

Research on Rumor Monger Motivation Based on Psychological Projection Perspective and Big Data Analysis

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Abstract:

Exploring the motivation of online rumor public opinion transmission is helpful for the management department to accurately detect and control rumor public opinion through different types of rumor transmission characteristics. Psychological projection theory is used to explore the projective relationship between rumor propagation motivation and behavior. Firstly, the projection process of rumor propagation is analyzed. Secondly, using Maslow's Hierarchy of Needs Theory to analyze the relationship between the psychology of rumor dissemination and user needs. Thirdly, explore the internal mechanism between different psychology and motivation of network users. Finally, the causal relationship between different behaviors and motivations is analyzed and the public motivations and demands implied behind the behaviors are interpreted. It is found that the communication psychology of users is categorized into a total of seven areas such as anxiety, panic, altruism, and self-interest. The network users' motivation of rumor spreading can be divided into four types: information acquisition motivation, self-actualization motivation, emotional catharsis motivation and entertainment and social motivation. Network user behavior can be divided into three types: spectator participation, discourse participation and communication participation. The results show that using the psychology of rumor users to reverse analyze their behavioral motivations is helpful for the management department to grasp the characteristics of different types of rumor propagation more accurately, and further improve the efficiency and effect of rumor detection and management.

Keywords: psychological needs, big data analysis, psychological projection, rumor monger, psychology motivation, user behavior

INTRODUCTION

The rapid development of Internet, artificial intelligence and other technologies has made people's life, work and study more intelligent and convenient. The rapid development of Weibo, Wechat and other social network platforms has also made social platforms one of the important means for the public to obtain new information. But at the same time due to the anonymity of the network and other reasons, the network platform is often filled with a lot of network rumors. If these online rumors are not dealt with in time, they may be distorted and amplified quickly on the network platform, misleading the public and causing great harm to social production and life. Therefore, how to accurately mine users' rumor spreading motives is helpful to the effective governance of online public opinion.

Motivation is the psychological tendency and internal drive to motivate user behavior to a certain goal [1]. From the perspective of psychology, motivation is a kind of psychological state, so it is the key to tap into user needs and predict user behavior to explore user psychology and clarify user motivation [2]. Behavior is the reflection of intrinsic motivation in the outside world. Motivation reflects user psychology and behavior expresses user motivation. The relationship among behavior, motivation and psychology makes it possible for external behavior to reverse mine user psychology. Therefore, user psychology can be explored more scientifically and accurately by analyzing the psychological motivation of users participating in network rumor propagation through user behavior.

Based on the perspective of psychological projection, the paper proposes a method to analyze users' psychological motivation from network users' behaviors. By making full use of the guiding role of motivation as an element in theory and practice, it expands the application scenarios of psychological projection theory, providing theoretical basis for the study of rumor propagation motivation and behavior, and also providing certain guidance and reference for the study of the portrait of rumor users.

RELATED WORKS

Rumor Spreading Motive

Rumor spreading motivation refers to the internal driving force that inspires people to publish or forward rumor-related content on social media. There have been many researches on rumor spreading motivation at home and abroad.

Early scholars' research on the motivation of rumor spreading stayed at the level of people's emotional needs, believing that anger, anxiety, resentment and other emotions promoted the spread of rumors [3]. Rosnow believed that personal anxiety, general uncertainty, and credulity of event results all affect the generation and spread of rumors, among which personal anxiety is the most important factor affecting rumor spread[4]. Based on social psychology theory, Kim and Bock studied the main factors affecting the spread of online rumors. They believe that emotion is an important factor affecting the attitude and behavior of online rumor spreading[5].

With the deepening of research, scholars find that the motivation of rumor spreading is no longer limited to the emotions of netizens, but extends to psychological factors. In the past, scholars studied the motivation of rumor spreading through questionnaires and interview surveys. For example, Lee et al. conducted an online survey of 184 undergrads who use Twitter, they concluded that a negative mindset increases the likelihood of rumor-sharing[6]. Yang Furong et al. studied the influence mechanism of rumor propagation through questionnaire survey[7]. The above research has certain positive significance for revealing the theory of rumor spreading motivation of social media users.

Psychological Projection

The concept of projective was first coined by Sigmund Freud, which refers to the reflection of one's own desires, character and mental state on others or surrounding objects. In essence, projection is a psychological defense mechanism used by individuals to rid themselves of evil[8]. Then, many scholars have carried out a thorough discussion and expansion on the connotation of projection. Sun Ruiying believes that projection is a process of imaged image[9]; Zhang Liman et al. believe that projection refers to the "expression" of a person's inner world in a certain behavior[10]; Li Wenjiao proposed that projection generally refers to an individual's explicit interpretation of his or her own psychological characteristics and tendencies[11].

Projection refers to a psychological effect in which individuals unconsciously reflect their own personal characteristics such as thoughts, attitudes and emotions on others or objective things.

PSYCHOLOGICAL PROJECTION ANALYSIS OF THE MOTIVATION OF INTERNET RUMOR SPREADING

Motivation of Rumor Propagation under Psychological Projection Theory

Theoretically, all social media users have intrinsic motivations when spreading rumors, and users will have differentiated behaviors under different motivations. Although people's inner thought activities and emotions are not easy to detect, the invisible inner world can be "manifested" through psychological projection. Therefore, it is feasible to reverse map users' motives from people's behaviors. At present, some scholars have explored it. Sun Ruiying uses projection theory to dig the hidden needs of users[9]; In order to analyze the user motivation of academic social network users and construct the user portrait, Zhang Liman used the theory of psychological projection to design the user portrait of user motivation[10].

Rumor itself is a kind of "emotional body", a projection of a completely subjective emotional state[12]. Rumor mongers generate different communication motives according to different psychology, and finally form differentiated behaviors, such as spreading different types of rumors and adopting different forms of communication. As a new method to explore the motivation of rumor spreading, compared with traditional literature research methods, questionnaire survey methods and other methods, psychological projection method provides guidance to infer the psychological motivation of users' communication behavior from explicit behavior data, and can reveal the real psychological status of users more objectively and accurately, explore users' communication motivation, and analyze users' communication behavior.

The Projective Process of Rumor Spreading Motivation

Projection test is a typical test method in the field of psychology. Gardner lindzey divided the psychological projection technique into five categories, which are followings. (1) associative type, represented by the roxia test test. The method asks the experimenter to make associations with certain stimuli and then express the associations. (2) Stereotype, represented by thematic apperception test. The method asked the experimenter to make up a story based on pictures that included past, present and future events. (3) The completion type is represented by the completion of sentence tests. The experiment asks participants to supplement incomplete sentences, words or stories. (4) Selection type, represented by Uchida - Krepelin psychological test. The experimenter is asked to arrange pictures, photographs, etc., according to some criteria. (5) Demonstrative, represented by drawing projection tests and sandplay therapy. Let the subjects reveal their inner state through some medium[11].

From the perspective of psychological projection, it is entirely possible to deduce the implicit characteristics of psychological motivation of rumor propagation from the behaviors of rumor users. Based on the relevant characteristics of psychological

projection theory and rumor propagation motivation, the paper believes that the projection process of rumor propagation motivation is divided into four stages, as shown in Figure 1. First of all, due to the ferment and expansion of a certain event (for example, public health emergency), the attention of netizens is increasing, and the event stimulates a certain need in the user and netizens to produce a certain psychological (for example, netizens are in a state of anxiety, panic, etc.). Then, the netizen's psychological state forms the motivation of spreading rumors. Next, according to the theory of psychological projection, motivation is the internal power that determines behavior, and communication motivation makes users produce relevant behaviors. Finally, according to the different behaviors of users, the deep-seated motivation of Internet users to generate network rumors is projected backwards, and the psychological state of Internet users is analyzed.

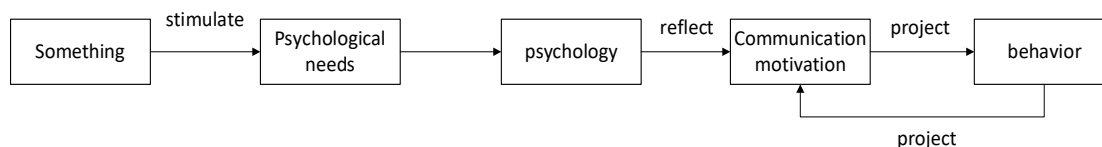


Figure 1. The projection process of rumor dissemination motivation

Analyzing user behavior not only helps to predict the future behavior trend, but also helps to reveal the psychological state of users. Therefore, the relationship between communication motivation and behavior should be clarified according to the projection process to lay a foundation for objective analysis of users' psychological motivation in communication.

NEEDS AND PSYCHOLOGY

Psychological Types of Rumor Propagation

It is found that the psychology of rumor spreading can be divided into seven types, including anxiety (panic), curiosity, conformity, anger, fun, altruism and self-interest. Anxiety is a kind of irritability caused by worries about one's own safety or future. When people are in a state of anxiety and insecurity, their discernment is reduced and they cannot judge the authenticity of information, which leads to rampant false information. According to Allport, rumors provide a verbal outlet for anxiety[12].

As a kind of negative psychology, anxiety provides propagation conditions for rumor breeding. Panic psychology refers to fear and panic is a kind of emotion. The public's lack of knowledge and understanding of the relevant truth leads to the public's information panic, media panic, behavioral panic, etc. This can be a fear of knowing less information, of being around people who know more than they do. In order to avoid information panic, the public focuses on mobile phones and forms an information circle of Wechat, QQ, Weibo and other media based on mobile phones. At this time, the public panic on information gradually shifts to panic on media. When information panic and media panic continue to spread in the group, behavioral panic is gradually derived, and its impact is inevitably related to the spread of network rumors.

Curiosity means being curious and interested in things you don't know about. It's human nature to be curious. In order to attract people's attention and gain more traffic and attention, many rumormongers add exaggerated and bizarre elements to the rumors. These bizarre and abnormal rumors arouse the curiosity of the public and thus get people to read, comment and repost. Users satisfy their curiosity by obtaining information about relevant events and realize their needs for information.

To vent one's anger means to vent one's anger. In today's society, the interest demands of class structure are increasingly diversified and complicated, and all kinds of social contradictions are intertwined in a complex way. In the event of a sudden event, these contradictions can easily emerge in the form of a blowout. Some members of the public use these events to create online rumors, vent their dissatisfaction with the society and fulfill their needs to vent their anger[13].

Egoism refers to people's instinct, behavior, consciousness and thinking or its ultimate abstract result to meet their own material and spiritual needs. Rumors are mostly generated by users to meet their subjective needs, including recognition needs, entertainment needs, profit needs and so on. In order to satisfy their own selfish interests, some netizens spread rumors on the Internet and gain attention, thus obtaining a great sense of vanity or relevant interests.

Altruism refers to the behavior of respecting the interests of others in order to make them obtain convenience and benefits. It's a voluntary socialization that benefits others. People usually have compassion and sympathy for the vulnerable groups, with a simple view of justice and morality. When the content of the rumor contains that this kind of weak group faces injustice or tragic experience, the public will arouse altruistic psychology and spontaneously forward and voice. They believe that such reposting behavior is not spreading rumors, but a kind act of caring for others and caring for the collective.

Conformity refers to the change of behaviors or ideas of group members under group pressure. The Internet era seems to provide netizens with greater activity and entertainment space and give them greater freedom, but it aggravates the public's sense of loneliness. There is a general herd mentality in the current society. In order to gain a sense of belonging on the Internet, the public comments and forwards the mainstream views. This provides an opportunity for rumors to spread. If the public blindly follow the trend and abandon thinking, it will have a blind mentality. Following blindly makes the public gradually converge in the process of sharing rumors, so rumors spread effortlessly in the group. When groups spread such information, a "group polarization" effect may occur.

Rumor spreading and spreading are inseparable from some people's mentality of entertaining themselves to death. On the one hand, part of the public take rumors as a kind of entertainment information, browse and forward them on the Internet. On the other hand, out of a playful mentality, netizens freely post their feelings and opinions on the we-media platform. Most users regard social media as a social means to relax, tease and vent, which leads to the casual, irresponsible and willful release and dissemination of information by users.

Psychological Needs

In 1943, the American social psychologist Maslow put forward the "theory of human needs", summarizing human needs into five levels: physiological needs, safety needs, belonging and love needs, respect needs and self-actualization. Currently, Maslow's five-stage model has been expanded to seven stages, including cognitive needs and aesthetic needs.

- (a) Physiological needs are the needs for air, temperature, reproduction and shelter that are necessary for the survival and continuity of a species.
- (b) Security needs are the needs of people for stability, safety, protection, the ability to eliminate anxiety, and so on.
- (c) Belonging and love needs include love, belonging, socialization, etc., and people's behavior is driven by emotional needs.
- (d) The need for respect refers to the need to have one's self-esteem respected and appreciated by others.
- (e) Cognitive needs are those of knowledge and understanding, curiosity, exploration, meaning, and predictability.
- (f) Aesthetic needs are the appreciation and search for beauty, balance, etc.
- (g) The need for self-actualization is the quest of people to realize their abilities or potential.

Psychological and Demand Relationships

Among the past studies on the psychology of rumors, most researchers have focused on the psychology of rumor spreading from different perspectives, such as the context in which rumors exist[14], the content of rumors[15], and the characteristics of the individuals who create and spread rumors[16]. However, current theories exploring the psychological mechanisms of rumor spreading from the perspectives of motivation and needs have yet to be developed[17]. This study investigates the relationship between rumor communication psychology and needs based on Maslow's hierarchy of needs (see Figure 2), to compensate for the above lack to some extent.

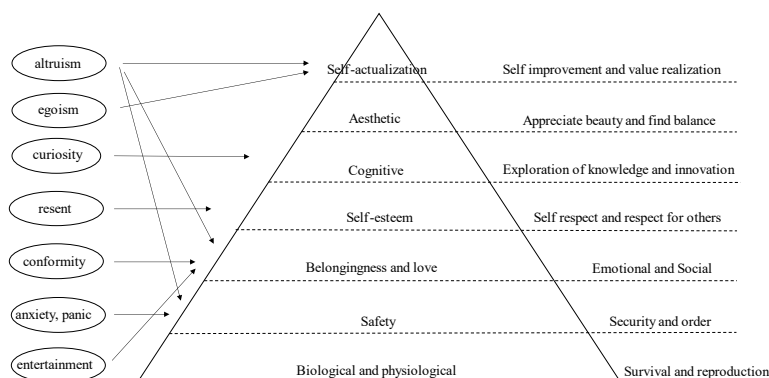


Figure 2. Relationship between psychology and needs

Studies have shown that people's anxiety and panic about dangerous events promote the generation and spread of rumors[12]. Rumors that are closely related to people and easy to get people's attention are directly related to people's safety needs. People spreading rumors due to anxiety and panic can be seen as a response to people's need for their safety. For example, the emergence of new crown epidemics intensifies people's inner sense of panic and anxiety and stimulates their need for security. Rumor mongers have seized on the general uneasiness and sense of worry hidden behind these sensitive topics to publish and spread rumors.

Curiosity corresponds to the cognitive level of Maslow's theory of needs. Curiosity implies an individual's desire and desire to explore new knowledge and things, which is consistent with the human desire to understand the world and the instinct to pursue knowledge. People may share new things and information with their friends or family members out of curiosity about new things, and unknowingly become the spreaders of rumors.

The venting mentality corresponds to the respect needs of Maslow's need theory. When individuals feel wronged, treated unfairly, or hurt, they may vent their dissatisfaction and anger by spreading negative news in the hope of attracting the attention and sympathy of others.

Egoism corresponds to the self-actualization need in the hierarchy of needs. Egoism causes individuals to pursue only their interests, disregarding the needs and well-being of others. Out of the need for personal gain, people want to influence the behavior of others by spreading false information to satisfy self-actualization.

Altruism corresponds to the three levels of Maslow's hierarchy of needs, which are the need for safety, the need for love and belonging, and the need for self-actualization. Embedded in altruism is the need for safety, which means that people want to protect others from harm by disseminating relevant information. For example, the rumor that "Shuanghuanglian Oral Liquid can inhibit the new coronavirus" has been circulating in WeChat and Weibo, and netizens think that this kind of "life-threatening good news" to satisfy their safety needs should be shared. In addition to this, altruism also hides the need for love and belonging. People usually have compassion and sympathy for the disadvantaged, and have a simple concept of justice and morality. Internet users spread information related to them out of emotional attributes to realize their inner emotional needs. Finally, altruism contains the need for self-actualization. This need for self-actualization contains the values of the people, and its essence is also the concern for moral phenomena[18]. On the one hand, people amid emergencies or crises will pay more attention to moral issues, and the public will be more inclined to understand the relevant events and disseminate the relevant information from a moral perspective. On the other hand, rumor makers and disseminators will use the public's existing judgment standards and moral theories to strengthen their own views, making the rumors more appealing to the audience's preferences[19].

Herd mentality is attributed to people's need for emotion - the need to belong and love. When their most basic needs are met, people seek a sense of belonging, look for groups that make them feel at ease, and want to be affirmed and recognized by the group. The social flow waterfall effect in rumor spreading reflects this mentality: "...we are more inclined to believe what others believe. If most of the people we know believe a rumor, then we will believe it too[20]." The emergence of social media has facilitated this social convergence psychology. It enhances communication and exchange between people, intensifies trust between strangers, and completes the exchange and dissemination of information between them, allowing rumors to be accepted and spread [19,20].

Internet users spread rumors out of a need to socialize in an entertaining frame of mind. A key driver of user-initiated rumor spreading behavior is the user's desire for social connection and recognition. This effective rumor spreading behavior can demonstrate the Internet user's relationship with a specific group or community. Based on proactive psychology, people tend to use social systems in various ways to validate their sense of self and gain attention or recognition from others[21]. Therefore, the populace will share information with others out of the social need to satisfy their emotions and to attract the attention and approval of others.

MOTIVATION AND PSYCHOLOGY

Types of Motivation for Rumor Spreading

The paper summarizes that rumor spreading motives can be divided into four types: information acquisition motivation (to meet users' information expectations, relieve inner tension and explore the truth of events), emotional catharsis motivation (to vent one's own emotions), self-actualization motivation (altruism, egoism and self-identity realization), and entertainment and social motivation (communication, entertainment and information sharing purpose).

Information acquisition motivation

Information acquisition motivation is to acquire information, exchange information as the main goal. According to individual needs, users obtain relevant information through social media and follow what they are interested in and think is valuable in order to discover the truth of the matter. When something happens, the public is eager to know the truth and get the relevant information. In addition, when the public is in the vortex of events, their hearts are full of anxiety, panic and other negative emotions. By obtaining relevant information, they can relieve their emotions, so as to realize the return of their hearts[22]. Social platforms provide Internet users with a medium to obtain and exchange information. In the process of exchanging information with others, Internet users tend to embellish information, which will eventually lead to false messages and rumors spreading everywhere.

Cathartic motive

Cathartic motivation refers to the emotional pursuit of some events, which is a behavior with very unique personality. Catharsis is necessary both for individual needs and for the development of society. Emotional venting is a way for the public to express their right to speech and participation, which helps social media users regain their psychological balance[23]. Individuals need to release emotions or express their needs, and society also needs to release emotions and relieve contradictions of the safety valve. The public cannot find a channel to vent in reality, so they use the virtual environment of the network to vent their emotions and obtain psychological pleasure. The motive of emotional catharsis makes the public not only a passive recipient of information, but also an active monger of information, expressing their inner resentment and other psychological feelings by spreading rumors.

Self-actualization motivation

Self-actualization motivation includes three aspects: caring level, egoism level and social identity level. Caring is a concept of social relations and an important part of moral consciousness, which reflects human's need for compassion, care, help and other altruistic acts. The formation of caring self-actualization motivation is usually a process of individual self-transcendence. Internet users have self-actualization motivation and spread rumors out of caring psychology. The contents of the spread reflect the collective consciousness of users to resort to fairness and expect goodwill. As long as the appropriate conditions are met, the rumor will spread.

The second level is the egoistic level of self-actualization motivation. The self-actualization motive is generated by the egoistic psychology of Internet users, whose purpose is to obtain personal benefits. The specific means corresponding to different communication behaviors may be different, but the ultimate purpose is to obtain personal interests. For example, some behaviors are to create hot topics to attract attention, make themselves popular, attract more attention from enterprises or media, and enhance their self-worth; Some behaviors are to spread rumors to obtain corresponding economic rewards and so on.

Self-actualization motivation at the level of social identity mainly refers to the user's continuous pursuit of social identity to obtain psychological satisfaction and comfort. Internet users care about the evaluation of the group and hope to have the sense of belonging of the group. The sense of social identity is formed from such cognition, emotion and self-evaluation, which leads to the Internet users to do the same behavior with the group out of the sense of social identity, so as to realize the group's recognition of themselves. Or they are unable to express their views under group pressure and can only cater to the opinions of opinion leaders.

Entertainment social motivation

The purpose of entertainment and social motivation is to entertain and socialize, that is, Internet users spread rumors for the purpose of better communication with other individuals, better understanding of themselves by others, or purely to entertain themselves and the public. Since rumors are entertaining and stimulating to some extent, they satisfy people's psychological needs of seeking new and different ideas and fresh topics. The spread of such rumors by netizens out of the motive of entertainment and social interaction can attract a large number of viewers' attention.

The Relationship Between Psychology and Motivation

In order to explore the rumor generating motivation and communication psychology of Internet users, based on the existing research, the classification of user communication psychology and corresponding motivation of domestic and foreign research results are sorted out, as shown in Table 1. Information acquisition motivation comes from users' demand for information, and their corresponding psychological states are anxiety, panic and curiosity. The lack of information leads to inner anxiety, panic and other negative emotions. Under such uneasy emotions, netizens can piece together the beginning and end of the event through

a large amount of browsing and collecting information, restore the truth of the event and calm their inner anxiety. In addition, some members of the public will also find a lot of information to satisfy their curiosity and desire to explore, to discover the truth of the event.

Table 1. Correspondence between the psychology of rumor mongers and their motivation

Motivation	Relationship	Psychology
Motivation for information acquisition	Information about something arouses someone's interest	curiosity
	Meeting public information expectations and alleviating nervousness	anxiety, panic
	Digging into the Truth of the Event	anxiety, panic, curiosity
Emotional venting motivation	Release the resentment in the heart	resent
Self actualization motivation	Caring for the collective and society	altruism
	To achieve one's own interests	egoism
	To gain a corresponding sense of identity and belonging	conformity
Entertainment Social Motivation	Relax and entertain	entertainment

The motivation of emotional catharsis originates from the needs of individual inner emotions to vent, and its corresponding psychological state is to vent anger. The purpose of such motivational transmission behavior is to express one's dissatisfaction and vent one's negative emotions. Rumor mongers mobilize emotions, spread rumors, distort facts and vent emotions. The popularity of the Internet makes everyone in the virtual network world have a "microphone". Especially when there is some kind of event that fits the current mood, under the motivation of emotional catharsis, the accidental event is very likely to become the fuse for the rumor mongers to spread rumors, through which they vent their anger or express a lot of dissatisfaction.

Self-actualization motivation comes from the need to realize self-value and the desire to pursue realistic interests, and its corresponding psychological states are egoism, altruism and conformity. Out of altruism, users help others from the bottom of their hearts with good intentions, but sometimes they do bad things with good intentions. The form of rumors is mainly to report or reflect the situation and remind others to pay attention. Its content reflects a plea for "goodwill, fairness and openness," a system of interpretation buried deep in the collective consciousness. Out of self-interest, Internet users spread the corresponding rumors and organize some hyping behaviors in order to shape the relevant personnel and show their personal charm. In order to obtain a sense of social identity, users will generate conformity psychology and self-actualization motivation, emulate group behavior and become a member of the association.

Entertainment social motivation arises from users' need for interaction and entertainment through social networks, and their corresponding psychological state is play. Most of the rumors circulated were interesting or surprising. Out of entertainment or social needs, users adapt and exaggerate established real information in an attempt to entertain themselves and the public by spreading rumors. Generally speaking, gossip and public opinion are the most widely spread news. Such rumors are easy to be depicted vividly and spread in large numbers.

MOTIVATION AND BEHAVIOR

Types of Rumor Spreading Behavior

From the perspective of occurrence, motivation is the real psychological reason behind the behavior, and the implicit motivation needs to be shown by the explicit behavior. Therefore, rumor spreading behavior can be divided into three participation modes, namely, onlooker participation, dissemination participation and discourse participation. Among them, the spectator participation is the behavior of information acquisition, and the dissemination participation is the behavior of information production.

Spectator participation behavior

The behavior of onlooker participation mainly refers to that users obtain relevant rumor information by clicking and browsing information. For users, clicking and browsing related posts is just a rumor headline or content that catches their attention or touches a certain level of their psychology. When the number of clicks and views increases exponentially, the message gets pushed a lot, potentially causing a "crowd effect.". For users, this kind of widespread communication is just a kind of "onlooker", but the social crisis and social pressure behind it cannot be ignored.

Communication participation behavior

Dissemination participation means that users forward and share related contents of rumors based on clicking and browsing information. Forwarding and sharing information does not need to express personal views and attitudes, and has the characteristics of low threshold and cost. Compared with traditional communication methods such as oral communication and newspaper communication, social media communication breaks the barriers of time and space, and spreads widely and quickly. In addition, this participation mode implies users' recognition of the content of rumor information or value tendency, so this kind of behavior has gradually become an important participation mode reflecting the motivation of rumor spreading.

Discourse participation behavior

There are two main forms of discourse participation. One is to post your own comments or produce rumors about relevant events. Commenting or responding to relevant events is a very concise way of expressing information. Internet users use a few words or words to express their views on the whole thing, but the influence of this way of expression is small, mainly restricted by the spread scope and influence of the event. Another kind of discourse participation behavior is that users publish original content based on a certain event to express their own opinions and attitudes. This form of rumor spreading has a great influence. On the other hand, this way requires users to bear greater responsibility and pressure, and can better show the motivation and desire of users to spread.

The Relationship between Behavior and Motivation

Only by understanding the hidden psychology and demands behind behaviors based on psychological projection perspective can rumors and public opinions be better controlled. Based on the relationship between motivation and behavior, this paper explores the motivation of users under different behaviors and summarizes it as shown in Table 2.

Table 2. Correspondence between communication motivation and communication behavior

Motivation type	Motivation for information acquisition	Emotional venting motivation	Self actualization motivation	Entertainment Social Motivation
behavior characteristics	①internet participation by browsing information	①Discourse based participation	①Communicative participation	①Discourse based participation
	②Communicative participation	②internet participation by browsing information	②Discourse based participation	②Communicative participation
	③Discourse based participation	③Communicative participation	③internet participation by browsing information	③internet participation by browsing information

Information acquisition motivation stimulates users' needs for information collection

In the process of rumors spreading on social media, the stronger the motivation of users to obtain information, the more likely it will lead to the participation of users as onlookers. Palen found that the more motivated the public is to obtain information, the more frequently they use social media to search for information and pictures[24]. Social media also provides easier access to information. Varshney and Vishwakarma believe that with the proliferation of computers and mobile devices, the cost of accessing social networks is gradually decreasing, and the boundary between media and audience is gradually blurred, making social media an important means for users to follow events and obtain information[25]. The mass of social media information and the immediacy of information acquisition have intensified users' dependence on it. In addition, when an important event is very vague, users urgently need to obtain the corresponding news to understand information, so as to generate the behavior of browsing and watching information. Therefore, when users pay attention to an important and vague event, they will select from a large amount of information on social media according to their own needs, which promotes the frequent occurrence of spectator participation behavior by users. The acquisition motivation projects the spectator participation behavior, and the behavior projects the user motivation in reverse.

Cathartic motivation encourages users to vent their inner feelings

The emotional catharsis motivation of users in the process of rumor propagation is mainly projected on the related behaviors of rumor generation and commenting on events. The stronger the motive of emotional catharsis, the stronger the willingness of the public to participate in the rumor spreading. The motive of emotional catharsis drives social media users' discourse participation in the generation and dissemination of rumors.

Catharsis is the main emotion included in the motivation of emotional catharsis, which is a kind of external emotion output. This output is a form of public participation right. The internal contradictions and external pressures of a social group will lead to the instability of the group[13], This complex instability is even more apparent in the social media space[26]. On the one hand, netizens will interact with each other through social media to vent their inner discontent and release their inner emotions. On the other hand, they may project their individual injustice and social dissatisfaction into rumors to achieve inner balance. This leads to the inevitable outbursts of rhetoric and unsubstantiated information on social media.

It can be seen that the motivation of emotional catharsis has a significant impact on users' discursive participation behavior. Users' discourse participation in rumor spreading can project the motivation of emotional catharsis[27].

Self-actualization motivation enhances users' willingness to participate in expression

The self-actualization motivation of users in the process of rumor propagation is mainly projected on the related behaviors of rumor propagation and rumor generation. To a large extent, self-actualization motivation can predict the behavior of social media users in spreading and generating rumors, that is, information production behavior. Self-actualization motivation encourages social users to enhance their initiative and enthusiasm in participating in expression, so as to achieve self-actualization in the process of producing and spreading rumors.

When users are blinded by network rumors and mistake the rumors for the truth, they will comment or release their views and opinions out of caring motives, hoping to make more people know what they think is the truth through information transmission. The expression of users' emotions is infectious and interactive, expressing sympathy for the vulnerable groups in the event or praise for the positive energy of the society. Under the influence of the interaction of social media, such emotions of users will continue to spread and infect users, generate certain degree of resonance and reverberation, and finally stimulate the generation of discourse and communication behavior.

Out of self-interest, the public reflects its superiority as an informed person by commenting and disseminating relevant information, and makes use of poor information to highlight its own value. Some members of the public create or take advantage of hot and sensitive topics and use exaggerated techniques to create rumors and attract others' attention, so as to make themselves famous, satisfy their own selfish desires and seek relevant interests.

Most network rumors are spread through social platforms. This phenomenon is due to the strong sense of dependence and trust of users on the groups they are in. Due to the motivation of social identification, users tend to ignore the truth and falsity of information without thinking and distinguishing in order to better integrate into this group, and gain the recognition of others through comments and opinions, which leads to the spread of rumors. Qi Hu et al. have shown that in conformity flow, the public follows the group's opinion in order to obtain the approval of others, and such common expression will lead to further spread of rumors[28]. In addition, some members of the public also expect to improve their status in the group out of the desire to improve their own reputation while obtaining the recognition of others. After becoming opinion leaders, the public can continue to speak out and lead the direction of public opinion. Fu Wei et al. improved the Bass model (Bass diffusion model) and built the Bass-Si rumor diffusion model, and verified that the stronger the appeal of opinion leaders' guiding behavior, the more diversified the rumor forms, the stronger the individual's willingness to choose and believe the rumor, and the more violent the rumor diffusion momentum[29].

Self-actualization motivation derived from three needs -- caring, altruism and identity can motivate social media users to engage in discourse and communication behaviors. Driven by self-actualization motivation, users generate corresponding rumor generation and propagation behaviors to express their will and obtain self-satisfaction.

Entertainment social motivation drives users to achieve entertainment interaction

The entertainment and social motivation of users in the process of rumor spreading is mainly projected on the discourse participation behavior. Entertainment social motivation encourages social media users to produce and spread rumors, that is, users are more willing to express their own views to entertain the public and make friends.

Entertainment social motivation mainly includes two aspects: social interaction and entertainment. The intention of social interaction will promote social media users to spread the topics they are interested in, so as to make new friends and expand their interpersonal relationships. Meanwhile, the update of social media can further deepen the communication with friends. In the process of mutual interaction, misinformation may be transmitted, and even because of the intimacy and trust, further accelerate the spread of misinformation, causing the spread of rumors[30]. With the rapid pace of life, people's life pressure increases dramatically, entertainment has become a necessity in people's life. Smock found that Facebook users' motivation for

entertainment and social interaction has a significant positive impact on information behavior[31]. Therefore, users may publish or spread rumors in order to establish potential social relationships and entertainment.

CONCLUSION

From the perspective of psychological projection, this paper explores the projective relationship between different rumor propagation motivations and behaviors, and divides the network rumor generation motivations into four types: information acquisition motivation, emotional catharsis motivation, self-actualization motivation and entertainment and social motivation. Network rumor spreading behavior can be divided into three types: spectator participation, dissemination participation and discourse participation. By comparing the differences between the behaviors of network users, the motivation is interpreted and the psychology and appeal behind the motivation is explored.

The paper only discusses the relationship between the three from a qualitative perspective, without obtaining relevant data for quantitative research. The next step is to build a dynamic model of user portrait based on explicit and implicit information such as user demographic information, UGC emotion, access location, web browsing behavior, platform interaction behavior, etc. To divide different user groups based such model, analyze the differences in user motivation and behavior in depth, and provide more targeted theoretical guidance and practical application for the governance of rumors and public opinions.

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