

# Analysis of Factors Affecting Network Information Dissemination

Yang Zhou, Jitong Cui, Jinyue Cao\*

School of Economics and management, Beijing Information Science & Technology University, Beijing 100192, China

\*Corresponding Author.

## Abstract:

With the rapid development of information technology and the extensive use of electronic products, more and more information promotion adopts the "online + offline" double-channel mode. In the process of information dissemination, the audience will consciously screen the information received to form a personal information acceptance filter net, and the factors affecting the attitude of the audience in information dissemination become more and more complex. This paper analyzes the influencing factors of audience resistance threshold of network information, and controls the key influencing factors of dimension reduction by measuring and analyzing. Through research, it is found that subjective factors have more obvious influence on the audience resistance threshold in the process of network information dissemination, and the threshold range is controlled through effective marketing means, in order to achieve the good effect of the information recipients into disseminator, save the promotion cost and improve the effect of network information dissemination.

**Keywords:** audience resistance threshold; social relations; information dissemination

---

## I. INTRODUCTION

In recent years, for the process of user communication information research, more around the user internal motivation and external factors, such as Zheng Jiaoliang selected time cost[1], entertainment, system quality, social interaction, perceived value, satisfaction and participation intention seven potential variables, the time cost, entertainment, system quality, social interaction as an independent variable, build the user to participate in mobile social network platform research model. According to the study of Hu Changying et al[2], the motivation of users to forward is mainly: entertainment motivation, self-realization motivation, environmental monitoring motivation and interpersonal motivation. Wang Feifei pointed out that there are significant differences in user information sharing motivation for different personality traits.[3]

Social media promotes forwarding and sharing behavior in social networks.- Some scholars have summarized several factors affecting the diffusion of social media information: content-related functions, users and network characteristics (social capital cognition, prestige and homogeneity.[4] mainly studies the characteristics of information itself and the impact of personal psychological needs on information dissemination, which focuses on the relationship between sources and accommodation, but lack of

information communicators and the influence of this dynamic communication on the effect of information communication. From the perspective of mobile search, for example, Zhang Yaming et al[5], based on the information of microblog platform, summarized the factors from the perspective of media richness, content characteristics, source characteristics and personal transfer engine, and studied the influencing factors of forwarding willingness. It is concluded that the individual user transfer engine is affected by three external factors: media, content and source, and the transfer engine plays a partial intermediary role for the variables of external factors, which generates the intention to forward commercial information comprehensively, but the exploration of external factors is not clearly explained.

Based on the relationship between information characteristics and communication, this paper will analyze the influencing factors of audience resistance threshold of network information, measure the distribution of audience resistance threshold, and control the key influencing factors of dimension reduction. Verifying social relationships affects people's attitudes to the information received.

## II. EXPERIMENTAL DESIGN

### 2.1 Study hypotheses:

Considering that people are influenced by many factors and to varying degrees in the process of information dissemination, the following assumptions are designed layer by layer.

H1: The transmission effect is influenced by personal factors, social relationship factors and objective factors.

Based on the hypothesis, a model of hypothesis was constructed as shown in Fig1.

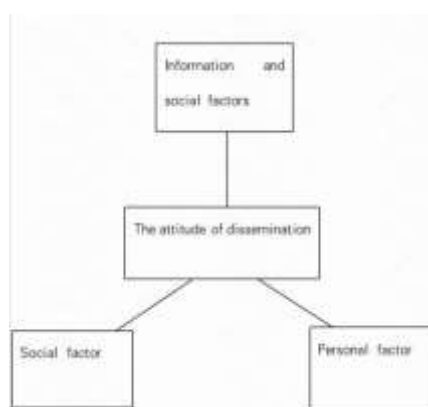


Fig 1: Multifactorial influence hypothesis model of information transmission attitude

H2: Under the influence of social factors, people have a more positive attitude towards spreading information. (Comparing experiments between groups A and B)

H3: Different social relations and different degree of information filtering promote different communication attitudes.

## 2.2 Variable design

According to the research objectives, variables were designed, as shown in Table 1 and Table 2.

**Table 1 Independent variable design**

object ive factor	Specific indicato rs	Questionnaire assignment	subjective factor	Specific indicators	Questionnaire assignment	pers onal infor mati on	Questionnaire assignment
Informa tion qualit y $X_Q$	accuracy Integrity, relevance , and authentic ity	Information accuracy =1, information inaccuracy =0; Information integrity =1, information completeness =0; information is related =1, information is not related =0; Information authenticity =1, information unreal =0	family relation $X_E$	father and mother sons and daughters spouse other person related by blood	1 2 3 4	sex recor d of form al scho oling	Male =1, female =2 Junior college and below =1; undergraduate =2; Graduate student or above =3
infor matio n conte nt $X_T$	title $X_{T1}$ summary $X_{T2}$ image-te xt $X_{T3}$ Text word $X_{T4}$	Title =1, title not =0; abstract =1, abstract not =0 Figure and text match =1, text and text mismatch =0; Words Within 1000 =1, words count at 1000-3000=2, words above 3000 =3	JR $X_W$	higher level Flat level lower level partner	5 6 7 8	age inco me	Age 19 and below =1, 20~29=2, 30~3 9=3, 40~49=4, Over 50 years old =5
infor matio n source s $X_C$	Business source Personal business sources Governm ent departme nts and administr ative organs at all levels Medical care, colleges and universiti es, and public welfare institutio ns Public non-profi t Personal non-profi t	Enterprise Business Source =1 Personal Business Source =2 Source of government departments and administrative agencies at all levels =3 Source of medical treatment, universities and public welfare institutions =4 Public non-profit =5 Personal Non-profit =6	student relation $X_L$	teacher student Students and alumni	9 10 11 12	marri age	Unmarried =1 Married =2 Other =3
Push time $X_T$	time	8:00-11:00=1, 11:01-13:30=2, 13:31-17:00= 3, 17:01-21:00=4, 21:01-24:00=5, all-weather =6	friend relationship $X_P$	sweetheart friend	13 14	area	First-tier city =1, second-tier city =2, third-tier and

							below =3, rural town =4
Push frequency $X_F$	frequency	One day 1 =1,2-3 times 1 day =2,3 times a day =3	Strange relationship $X_O$	Strange individual Strange groups	15 16	occupation	government institutions leading cadres =1; government institutions general personnel =2; enterprise / company senior management =3; enterprise / company middle managers =4; enterprise / company general personnel =5; professional and technical personnel =6; commercial service personnel =7; manufacturing production enterprises =8; employed / freelancers =9; rural migrant workers =10; agriculture, forestry, animal husbandry and fishing people =11; retirees =12; students =13; unemployed / laid / unemployed =14; other =15

**Table 2: The dependent variable design**

dependent variable	definition	decompose	short-cut process	Behavioral interpretation
<b>Network information propagation effect Y</b>	of no avail	countercurrent	-2	Report, block, take a close
		ignore	-1	unread
	valid	accessibility	0	read
		interaction	1	Thumup, collection, reward
		appreciation	2	retransmission

### III. PRE-PROCESSING

#### 3.1 Sample size determination

The total N number of the experiment was 897 million mobile Internet users in China[6] Given the

knowledge of the variation of the index, and the maximum variation of the survey attitude ratio is  $P=0.2$  (the value of  $Y$ ), estimate  $P$  at 0.05 at 95.45 confidence ( $0.05 \pm 0.05$ )  $z=1.96$ :

**Table 3 Sample size determination**

$N$	$P$	$z$	$r$	$Deff$	$n_2$	$n_3$	$n$
eight hundred and ninety-seven million	0.2	1.96	0.7175	1	246	246	334

Where, “ $r$ ” is the mean of the empirical values in table3.

Therefore, no less than 334 samples were drawn from the two groups, and a total of no less than 668 samples were drawn.

### 3.2 Sample size acquisition

In groups A and B, 385 questionnaires were collected to sort out and clean up the data of different social relations. Finally, 215 valid questionnaires were reached. Clone Bach reached 0.796 in the reliability test, and the scale title in the validity test was also passed. The man-to-female ratio is 4:6, and the age concentration is distributed between 20 and 49 years.

## IV. AUDIENCE RESISTANCE THRESHOLOD MEASURE OF NETWORK INFORMATION

### 4.1 Selection of key factors and equation construction

#### 4.1.1 factor analysis

The scale was factor analyzed by the statistical software SPSS to prepare for the subsequent verification of the reasonable division of each dimension. The samples were tested for KMO and Bartley sphere with a KMO value of 0.787 and  $P$  of 0 (Table 4), indicating that the scale within this questionnaire is suitable for exploratory factor analysis.

**Table 4 KMO and Bartlett tests**

Number of KMO sampling		.787
Bartlett spherical test	Approximate chi square	826.911
	free degree	105
	conspicuousness	.000

The principle of variance maximization was used to cluster all indicators. The load height of each factor in the rotating factor load matrix was classified, and the eigenvalues of the common factor in the

cluster were greater than 1 were extracted, as shown in the following Table 5. Finally, the number of effective factors was 5, and 15 questionnaire items were formed. The cumulative contribution rate of factor variance was 62.35%, which met the statistical significance, and the effect of this factor extraction was reasonable. Combining the purpose of this study and the actual meaning of each project, it was named "social factors", "information factor 1", "information factor 2", "personal factors" and "subjective factors".

**Table 5: Factor analysis of the questionnaire**

factor	title	factor loading	Accumulated contribution rate
social factors	7	0.584-0.741	21.33%
Information factor 1	3	0.659-0.758	34.493%
Information factor 2	2	0.671-0.746	44.74%
personal factors	2	0.645-0.873	54.066%
manner	1	0.793	62.35%

When considering the actual questionnaire design, information from different sources of social relations was simulated to collect data, information factors 1 and information factor 2 were integrated into social and information factors, and social factors, social and information factors, personal factors and attitudes were selected for model construction.

#### 4.1.2 Equation construction

The equation of the measurement model is expressed as follows, where the first 15 equations are the measurement model of endogenous potential term and the 16th is the measurement model of extrinsic potential term.

- When the information content is irrelevant to you =f (social factor, e5)
- When the information content is inaccurate =f (social factors, e4)
- When the information title is not attractive =f (social factor, e3)
- When the information is incomplete =f (social factors, e1)
- When the abstract does not attract attention =f (social factors, e6)
- When the information content is true and accurate =f (Social and information factors, e13)
- When information is complete and coherent =f (social and information factors, e12)
- Your age =f (personal factor, e14)
- Number of your favorite instant messaging software friends =f (personal factor, e31)
- Average monthly income =f (personal factor, e10)
- Forward to others =f (Attitude, e20)
- Forward to Group =f (Attitude, e21)

Forward to Moments = f (Attitude, e22)

Thumtip or comment = f (attitude, e29)

Read Only No Forward = f (Attitude, e30)

Attitude = f (social factors, social and information factors, personal factors, e26)

There is no correlation between the measured random variation term and the error term.[7]

#### 4.2 Model fit degree analysis

CMIN / DF (chi-square degree of freedom ratio), GFI (goodness of fit index), CFI (Comparative fitting index), NFI (standard fitting index), IFI (increasing fitting index), TLI (Tucker-Lewis index) and RMSEA (approximate root mean square error) of the test model were selected [8]. According to existing studies, CMIN / DF should be below 5, preferably below 3 or 2; GFI, NFI, IFI, TLI and CFI should be greater than 0.90, the closer to 1, the better; RMSEA should be less than 0.05, better closer to 0. Table 6 shows that all the modified fit indicators, except IFI, which is about 0.8, meet the statistical requirements and have good adaptation.

**Table 6 Table of various fitting indicators of the model**

metric	CMIN/DF	GFI	RMR	NFI	IFI	TLI	CFI	RMSEA
Good adaptation	≤3	≥0.90	≤0.05	≥0.90	≥0.90	≥0.90	≥0.90	0
Reasonable adaptation	≤5	≥0.70	≤0.08	≥0.8	≥0.8	≥0.8	≥0.8	≤0.05
This model	1.480	0.929	0.065	0.811	0.772	0.913	0.928	0.047

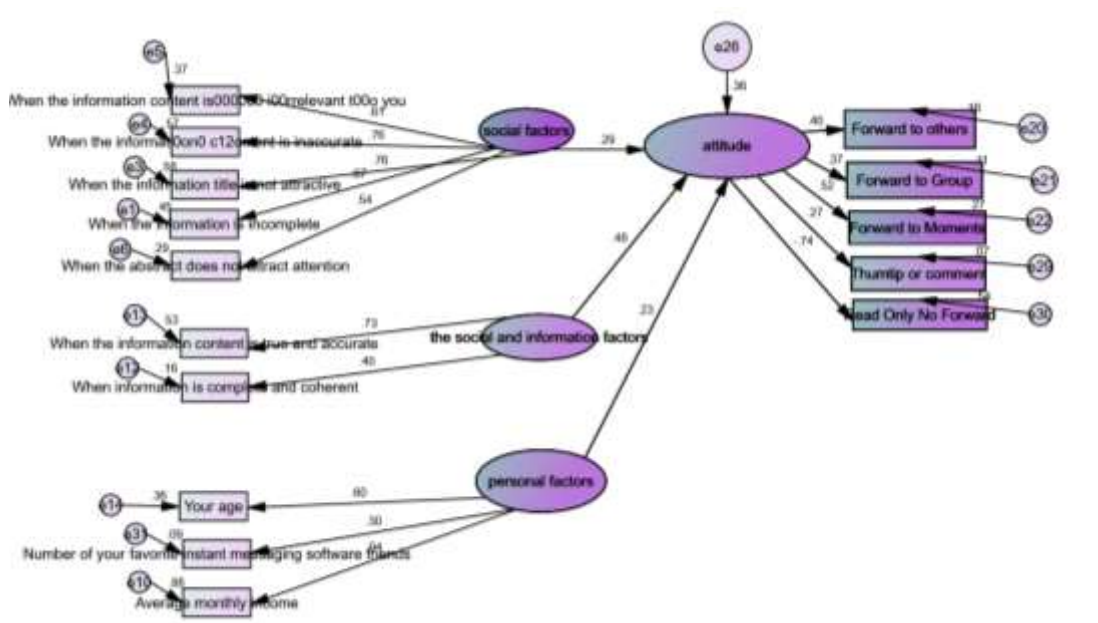


Fig 2: Multifactorial influence diagram of network information transmission

Data on social factors were derived from the questionnaire asking respondents about their attitudes towards disseminating information when receiving information about different social relationships. Information depends on the condition that the content has nothing to do with users, is inaccurate and not attractive. It eliminates the characteristics of information and mainly considers the factors of social relations, while the social and information factors, and the characteristics of information are added under different social relationship conditions.

### 4.3 Relations analysis of the influencing factors of network information transmission

#### 4.3.1 Hypothesis test and path analysis affecting information transmission

Table 7 shows the list of the path coefficient between the variables and the corresponding p-value statistics. Shown by Fig2, three paths, passed by significance test. The three paths are the influence of personal factors, social factors and information factors on attitude. The comparison found that when only personal characteristics and social factors existed, the attitude influence on information was small. When social relationships are combined with information characteristics, attitude effects on information is more significant.

**Table 7 Hypotheses and significance tests**

hypothesis	Standardization coefficient	standard error	critical value	P	result	
manner <---	personal factors	0.23	0.03	2.143	0.032	Positive effect results were significant
manner <---	social factors	0.29	0.029	2.371	0.018	Positive effect results were significant
manner <---	Society and Information factors	0.475	0.09	2.368	0.018	Positive effect results were significant

#### 4.3.2 Impact analysis of latent variables

**Table 8. Analysis of the effects of the latent variables**

way	Standardization coefficient	standard error	critical value	P		
social factors						
When the information is incomplete and incoherent	<---	social factors	0.668	0.12	8.774	***
When the information title is not attractive	<---	social factors	0.762	0.105	9.75	***
When the information content is inaccurate	<---	social factors	0.758			



When the information content is irrelevant to you	<---	social factors	0.605	0.104	7.999	***
When the abstract does not attract attention	<---	social factors	0.537	0.105	7.109	***
manner						
Forward to group	<---	manner	0.375	0.509	2.756	0.006
Forward to circle of friends	<---	manner	0.52	0.664	3.025	0.002
Read only and not forward	<---	manner	-0.736	0.781	-3.122	0.002
Forward to others	<---	manner	0.396	0.551	2.81	0.005
thumb up collection tips or comments	<---	manner	0.26			
Social and information factors						
When the information is complete and coherent	<---	Social and information factors	0.405			
When the information content is true and accurate	<---	Social and information factors	0.728	0.81	2.411	0.016
personal factors						
Monthly average income	<---	personal factors	0.94	1.39	3.862	***
Your age	<---	personal factors	0.602			
The number of friends you most commonly use in instant messaging software	<---	personal factors	0.304	0.155	4.048	***

Through the Table 8 analysis, we can know that:

(1) Among the observation variables that affect social factors, part of the nature of the information is excluded, and the investigators give three-level attitude feedback on whether to read, interact (likes, collection, tips and comments )and forwarding (individual, group, circle of friends) according to the information sent by social relations. When excluding the information of integrity, title attraction, accurate information content, information correlation and information attraction, the standardization coefficient of information from social relations on people's attitude towards information is in the range of 0.537-0.762, which has a significant positive effect. Therefore, it is learned that when social relations exist and in the face of complex network information, people will ignore the characteristics of information to some extent, so as to open their own information "filter" to read, interact and forward information. At the same time, the influence of personal factors on attitude needs to collect privacy issues such as their age, friends and average monthly income. From the perspective of social relations, they pay attention to information exchange and the relationship with others. The privacy is low, and people are more willing to share information with their social relations.

(2) Among the observation variables that affect attitude, forwarding to the circle of friends is the most positive and significant factor compared to others and groups, indicating to a certain extent that people tend to communicate more indirectly when they reprocess information after reaching them. However, the value of only reading without forwarding is negative, which may indicate that it is difficult for people to refuse the information sent from social relations, and they choose to interact or forward the information again.

(3) In the face of complete, coherent, truthful and accurate information from social relations, it has a strong impact on people's attitudes towards reading, interaction and forwarding. The communication attitude is more influenced by individual factors than social factors.

## V. COMPARATIVE ANALYSIS OF SUBJECTIVE AND OBJECTIVE FACTORS

### 5.1 Control design of subjective and objective factors

In order to discuss the influence of various factors including and excluding social relations on information transmission. According to the original questionnaire containing social relations, the content of social relations was excluded. Group A formed the subjective information group of social relations, and group B excluded the objective information group of social relations.

For the questionnaire reliability validity test, the KMO value was 0.805, which is higher than 0.8, indicating high validity. In addition, the corresponding relationship between items and factors is basically consistent with the study expectations and good validity; the lowest common value was 0.494, higher than 0.4, and no delete items are required. Overall, the validity of this questionnaire is reasonable.

Want to compare the questionnaire with the information mainly influenced by objective factors and the questionnaire mainly influenced by human subjective factors. Considering the differences in the questionnaire design of the two sides, we choose spss for exploratory factor analysis and classify the internal factors of the questionnaire. The scale was factor analyzed by the statistical software SPSS to prepare for the subsequent verification of the reasonable division of each dimension. The KMO and Bartlett spherical tests were performed for the samples, and the KMO values and P-values of the two questionnaires are shown in Table 9, indicating that the scale within this questionnaire is suitable for exploratory factor analysis.

**Table 9. KMO and Bartlett tests**

	objective	subjectivity
Number of KMO sampling	0.847	0.888
Bartlett spherical test	0	0

The variance maximization principle was used to cluster all indicators, and the load height of each

factor in the rotating factor load matrix was classified, and the eigenvalues of the common factor greater than 1 were extracted, as shown in the following figure, and the final number of effective factors was 4 and 5 respectively, which is reasonable. Considering the purpose of this study and the actual meaning of each project, the objective factor questionnaire is named "media use", "information factor", "attitude" and "personal factor"; the subjective factor questionnaire is named "media use", "information factor", "attitude", "personal factor" and "social relations".

### 5.2 Difference analysis of subjective and objective data

The differences between objective and subjective factors were compared, that is, spss used paired sample T test to find whether subjective and objective factors have obvious differences in information transmission in the three dimensions of information factors, attitude and social relations.

**Table 10. Results of the table-paired T-test**

	Paired difference	mean	standard deviation	Standard error	Difference value: 95% Confidence interval		t	df	Sig.(Double tail)
					lower limit	superior limit			
Paired 1	Subjective not forwarding-objective not forwarding	-0.02597	0.59891	0.03052	-0.08599	0.03404	-0.851	384	0.395
Paired 2	Subjective business source-objective business source	0.27586	1.31603	0.12219	0.03383	0.5179	2.258	115	0.026
Paired 3	Subjective Words-Objective Words	0.096	0.90446	0.0572	-0.01666	0.20866	1.678	249	0.095

As shown in the Table 10, when only information comes from commercial sources, information containing social relations and information not considering social relations, with a P value of 0.02 less than 0.05. Therefore, the transmission effect of network information is further analyzed according to different social relations.

## VI. AUDIENCE RESISTANCE THRESHOLD CONTROL OF NETWORK INFORMATION

Through the analysis of the resistance threshold measure of the network information, it is confirmed that the factors affecting the attitude of the audience information dissemination are complex,

multidimensional and joint, and the subjective factors have a more obvious influence on the audience resistance threshold in the process of the network information dissemination.

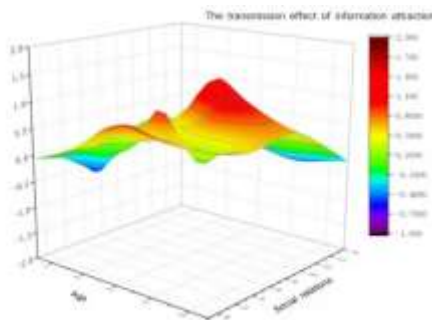


Fig. 3: propagation effect when information title is attracted

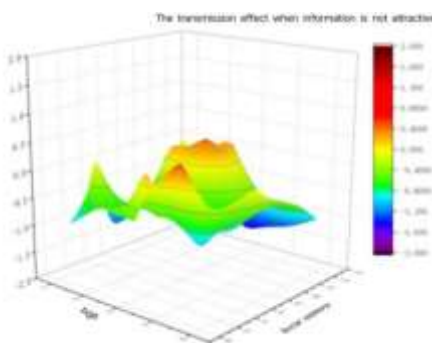


Fig. 4: propagation effect when information title is not attracted

Figure 3. In the case of attractive information, the communication effect approaches to 2 (forwarding behavior), the more the social relationship tends to R e 13, and the more the age tends to A ge 2. This shows that when friends send attractive information, people aged 20-29 tend to be more active in communication reactions. The closer the communication effect is to -2 (reporting, shielding, shielding), the closer the social relationship is to R e 14, the closer the age is to A ge 5, which shows that people over 50 years old tend to take a more negative way to deal with attractive messages sent by strangers. Age 20-29 of all ages tend to give a more positive treatment to messages with attractive headlines, and those under 19 and over 50. In social relations, users are more willing to give positive ways to handle the messages sent from R e 2, R e 5 and R e 13 interpersonal relationships.

Figure 4 is formed under the influence of three variables of communication effect in age-social relationship-when the information title is not attractive. When the information title is not attractive, the overall treatment is negative with almost no positive communication reaction, which shows that the feature of information title attraction is very important for the communication effect. Age is also 20-29, information tends to be more positive. R e 8 and R e 13 relationships will have a more positive approach. To sum up, we shows that the attraction of information title has a great impact on the effect of information dissemination, and the interpersonal relationship of friends will promote the audience to make a positive response under different objective attributes.

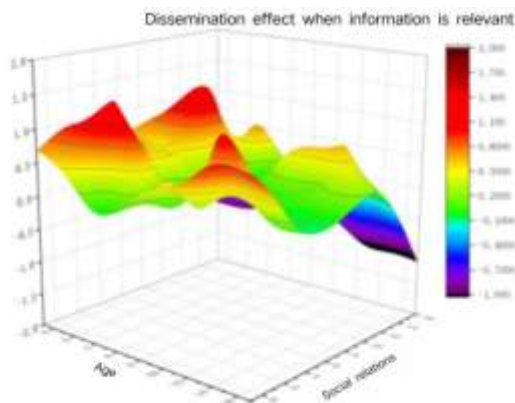


Fig 5: Transmission effect when information is related to oneself

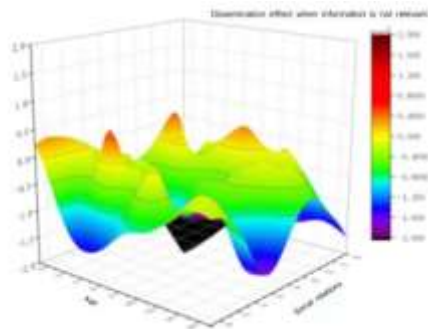


Fig 6: Transmission effect when information is not related to oneself

As we can see in Figure 5, audiences of different professions should report and close the different social relations with communicators; give up reading, click on reading; like, collect and comment; forward these five main communication attitude reactions. When the transmission effect is positive (score greater than 0), occupations tend to Oc 1, Oc 2 and Oc 8; social relations tend to Re 5, Re 8 and Re 13. government officials and productive enterprises are more likely to make positive responses to messages from their superiors, partners and friends.

Figure 6 is formed under the influence of three variables of transmission effect when occupational-social relationship-information is irrelevant. When information is not correlated with them, the overall response of users is more negative, but there are still some neutral or even positive reactions. Therefore, information correlation has a certain impact on the effect of information transmission, but it is not decisive. Oc 2, Oc 7, and Oc 12 are also willing to actively process information that is not related to them. The information from Re 3, Re 12 and Re 13 social relations is easier to get positive processing.

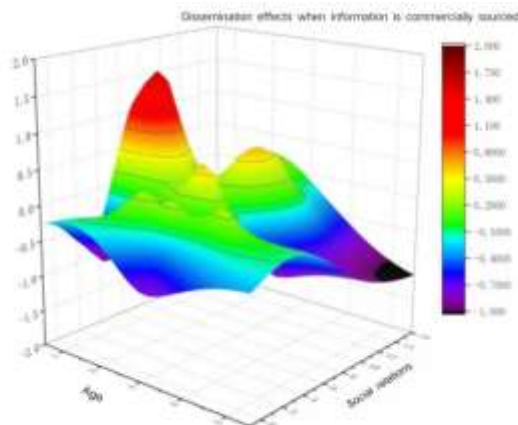


Fig 7: Communication effect of information from commercial sources

Figure 7 shows that information is sent from a commercial channel, audiences of different ages will report and block the different interpersonal relationship between communicators and themselves; give up reading, click reading, like, collect and comment; forward these five main communication attitudes. Therefore, when business information comes from strangers, parents, children and other relatives, the transmission effect is poor, among which strangers have the lowest transmission effect. The communication effect from working relationship and school relationship is good, and the effect from superiors and superiors is the best, with the effect of click reading; praise, collection and comment. Among them, under the age of 39, they have more attitudes towards likes, collections and comments.

## VII. Conclusion

7.1 The influence of interpersonal relationship on the effect of information transmission presents different characteristics in different ages.

Social relations have a significant impact on people's handling of the received information, clear the social relations of users, advertising, tweets from social relations for scene design, humanized marketing, moving with emotion. It is beneficial for information publishers to change their information processing attitude in the face of user information fatigue or in the filtering of information because of social relations.

7.2 It is difficult to spread the information from commercial sources to high-affinity social relations.

Data analysis results show that when business information comes from strangers and their relatives, the transmission effect is poor, among which strangers have the lowest transmission effect. The communication effect from working relationship and school relationship is good, and the effect from superiors and superiors is the best, with the effect of click reading; praise, collection and comment. Enterprises should encourage users to forward commercial information in the working circle and university groups.

When information is a source of business, social relations show a strong positive role in information

dissemination. This is because the information from commercial sources lacks the attraction of content, and the communication of social relations will bring emotional trust to the audience, so that more audiences can bring stronger positive communication effect to the information.

When information is not a commercial source, social relations have little influence in the process of information dissemination. The objective factors of information such as the number of information and information content are higher than subjective factors in social relations.

Business source attribute of information in the process of transmission, different interpersonal communicators information from the audience response, parents and children because too close, the audience in this kind of interpersonal communicators received this information, is often ignored, transmission effect is poor, strangers business source attribute of information audience is mostly negative transmission effect, transmission effect is the worst in many relationships. Among them, the information from the superior and level interpersonal relationship is the best, because the working relationship is relatively subtle. The blessing of the working relationship makes the information exchange between each other very serious, and it will be a positive reaction to the information received.

### 7.3 Most people will choose to open up the messages from close social relationships

No matter how the objective properties of information, in the face of different intimate relationship information communication channels, close social relationship message more easily Datong communication threshold, when only need to improve visibility, do not need to live forwarding behavior, enterprises can through interpersonal marketing, set up special forward blessing, etc., promote intimate information between forward, improve information exposure.

## ACKNOWLEDGEMENTS

Promoting the Connotation Development of Colleges and Universities -- A study on the Mechanism of Audience Resistance Threshold Distribution of Promotion Information in social Relations Channel (2020KYNH217).

## REFERENCE

- [1] Zheng Jiaoliang, Lu Baozhou. Impact factors of user participation on mobile social network platform. Enterprise Economy, 2019, 38 (03): 88-95.
- [2] Hu Longying, Dong Jingwei. Empirical Analysis of Weibo Users. Soft Science of China, 2015, {4} (02): 175-182.
- [3] Fei-fei wang. Research on WeChat Users of Mobile Social Network. Beijing University of Posts and Telecommunications, 2018.
- [4] Ding Xuwu, Wu Zhong, Xia Zhijie. An Empirical Study on the Impact of Emotional Factors on Users' Forward Behavior in Social Media--takes Sina Weibo as an example. Modern Intelligence, 2014,34 (11): 147-155.



- [5] Zhang Yaming, Su Yan Yuan, Liu Shuo.--is based on the perspective of communication persuasion model and the theoretical perspective of media richness. *Journal of Yanshan University (Philosophy and Social Sciences edition)*, 2020, 21 (05): 62-71.
- [6] The 45th Statistical Survey Report on Internet Development in China. China Internet Information Center
- [7] Yang Xiaodong, Wu Yongxiang. Utility Value Evaluation of Urban Housing Based on Structural Equation Model. *China Soft Science*, 2013, 4 (05): 158-166.
- [8] Xiong Wuji, Liu Yongquan. Open education non-learning support service psychological element analysis under the AMOS structural equation model. *Research on Modern Distance Education*, 2017, 4(02): 104-112.