A Study of the Effectiveness of Water Control Reviews in the Perspective of the Internet Spiral of Silence

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Abstract: Water army generally refers to those who publish specific information in the network for specific content, or are hired network operators, whose main purpose is generally to create a false network atmosphere, gain profit or achieve some kind of change in the attention of ordinary people. With the development of the information age, the importance of public opinion on the Internet has become more and more evident, and the "water army" that guides public opinion has been born, and major social media platforms are inevitably "eroded" by them. This paper takes the Weibo platform as an example from the perspective of the spiral of silence, and through in-depth interviews and questionnaires, we find out the impact of the phenomenon of "water army" on different types of users, and propose a reasonable solution for social platforms to deal with "water army". We also propose reasonable suggestions on how to deal with "water army" on social media platforms.

Keywords: water army; spiral of silence; comment control; weibo

1. Introduction

With the implementation of the "Clear Action" and the "Regulations on the Administration of Internet Followers' Commenting Services" and other measures to manage the Internet public opinion space, and against the background of the increasing gate-keeping of users' comments, the comments under weibo have become more and more "one-sided" and "off-topic" in terms of the control of comments by water bots. The phenomenon of "overwhelming" and "inaccurate" comments by water bots. The water bots dilute the different voices in the commentary field through "quantity wars" of comments and likes, and even by attacking dissident comments. The development of cyberspace has brought the debate into the era of "everyone has a microphone", and the freedom of weibo comments has also given the public the right to speak. However, the Internet has also brought together groups of circles and niche cultures to form a collective force that rejects and even attacks heterogeneous views, hires water bots to control comments, deters users with different views from expressing their opinions, and strengthens the tendency of active users to flee Weibo, creating a "double helix of silence" in the online public opinion space and causing cognitive imbalance among Internet users. We have observed that a large number of social bots have been stationed on Weibo to participate in comment control, which has achieved the purpose of comment control on the one hand, but on the other hand, it has also led to a decline

in the proportion of active users on Weibo, which has increased the tendency of users to flee from Weibo. So, for those within the circle, the more comment control by water bots on social media platforms, the more they provoke resistance from real users? Or does it lead to silence among real users? Does the greater the number of bots' comments, the less active the social media users?

2. Review of the literature

2.1 Literature review on the phenomenon of weibo water army

Weibo is a platform for sharing, disseminating, and acquiring information based on the relationship between users' followers and links. After several years of booming development since Sina launched its Weibo product, Weibo has become one of the current giants of social networking software and is the only platform with strong media properties among all highly used social applications. As a platform with such a large number of active users, "Weibo marketing" is favored by enterprises and organizations, and the focus of public figures is to seize the public opinion space on Weibo. This has led to the emergence of "Weibo water army", a tool that can influence the "opinion climate". There are very few news communication papers that focus on microblog water army, mainly "Network Water Army: The "Gray Shadow" in Microblog Marketing" and "The Influence of "Network Water Army" on Public Opinion and Guidance Strategies", but the content is focused on The influence of "microblogging water army" on public opinion and the strategies to solve it. No research has ever been conducted on the influence of microblogging platforms and users' sense of using microblogging platforms as described in this paper.

2.2 A Review of Research on the Spiral of Silence Theory

The spiral of silence was first proposed by Elizabeth Neuman in 1974 in her article "The Spiral of Silence: A Theory of Popular Opinion" published in the Journal of Communication. Since its introduction, the spiral of silence has caused an uproar in communication scholarship, and more research and innovations on the theory have followed. Research on the application of the spiral of silence model in different cultures has also been ongoing. For example, Chang, JeongHeon in 2004 used the spiral of silence theory to analyze the relationship between media use and voting decisions based on data from the general election in Korea.Waipeng Lee et al. in 20002001 demonstrated the different applicability of the spiral of silence in different regions in experiments in the United States and Singapore, while TingToomey in 1988 proposed the idea that the spiral of silence theory would be more applicable if a cultural environment had stronger collective values (e.g., Asian countries) and fewer individualistic values.

Social media has also been the focus of scholarly research. A search of the Internet found about 45 papers applying the "spiral of silence" theory to the social media phenomenon, among which the representative ones are Zhou, Kai, Liu, Wei, and Ling, Hui. (2016) "Social media, the "spiral of silence" effect and young people's political participation: an interview study based on 25 Hong Kong university students", Liu Ying. (2021), "Why college students are silent on social

media - based on the "spiral of silence" theory". However, I have not found any literature that applies the spiral of silence theory to study the phenomenon of microblogging water army.

On the basis of the spiral of silence theory, the "double helix of silence" and "anti-spiral of silence" theories have been developed. In the process of searching the literature, I found that because the "double helix of silence" theory is relatively new, there are fewer articles on its theoretical elaboration. The "double helix of silence" theory is also a relatively rare phenomenon to study at present.

2.3 Problems

1. The more water bots make comments on social media platforms, will it provoke more resistance from real users or silence from real users?

2. Does the presence of bots on social media platforms affect the activity of social media users?

3.Research Methodology

This paper uses questionnaires and in-depth interviews to try to answer the above questions.

3.1 Questionnaire survey

3.1.1Hypothesis building

H1: For in-circle people, the more water bots control comments on social media platforms, the more users' willingness to speak is provoked; H2: For out-of-circle people, the more water bots control comments on social media platforms, the stronger users' willingness to rebel; H3: The more water bots control comments, the less active social media users are; In order to prove the hypothesis, this study

adopted the questionnaire survey method. Sampling of the overall population and the creation of questionnaires.

In-circle, generally we refer to a work project group, or a group of people who have a common topic or identity. The implicit meaning of this phrase is that people within the circle are more accurate than those outside the circle and are relatively more established in a particular field. In the above context, "insiders" refers to the real users who are deeply involved in the public opinion events. The fans of the main actor of the movie or the fans of the movie itself are the "insiders" who are highly involved; and the outsiders are the ordinary viewers who have seen the movie or the ordinary "passers-by" who know about the movie.

3.1.2 Dimensionality reduction

The degree of control of microblogs can be downgraded to the number and weight of

homogeneous texts in the comment section of microblogs, which are objective measures;

The degree of comment control by water bots can be downscaled to the number of "zombie users" in the comment section; user resistance can be downscaled to the number and weight of heterogeneous views and the interaction with the refutation

of comment control; user silence can be downscaled to the degree of user speech burnout and the number of active users;

3.1.3Selection of research subjects

The research object corresponding to this hypothesis is the group of microblog users. This group is chosen because: firstly the microblogging platform has a larger group of water bots compared to other social media platforms, and also the users on microblogging are highly representative as a group of internet users. The second is that this group is more accessible to the researcher and has a strong actionable nature.

3.1.4 Sampling method

Firstly, we conducted representative sampling of the group, choosing to select different groups in different age ranges and different industry positions for sampling; secondly, we prepared the overall sampling frame based on the age of the group; again, we conducted stratified multi-level sampling of the sampling frame with 95% confidence interval and 5% sampling error. A sample of 800 students was selected. If a refusal

to interview was encountered, the next study participant was sought in turn as a replacement.

3.2 In-depth interviews

3.2.1Interview outline

The interview outline was divided into the following main sections:

Part I: Basic information about the interviewee, including the interviewee's occupation, age, and preferences.

The second part: the situation related to this study, including the interviewees' use of microblogs.

The third part: possible deeper questions that are mainly involved in the preparation.

Table Semi-structured 1interview outline

No.	Overview of interview questions	Content
1	What is your occupation related to? What are your usual preferences?	Basic information

2	What do you usually use Weibo for? What kind of content do you like to read?	Core content
3	When do you usually "brush" Weibo and how long do you use it each time?	
4	Do you usually pay much attention to the trending topics on Weibo, such as the hot search list, popular tweets, etc.?	
5	Have you ever seen all the same comments in the comment section of Weibo?	
6	What is your opinion about this kind of "water army"?	
7	What is your general reaction when you visit a microblog or click on a topic that has been taken over by a water army? Do you continue to browse or do you quickly quit?	
8	What is your general reaction when you encounter a large number of "water army" comments on a topic you care about?	
9	In this case, do you feel that you will be drowned in the repetitive comments of the water army and will not comment, or will you express your own opinion?	Dig deeper
10	Has the presence of "water scouts" affected your experience of using Weibo?	
11	Since the emergence of "water army" on Weibo, has your time spent on Weibo become longer or shorter, or has it not changed?	
12	Do you prefer a social platform with rich personal expression or one with more homogeneous content? Why?	

3.2.2 Interviewees

Fifteen interviewees were selected from different occupations and age groups of Weibo users. The interviews were conducted one by one in a semi-structured manner. The interviews were conducted by telephone, text interview by WeChat, and one-on-one face-to-face interview. All interviews were recorded with the consent of the interviewees in advance. After the interviews were completed, all recordings were transcribed into textual materials and then recorded. The

basic information of the interviewees is shown in the following table.

During this interview and the conduct of the study, the researcher tried to avoid the fourfold ethical issues and transgressions highlighted by scholar Al an Bryman.(1) causing harm to research participants; (2) not using informed consent documents or materials; (3) violating the privacy of research participants; and (4) deceiving research participants. In addition, if a participant has any questions or complaints that he or she does not wish to answer during the interview, he or she may remain silent or withdraw from the interview. Interview materials that the interviewees declared they did not want to disclose were not included or cited in this study.

Table Basic 2information of interviewees

No.	Age	Gender	Occupation	Location	**Remarks**
1	25	Female	Real estate sales	Guangxi	
2	22 Female	female	Student	Shandong	
3	28	female	Advertising	zhejiang	Work is related to the use of microblogging
4	female	Female	Medical	Guangdong	
5	18 Female	female	Student	Shanghai	Because of the star-struck microblogging use more
6	26	Female	Service	Hunan	
7	20	Female	Student	Chongqing	
8	21	female	Student	Chongqing	
9	20	Female	Student	Chongqing	
10	20	Female	Student	Chongqing	

4.Research Findings and Discussion Points

In this interview, more than half of the interviewees use Weibo for 10 minutes to 1 hour in their daily leisure, more than 3 times, and are deep users of Weibo.

After the questionnaire and in-depth interviews, we found that both people who rely heavily on Weibo and those who rely less on it, more or less encounter the existence of water army under the microblogs or topics they are interested in, and most of them are disgusted by the existence of "water army", and "water army The presence of a large area of "water army" will indeed affect people's willingness to speak and speak emotionally, thus causing attitudes towards social platforms.

4.1Water army control comments will stimulate users in the circle to refute the speech

Pearson correlation analysis of the questionnaire data was used to analyze the degree of comment control by water army bots and users' willingness to interact, and the results showed that the two showed a significant positive correlation with a correlation coefficient of 0.212. The higher the degree of comment control by water army bots, the higher the degree of willingness to speak by those users who usually pay high attention to hot topics on Weibo under the comment

section of comment control, and the more willing to speak.

However, during the interviews, I interviewed in-depth users who follow Weibo hot topics every day, and found that their willingness to speak was based on the fact that the content of Weibo itself is something they usually pay more attention to and know more about, so they would become angry at the phenomenon of water bots controlling comments and would comment on it, hoping to get approval and praise from people in their circle. For example, "If it is under the microblogging of my star-chasing people control comments, I may also send comments, hoping that passers-by look good; if the comments are bad for him, I will refute these comments and explain for him." (Interviewee 5)

4.2Water army control comments can cause rebelliousness among users outside the circle

The Pearson correlation analysis of the questionnaire data shows a significant positive correlation between the degree of comment control and the users' willingness to rebel, with a correlation coefficient of 0.323. For people outside the circle, the higher the degree of comment control on social media platforms, the higher the users' willingness to rebel against them.

I further found in the in-depth interviews that further manifestations of these users' rebellious (programmatic) psychology towards them were to speak less and spend less time browsing such tweets.

They indicated that they would be more reluctant to speak where there were watermen present::

"Won't voice my opinion, feel like it will sink to the bottom and it doesn't seem important anymore." (Interviewee 8)

"I won't publish it, and there is no point in publishing it so that others can't see it." (Interviewee 1)

"I won't publish it. Because I think the water army will affect my original view." (Interviewee 7)

"If there is a large number of water army and control comments will not be published in the comments section, it feels meaningless, but may send their own microblogging." (Interviewee 9)

4.3The more water army and control comments, the less active social media users are

Pearson correlation analysis of the questionnaire data was used to analyze the degree of comment control by water bots and social media user activity, and the results showed that the two showed a significant negative correlation, with a correlation coefficient of 0.197. This means that the higher the degree of comment control by water bots, the lower the user activity on social media.

Moreover, after analyzing the data, we can see that nearly 71.37% of people will give up using a social media platform because of the increasing severity of the control of the platform, and hope that the major social media platforms pay attention to this situation.

In the in-depth interviews, nearly half of the respondents gave negative feedback on whether the existence of water soldiers has an impact on people's experience of using Weibo platforms.

Loss of desire for expression: "Yes, it makes people lose the desire to express themselves

more and more, and they think it's useless to say more, because it will be covered up by other things anyway. Entertainment news is fine, just despise it, but social news will feel especially powerless" (Respondent 3);

Influence on the judgment of information: "Disorderly destruction of the network environment and order, provoking disputes lead me to feel uncomfortable grievances, and there is a lot of false information, so that sometimes it is not easy for me to distinguish the truth." (Interviewee 1) "There will be. Because the emergence of water army on Weibo will lead to less collision between different views of real users, and the overly homogeneous content will make people feel that the platform is not strictly managed and does not care about the user's experience." (Interviewee 5)

In addition, we found that the "water army" phenomenon has little impact on users' time spent on Weibo. The reason for this is that they have shifted their focus to the "active bloggers they follow regularly":

"In fact, there is not much change, because I don't pay attention to these marketing numbers, I only pay attention to my favorite bloggers, and most of what I see is what I like; I just sweep through the hot search every day, and although I am speechless about many opinions, I just cross over them, and I can still see people who have the same opinion as you." (Interviewee 3) "There is no change in time. Because I avoid topics and pages that have water army on them, I pay more attention to live users that I am interested in and topic boards that have high participation from live users. The appearance of water army will only make me skip related topics and tweets, and will not affect my usage time." (Interviewee 8)

We found that the reason for this is still that users will pay more attention to the boards with high active presence of real users.

5.Conclusion and Reflection

Finally, we conclude that people are interested in social platforms such as Weibo for - "richly expressed content", "users with different views", "interesting comments", and "Interesting comments" are in high demand.

Asked about their views on social media platforms, respondents have said; "I prefer platforms that are rich in personal expression that stimulate creativity, promote the exchange of ideas and knowledge sharing, and allow me to freely express my opinions, express my views, and interact and dialogue with others. Such platforms encourage individual diversity and uniqueness and promote social progress and personal growth." I like platforms with rich personal expression, everyone has the right to express their own views, people are directly different from each other, of course, their views will also be different, of course, some views may not match my view, but a hundred flowers are interesting, I don't like to see them, what is the difference between them and robots? The platform is interesting", "I like a platform with rich personal expression, if all the content is homogeneous, there is no point in watching. The atmosphere of rich personal expression is conducive to the expression and discussion of views, and more interesting." I would like to see a platform where people are brave enough to be themselves under the premise of protecting

themselves, so that my experience will be better, if it is too homogeneous, then microblogging will reduce the sense of use."

In summary, the author makes the following suggestions and solutions to the emergence of water armies and the impact and harm they bring to users.

1.Social media platforms should strengthen the guidance of public opinion and take technical measures to reduce the control of the water army.

In the platform "water army control" chaos, the platform has the responsibility and obligation to reasonably curb it, such as the installation of anti-control software, by monitoring the user's behavior indicators to identify the water army control behavior, and take measures, such as the user to punish, limit the user to post content, lower the user level, ban the user account, etc. .

The media platforms should not only curb the controlling behavior of the sailors, but also take advantage of the platform to solve the problem of public opinion from the root, and if necessary, use the sailors reasonably and legally to make positive public opinion, so as not to disappoint the majority of users. .

2.Media platforms should take measures to encourage real users to make comments on their own

Social media platforms such as microblogging can encourage real users to write high-quality content on their own. They can also provide rewards to encourage users to publish valuable content on their own, rather than being distracted by water army control comments. This will also help the platform to keep active users and ensure long-term development. In addition, to give real users a good speaking atmosphere space, such as for real users to create a 0 water army topic discussion page.

3.Improve network regulations and strengthen measures to combat

In this regard, from the introduction of regulations such as the "Network Information Content Ecological Governance Regulations" and "Internet Management Regulations" to various actions against the network ecological environment, such as the "100 days of action", the national public security organs effectively solve the "network water army" cases For example, the "Hundred Days Operation" was carried out, and the national public security authorities effectively solved 147 cases of "online water army", shut down more than 210,000 accounts of "online water army" and 185 illegal websites, cleaned up 127,000 illegal and harmful information on the Internet, disbanded 63,000 online groups involved in the case, or "Qinglang" "net" and other special rectification actions, we can see that our country's attention to the network environment is gradually strengthening. However, in order to truly establish a good atmosphere and help improve the information literacy of Internet users, it is necessary to strengthen the regulation of Internet public opinion, to improve the rules and regulations, to refine the laws and regulations, to specialize, to protect the freedom of expression of Internet users, but also to limit the "water army" in the network behind the opinion of The "improper behavior" behind online public opinion should be restricted.

Furthermore, media platforms need to improve their own platform rules and strengthen their regulatory mechanisms to help build a healthy network atmosphere.

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