

A Case Study of Roles in the Social Reading Activities

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ABSTRACT

Readers who participate in social reading activities can play a variety of roles. These roles can reflect differences in the behaviors among readers and influence the knowledge sharing and information flowing in the social reading process. This study investigates a community of university students' roles in the WeChat reading activities. Social Network Analysis approach was adopted for analyzing the data in WeChat reading. Results indicate that different roles have different effects on the connection between subgroups and the dissemination of information, which can cause influences on the generation and development of social reading networks as well. This study offers implications for facilitating readers' interactions and knowledge sharing in the social reading contexts.

Keywords: social reading; role differences; social network analysis; structural coreness

INTRODUCTION

Social reading is a new reading mode that facilitates readers' reading and interaction, encourages expressions of multiple ideas, and promotes collaborative inquiry [1]. As a collective reading mode, readers can behave differently due to the variety of roles they play in social reading activities. The role played by the readers is related to their reading effectiveness and contribution [2]. The interactions with other readers, the density of readers' relationship networks, and the characteristics of the social network attributes can be useful indexes for the classification of readers' roles and elements of predicting models for readers' behaviors [3]. The purpose of this study is to identify a community of readers' positions and roles, which can elaborate the multi-level collaboration processes to provide evidence for the design of reading practices and strategies for the enhancement of interactions among readers in social reading contexts.

THEORETICAL FRAMEWORK

A key aspect of the research on readers' roles in social reading activities is the structure of readers' whole networks, and introduce data of the readers' interaction process into the analysis. Drawing upon the "thick description" [4], we can deeply understand the role characteristics, relationships, and functions of the readers through the case study.

In line with the block model theory, society is an associated role system where different roles are related to the social structure [5]. Centrality is one of the critical determinants in social network analysis and indicates the power and position of an individual or organization in a social network [6]. Gould and Fernandez [7] claimed that we could identify structurally distinct types of broker roles as intermediary actors facilitate transactions between other actors lacking access to or trust in one another, these roles include: coordinator, cosmopolitan, gatekeeper, representative, and liaison. Different roles differ in connecting communities as they maintain relationships among the communities in different ways or establish links among different groups and communities to disseminate information.

RESEARCH QUESTIONS

The purpose of this study is to explore the social reading roles in an open social platform – WeChat. The research questions are addressed: (1) What differences can be found in the roles during the social reading activities? (2) How did the differences impact readers' behaviors and information dissemination in the social reading activities?

METHODS

Research Context and Participants

As a popular social media tool, WeChat has been developed with functions that are advantageous for social reading. Readers can link the contents of personal status, online blogs, and journals. They can post their opinions and insights for the generation of meaningful discourse as well. In this study, we decided to utilize the WeChat platform as the research context to investigate the roles and the relationships of the readers in the social reading activities.

This study took place in a university class with 55 second-year undergraduate students (11 males and 44 females). All the students were reported to have reading experiences in WeChat for more than one year, 37% of the students spend more than half an hour reading every day in WeChat, 45% of the students expressed that more than half of their reading materials in WeChat were forwarded and shared by other classmates in the class.

Materials

Reading Network Questionnaire. This questionnaire was used to measure participants' engagement and interactions in the WeChat reading activities. This questionnaire has two parts. In the first part, students were asked to provide information about personal reading habits, such as reading frequencies and reading preferences; the second part collects data of reading and interactions among the participants. Reading relationships in WeChat are classified into the reading network and the interactive network based on the students' behaviors of reading, clicking a like, commenting, and sharing. Participants were asked to answer questions, such as "Whose articles in WeChat did you usually read?" "Whose articles did you normally comment on?" Questionnaires collected were

later analyzed using a social network analysis software UCINET based on the block model analysis, the core-periphery structures, and the brokerage model analysis.

RESULTS

Role Differences

Structural equivalence analysis is one of the most commonly-used methods to understand whether role differences exist in a group [8].

Figure 1 displays the structural equivalence of the reading network. At the similarity level of 1.000, 55 students (readers) in the whole network can be divided into 38 categories at most. Only 15 students have the same structure and play the same role type, but they were rarely involved in the social reading process. As can be seen, the disparity of reading behaviors was obvious and the structural equivalence among the students was relatively low. There existed certain role differences and diverse types of positions within the reading network.

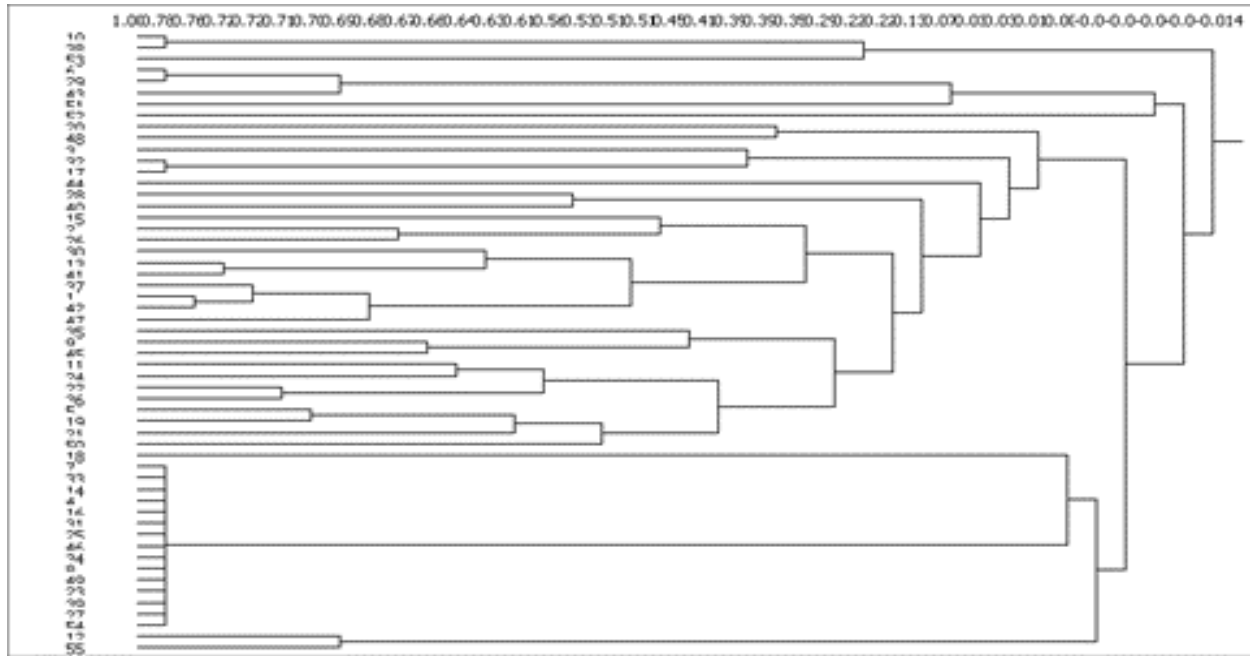


FIGURE 1: Cluster Dendrogram of Structural Equivalence of the Reading Network

The Effects of Role Differences

Structural Coreness represents the degree of a reader's participation and interaction in the group. The higher the coreness value, the greater the ability of the reader to control the dissemination of information in the reading activities and the higher position he/she is. Table 1 displays selected results of the students' coreness in the interactive network during the WeChat reading activities in this study.

As Table 1 shows, the interactive network which reflects the students in the WeChat reading activities constitutes a core/periphery structure. The Gini coefficient of 0.791 indicates that there is a significant difference in the coreness among the students. We then divided the students into three categories, namely, core readers, semi-peripheral readers, and peripheral readers.

Table 2 indicates that the connectivity in the interactive network and the coreness among the students was generally at a low level. Firstly, the core readers, such as Student No. 13 and Student No. 41, can effectively control the flowing of information and reading resources, and help maintain interactions with peripheral readers during the WeChat reading activities. Secondly, the semi-peripheral readers were managed by the core readers and can manage the peripheral readers. They were located in the connecting position of the whole interactive network, which can also ensure the effectiveness of the circulation of the reading resources. Thirdly, there were a certain number of peripheral readers. Some of them, such as Student No.10 and Student No.39, were even found to have a zero value in the coreness. These readers rarely participated in the reading and communicating with other readers in the WeChat reading activities. They were almost excluded from the whole interactive network.

TABLE 1: Coreness of the students (readers) in the Interactive Network (Partial)

ID	Coreness	ID	Coreness	ID	Coreness
13	0.762	50	0.015	34	0.006
41	0.330	14	0.012	40	0.006
37	0.299	29	0.012	46	0.006
30	0.287	09	0.011	54	0.006
21	0.200	17	0.011	06	0.005
...

TABLE 2: Core-periphery structure in interactive network

Property	ID
Core	13, 41, 37, 30, 21
Semi-Peripheral	47, 24, 42, 5, 36, 45, 26, 19, 22, 2, 3, 1, 9, 17, 15
Peripheral	11, 8, 23, 18, 39, 43, 12, 49, 40, 20, 29, 32, 53, 33, 10, 35, 51, 38, 52, 46, 27, 25, 55, 16, 4, 34, 7, 10, 14, 6, 44, 39, 31, 54, 28

Intermediary Roles Analysis

To explore the roles in the interactive network and the internal structure among the students, we employed the block model method to analyze the roles in the interactive network during the WeChat reading activities.

As Figure 2 and Table 3 show, 55 students were divided into seven positions. Each position stands for a subgroup. Therefore, the students in the interactive network can be classified into seven subgroups. Based on this classification, we further clarify each student's belonging to the corresponding subgroup as Table 4 presents.

The important brokerage roles in the WeChat reading activities included No. 30, No. 37, No. 13, No. 21, and No. 41. Student No. 30 primarily was coded a gatekeeper position.

This student served as the intermediary between students in Subgroup 1 and readers in other subgroups for information flowing. Meanwhile, Student No. 30 was also the cosmopolitan of Subgroup 2 and acted as the coordinator of communication for all members in its own subgroup. Student No. 41 occupied four roles at the same time, such as the coordinator, cosmopolitan, gatekeeper, and liaison roles with respect to other subgroups. For instance, he was the primary intermediary among the students in Subgroup 2, 4, 5, 6, and the students in subgroup 1 for their internal exchanges of information. Student No 2 exhibited a clear tendency to occupy the role of liaison, who was the most crucial liaison in the connection between Subgroup 4, 5, 6, and Subgroup 3.

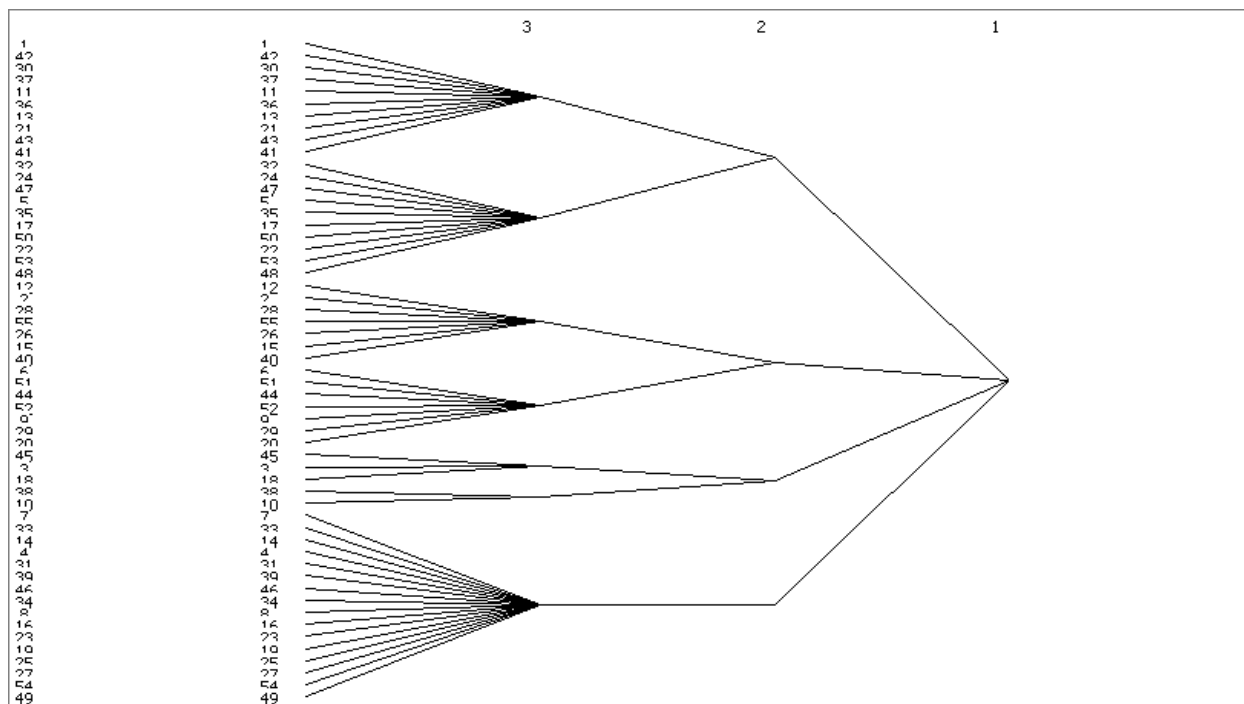


FIGURE 2: Subgroups of the students (readers) in the social reading activities

TABLE 3: Classification of the readers' positions in the interactive network

Position 1:	42, 30, 37, 11, 36, 13, 21, 43, 41
Position 2:	32, 24, 47, 5, 35, 17, 50, 22, 53, 48
Position 3:	12, 2, 28, 55, 26, 15, 40
Position 4:	6, 51, 44, 52, 9, 29, 20
Position 5:	45, 3, 18
Position 6:	38, 10
Position 7:	7, 33, 14, 4, 31, 39, 46, 34, 8, 16, 23, 19, 25, 27, 54, 49

TABLE 4: Counts of Brokerage Relations (Partial)

ID	Coordinator	Cosmopolitan	Gatekeeper	Representative	Liaison	Total Number
1	0	1	0	0	0	1
30	0	15	1	3	0	19
37	4	3	3	4	0	14
30	10	4	3	1	0	18
21	4	10	0	2	0	16
41	4	2	9	0	3	18
24	0	0	0	0	6	6
47	0	0	2	3	3	8
5	0	0	0	0	3	3
2	0	0	0	0	6	6
40	1	0	0	0	0	1
51	0	2	1	0	2	5
...

DISCUSSION

The results suggest that there were significant role differences in the WeChat reading activities in this study, which influence the dissemination of information among the students. By dividing the students into five types of brokerage roles, we find that some students seemed to serve as a critical conduit of the reading resources from one subgroup to another, and vice versa. Some readers promoted the dissemination of information both between subgroups and within groups even though they were not a member. Some readers appeared to act as the coordinator of communication for members in their subgroups. To sum up, all the students play different roles in the social reading community with various contributions.

Distinct from some existing studies on social reading which focused on individual attributes of readers, this study contributes to the integration of perspectives of the research on roles in social reading and carries out the analysis of roles using the social network analysis method. During the social reading activities, the degree of communication and interaction among readers leads to distinctions in their roles. Our findings offer important implications for literacy learning activities to improve the performances of students. More in-depth analysis needs to expand the scope of the research and to utilize social network analysis in other research perspectives, such as studies on emotion and motivation.

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