# Two of a Kind or One Far Behind: Comparative Analysis of Internet Media and Traditional Media behind Public Policy Agenda

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## Abstract

With the rapid development of internet, the question comes up as to who plays a stronger role in the creation of the public policy agenda: Internet media or the traditional media? This study takes the case of PM 2.5 information exposure as an example to explore how internet media and traditional media work together to promote the formation of public policy. By selecting samples of internet media, traditional media and policy agenda, and by way of the empirical analysis, we came to the conclusion that Internet media and the traditional media have the same agenda setting function; these two parties have their own advantages and influence each other and promote the establishment of the policy agenda together. This study supplements the theory of agenda setting.

## Keywords

## 1. Introduction

"All I know is from the newspapers." American humorist Rogers said in his satirical political commentary. Lieberman once wrote in his book "Public Media" that the three countries of Britain, France, and Germany had long fought. The people living in these three countries on an island learned in the newspaper six weeks later. The news, shockingly, was that during the six weeks they also got along like their friends. In fact, they have become the enemy of each other without knowing the situation. This example vividly shows that mass media has an indispensable position in social communication [1]. The mass media agenda has had an important impact on the public agenda and policy agenda. Cohen has

proposed the famous agenda setting theory, namely the "media agenda Influence the public agenda, and the public agenda influences the policy agenda" [2].

With the rapid development of the Internet, the development of online media has become unstoppable. Compared with traditional media, online media have features such as "breakthrough time and space", "real-time interaction", and "highly openness and personalization". There has been a very important influence on the traditional media agenda. The new trend of media development also puts forward new requirements for government governance. The government's decision must be based on the premise of extensive information acquisition and effective use. In order to ensure the scientificity, legitimacy, and rationality of decision-making, the media is playing a role in the public policy agenda. Its role is one of the important factors that policymakers have to consider. Will the agenda-setting theory still apply in today's era of fierce development of online media? Compared with traditional media, in the process of promoting the creation of the public policy agenda, the role of online media is stronger or weaker. This is the core issue of this article.

In recent years, more and more online media and traditional media have joined forces to promote the creation of public policy agendas. The most famous one is the PM 2.5 event. On the occasion of the fall and winter of 2011, the haze days that lasted for several days began to erupt in China's interior areas including Beijing. The US Embassy in Beijing announced Beijing PM 2.5 data in December 2011. The data showed Beijing's air quality index. The table has been severely detonated, but the term "PM 2.5" has never appeared in China's air quality index, and it shows that the air quality is good. The huge differences in the data between China and the United States have triggered a heated debate among the public. The highly professional word "PM 2.5" has begun to enter the public's view.

The large-scale continuous haze weather has seriously affected the lives of the people. Therefore, the majority of Internet users have adopted online search methods and vocal methods in forums and Weibo to initiate initiatives and strongly demand that the Chinese government take corresponding measures to publish PM 2.5 data. The major news media also reported one after another. In the fourth quarter of 2011, the domestic media reported a total of 168,100 articles on the topic of "PM 2.5 Including Air Quality Standards" [3]. The public and many other NGO, such as the "Green Club Air Testing and Environmental Protection Group", have begun to take to the streets. A series of online and offline activities have been carried out, and public opinion further brewing fermentation. On November 16th of the same year, the Ministry of Environmental Protection issued the "Ambient Air Quality Standards" and publicly solicited opinions for the second time to formulate the PM 2.5 standard. Since the deadline for soliciting comments, the Ministry of Environmental Protection has issued a statement saying that it has received more than 1500 feedback from various sectors of the industry through e-mails and other methods. The proposal to

incorporate PM 2.5 into air quality standards has been widely recognized. In addition to agreeing with this policy, industry experts and various media have also put forward constructive opinions. At the EPA's executive meeting on December 30 of the same year, the newly revised Ambient Air Quality Standards was reviewed and approved. On January 21, 2012, the Beijing PM 2.5 test data was officially announced for the first time. On February 20, 2012, the Beijing Municipal Government planned to incorporate PM 2.5 indicators into the performance evaluation of leading cadres to further demonstrate the determination to control haze. On February 29, at the executive meeting convened by the State Council, Premier Wen Jiabao of the State Council formally agreed to issue the newly revised "Ambient Air Quality Standard" and wrote an article requiring that the environment be prepared for a protracted war, and that comprehensive prevention and control of air pollution be required. Deployment work. On March 5th, Premier Wen Jiabao announced in his government work report that this year the project will monitor fine particles (PM 2.5) in key regions such as the Beijing-Tianjin-Hebei region, the Yangtze River Delta and the Pearl River Delta, as well as municipalities and provincial capitals. Since then, adding PM 2.5 monitoring data has been written into the government work report. Above, the public vocalized through online media. Public opinion has been warmed up through traditional media coverage of news, thereby promoting the media agenda to enter the policy agenda.

Therefore, this article selects the PM 2.5 incident as a case study, and explores the role of both online media and traditional media in promoting the formation of public policies; the roles of the two which is stronger, and what kind of interaction between them; and tried to verify and supplement the agenda setting theory.

## 2. Literature Review

The relationship between the media and public policy belongs to the category of political communication. Since the 1970s, political communication has become the "remarkable learning" of the West. However, the research results of early scholars on the relationship between mass media and public policy are not many. Focus on elections [4]. For example, McNeil discussed the relationship between the media and political parties and the election campaign, and proposed that the media and political party elections have dialectical relations [5]. But then some policy scholars in the study of the media and public policy made a certain discussion, and the agenda setting theory is to explain the relationship between media and public policy is the most classic theoretical framework.

### 2.1. Study on the Influence of Traditional Media on Public Policy

Since Lipman puts forward the hypothesis of the relationship between the mass media and the public agenda, research on media agenda setting theory has gradually developed and improved. McCommus has defined the theory of media

agenda setting, that is, "The media through the day-to-day news screening and arrangement, editors and supervisors affect our understanding of what is currently the most important thing, this kind of impact on various topics The prominence on the public agenda is called the agenda setting role of the media." [6]. Rogers and Dilling summarize the innovation process of the theory and method of media agenda setting, as shown in Table 1 [7].

Rogers & Dearing vividly concluded in 1988 that the agenda setting process is composed of closely related media agendas, public agendas, and policy agenda [6], as shown in Figure 1. The first is that the media captures the attention of the public caused by reports of influential and compelling new events and thus gets into the public agenda; the dissemination between various individuals and others and the real world indicators on the importance of the issue or event It will speed up the dissemination process, and eventually make concerted efforts to enter the policy agenda.

More and more studies have verified the influence of the mass media on the public agenda. Later, scholars focused their attention on the source of the media agenda, namely: "Who has set the media agenda?" [8]. McCombe uses three basics. The level answers this question, namely external news sources, other news media and news norms [5].

The research on the setting of the media agenda by Chinese scholars began in the 1980s. Taiwan scholar Peng Yu believes that the media can effectively influence the setting of the public policy agenda through investigation and reporting

Table 1. Theories and methods of media agenda setting innovation process.

| The innovation of theory and method | The author and the time of the earliest publication |
| --- | --- |
| 1) Determine the specific relationship between the mass media agenda and the public agenda | Wallet Lippmann (1992) |
| 2) Determine the status of the media and give it function, give the issue a distinctiveness | Paul F. Lazarsfeld and Rober K. Merton (1948/1964) |
| 3) Clarify the metaphorical statement of agenda setting | Bernad C. Cohen (1963) |
| 4) Name the agenda setting | Maxwell McComs and Donald Shaw (1972) |
| 5) Study the ranking of topics in the setting of the public agenda | Maxwell McComs and Donald Shaw (1972) |
| 6) Provides a model for the public policy agenda setting process | Roger W. Cobb and Charles D. Elder (1972/1983) |
| 7) Create a time-varying study of the public agenda agenda at the macro-analysis level and study the relationship between real-world indicators and the media agenda | G. Ray Funkhouser (1972) |
| 8) Experimental study of public agenda setting at the level of micro analysis | Shanto Iyengar and Donald R. Kinder (1987) |

Sources of the graph: Rogers and Dearring (1996).
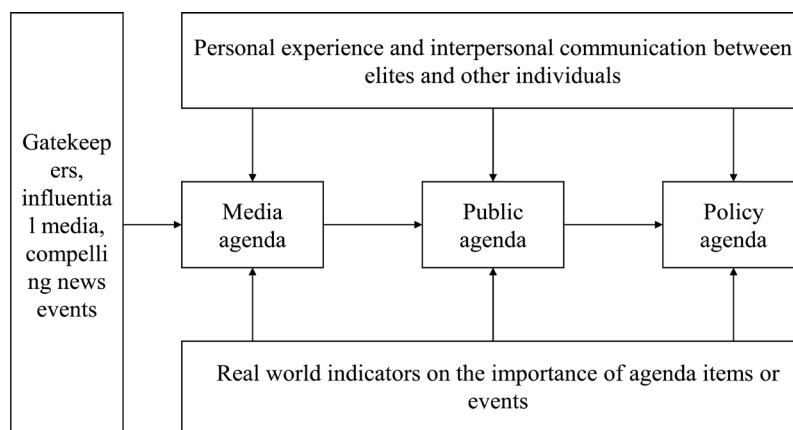
Source: Rogers and Dearring (1988).

**Figure 1.** The three main components of the agenda setting process: the media agenda, the public agenda, and the policy agenda.

[9]. Taiwan scholar Zhu Zhihong also agrees that the mass media can really encourage people's interest in certain issues and raise people's interest in policies. However, there are still situations where the mass media have limited impact on public policies [10]. Hong Kong scholar Wang Shaoguang (2008a) divided the process of setting up the policy agenda into the following six modes based on public participation in the public policy agenda: "Mobilization mode, leveraging mode, external pressure mode, closing mode, internal reference mode, and the mode of writing." [11]. The author focused on examining the role played by the media in the external pressure model. He believes that in the external pressure model, advocates of the policy agenda will favor the use of the news media as a means of promoting public opinion and forming enough for policy makers. He believes that in the external pressure model, advocates of the policy agenda will favor the use of the news media as a means to boost public opinion and create enough pressure on policymakers to compete for public support and thus enter the policy agenda. Xie Yue studies the American mass media and democratic politics and believes that the media and democracy have a certain relevance. He pointed out that the media plays a decisive role in both social life and political life [12]. He Zhiwu (2008) examined the mass media in the Wuhan Municipal Government by using the political system analysis method. The role of the three policy links in importing, transforming, and exporting the three-wheeled motorcycle is forbidden [13]. Wang Jinghua (2012) studying the relationship between the US media and the government, The three main mechanisms for the mass media and government operations in the United States have been derived: motivational mechanisms, control mechanisms, and integration mechanisms [14]. Yan Yanhua conducted an empirical analysis of China's agricultural policy and media coverage. Conclusions: There is a significant positive correlation between China's policy agenda and the media agenda. The policy agenda has a significant influence on the media agenda, while the media agenda has a relatively limited impact on the policy agenda [15]. Liu Dandan used the reports of the

"People's Daily" and other four newspapers as research samples and conducted content analysis. He concluded that the public media's report on the reform of public hospitals is still dominated by the government and the market [16].

As the scope of public issues has already surpassed the private sphere, and at the same time it has been subject to constraints from various aspects such as socio-economic politics, people's reliance on popular reports has grown [17]. Especially in China, today there is no civil society yet. Currently there are countries that rely on mass media. The "civil media society" that interacts with social citizens [18]. Traditional media provide channels for government, citizens and society to express their appeals. This will have an impact on the public policy agenda.

## 2.2. Study on the Influence of Online Media on Public Policy

For a long time, Chinese traditional media has assumed the role of public opinion in opening up public opinion. The status of mainstream media has always been occupied by traditional media, but this will inevitably lead to a relatively passive public position in the traditional communication situation. However, the emergence of new media has exerted an impact on this pattern. The real-time interactive software such as microblogs and forums opened up the frontier for the public's free vocalization and gradually formed a force that cannot be ignored. It is also bound to influence the setting of the public policy agenda.

The concept of "post-mass communication" was first proposed by Su Kejun. He pointed out that due to the emergence of new media driven by the Internet, the one-way mode of communication across the traditional mass media will be replaced by the two-way interactive communication mode of online media. The emergence of a variety of new media forms has enriched the traditional forms of traditional media. At the same time, it meets the diverse needs of the public [19]. Xie Xinzhou through questionnaires The method to verify the role of the media's agenda setting, he pointed out that although this role exists in the network, but the results obtained by the study are only partially consistent with the Internet media agenda and public agenda, and play a significant role [20]. Zheng Xiping affirmed the positive influence of new media on the setting of the public policy agenda [21]. Deng Zhe also questioned the applicability of the agenda setting theory in the flourishing era of new media. Analyze the case, collect microblogs of opinion leaders in Weibo, analyze the content of the media, analyze the interactive relationship between the media agenda, the public agenda, and the policy agenda, and draw a path for Internet users to use the new media to set the agenda. Describe its process of promoting the formation of public policies [22]. Leng Tao, from the perspective of policy learning networks, The impact of new media on Chinese policy learning network has been proposed, that is, from "closed to open, from locality to derealization, and from one-way control to multiple interactions, and the realization of the transition has mainly come from the society that Weibo has empowerment and redistribution of resources." [23].

In summary, it can be concluded that the influence of online media on the public policy agenda has been continuously enhanced with the progress of the times, with little impact on the policy agenda during the rise period and a certain mature system has not been formed. With the rapid development of the Internet, the influence of online media is also spreading day by day. The increasingly important influence on the policy agenda has become a new force that cannot be ignored by policy makers.

### 2.3. Study on the Relationship between Traditional Media and Online Media

From the 1980s onwards, scholars' research on agenda setting has gradually shifted from "who is setting the policy agenda" to "who is setting the media agenda" and the "mediating agenda setting theory" has emerged. McLuhan (1977) has pointed out that different media are only in different forms, and media of different natures can coexist instead of annihilate each other [24]. That the new media production does not mean that the old media will die, just like the emergence of television did not make newspapers disappear, and the emergence of new media represented by the Internet would not mean the demise of traditional media represented by newspapers. The two could coexist with each other. Neumann's study of the West German media system, including newspapers, radio, and television, found that most journalists have a tendency to refer to one another for reference. He called this phenomenon the "mutually joint setting" of the media [25]. Walgrave *et al.* through a longitudinal study of Bulgaria's political circles for 10 years, it was concluded that the media did have a certain degree of influence on the Congress and the government's agenda, with newspaper media being more powerful than TV media [26]. Bode *et al.* believe that social media has strong advocacy capabilities through its empirical research on three major social media platforms: Facebook, Twitter, and Youtube. Intervention effects on government policies [27]. Ferst *et al.* conducted an empirical study of 2253 media workers in Europe. The survey results show that information dissemination has undergone a tremendous transformation from mass media to media communication, especially in Western Europe and Northern Europe and regions are even more pronounced [28].

Dong Tiance, a scholar of China, took the interaction between newspapers and BBS in 2003 as an example to study the phenomenon that online media and traditional media have the phenomenon of divergence and resonance, resonance and fracture [29]. Zhang Li passes multiple cases A study was conducted to find out that in the Internet age, the assumption that the "media agenda affects the public agenda" in the traditional agenda setting model can still be confirmed [30]. Zeng Runxi (2015a) conducted an empirical study of the relevancy of the media agenda and policy agenda and concluded that compared with the online media agenda, traditional media have a stronger influence on the policy agenda [31]. Tian Fengqi (2017) believes that with the traditional media. It is difficult to

create a wide range of public opinion pressure. Compared with the traditional media, online media has made up for the lack of traditional media due to its features such as two-way interaction and openness, which has provided a convenient channel for policy target groups to reach the vision of policy makers [32].

The above research shows that the relationship between online media and traditional media is attracting more and more attention from scholars. However, relevant scholars mostly focus on normative research. Empirical research mostly focuses on examining the correlation between the two, or simply researching the network. The characteristics of the media itself, or the analysis of the path of online media to promote public policies, lacks the respective roles played by online media and traditional media in promoting the formation of public policies, and the empirical and quantitative studies of specific interactions. It is planned to use the PM 2.5 incident as an example to unveil whether online media and traditional media are indiscriminate or ineffective in promoting public policy formation. At the same time, it studies the relationship between the online media and traditional media promotion policies.

## 3. Research Methods and Analysis Framework

Quantitative analysis methods such as descriptive analysis methods, correlation analysis, and causal analysis are used to analyze the internal links between online media, traditional media, and policy agendas. Content analysis is used to analyze the content of forums, microblog content, traditional media coverage, and policy content, and online media and traditional media are studied. This study examines how online media and traditional media promote the creation of policy agendas and analyze their respective roles.

### 3.1. Sources of Data

This study selected electronic newspapers of cnki.net, Sina Weibo, and policies issued by the Ministry of Environmental Protection as sources of data for analysis and quantitative analysis. It also adopts the typical operational approach established by ME Mccombs in the 1970s: the policy agenda and the media agenda were operated on the basis of the number of policies and the number of news reports on a particular topic [33], because the U.S. Embassy in China was pushing in 2010, specially announced the monitoring data of PM 2.5 in Beijing. Since then, it has gradually triggered public discussion. The online media and traditional media reported that the State Council promoted PM 2.5 monitoring data to the government work report in March 2012. Taking into account the comprehensive analysis of the various stages of the policy introduction, this study intends to select data from January 2010 to January 2013 for analysis.[1]

### 3.1.1. Determination of the Traditional Media Agenda
Considering the availability of resources and considering the availability of re-

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[1]Among them, Sina Weibo has 4280 discussions, Tencent Weibo 490, NetEase Weibo 200, Powerful Forum 27,400, End of the World 3980, and Kaidi Community 2300.

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sources, this study selects the CNKI's massive newspaper resources to analyze. In order to ensure the comprehensiveness of the sample, the title or the text of January 1, 2010 to January 1, 2013 is selected to include "PM 2.5/Air particulate matter/smog/air pollution" and "Incorporate the full coverage of air quality standards", excluding duplicates, reports unrelated to the content of the study, a total of 652, and according to chronological order of the various reports were summarized.

### 3.1.2. Determination of Online Media Agenda

As for the online media agenda, according to the data in the 2011 China Weibo Political Report published by Shenyang (2012), netizens discussed the topic of "PM 2.5 Including Air Quality Standards" mainly through Weibo and forums. The discussion volume on Sina Weibo and the Powerful Forum far exceeds the amount of discussion in other online media. Among them, Sina Weibo's discussion volume was 4280, Tencent Weibo was 490, and Net Ease Weibo's was 200; the Powers Forum had 27,400 discussions, the Tianya community was 3980, and the Kaidi community was 2300. Therefore, this study will use data from the Powers Forum and Sina Weibo as data sources for the online agenda. Among them, the articles of "PM 2.5/air particulate/haze smog/air pollution" and "Inclusion of air quality standards" were included in the main post from January 1, 2010 to January 1, 2013 in the Power Forum, and the duplication and A total of 552 posts were added to the topic-independent posts.

Sina Weibo can classify Weibo bloggers into celebrities, activists, and ordinary netizens based on the number of fans and the level of activity (Deng Yi, 2016). The influence of ordinary netizens is far lower than that of celebrities and activists. Most of them adopt actions of reading, commenting, and reposting Weibo, and due to the limited influence of ordinary netizens, it is difficult to cause even ordinary active netizens to post messages. It is very difficult for them to cause widespread concern even if they take the initiative to post. The celebrities and activists who have strong influence are often forwarded by ordinary netizens and become the main body of information diffusion. Such bloggers belong to opinion leaders and promote the agenda setting process of online media. Therefore, the method of random sampling in the content of Sina Weibo will result in insufficient representation of the sample. Therefore, this paper adopts the "judgment sampling" method in the non-random sampling method and selects Sina Weibo content that belongs to opinion leaders about PM 2.5. In the PM 2.5 incident, the representative of celebrities was Pan Shiyi, because he focused on the controversy about PM 2.5 and introduced more stringent air quality standards in Weibo. A report published by the British BBC on November 19th, 2011 titled "Beijing in air pollution action" quoted Pan Shiyi's related microblogs, which attracted attention from the public at home and abroad for the PM 2.5 incident, and since then it has continued to the publication of hundreds of related microblogs, and has led to the rise of the topic and has become a representative of celebrities. The representatives of the activists are the "ecological outlook on the world" and the "eccentric grace". The blogger "ecological outlook on the world"

is a member of the Darwin asking Nature Knowledge Society and the Natural University Environmental Health Institute, paying close attention to the ecological environment and healthy development. The concentration monitoring of PM 2.5 was once aroused, causing constant attention and forwarding by netizens. "Strange Grace" is a well-known media person who had applied for disclosure of PM 2.5 data to the Beijing Municipal Bureau of Environmental Protection and received a response, which is the key to promoting the agenda character. Therefore, the collection of "ecological world view", "surprising grace", "Pan Shiyi" belonging to the opinion leaders included "PM 2.5/air particulate/fog/air pollution" from January 1, 2010 to January 1, 2013 "and the Weibo included in the air quality standards, excluding duplicates and irrelevant topics, a total of 211, and sorting and summarizing each report in chronological order".

### 3.1.3. Determination of the Policy Agenda

In response to the public policy agenda, a total of 204 policies related to PM 2.5 issued by the State Council and the Ministry of Environmental Protection from January 1, 2010 to January 1, 2013 were selected, and the reports were sorted and summarized in chronological order.

## 3.2. Statistical Analysis Methods

Descriptive statistical methods are used to analyze and present the data of the online media agenda, traditional media agenda, and policy agenda. For the impact of online media and traditional media on public policies, Spss software and Eviews 6.0 software are used for these three types of samples. Then use Spss software and Eviews6.0 software to apply correlation analysis and causal analysis to these three types of samples and present the analysis results.

### 3.2.1. Unit Root Test

In order to test whether the time series of variables is stable, the unit root test method is needed. Therefore, before adopting Granger causal analysis, a unit root test of the traditional media agenda variables and policy agenda variables is required. Its inspection idea is:

$$\Delta x_t = c + \delta_t + \gamma x_{t-1} + \sum_{i=1}^{k-1} \rho i \Delta x_{t-i} + \varepsilon_t \tag{1}$$

In Equation (1), $x_t$ is the observed value of the period $t$, and $x_t = x_t - x_{t-1}$ represents the first-order difference of the sequence; $\varepsilon_t$ is white noise. The original hypothesis of the ADF test is H0: $\gamma = 0$, indicating that the time series contains a unit root, *i.e.* the time series is not smooth. If the test results reject the null hypothesis, it means that the time series is stable.

### 3.2.2. Granger Causality Test

Granger causality test is a commonly used test method to test whether there is causality between two variables (Engle, *et al.* 1987). The Granger causality test assumes that information about the predictions of each of y and x is contained in the

time series of these variables, and tests to construct the following regression model:

$$y_t = \sum_{i=1}^{m} \alpha_i y_{t-i} + \sum_{j=1}^{m} \beta_j x_{t-j} + \varepsilon_{1t} \tag{2}$$

$$x_t = \sum_{i=1}^{n} \lambda_i x_{t-i} + \sum_{j=1}^{n} \mu_j y_{t-j} + \varepsilon_{2t} \tag{3}$$

In Equations ((2) and (3)), the $x_t$ and $y_t$ represent the time series, the $\varepsilon_{1t}$ and $\varepsilon_{2t}$ represent the white noise, and it is assumed that they are not related to each other. $m$, $n$ represents the lag order. The original hypotheses of equations (2) and (3) are: $\beta_1 = \beta_2 = \cdots = \beta_m = 0$ and $\mu_1 = \mu_2 = \cdots = \mu_n = 0$. If $\beta_j$ is significantly not 0 in the overall, and $\mu_j$ is significantly equal to 0 in the overall, then we can think that there is a single cause and effect of $x$ to $y$, that is, the variable $x$ is the cause of the change of the variable $y$. On the other hand, it can be considered that there is a single causal relationship between $y$ and $x$, and an inverse conclusion can be drawn: The variable $y$ is the cause of the change in the variable $x$. If both appearance $\beta_j$ and $\mu_j$ overall situation are not significantly 0, then it can be concluded that there is a bidirectional causal relationship between $y$ and $x$.

## 4. Data Analysis Results

### 4.1. Descriptive Statistical Analysis

Table 2 lists the descriptive statistical analysis results of the three variables. From January 2010 to January 2012, within the three-year period, the State Council and the Ministry of Environmental Protection issued an average monthly PM 2.5 policy of approximately 6. The standard deviation is 8, and the number of policy items promulgated on a monthly basis does not change much; the average monthly reported volume of PM 2.5 on traditional media is smaller than the number of online media, and the standard deviations of the two are relatively large, showing different. The changes in the number of months are quite different.

Figure 2 shows the trends of the policy agenda, traditional media agenda, and online media agenda over the course of a year. It can be seen from the end of October 2012 that both the online media and the traditional media for the PM 2.5 event. The number of discussions and reports were low, but online media disclosed the event as early as possible. Until November 2011, the amount of discussion on PM 2.5 incidents between online media and traditional media began

**Table 2.** Descriptive statistics analysis table.

|  | Total amount | Maximum value | Minimum value | Mean value | Standard deviation |
|---|---|---|---|---|---|
| Policy agenda | 207 | 40 | 0 | 6 | 8 |
| Traditional media agenda | 653 | 118 | 0 | 19 | 31 |
| Online media agenda | 763 | 164 | 0 | 22 | 46 |

Source: author homemade.
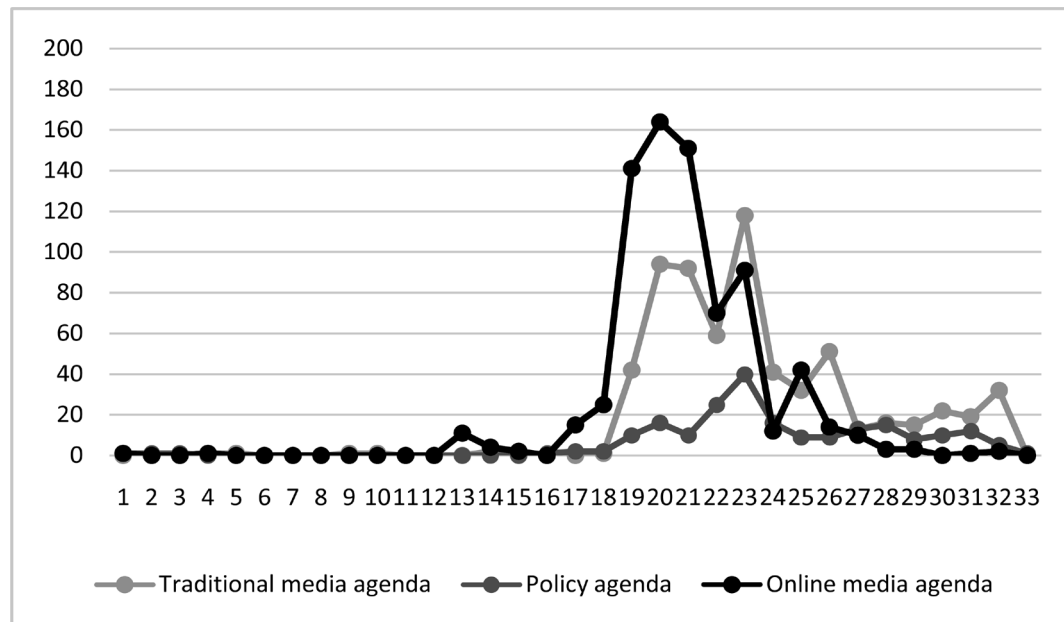
Source: author homemade.

**Figure 2.** Variable trends.

to gradually increase. This was aggravated by hazy weather that gradually worsened in the autumn and winter and caused widespread public concern. However, the difference is that the peak of online media discussion occurred in December. At this time, both the posting of the Powerful Forum and the content of Sina Weibo were appeals for the government to release PM 2.5 official test data as soon as possible. The highest value of traditional media reports appeared in March. In general, the development trends of the two types of media are roughly the same, and they have a strong affinity with the policy agenda.

## 4.2. Correlation Analysis

This study applied the Pearson correlation to analyze the relevance of the policy agenda, the traditional media agenda, and the online media agenda. Tables 3-5 show the results of relevant analysis. It can be concluded that the traditional media agenda compared with the online media agenda, both have a significant positive correlation with the policy agenda, and there is also a significant correlation between traditional media and online media. From this, it can be concluded that the two have an impact on the policy agenda. There is no difference between the two, and there are interactions between the two. Can you think that traditional media and online media set a public policy agenda? What kind of causal relationship does the relationship between the three parties have? The next step is to test the causal relationship between traditional media, online media, and public policies.

## 4.3. Unit Root Test Results

Before carrying out the Granger causality test on the variables, the ADF unit

root stationarity test needs to be performed on the variables. The test results using the reviews 6.0 software are shown in Table 6. The original sequence of the traditional media agenda, network media agenda, and policy agenda is at 1% significance level is a stationary sequence, so the above sequence can be directly Granger causal analysis.

## 4.4. Granger Causality Test Results

Table 7 shows the results of the Granger causality test of variables. It shows that

**Table 3.** Results of analysis of traditional media and policy agenda.

|  | Correlation coefficient | Policy agenda |
|---|---|---|
| Traditional media agenda | Spearman's rho | 0.778** |

Note: ***P < 0.01, **P < 0.05, *P < 0.1.

**Table 4.** Results of analysis of online media and policy agenda.

|  | Correlation coefficient | Online media agenda |
|---|---|---|
| Policy agenda | Spearman's rho | 0.680** |

Note: ***P < 0.01, **P < 0.05, *P < 0.1.

**Table 5.** Results of analysis of online media and traditional media agenda.

|  | Correlation coefficient | Traditional media agenda |
|---|---|---|
| Online media | Spearman's rho | 0.818** |

Note: ***P < 0.01, **P < 0.05, *P < 0.1.

**Table 6.** Unit root test results for traditional media, online media, and policy agenda (January 2011-January 2013).

| Variables | ADF value | 5% threshold | 10% threshold | Conclusion |
|---|---|---|---|---|
| Traditional media agenda | −2.21 | −2.36 | −2.01 | smooth |
| Online media | −2.32 | −2.73 | −2.13 | smooth |
| Policy agenda | −2.17 | −2.99 | −2.07 | smooth |

Source: author homemade.

**Table 7.** Variable causality test results (January 2011-January 2013).

| The original hypothesis: not the reason for the change | F value | P value | Conclusion |
|---|---|---|---|
| Traditional Media → Policy Agenda | 15.261 | 0.006 | Refuse |
| Policy Agenda → Traditional Media | 2.306 | 0.28 | Accept |
| Online Media → Policy Agenda | 11.481 | 0.001 | Refuse |
| Policy Agenda → Internet Media | 0.712 | 0.499 | Accept |
| Traditional Media → Online Media | 4.435 | 0.022 | Refuse |
| Online Media → Traditional Media | 11.672 | 0.000 | Refuse |

Source: author homemade.

there is a one-way causal relationship between the traditional media agenda and online media and the policy agenda. At the same time, there is a two-way causal relationship between the online media agenda and the traditional media agenda, and online media versus traditional media. The causal effect is even more pronounced. The statistical analysis results show that for the PM 2.5 event, traditional media and online media jointly promote the public policy agenda, while the traditional media agenda and online media have mutual influence effects, among which the online media has a more significant role in promoting the traditional media.

## 5. Summary and Discussion

The core issue of this study is: In the process of promoting the creation of the public policy agenda, whether the traditional media or the online media are playing a role in the creation of the public policy agenda? Who is more powerful in the end? What kind of interactive relationship exists between the two? From the perspective of correlation analysis and causal analysis, both of them are independent and jointly promote the formation of public policies. At the same time, they also influence each other, and the role of online media in promoting traditional media is even more pronounced. The relationship between the three is illustrated in Figure 3, which shows that today's vigorously-developed online media rely on the Internet. The role of online media is to first trigger public opinion and provide a platform for dialogue between the public and decision makers. As public opinion heats up, the traditional media have sensed public opinion and reported on it. At the same time, in the process of setting the agenda, they have each exerted their respective advantages, and they have jointly formed public pressure promotion policies.

### 5.1. Traditional Media and Online Media Have Various Advantages in Promoting the Policy Agenda

Judging from the empirical analysis results, the promotion of PM 2.5 incidents into the government work report prompted the Ministry of Environmental Protection to introduce new policies. Compared with the traditional media agenda
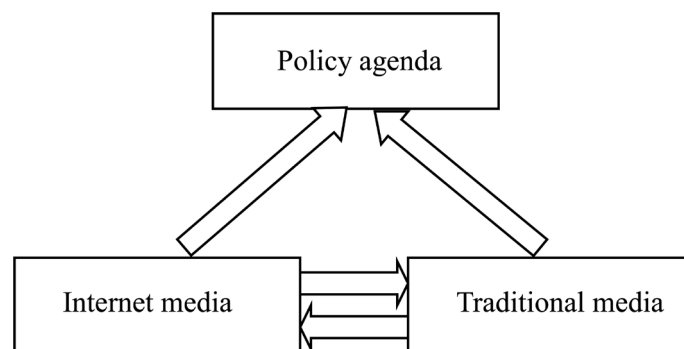


Source: author's drawing.

**Figure 3.** Relationship between online media, traditional media and public policy agenda.

and the online media agenda, both have a significant positive correlation with the policy agenda. It can be preliminarily assumed that both have obvious effect of setting the agenda, and from a further causal analysis, both have a one-way causal relationship with the public policy agenda, indicating that both have promoted the formation of a policy agenda. This result shows that although the influence and nature of the online media and traditional media on the policy agenda are different, the impact of the two on the policy agenda has its own advantages and the same destination.

### 5.1.1. Innate Advantages: Traditional Media Promotion Policy Setting

In the process of historical development, traditional media represented by newspapers have a unique political advantage. "China's mass media is led by the Communist Party of China, and therefore its political nature is very strong and can often play a special role in the establishment of a policy agenda." [34]. The traditional media participate in the public policy agenda setting activity, providing a convenient channel for the public lacking expression of interest. At the same time, some unfair policy activities can also be exposed and criticized, effectively safeguarding the fairness of the policy. Therefore, the mass media has a natural connection with the public policy agenda. Judging from the correlation coefficient and causality analysis results of this article, traditional media has promoted the formation of public policies, and compared with online media, the traditional social media has a slightly better public credibility, because although the Internet is open to a high degree, the public can be encouraged to express their suggestions in a timely manner. However, due to the high anonymity, public discussion of any topic is relatively lacking in formality, which leads to low levels of social trust [10]. While traditional media rely on its extensive attention to social issues and professional news capture and reporting, credibility is higher than online media. And from the comparison of traditional media compared to the relationship between online media and rights distance, traditional media have inherent advantages. From the perspective of historical development, it is a highly institutionalized product, and it is closer to the decision-making layer. The online media understood the ideas within the system, including decision makers, to promote the formation of a policy agenda.

### 5.1.2. The Rising Star: Online Media to Promote Agenda Setting

Lax pointed out that no matter how difficult it is to achieve social democratization, the Internet should continue to strengthen its participatory ambitions [35]. The emergence of online media broke the monopoly status of traditional media and gave birth to them. The trend of diversification of the main body of the agenda has been set. "According to the laws of human society development, the truly valuable information is not the specific content of dissemination, but rather the specific dissemination tools used in this era." [36]. The rapid development of online media has exerted irresistible influence on the entire society. From the empirical analysis results of this article, the Internet media has pro-

moted the formation of public policies by virtue of its own advantages. Because online media rely on their multi-interactive modes of communication, the speed of fissile dissemination, and the rapid dissemination of hot topics, the social issues of concern to the public are translated into policy issues, and the process of entering public policies is shortened [30]. And the function of online media complements the one-way transmission mode of traditional media and strengthens the public's attention to issues. It quickly gathers the public's attention through topics, its multiple interactions and the role of opinion leaders promote Internet public opinion, which in turn puts pressure on policymakers. Unlike traditional media, online media provides a platform for direct dialogue between the public and decision makers, putting pressure on decision makers. For example, Weibo blogger "Strange Grace" released Weibo on November 19, 2011, saying that it has submitted an application for open government information to the Beijing Municipal Environmental Protection Bureau through EMS and requested the Beijing environmental protection department to publish the daily monitored PM 2.5 data. The EPA responded and although it responded that its PM 2.5 monitoring data was for research purposes only, it did not agree to disclose it. However, this interaction not only caused public opinion to heat up, but also demonstrated to the public the possibility of "conversation" between the general public and decision-makers, reflecting the fact that online media, with its unique advantages, has become the rising star of the media as a means of realizing the public's self. The "upside down" agenda setting provides impetus.

## 5.2. Joining Together: Traditional Media and Online Media Work Together to Promote the Public Policy Agenda

Parson Wayne proposed that policy needs determine the supply of policies, and the agenda setting is the result of the interaction between public opinion and public power [37]. With the flourishing media the channels of development and expression of public opinion are also increasing. "The interaction of the media helps public expression of opinion and public opinion, thereby assisting the execution of major central policies." [38] Policy formulation in today's society is no longer a simple government formulation-media campaign-public acceptance This simple and straightforward mode of communication, the public's voice and the flourishing development of new media have prompted the cooperation between the old and new media, complement each other's advantages, and jointly promote the scientific decision-making.

## 6. Conclusions

From the empirical analysis results of this article, there is a two-way causal relationship between the traditional media and online media, indicating that both sides have had mutual influence in promoting the formation of the policy agenda. This research finds complements of the "intermediate agenda setting theory"; that is, today when online media is popular, traditional media agenda

settings no longer flow from authoritative traditional media to emerging online media, but rather both generate. The role of the agenda is set, and from the perspective of causal analysis, online media has a significant role in promoting traditional media. For example, in the PM 2.5 incident, for the same event, the traditional media has a relatively obvious lag effect relative to online media. The specific manifestation is that the online media first disclosed this event, and the earliest mention of this matter. It is Weibo's "ecological view of the world", which was released on May 24th, 2011: "PM 2.5 is the main source of air pollution in China, causing 'deterrence'. Fine particles easily enter the respiratory system of humans. The vascular system is harmful to health. Use the PM 2.5 detector to detect the air quality around you." Afterwards, the microblogs and discussion forums of other Weibo users were forwarded. The earliest reports of PM 2.5 in traditional media were reported by the Workers Daily on June 8, 2011. "Fine PM 2.5 has become the city's primary pollutant." Due to limited influence, there are few media to follow. Reported from the perspective of the development of the entire incident, traditional media have always reported on the most popular events after the development of public opinion is relatively mature. For example, after the Internet users started in September 2011, they reacted on forums and Weibo to request the government. The PM 2.5 monitoring data was disclosed as soon as possible, and the earliest request for the government to publish PM 2.5 data was reported by Southern Weekend on November 10th. It shows that the traditional media has captured the public's voice with its sharp tentacles, and has expressed the public's voice promptly after the events matured. The PM 2.5 incident shows that while online media and traditional media have different ways of communicating in promoting the formation of public policies, the two are not fighting each other, but each has its own advantages, influences each other, and realizes the interaction of the agenda.

The inadequacy of this study is to compare the effects of the online media and traditional media on PM 2.5 incidents, and may explain the lack of other types of incidents. At the same time, considering the availability of resources, although the selected data is representative, it is not exhaustive and accurate. Further research should expand the sample sources and enrich the sample types. It should also take into account that because of the technology gap—people who cannot contact the Internet and social media cannot express their opinions.

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