Science. https://doi.org/10.1007/s11366-019-09651-w

Li, J., Shi, L., Liang, H., Deng, G., & Xu, L. (2018). Urban-rural disparities in health care utilization among Chinese adults from 1993 to 2011. BMC Health Services Research, 18(1), 1–9.

Liu, H. (2013). Propaganda: Concept, discourse and its justification. Beijing: China Encyclopedia Press (in Chinese).

Marcuse, P. (2015). Depoliticizing urban discourse: How “we” write. Cities, 44, 152–156.

Moore, M. (2016). Creating public value. Cambridge, Mass.: Harvard University Press.

Moore, M. (2013). Recognizing public value. Cambridge, Mass.: Harvard University Press.

Sachs, J. D., Horton, R., Bagenal, J., Amor, Y. B., Caman, O. K., & Lafortune, G. (2020). The Lancet COVID-19 commission. Lancet (London, England). https://doi.org/10.1016/s0140-6736(20)31494-x

Shi, C., Shi, Q., & Guo, F. (2019). Environmental slogans and action: The rhetoric of local government work reports in China. Journal of Cleaner Production, 238, Article 117886.

Song, J., & Gee, J. P. (2020). Slogans with Chinese characteristics: The political functions of a discourse form. Discourse & Society, 31(2), 201–217.

Song, Z., Wang, C., & Bergmann, L. (2020). China’s prefectural digital divide: Spatial analysis and multivariate determinants of ICT diffusion. International Journal of Information Management, 52, 12.

Tichenor, P., Donohue, G., & Olien, C. (1970). Mass media flow and differential growth in knowledge. Public Opinion Quarterly, 34(2), 159–170.

Wang, D. (2019). Reduction but not elimination: Health inequalities among urban, migrant, and rural children in China—The deteriorating effect of the fathers’ education level. BMC Public Health, 19(1), 1–12.

Wang, G. (2018). Wall slogans: The communication of China’s family planning policy in rural areas. Rural History, 29(1), 99–112.