ABSTRACT: WeChat is a social tool with the highest acceptance in China, and its huge user social network and information communication mode become research hotspots in recent years. In the paper, different information communication abilities of many social functions of WeChat are integrated on the basis of referring to related information communication theory. WeChat multi-stage information communication mode is constructed, and its communication mode is systematically described and analyzed. In the paper, subjective selectivity communication of users and user own attributes on information is mainly emphasized in order to describe its information communication complexity and diversified selectivity more clearly, thereby further proving the availability and applicability of the WeChat multi-stage information communication mode. It is expected that it can play a larger role in research development of online social network information communication mode in the future.

1 GENERAL INSTRUCTIONS

WeChat meets people's demands in information, entertainment, interest, interpersonal relationship and other aspects as one of the largest online social platforms in China. In addition, it has become an indispensable part in daily social life of people. Therefore, mass information exchange capacity and complex structure characteristics of WeChat have become research hotspots of academic circles in recent years.

Information communication mode has experienced a conversion process from static state to dynamic state and from simple state to complex state in the history of human development [1]. Information has been transformed from one-way linear communication into interactive communication especially in the digital network age. Individuals or organizations in the network are both information receivers and information senders. It also means that information communication process in the network will achieve high complexity. WeChat has own unique features compared with traditional media. Existing model and analysis method are not enough to completely describe the complexity contained in the network information communication [2]. Besides, WeChat behavioral agents are people with high intelligence and adaptive ability, and the cognitive and decision-making behaviors belong to process of constant interaction, learning and evolution among subjects, and between subjects and environment [3]. It is obvious that research on WeChat information communication mode should not be limited to information transfer process; own attributes of communication subjects in the network and association mode among subjects should be further focused, thereby recognizing key factors driving information communication.

2 SUMMARY OF WECHAT MULTI-STAGE INFORMATION COMMUNICATION MODE

WeChat is one of online social tools with the highest usage degree in China at present. Its communication mode is sublimated into a multi-stage information communication mode with own unique features on the basis of traditional communication mode. We learn from Lasswell's “5W” communication mode [4] and Schramm's mass communication mode [5], and a WeChat multi-stage information communication mode is constructed as shown in figure 1 aiming at specific mode of WeChat information communication, namely characteristics.

Figure 1. WeChat multi-stage information communication mode.
2.1 Factor analysis

(1) Communicator and receiver; WeChat is regarded as online social media, and users bear dual roles of sender and receiver synchronously in many cases. Users can enrich own information and actively express own views through constantly receiving and forwarding information as communicators. Users can know the latest progress of information from many information sources through a variety of ways as receivers, thereby affecting subsequent audience. It is obvious that it is a complex communication system integrating 'one-to-one', 'one-to-many' and "many-to-many" communication modes. It can communicate information more rapidly.

(2) Receivers with different identities; R is joint name of receivers, there are three categories, respectively follower RS, thinker RC and independent Rr, and they can receive information M0 normally. However, subsequent communication of M0 information is based on its own 'information recognition ability'. Followers RS contain receivers who actively accept information and follow others to receive information. Since they have weaker recognition ability on information, they can directly forward or follow others to forward information M0. Thinker RC has dexterity on information recognition ability. Time and basis are required for identifying information. Therefore, it has no response on the received information M0. Independent Rr is the receiver with extremely high recognition ability. It can intuitively judge the mismatch degree of interest thereof according to contents of information M0, thereby refusing to forward the information.

2.2 Analysis on communication process

WeChat multi-stage information communication mode is constructed based on specific user relationship network of WeChat. Therefore, its communication process also has own superiority and uniqueness. We learn that information only can be observed by sharing friends in the process of information communication among WeChat users according to specific friendly relationship model of WeChat. In addition, user relationship networks constructed through different modes also have different influences on information communication. Therefore, it is determined that information has multi-stage feature and rich interactivity during communication in WeChat.

(1) Initial communication stage; Initial communication stage is regarded as the first stage that information is sent out from information source. It is not clearly given in figure 1 because two different information communication modes are available at the initial stage of communication, namely point-to-point communication mode and one-to-many communication mode. One-to-many communication mode is intersected with communication process conversion stage. Therefore, initial communication stage is defined as the stage before the ending of primary communication in the paper. The stage includes point-to-point communication and one-to-many communication of communication sources to information, it is in the important position in the whole communication process, and the overall effect of subsequent communication is directly determined by the communication scope.

(2) Conversion stage of communication role; WeChat is regarded as a novel online social media which integrates private communication and mass communication. The complexity of the communication process and interweaving feature of user node determine that the user nodes must be able to bear multiple roles synchronously, namely communicator role and receiver role. Therefore, conversion sublimation of the communication role is regarded as the core stage of the whole communication process during the whole process of WeChat information communication, the repeatability is very high, role conversion frequency of single user node is also not unique, the user may act as different roles for many times in the communication process. Meanwhile, role conversion time delay at conversion stage of communication role is also the core of discrete process communication mode proposed in the paper.

(3) Late communication stage; Late communication stage refers to overall subsequent communication process of secondary communication of information. There are two communication mechanisms in the stage. One is many-to-many information communication based on discrete process communication mode. Conversion stage of communication role is repeatedly constantly aiming at information communication under the mechanism. Refusing receiver proportion is increased with decrease of information popularity, and then the process is finally directed to communication decline stage. The other mechanism is communication spreading stage under the premise that communicator and receiver are followers, namely information can be communicated without resistance in user relationship network. If there is no 'community phenomenon' in user relationship network, the information can be permanently communication in the communication spreading stage.

3 ANALYSIS ON WECHAT MULTI-STAGE INFORMATION COMMUNICATION MODE

3.1 Point-to-point communication mode

WeChat focuses on user and user relationship maintenance. Therefore, WeChat focuses on creating
social relationship network. Point-to-point communication is an important mode of user interactive behavior in the relationship network. The communication mode has obvious directivity and privacy from the perspective of receivers [6]. The communication is direct, contents can be directly sent to the receivers without processing by any third party, and the communication contents, modes, etc. are extremely random from the perspective of user. Though such point-to-point communication mode can gain large private space, the communication contents are more and more similar, and thereby the scope of information communication is reduced.

Information communication closure is an important feature of point-to-point communication as shown in figure 2. User information communication behavior among user nodes is embodied as relationship of notification and feedback. Meanwhile, many factors, such as trust, interest, individual characteristic, perceived usefulness, etc., affect information communication and feedback. The whole communication path is in chain shape. There are also different communication influence factors among different users, wherein information can be forwarded outwards or not depends on the attitude of the receiver on information and his thirst on information richness. Figure 2 also shows that information communication of point-to-point communication mode is only available in friendly relationship among users, namely strong relationship among users. Strong relationship is also a main human relationship in interpersonal social network, and it even can dominate specific information communication under certain situations. Existence of strong relationship is considered, the information communication in the communication mode has convergence feature. Professor Grana Walter at Stanford University proposed theory of the strength of weak ties in the 1970s [7]. He points out that information can be easily communicated among people with high similarities in all aspects. The information mastered by these people is not greatly different from the information mastered by the communication. Therefore, the information communication chain formed in point-to-point communication mode can form 'broken-chain phenomenon' on the boundary of some strong and weak relationships. Namely, 'broken-chain phenomenon' can be easily produced in the middle stage of communication chain.

3.2 One-to-many communication mode

The mode is another communication mode of primary communication in WeChat third-order communication mode. The friend circle in the core position is an information communication mode based on existence of strong relationship, namely the information released in the friend circle only can be observed by receivers who are mutually friends. The drift bottle, shake-it-off, etc. on the secondary positions are information interaction modes on the basis of weak relationship existence. The information conveyer can be any person in the user network. It is obvious that targeted communication in strong relationship network is considered in WeChat one-to-many communication mode on one hand, and uncertainty communication in the weak relationship network is also covered on the other hand. [8] Therefore, the breadth is far beyond directivity communication in point-to-point communication mode.

Figure 3 is sketch map of WeChat one-to-many communication mode, wherein communicators are single communication sources, the receiver is multi-user audience. The user nature depends on information interaction mode of the receiver. Most individuals in the audience keep own strategy constant in the audience evolution process according
to population dynamics theory in evolutionary game, however some individuals adopt more beneficial strategies through imitation behaviors [9]. Therefore, receivers in one-to-many communication mode are divided according to receiving attitude, mainly including active receiving, uncertain receiving, follow receiving and refuse receiving. They respectively correspond to friend circle, drift bottle and shake-it-off in WeChat communication scenes. Spatial communication effect of WeChat one-to-many communication mode is basically shown in figure 4, wherein active receiving and follow receiving do not affect subsequent communication of information, while uncertain receiving and refuse receiving can form a layer of 'cross-section' in the communication space. It has the most intuitive influence that the communication process of information on the potential users behind the cross section is cut.

Cross-section generation and information communication mode of 'broadcasting' communication itself have information ductility, therefore the information receiving probability and accuracy by receivers are greatly discounted. Therefore, the temporarily-built social network is called elastic network in one-to-many communication mode mixed with strong and weak relationships. Though the information can be communicated more widely, 'truncation effect' also can be produced to certain extent. It completely depends on specific behavior of specific users in specific time point, such as change of user position or change of user concept, etc.

3.3 Discrete process communication mode

As the name suggests, the communication process of the communication mode is discrete, namely the information receiving time and information communication time of the communicator are not perfectly consistent. There are nonlinear time intervals during the process. Accurately, the mode is extracted from specific many-to-many communication mode of social network platform. It is obtained from Schramm’s mass communication mode at the earliest stage. Since there are mutual connectivity and complicated interweaving feature between information source and information sink, the mode shows complex 'mesh' communication phenomenon.

First of all, the discrete process communication mode has basic characteristics of many-to-many communication mode, namely information is communicated based on many information sources and many information sinks. Therefore, the prerequisites lie in the conversion process of communication role in figure 1. Refuse receiver and uncertain receiver jointly form 'communication cross-section' after primary communication. However, information receiving of uncertain receivers has time delay effect based on control effect. Therefore, the user node identity can be converted after certain time, namely information receivers are converted to information communicator, and they are hereinafter referred to as information source and information sink in the mode. The information sink is changed into information source after role conversion, namely information source of discrete process in figure 4, thereby promoting secondary communication of information. However, there is a fuzzy and uniform relationship between the information source and the information sink due to network system complexity and diversity of communication path. The communication mode has faster communication speed and wider coverage due to the equality of information exchange.

Secondly, the discrete process communication mode belongs to further abstraction of many-to-many communication mode in the aspect of communication timeliness. Simply speaking, the role conversion time of information source and information sink is regarded as an important indicator to measure communication timeliness in the mode. The degree of discretization depends on the time interval from uncertain receiving state to final receiving state in one-to-many communication mode. The three states are respectively immediate communication after information receiving, later communication after information receiving and
delayed communication after information receiving. The three states respectively correspond to the response time of uncertain receiving for different information. The decisive factors lie in trust and recognition of information sink to information source. However, WeChat is regarded as a platform which is accurately reached by in-depth information [10]. The user relationships are also different. Therefore, receivers in different types have different comprehension degrees on information. Therefore, most information is not controllable under discrete process communication mode. In addition, noise is extreme evaluation of some person on something in the whole communication process, it may lead to excessive interaction of information between information sink and information source, or highlight the radical ideas thereof. Therefore, the discrete time of discrete process communication mode can be greatly shortened due to influence of sound noise control on communication mode, thereby better promoting information communication.

4 CONCLUSION

In the paper, Lasswell's “5W” communication mode and Schramm's mass communication mode are adopted as reference. A WeChat multi-stage information communication mode is constructed aiming at specific friend mechanism and user relationship network of WeChat. Loop, cascade feedback and other mechanisms are introduced in the mode on one hand, different information interaction modes in the WeChat network are regarded as classification basis synchronously, and the design intention of WeChat is regarded as starting point. Real communication process of WeChat is reflected more intuitively and objectively. Furthermore, the process of WeChat information communication from interpersonal communication level to broadcasting communication level and then to mass communication level is revealed aiming at three subdivision communication modes in the paper. Finally, many interference items in the information communication process are specially explained, thereby providing other researchers with important research reference suggestions. Complex network and dynamic model knowledge should be utilized for further studying information communication mechanism based on WeChat platform, selection of critical path, core community discovery and other important topics in the future.

REFERENCES