

Media as the Extension of Social Network- Probing the Function of Interpersonal Communication System in Mainland China

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Abstract: This research tries to probe how social network affect peoples' usage of the communication network. In western country, the networked individualism has been studied for more than 10 years, but such research is still limited in Asia, also most of the current study only use specific group of people as their sample. This is the first study in China or Asia that use national sample. The snowball sampling and the third party research platform is used to get the sample in this study. The impact of social network on the personal communication system is discussed in the conclusion part.

1. Introduction

The issue of the impact of social networks on communication networks is not new, and there has been some research on this topic [1]. A large body of empirical research supports the emergence of such social interactions based on the dissemination of infrastructure[2]. However, the above research tends to focus on mobile internet. In fact, for modern people, although mobile internet is very important, traditional media means such as face-to-face communication, SMS and phone are still very important [3]. At the same time, such research is not too much in Asia. Therefore, this study will explore this issue in the context of China.[1-3]

2. Problems Discussed

The discussed model is given as follow:

$$\text{Communicationnetwork} = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5(\text{female}) + b_6(\text{education})$$

Some basic concepts associated with the problem are presented as follows

Social network tie strength

This is X1, which is the independent variable of interest. Social network tie strength represents the strength of social network we had.

Social network familiarity

This is X2which is the independent variable of interest. Social network familiarity represents the familiarity of social network we had.

Social network distance

This is X3which is the independent variable of interest. Social network distance represents the distance of social network from us.

Social network closeness

This is X4which is the independent variable of interest. Social network closeness represents the closeness of social network with us.

Communication network:

This is Y, which is the dependent variable of interest. The Communication network represents the communication situation of people.

Background variables:

They are key demographic variables we added to control. The demographic variables includes

sex, age and education.

Definition 1

For social network

if people answer the social network questionnaire, then we get his different aspect of social network condition

Two assumptions are given as follows:

i) Different ICT is used to mediate different social network

ii) The character of social network might significantly affect the structure of communication system

Definition 2

For communication system

if people answer the communication system questionnaire, then we get his different aspect of communication system condition.

3. Media Affordance

Media availability provides a perspective that takes care of the relationship between modern people and the media, unlike media or information. The medium, the message, emphasizes the decisive role of the media, that is, the media has a decisive influence on the social relations of modern people, and we are often ignorant of this influence. In contrast, media availability refers to individuals who choose the right medium for social interaction based on the underlying functions provided by the communication infrastructure and contextual cues in social interaction[1].

Availability is a concept that has been used in psychology and originally referred to the ability of people to understand the potential of objects for different purposes [4, 5]. When this concept is used in communication technology, when there is a consistency between the communication provided by the media technology and the characteristics of the social relationship that people want to associate with, the specific function of the media user makes it relate to a specific social relationship.[2, 4, 5]

The concept of availability emphasizes two things: first, technology has its inherent characteristics, and second, these technical characteristics will influence how people use these media. In other words, the media availability of the dissemination infrastructure consists of two dimensions, one is media technology and the other is the social use of media users. Therefore, the media infrastructure can be used to promote communication, but also May hinder communication. Most digital media have different functions, such as enabling media users to have simultaneous conversations with people in multiple locations, as well as using media anonymity, de-regionality, and a degree of flexibility. For example, e-mail allows asynchronous interactions to occur, allowing people to have enough time to organize the information they are about to send and make self-rendering better; at the same time, instant messaging tools are also used for asynchronous communication, but instant Communication tools also support simultaneous communication. In particular, as mobile phones become more and more embedded with instant messaging software, it is possible to use instant messaging tools for emergency contact, micro-cooperation, and emotional support [6].

4. Networked Individualism

In the perspective of networked individualism, the communication network is used to maintain the social network. When there is consistency between the communication provided by the media technology and the social relationship characteristics that people want to communicate with, the media users will use the specific The media maintains a connection with specific social relationships [1]. For example, the phone provides the ability to contact family and friends remotely. If there is no phone call, our contact with distant friends will become very difficult. When we have a large number of friends or family members living in distant places, the characteristics of the phone provide a good opportunity for communication.

5. Communication System

The issue of the impact of social networks on communication networks is not new, and there has been some research on this topic. A large number of empirical studies have supported the emergence of such social interactions based on the dissemination of infrastructure. Through a national survey in the United States, some researchers pointed out that people are more likely to use multiple media to maintain social contact with acquaintances in their daily lives. Boase (2008), and more importantly, what media people use depends on communication. The purpose (for example, the subject of the conversation), the function of the technology, the social accessibility of the relationship (eg whether local, the intimacy of the relationship) and so on. People tend to use different communication infrastructures to facilitate the completion of tasks at hand (e.g., H. Kim, Kim, Park, & Rice, 2007; Mesch, 2009; Van Cleemput, 2010, 2012). Through the analysis of social network data, some scholars pointed out that in addition to face-to-face communication, most of the participants will try to use all media to maintain their social relationships, and they have the tendency to use instant messaging tools or social software to maintain weak relationships (Van Cleemput, 2010, 2012). Research in South Korea has pointed out that people tend to use face-to-face interactions and mobile phones to maintain strong social relationships and use email and instant messaging tools to enhance weak connections (H. Kim et al., 2007). Some studies have also pointed out that people will use various media to develop their own social relationships, such as people will first use the Internet to meet new friends, and then bring these social relationships into their daily lives. However, how to integrate multiple media has yet to be empirically studied[3].

In summary, this study proposes the following hypothesis

H1: Social networks have a significant impact on the use of self-propagating networks.

6. Data Collection and Analysis

Variables Measurement

The first part of the questionnaire asked participants to answer background information

The second part of the questionnaire used to obtain data of social networks[7] and communication system[8].

The impact of social network on communication system are shown below:

Table 1 Multiple regression of social network on communication system

	FTFSTTTL				MBLSTTTL				EMLSTTTL				IMSTTTL				SNSSTTTL			
	B	SE	TOR	VIF	B	SE	TOR	VIF	B	SE	TOR	VIF	B	SE	TOR	VIF	B	SE	TOR	VIF
intrept	1.59	.43			1.48	.43			.71	.53			1.15	.44			1.10	.53		
Edu	.02	.09	.93	1.07	.02	.09	.93	1.07	.01	.11	.93	1.07	.04	.09	.93	1.07	.02	.11	.93	1.07
Gender	-.13	.13	.94	1.07	-.22	.13	.94	1.06	-.34	.15	.94	1.06	-.04	.13	.94	1.06	-.14	.15	.94	1.06
Age	-.04	.07	.92	1.08	-.04	.07	.92	1.08	-.06	.08	.92	1.08	-.02	.07	.93	1.08	-.07	.08	.92	1.08
Strong tie	.42***	.04	.53	1.88	.48***	.04	.53	1.88	.46***	.05	.53	1.88	.45***	.04	.53	1.88	.53***	.05	.53	1.88
Weak tie	.01	.03	.56	1.80	-.07**	.03	.56	1.80	-.07**	.04	.56	1.80	-.05	.03	.56	1.80	-.12**	.04	.56	1.80
familyarity	.20***	.06	.93	1.08	.19***	.06	.92	1.08	.18**	.07	.93	1.08	.18***	.06	.92	1.08	.24***	.07	.93	1.08
Distance	.09**	.04	.81	1.23	.05	.04	.81	1.23	.06	.05	.81	1.23	.14	.04	.81	1.23	.11**	.05	.81	1.23
Edu close	-.04	.07	.66	1.52	-.04	.07	.66	1.53	.02	.08	.65	1.54	-.06**	.07	.65	1.53	-.06	.08	.66	1.52
Age close	-.06	.07	.59	1.69	-.05	.07	.59	1.70	-.07	.09	.59	1.70	-.05	.08	.59	1.70	-.14	.09	.59	1.69
Gender close	-.01	.08	.73	1.38	.04	.08	.72	1.38	.01	.09	.72	1.39	.03	.08	.72	1.38	.04	.09	.72	1.38
Ethic close	.19***	.06	.82	1.23	.17**	.06	.82	1.23	.25***	.08	.81	1.23	.25***	.06	.82	1.23	.27***	.08	.81	1.23
Adjusted R square			.224				.216				.149				.214				.176	
D-W			2.09				1.982				2.004				1.967				1.978	
F			26.838				25.713				16.627				25.375				20.155	

The results show that the D-W of the five models are 2.09, 1.982, 2.004, 1.967, 1.978, and the D-W values are around 2, indicating that the data is consistent with the sample. The variable VIF<5 for each model indicates that there is no collinearity between the variables in each model.

In general, the more acquaintances or common relationships in an individual network, the more likely people are to rely on mobile networks, the Internet, and social media networks as carriers of

their social relationships. But at the same time, face-to-face networks and instant messaging networks are rarely used to carry ordinary social relationships.

Only the correlation of $P < .05$ can be explained, and the following possible conclusions can be obtained:

1) The more strong relationships in individual social networks, the more likely people are to interact with networks, mobile networks, internet, instant messaging networks, and social media networks.

2) The more common relationships in an individual social network, the less likely people are to face-to-face interactions with face-to-face networks, mobile networks, and social media networks.

The breadth of interpersonal networks, the results of the study analyzed the breadth of individual interpersonal relationships and the social relationships in the media. The results show that the relationship between the two is more complicated.

Consider only $P < .05$: The results of the study show:

1) The higher the familiarity in individual social networks, the more likely people are to interact with networks, mobile networks, internet, instant messaging networks, and social media networks.

2) When the similarity of ethnic groups in individual social networks is higher, people are more likely to adopt face-to-face networks, mobile networks, Internet, instant messaging networks, and social media networks.

7. Conclusion

In the proposed theory framework, the ambiguous problem is transformed into the relationship between the social network, communication channel and loneliness. The current study points out the importance of the ICT for people nowadays. The major advantage of this study is it takes ICT not separately, which could get a more grand picture of ICT significance. Hence, it can be used to give modern people more clear understanding of how to use ICT properly, and shows the necessity of media literacy education.

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