

Chinese Residents' Online Sports Appeal and Responsiveness Interaction and Evolution

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Abstract—In the era of big data, the Internet has become an important field of residents' sports life. Using python technology, the author selects sports appeal information among more than one million pieces of data from "message board for local leaders" in China, and conducts statistical processing and analysis. Space-time factors, topic types and appeal modes are the main influencing factors of government responsiveness, reflecting the development and evolution characteristics of the sports appeal and politic interaction.

Keywords—Internet; Chinese residents; sports appeal; interaction; evolution

I. INTRODUCTION

Entering the era of big data, the government's decision-making and the national reform plan are all based on big data. The analysis and research of big data directly affect the trend of society and the happiness of the people. Therefore, the study of big data is very important. The so-called big data refers to massive data. For these data without sampling, they can be closely linked structured data or irrelevant unstructured data, which can be processed and analyzed as a whole [3]. Research based on big data method has become a new trend in academic research. Such survey method can not only comprehensively make the understanding, but also specifically make the analysis. It is of great significance in promoting the development of disciplines and the process of social reform.

This paper studies the subject of online sports appeal of Chinese residents. The data comes from the "message board for local leaders", which is the only national online platform for political inquiry launched by people.cn in 2006 and officially operated in 2008. It has lasted for ten years. Over the past ten years, Chinese residents have inquired more than 1530,000 questions on the Internet, and nearly 1000,000

responses have been received by leaders of local Party and government departments and leading cadres of relevant departments, reaching two-thirds of the respondents. It can be said that it has become a major channel for Chinese residents' political aspirations, and has also attracted great attention from leading cadres of Party and government in all provinces and municipalities throughout the country. Since 2009, namely, the year after the platform's official operation, Anhui province, Shanxi province and other places have begun to try to use the government's "red-headed document" to solve the appeals of concentrated response and large public opinion, and have initially formed a model. And the people.cn regularly notifies the message board replies every month to form a mechanism. In addition, if "message board for local leaders" is searched in Baidu, 6.56 million pieces of information can be found; of which, 230,000 pieces are news-like information. It can be said that the social attention of the platform has been very high. However, if "message board for local leaders" is searched in CNKI, only 65 relevant studies and reports can be found. Apart from the achievements, it is also necessary to pay attention to the lack of researches on it.

In order to accurately screen out the contents on the sports appeal from the 1530,000 messages, the three key words of "physical education", "sports" and "fitness" were determined. A total of 4124 messages were obtained. After manual screening, nearly 3,000 effective messages were left. Although the number of messages was indeed less than that of other aspects, the Chinese residents' sports appeal has increased substantially in the past ten years (see "Table I"). The reasons behind this are multifaceted, including economic development, the importance of public health and the aggravation of China's aging, which are the reasons for the growth of people's sports appeals.

TABLE I. BASIC INFORMATION OF CHINESE RESIDENTS' SPORTS APPEALS FROM 2008 TO 2018

Year	Secretary (piece)	Percentage (%)	Provincial governor (piece)	Percentage (%)	Total (piece)
2008	24	64.86%	13	35.14%	37
2009	42	60.00%	28	40.00%	70
2010	98	72.06%	38	27.94%	136
2011	99	62.26%	60	37.74%	159
2012	87	62.14%	53	37.86%	140

Year	Secretary (piece)	Percentage (%)	Provincial governor (piece)	Percentage (%)	Total (piece)
2013	163	75.46%	53	24.54%	216
2014	191	64.53%	105	35.47%	296
2015	221	75.68%	71	24.32%	292
2016	277	71.76%	109	28.24%	386
2017	346	67.45%	167	32.55%	513
2018 (By Dec. 31)	390	71.04%	159	28.96%	549
Total	1938	69.36%	856	30.64%	2794

II. SPATIO-TEMPORAL ANALYSIS OF CHINESE RESIDENTS' ONLINE SPORTS APPEAL

Sports belong to superstructure and develop with the development of economy and society. With the development of the times and the improvement of economic level, the

sports appeals of Chinese residents inevitably undergo profound changes (see "Table II"). At the same time, it is also necessary to pay attention to the regional impact on sports appeals, the differences between the north and the south, the differences in the distribution of different ethnic groups and so on.

TABLE II. CHANGE OF ONLINE SPORTS APPEAL AMOUNT OF CHINESE RESIDENTS FROM 2008 TO 2018

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Pieces	37	70	136	159	140	216	296	292	386	513	549
Percentage	1.3	2.5	4.9	5.7	5.0	7.7	10.6	10.5	13.8	18.4	19.6

From the perspective of time, people's online sports appeal has undergone profound changes. Ten years ago, people's sports appeal focused on the shortage of sports venues and exercise yards. After ten years of government

investment and construction, people's sports appeal has changed, including sports environment, sports equipment, transportation convenience and other aspects.

TABLE III. STATISTICS OF TIME NODES FOR PEOPLE TO EXPRESS SPORTS APPEAL

Month	1	2	3	4	5	6	7	8	9	10	11	12
Number of times	169	170	270	257	256	261	290	295	304	175	192	155
Percentage	6.0	6.1	9.7	9.2	9.2	9.3	10.4	10.6	10.9	6.3	6.9	5.5

From the perspective of time horizon, the time nodes for people to express their sports appeals are different (see "Table III"). Generally speaking, the number of sports appeals in spring and summer is larger than that in autumn and winter. The number of sports appeals in July-September is larger, and the number of appeals in September is the largest, accounting for 10.9%. This shows the influence of seasonal changes on sports political appeals. However, after the Spring Festival in each year, the number of sports appeals issued by the people will have a significant increase, which is the impact of traditional Chinese festivals on the appeals of the people.

From the perspective of regional span, the sports appeals of the people in the north and south are obviously different (see "Fig. 1"). The people in the north appeal more to the improvement of sports environment and the increase of sports venues, while the people in the south appeal more to the improvement of sports transportation convenience and the suppression of sports noise.

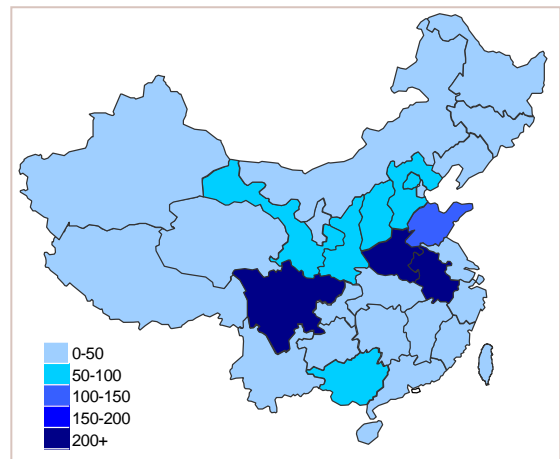


Fig. 1. Data map of posting quantity of provinces (Autonomous Regions).

From the perspective of ethnic distribution, the majority of people in Han nationality areas tend to improve the sports environment and the negative impact of sports, while the majority of people in ethnic minority areas tend to increase the appeal for sports venues and sports education. In this way, the two-way analysis of time and space is one of the important methods of the research in the big data era. The

analysis and sharing of data also introduces new mechanisms and opportunities for the framework of academic research [4].

III. NEW CHANGES OF CHINESE RESIDENTS' ONLINE SPORTS APPEAL

There must be new changes in Chinese residents' online sports appeal. To sum up, there are the following points (see "Table IV"):

TABLE IV. TYPES OF RESIDENTS' SPORTS APPEAL

Category	Improving field and facilities	Improving sports environment	Sports health care	Physical education teaching	Sports policies and regulations	Others
Posting quantity	803	509	282	722	355	122
Percentage	28.7	18.2	10.1	25.8	12.7	4.4

A. The Appeal for Stadiums and Sports Venues Is Still Large

In the analysis of the data from "message board for local leaders", more than 30% of the people still appeal to the increase in the number of stadiums. The Chinese government has been committed to the construction of stadiums and gymnasiums in the past decade. As the country with largest population, especially in the fourth-tier and fifth-tier cities or more remote areas, there is still a lack of modern stadiums and gymnasiums, which will continue to be a priority for the Chinese government.

B. People's Sports Appeals Are Diversified and Complicated

With the development of economy and society, the number of appeals for sports environment has increased dramatically. People's appeals for the environment are not only in modern places and convenient conditions, but also in air quality and surrounding environment. In the analysis of the data, there are more than 10% of the appeals for the aspect. In addition, due to the expansion of the scope of the city and the increase of the size, residents have higher requirements for the convenience of travel. From residence or office to stadiums and gymnasiums, there must be convenient transportation. People have higher requirements

for public travel system, private car parking, etc. Some sports venues with old facilities and inconvenient traffic obviously can not meet the needs of modern people.

C. Feeling New Changes, Facing New Problems and Meeting New Challenges

In data analysis, there is one appeal put forward widely. The people all over the country have raised the issue of "noise pollution around sports venues". Many cities have put forward the concept of "ten-minute fitness circle", that is, no more than ten minutes' distance from the place of residence to the place of sports. Some modern residential areas directly build the gymnasium in the community. However, it brings noise pollution to the people. Most of the petitioners are parents of students. Noise affects students' study and rest, so there is such an appeal. However, such appeals put forward new challenges for the Chinese government. Faced with new challenges, it is necessary to pay attention to them in time and put forward solutions as soon as possible.

IV. ANALYSIS OF CHINESE RESIDENTS' ONLINE SPORTS APPEAL TEXT

Through a study of the appeal text, the Chinese residents' online sports appeal is divided into the following five types (see "Table V"):

TABLE V. ANALYSIS ON TYPES OF CHINESE RESIDENTS' ONLINE SPORTS APPEAL TEXT

Types	Request-oriented	Complaint-oriented	Proposal-oriented	Support-oriented	Inquiry-oriented	Total
Number of times	1411	433	417	79	454	2794
Percentage	50.5	15.5	14.9	2.8	16.2	100.0

A. Request-oriented Appeal

In this paper, the residents' sports appeals, such as needs, requests and expectations, are attributed to request-oriented appeals. There are 1407 appeals, accounting for 50.4%, which is the type with the largest amount among all types. On the one hand, as a country with a large population, China still has many shortcomings and deficiencies in sports facilities, especially in remote areas and ethnic minority areas. On the other hand, it also shows that there are still many shortcomings in sports facilities in China, especially in remote areas and minority areas.

B. Complaint-oriented Appeal

This article classifies residents' complaints and dissatisfaction about sports into one type. There are 432 appeals, accounting for 15.5% of the total. Such a large amount of data does attract our attention. This shows that the problems in some aspects or in certain areas are still quite sharp and prominent, and the vital interests of the people are still being violated. In the report of the 19th National Congress, it is necessary to take the people-centered development path. Therefore, it takes a lot of time and energy to solve outstanding problems in this area, safeguard

and develop the vital interests of the broadest masses of the people.

C. Proposal-oriented Appeal

This article classifies the text of suggestions and opinions on the policies, programs and measures issued by the government as well as on some sports appeals into this type. There are 416 appeals, accounting for 17.9%. Such appeals have increased sharply in recent years as civic awareness has grown. The proposal-oriented appeal is what the government is most willing to see. According to the proposal-oriented appeals, the government can best grasp the public opinion.

D. Support-oriented Appeal

Support-oriented appeal refers to the appeal for support and approval of certain measures, policies and measures of the government. There are 79 appeals, accounting for 2.8%. From this figure, it is easy to see that Chinese residents still have low recognition of the improvement of sports political system, the construction of stadium and the improvement of the environment. Governments at all levels and the main leaders of the party should listen to the public opinions, and understand the public proposals, which are still the focus of their work. But the changes and efforts of the government should also be taken into account. With the proposals of such measures as the Blue Sky Protection Campaign and the Healthy China 2030, the support and recognition can still be observed.

E. Inquiry-oriented Appeal

Residents questioned 453 appeals on the public sports measures and services on the network platform, accounting for 16.2%. Although the number and proportion were not the highest, the response rate of the government was the highest for people's inquiry-oriented appeals. From this point, it is not difficult to see that the government and relevant party and government leaders pay attention to answering people's questions and puzzles, and attach importance to the interpretation of policies. Public sports serve more people.

V. THE RELATIONSHIP BETWEEN THE EXPRESSION FORM AND LENGTH OF THE APPEAL TEXT AND THE EDUCATION LEVEL

In sorting out and analyzing the message content on the "message board for local leaders", it is found that people of different educational levels will adopt different ways to express the same kind of appeal, and there are also differences in the length of the appeal text. Taking the topic of "sports noise pollution" as a research topic, there is the expression of "noise killing me, being unable to sleep, and when the immoral government taking action". At the same time, there is also the expression of "facing noise pollution in stadiums, we hope that the government will fight hard and provide residents with peace and comfort environment as soon as possible". With such rational analysis, and constructive appeal text, it is believed that there is a direct relationship with the education level.

The higher the education level is, the more thoughtful the appeal is, the easier it is to put forward constructive opinions and suggestions for the government to listen to and adopt. For the government and the ruling party, the clearer the idea is, the easier the policies and measures will fall to the ground as soon as possible, so as to solve the problem. But for the people who lack education, they adopt "straightforward", of course, this way is easier to present the problem to the government and the ruling party. However, this way is not conducive to the rapid solution of the problem.

At the same time, the length of residents' online sports appeal text is between 4-4000 characters, with an average of more than 300 characters. The length of online sports appeal text is also positively related to the education level. The higher the education level is, the more substantial the content of the appeal text is, the more compact the basis is, the more sufficient the reason and the more specific the measures are put forward. Of course, it can not be generalized that as long as the sports appeals expressed by the people with higher education are not "straightforward", which is also closely related to the subject's gender, environmental impact, emotional fluctuations, the personal interests and the degree of grasping the information and other factors. As a local leader, the affairs that need to be dealt with are too complicated. It is impossible to cover all aspects of the people's online sports appeals. Therefore, in order to quickly solve the problems concerned, choosing appropriate words and combinations can fully, accurately and specifically express the political appeals. From this point of view, the more comprehensive and specific the people's appeals are, the government's response and resolution will also increase.

VI. ANALYSIS OF THE GOVERNMENT'S RESPONSIVENESS TO THE ONLINE SPORTS APPEAL

A. The Government's Attention to Sports Appeal

With the proposal of Healthy China 2030 Plan, Chinese residents pay more and more attention to health. With China's entry into an aging society, the Chinese government attaches unprecedented importance to residents' formal sports appeal [6]. Of course, this kind of attention has a direct relationship with the frequency and quantity of the appeal that residents put forward on the Internet. By searching Baidu for "Sports Appeal of Chinese Residents", 178,000 entries are found, while searching for "Sports Appeal", an astonishing 5.51 million entries can be found. Such a huge amount of data is enough to show the importance people attach to sports, health and the overall development of individuals. Faced with such a high level of public concern, the Chinese government can never turn a blind eye to it.

At the same time, as a key work in the field of people's livelihood, sports are highly concerned whether in schools or in society. School sports affect the health and development of the next generation in China. It can be said that it affects hundreds of millions of people. Social sports are also a livelihood project that almost everyone participates in. From fitness trails in parks and along the lakes to perfect and convenient fitness equipment in communities, and then to

modern large-scale stadiums and gymnasiums, all of these are the contents of residents' sports appeals, and also the major livelihood projects that the Chinese government needs to consider and solve. Among the selected data, there are 1937 questions for the secretary, accounting for 69.3%; there are 855 questions for the mayor of the province, accounting for 30.6%. Such questions are inseparable from the political system structure of China. Similarly, the overall response rate of local party and government leaders reached 63.9%. On the one hand, this data reflects the importance that the government attaches to the people's sports appeals. On the other hand, it can also be seen that the government is confident and capable of solving and dealing with the appeals of Chinese residents in sports and politics, which is the attitude of a responsible government and a big country. "There is no big, small or urgent difference in anything." As long as it concerns the people's livelihood and the happiness index of the people, it should be the field that the government and its rulers care about and attach importance to.

B. Implementation and Analysis of the Government's Responsiveness Policy

To study the government's responsiveness policy of Chinese residents' online sports appeals can't be separated from the public's questions and the government's response. Only by analyzing and mastering the two at the same time, can it be available to fully understand the basic interactive mode of requesting the politics.

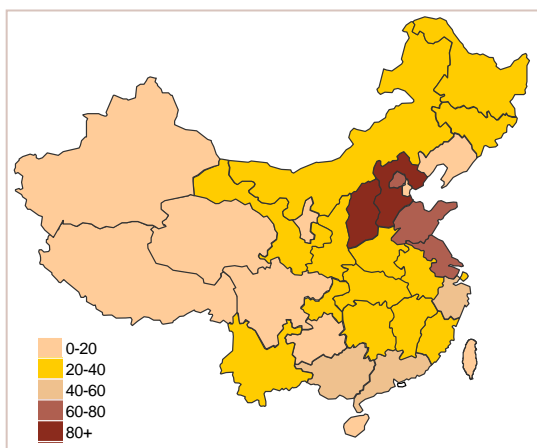


Fig. 2. Spatial distribution of government responses.

Although the overall response rate to Chinese residents' online sports appeals reached 63.9%, there are still differences in the specific point of view, and the response rate is higher in the central region. In addition, the government's response to and handling of sports appeals focuses on the construction of sports stadiums in "young, old, marginal and poor" areas, improvement of sports environment, renewal and maintenance of fitness facilities and equipment, improvement of public transportation system and allocation of sports education resources, etc. At the same time, new appeals, such as "sports noise", are emerging. The problem of sound pollution has also attracted enough attention from the government. In the next, "how to meet the

needs of residents for sports convenience and avoid disturbing the people by sports noise" has become a new topic for the government and local leaders to study and analyze.

In terms of policy implementation, Anhui province, Shanxi province and other provinces began to try to use the "red-headed document" to solve the people's appeals as early as in 2009. Today, it is not unusual for the government to use the "red-headed documents" to resolve appeals. There are many ways to solve the people's online sports appeals, such as leadership instructions, minutes of government meetings, the formulation of laws and regulations and other forms and means, so as to make this livelihood project bigger and better, and put it into practice.

VII. CONCLUSION

In recent years, with the development of the Internet, the network has not only become a "hub" for information exchange, but also an important platform and place for carrying out the political life. The political interaction in cyberspace has become increasingly important and frequent. More and more people use the network to express various political appeals, including sports appeals. At the same time, the government is also developing its "network capabilities", and it begin to use the Internet to understand and grasp social conditions and public opinion, especially during the annual "two sessions," the role of "message board for local leaders" can be "pivotal".

As far as residents' online sports appeal is concerned, first of all, Chinese residents' attitude towards appeal and channels of political inquiry are changing. They never dare to ask, do not know how to ask and develop to dare to ask, diligently ask, and then to the deep and detailed inquiry at present. This is not only due to the enhancement of people's health awareness, but also because of the improvement of platforms, the increase of channels, and the attention of the government and other factors.

Secondly, the government's responsiveness is based on a sound responsiveness system. At the same time, through the "message board for local leaders", it is not difficult to see that most provinces have established a relatively fixed and perfect responsiveness system, and this system should be long-term and follow-up. Regarding people's sports appeals expressed on the Internet, local governments have also undergone qualitative changes in their attitudes and behaviors. They have actively listened to the voices of the people, played the role of "social service provider", put the opinions and needs of the people in the first place, and never sacrificed the vital interests of the people as a means of development and image engineering. "People-oriented and mass-centered" concept should be the concept that the government should have in this era.

Finally, in order to satisfy the residents' sports appeals, make the people enjoy good and perfect stadiums and facilities, and fully exercise the right to enjoy health, it is necessary not only for the people to put forward reasonable and rational sports appeals, but also for the government to face the appeals of the people correctly. The government

can't response to low-difficulty, and easy-to-operate in timely, and "turn a blind eye" on the difficult appeals. To further strengthen the construction and perfection of the government's responsiveness policy is still a key issue in the current and future period of time. In general, in order to raise the Chinese sports system and people's physical fitness to a higher level, it is needed to unify the joint efforts of the broad masses of the people and the governments at all levels. Although the road is difficult, the results will be abundant.

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