

The Mechanism and Influencing Factors of Herding Effect of College Students' Network Public Opinion

Hu Xia¹, Zhang Yan^{2*} and An Bowen³

¹*China University of Mining and Technology, No. 1 University Rd. Xuzhou, Jiangsu, China 221116*

Telephone: 86-13952158832, E-mail: xhulinda@163.com

²*China University of Mining and Technology, No. 1 University Rd. Xuzhou, Jiangsu, China 221116*

E-mail: yan-zhang@hotmail.com

³*School of Social Development, Central University of Finance and Economics, Beijing, 100081*

E-mail: anbowen602@outlook.com

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ABSTRACT This study investigated the mechanism and influencing factors of herding effect in network public opinion of college students. Experiments by controlling sources of ideas and the strength of concern explore how college students process information of public opinion on the network. To explore factors that influence college students generating herding effect in the public opinion on the network, questionnaires and data test were used. The result shows that herding effect is the result of consensus heuristic and competence heuristic. On the other hand, various sources of information, which are from either the majority or experts, have equal impact on college students' herding effect in network public opinion. Besides, college students' knowledge structure is not significant to generate herding effect. On the contrary, gender, geography and original opinions have a significant impact on the generation of herding.

INTRODUCTION

In this paper, herding behavior is the focus. Herding behavior, which is derived from the movement and foraging of sheep under the leadership, is also widespread in human social life. Herding effect was first found in securities investment activities, which was thought that the uncertainty of the information was the main cause of external factors in the herd behavior in securities investment.

In addition, the psychological mechanism of herd effect has been found: faced with uncertain investment environment, the investor process information and show herd effect through two ways. The first way is consensus heuristic, namely the public view is believed to be correct. As a result, investors choose to be consistent with popular opinion. The second way is competence heuristic, namely the experts are considered more capable, so investors choose to keep up with the opinion of the experts (Quiamzade and L'Huillier 2009). In the process of exploring psychological mechanism, researchers found that the degree of consistency within groups is an important factor impacting on the selection of information processing mode. When consistency

degree is high, investors tend to choose consensus heuristic. Otherwise, investors tend to adopt competence heuristic (Andersson et al. 2009).

Thus, herding is the result of both internal and external factors. In addition to investment, herding also exists in other aspects of human life. Studies have shown that consumption and investment share the same generation mechanism in herding (Jiang 2011). And Cheng (2015) found that people tend to follow popular opinion.

Herding effect appears on the network as well. With the development of communication and the internet, network public opinion emerged. Public opinion of network is defined as the aggregation including people's socio-political attitudes, beliefs and values to both public issues and social managers, surrounding various social events through the network.

Although network public opinion is essentially public expression and demands from various independent people, herding has an impact on it.

Is the generation mechanism of network public opinion same as the mechanism in consumption or investment? To solve this problem, this study attempt to explore the generation mechanism of network public opinion and influencing factors of herding.

*Corresponding author

METHODOLOGY

In order to determine variable factors in the main research, this study was aimed at finding out which concerning point of social issues attracted most attention of college students by means of doing survey.

Two hundred ten college students accepted the survey, including 107 males and 103 females. The mean age was 20.32 years.

Two hundred ten participants received questionnaires. One hundred ninety questionnaires were returned and these questionnaires were valid. The effective rate was 90.48 percent.

Statistical data about concerning perspective of college students showed that, by comparison, emotional aspects such as family and friends were more concerned than environmental protection, when talking about social issues. Accordingly, relatives and friends were treated as strong view aspects and the environment was a weak point of view. On the basis of data gained before, questionnaires were made afterwards.

Purpose of the Research

To explore processing methods of herding in public opinion, this research manipulated variables including sources of information and concerning degree of topics. In addition, survey and data analysis were used in order to explore influencing factors in herding.

Subjects

One hundred ninety college students were subjects, including 111 males and 79 females. The mean age was 21.35.

Materials

News (netizens grabbed red envelope on WeChat on New Year's Eve) and simulated scenarios with 2 sorts of opinions on 4 types of questionnaires.

Research Design

The first part of questionnaire using 2 (Source: netizens or experts) $\times$ 2 (concerning point: strong, weak) between-subject design. 200 subjects were divided into four groups. In order to explore which combination was easier to change people's perspective, in the first part of

the questionnaire, the study first investigated the subjects' view (positive or negative) to the event.

As soon as one side of view (positive or negative) was chosen, the questionnaire would provide an opposite point of view (negative or positive) in next material, and then asked subjects whether the view had changed, aiming at testing which combination was easier to influence the view.

As for the material design, when the points of attention were same but the sources of information were different, same content were used. As different identities had different speaking habits, the study used different narrative tones between the majority and experts, in order to increase the realism of simulated reality. Besides, seven point scales had been adopted each time.

The second part of the questionnaire was about essential information, including gender, age, province and major.

Procedures

At the beginning of the survey, subjects were told that this was a test of view identity. In the research, subjects were first presented to the objective news: "grab red envelope" event on WeChat on 2015 Chinese New Year's Eve. After subjects were asked to express their opinions (positive or negative), the majority (strong or weak degree of attention) or experts' opinions (strong or weak degree of attention) were given, and the subjects were asked to re-express their views (positive or negative).

RESULTS

Test of Opinion Source

Table 1 lists the distribution of subjects in four kinds of experimental treatment. When asked

Table 1: The original attitude

		Frequency	%
Valid	Very opposition	11	5.8
	relatively opposition	8	4.2
	opposition	12	6.3
	Neutral	70	36.8
	Support	29	15.3
	Relatively support	32	16.8
	Very support	28	14.7
	Sum	190	100.0

directly about the view, subjects tended to choose “neutral.” As is shown in the Table 2, when the opinion from the majority or expert occurred, subjects would change the degree of view and tend to approach the expressed opinion from the public or expert.

Table 2: The absolute change of attitude

		Frequency	%
Valid	0	106	55.8
	1	47	24.7
	2	19	10.0
	3	13	6.8
	4	5	2.6
	Sum	190	100.0

As the analysis results shown in Table 3, 55.8 percent of subjects did not appear herd behavior, and 44.2 percent of subjects who generated the herd behavior, did not show significant difference between the public and expert groups, as shown in Table 4.

Table 3: The grouping of participants

	View	Strong	Weak	Sum
Resource	Public	43	54	97
	expert	45	48	93
	Sum	88	102	190

Table 4: resources and the absolute change of attitude

		The absolute change of attitude				
		0	1	2	3	4
Resource	Public	50.0%	59.6%	47.4%	30.8%	60.0%
	expert	(53)	(28)	(9)	(4)	(3)
	Ex-	50.0%	40.4%	52.6%	69.2%	40.0%
	pert	(53)	(19)	(10)	(9)	(2)

Accordingly, in the network environment, the majority of college students are less prone to herding (Xie Xinzhou 2003). From the participants who appear the herding behavior, the influence of herding effect has no significant difference (3.830, $p > .05$) between public and expert’ opinion.

Test of Angle of View

The experimental results showed that the angle of concerning point didn’t impact on herding effect significantly ($t(82) = 0.101$, $p = 0.919$). Subjects who accepted the view of the public were not significantly impacted on herding ef-

fect ($t(95) = -1.226$, $p = .223 < .05$). Subjects who accepted the view of experts were not significantly impacted on herding effect as well ($t(91) = -.710$, $p = .479 < .05$). As the result, differences of the angle of view did not affect the amount of change in point of view. On the other hand, herding effect on network generated either in consensus heuristic or competence heuristic.

Test of Gender

In order to examine whether gender affects the amount of change of absolute attitudes, all of the experimental data have been analyzed and here is the conclusion: the amount of change of absolute attitudes based on the impact of gender was not significant ($t(188) = -1.215$, $p = .227$). Among the subjects who generated herding effect, the effect of gender on the amount of absolute attitude change is significant ($t(82) = -2.046$, $p = .045 < .05$), female change more attitude than male.

Test of Area

Aiming at testing whether the area have the impact on the amount of absolute attitude change, the nation was divided into North and South by the boundary of Qinling-Huaihe. The data was dealt with independent samples t- test. Analysis showed a significant difference ($t(188) = -3.158$, $p = .001 < .05$) in region in the amount of the attitude change. Northerners changed absolute attitude greater than southerners.

Test of Original Point

There is a phenomenon that the original attitude as “support”, “neutral” and “opposition” have varying degrees of herding effect in the test.

Data analysis illustrates that both of the subjects whose original attitude is support and whose original attitude is neutral can be found significant differences in the amount of attitude change ($t(157) = 3.637$, $p = .000 < .05$). Consequently, the subjects who originally support the event have greater change than whose original attitude is neutral.

The comparing of the subjects whose original attitude is opposition and whose original attitude is support shows that a significant difference exists between the 2 types of subject on

the amount of attitude change ($t(118) = -2.179$, $p = .031 < .05$). The subjects who originally take opposite opinion have greater change than whose original attitude is support.

Results of comparing the subjects whose original attitude is opposition and whose original attitude is neutral show that the difference between both sides is significant ($t(99) = -4.055$, $p = .000 < .05$). The opposite attitude taker have greater emotional change than whose original attitude is neutral.

Thus, the inequality of attitude change amount is as follows:

Original attitude is opposition > original attitude is support > original attitude is neutral.

DISCUSSION

Depending on above results, college students will produce herding in network consensus, which is generated in either consensus heuristic or competence heuristic, and the conclusion is similar to Quiamzade and L'huillier's (2009) research on stock investment decision.

To dig out why heuristic is used, the first reason is due to the limitation of human understanding. In order to overcome this limitation, understanding things efficiency and comprehensive, people use heuristic as a fast and cost-saving way of processing information (Kameda and Nakanishi 2003). Second, when in the face of complex situation, people hope to solve problem in a simple manner (Kruglanski 1989). In driving this motivation, people eager to pay attention to public or experts' decision-making, using consensus heuristic or competence heuristic, which results in herding effect.

In this experiment, herding behavior appeared, which is same as Cheng's result (2015) that people tend to follow popular opinion. It's worth noting that, no significant differences was found in the influence of mass viewpoint and expert opinion for the herd effect. Analyzing the reason, first, in the network era, everyone is self-media and thus network has a certain authenticity (Yang 2007). Second, Tang Lili (2010) pointed out that "experts" for public trust had been gradually reduced. The doubts to experts come from the growth of knowledge of the public (Chen and Wan 2013).

When exploring influence factors of herd effect, women are found more likely to change their views to approach others' opinions. As Song Xinjun (2010) pointed out, the mainly reason is

that women are in weak gender position and have ego consciousness to protect themselves.

In addition to gender, herding is also influenced by region. Northerners are more likely to follow others' opinion, which leads to herding effect. Chen Chiwei (2014) pointed out that traditional Chinese medicine, which originated from the Book of Changes, believed that northerners' character is so frank and decisive, warm and lively that they are easy to trust others and generate herding effect. On the contrary, southerners' character is feminine, circumspect, occupied with delicate thoughts, which make them more inclined to think independently, maintaining their own point of view.

What's more, the phenomenon "Those who take the original attitude which is more radical, is inclined to change their ideas" can be explained by the "spiral of silence". Noelle-Neumann (1977) pointed out that when people think their point of view is a minority, they will be unwilling to spread their true thoughts. Under the "climate of opinion", in order to obtain a sense of security and belonging, people would make convergence to mainstream opinion. In this experiment, neutral attitude provided a sense of security, so that the neutral subjects have the courage to stick to their point of view. But people with positive or negative attitude will weaken the original views when encounter with the inconsistent views.

The consequences of this study can help the network marketing focus on the dissemination of advertising information: if the positive evaluation of commodity were given by public or experts, or commodity information can be spread by women and lively people who are easy to trust others, then on the basis of herding, the network marketing will be more successful.

At the same time, the study can also provide guidance to regulators of public opinion. Statistical report of the thirty-fifth China Internet Development (2015) showed that Chinese Internet user within 20-29 years of age was the majority, up to 31.5 percent; middle school students were accounted for the highest, 23.8 percent. When rumors are spread on the Internet, regulators can make use of the spiral of silence theory and herding effect to guide college students create a good network environment, which can maintain a stability society.

CONCLUSION

Among the experiment, some interesting findings on herding behavior have been found. Herding behavior is the result of consensus heuristic

and competence heuristic. Various source of information, which is from either the majority or experts, has equal impact on college students' herding effect. Besides, college students' knowledge structure is not significant to generate herding effect. On the contrary, gender, geography and original opinions have a significant impact on the generation of herding.

RECOMMENDATIONS

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