Analyzing Opinion Conflicts in an Online Group Discussion: From the Perspective of Majority and Minority Influence

Jieli Liu[0000-0001-6771-0064], Jiaxin An[0000-0003-2793-6469] and Pengyi Zhang[0000-0003-0624-6776]

Department of Information Management, Peking University, Beijing 100871, China
liujieli@pku.edu.cn;jiaxin.an@pku.edu.cn;pengyi@pku.edu.cn

Abstract. Online community and groups often experience heated discussion. This paper examines a WeChat group discussion from the perspective of majority and minority influence to explore the evolvement of the discussion and the behaviors of group members. Content analysis of 515 messages suggests that opinion conflicts between majority and minority evoke discussion engagement and knowledge exchange. There are different patterns of knowledge construction expressions between majority and minority groups. The majority prefer egocentric expression, while the minority prefer allocentric expression. Majority opinion holders have different conflict handling styles compared to minority opinion holders, who are more likely to avoid. Minority group is under great pressure in social interaction, they are easier to receive unfair comments and personal attacks.

Keywords: Knowledge Construction, Conflict Management, Online Communities.

1 Introduction and Related Work

It is common to encounter opinion conflicts in discussions in online open platforms, group chats and so on. Conflicts occur in group discussion when members show deviant judgments of essential issues. These conflicts are valuable to knowledge construction because they can promote participants' understanding of the discussed issues.

Online discussions' communicative function can be categorized into three types: providing knowledge, organizing activities, and socializing[6]. Conflicts may occur in any of the three types of communication and expression. Ke and Xie divide knowledge construction in discussions into egocentric and allocentric expressions[7]. Egocentric expressions focus on one's own argument while allocentric expressions are built on peers' viewpoints. Research has identified several types of knowledge construction expressions (such as statement, interrogation, and response) and social interactions (such as greetings and expressing emotions) among group members [7, 8]. Hara et al. mainly found four kinds of knowledge construction role in Wikipedia edition, including iden-

tifying and sharing knowledge, modifying knowledge, facilitating knowledge collaboration and additional roles[9]. Relatively less is studied about closed group chat such as a WeChat group discussion, which is often characterized by multiple perspectives, opinion conflicts, discussions and negotiations.

In terms of conflict handling, Rahim and Bonoma proposed a five-mode model including: integrating (involving problem-solving leads to creative solutions), obliging (emphasizing giving up something to satisfy others), dominating (identifying ignoring others' needs and winning one's own position), avoiding (associating withdrawal or sidestepping situations), and compromising (involving both parties giving up something and making mutually acceptable decision) [10]. Research in organizational management has long been studying conflict management, however, relatively less is known about how online groups do that.

In online opinion discussions, participants often stand by their position. They can be divided into minority and majority groups. Both majority and minority subgroups can create conflicts, because they both face deviant behaviors or judgments of something essential from individuals or groups[1]. Although majority influence often prevails, persistent minority viewpoints can stimulate the group to think in more divergent ways [2]. Minority group would generate more creative contribution, for they tend to find more new and correct solutions to the problems[3]. Research argues that although minority opinions should be encouraged in group discussions, majority exerts greater influence and minority experience more social pressure [4]. When group members encounter opinion deviance, people may try to minimize the potential for minority influence by discounting the different opinion[5].

Therefore, we examine opinion conflicts between majority and minority groups from the following three aspects: knowledge construction (opinion conflict), conflict handling (activities to intervene conflicts), socializing (social interaction with others and emotional expression). This poster presents a case study using content analysis to analyze a debate about TCM in a WeChat group (WeChat is a popular social networking and IM APP in China). We chose the topic "traditional Chinese medicine" (TCM), among several widely discussed topics such as vaccine safety, which is closely related to people's lives and may influence people's decision making. The overall research question is: how do majority and minority opinion holders construct knowledge and handle conflicts in an online group discussion?

2　Methods

We collected the transcripts of a two-day (from September 18, 2017 to September 19, 2017) heated discussion about TCM in a WeChat group, which is an education group consisted of 500 primary school parents. The data set includes a total of 515 messages from 40 participants. All data was anonymized.

The coding scheme (shown in Table 1) was developed based on prior research, describing the opinion conflict process from three dimensions: knowledge construction, conflict handing, social interactions. The first two authors coded the messages separately without limiting the number of codes for each message (coding examples see

Figure 1). We calculated intercoder reliability coefficients for all messages by two coders. The agreement of coding was 70.10%, and inter-coder Kappa was 0.66, indicating a good agreement level. We then discussed and resolved the disagreements, and used the agreed coding in the analysis.

Table 1. Coding scheme

Categories	Codes	Definition
	Egocentric	
	State[8]	A statement of observation or opinion.
	Restate[6]	Restating the participant's position, or opinion.
	Elaborate[6]	Developing further a piece of information, suggestion/arguments/concepts/problem solutions.
	Cite[7]	Citing one's own experience/observation/data, and other materials.
	Analogize[8]	Using metaphors or analogies to explain one's statement or opinion.
Knowledge construction	**Allocentric**	
	Interrogate[6]	Asking for an opinion, information, suggestion, confirmation, or clarification
	Response[6]	Answering a question or giving clarification to one's statement.
	Facilitate[9]	Smoothing and expediting the production process within ongoing discussions by elaborating existing statement of other's and, that will lead to progress.
	Rebut	Claiming or proving an opinion is false.
	Disagree[8]	Identifying and stating areas of disagreement.
	Agree[8]	Stating agreement from one or more other participants.
	Dominating[10]	Going all out to win one's objective, ignoring the expectations of the other and relating to forcing behaviors to win one's position.
	Avoiding[11]	Moving away from the conflict issue, just to end the argument.
Conflict handling	Compromising[10]	Giving up something to make a mutually acceptable decision.
	Integrating[11]	Attempting to generate creative solutions to solve the conflict.
	Obliging[10]	Attempting to play down the differences and emphasize commonalities to satisfy the concern of the other.
	Social manner words	Greeting, farewell and thanks to others.
Social interaction	Emotional expression	Express one's attitude and feeling.
	Comment	Comment during conversation about other person, other things.

We categorized users in WeChat discussion into three subgroups based on their message: users supporting TCM, users opposing TCM, and users holding neutral or unclear attitude about TCM. Then, we identified minority group and majority one based on

their numbers of users, the minority group (2 people) were against the TCM while the majority group (13 people) supported TCM. Another majority group (25 people) held neural attitude or did not express their attitude towards TCM.
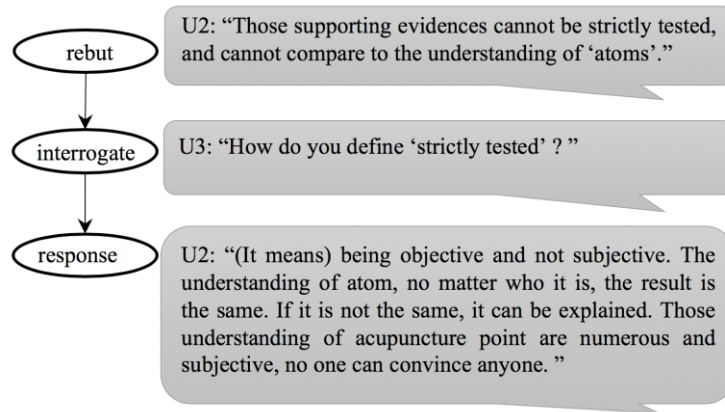

rebut — U2: "Those supporting evidences cannot be strictly tested, and cannot compare to the understanding of 'atoms'."

interrogate — U3: "How do you define 'strictly tested' ?"

response — U2: "(It means) being objective and not subjective. The understanding of atom, no matter who it is, the result is the same. If it is not the same, it can be explained. Those understanding of acupuncture point are numerous and subjective, no one can convince anyone."

Fig. 1. Coding examples

3 Findings

3.1 Conflict Phrases

The heated discussion started with a piece of news about TCM from a minority opinion holder (U2), who explicitly stated his opposition to TCM. While four other persons supporting TCM joined the discussion and rebutted U2's opinion. During this discussion (see Fig. 2), the supporting group (majority group) takes a great part of the messages and shews high engagement. This might because conflicts between supporting parties and opposing group (minority group) encourage supporting group's engagement and knowledge exchange. The neutral group (majority group) sends more messages in the middle stage (151-350 messages) and at the end of the discussion (351-515 messages). This is because neutral group joins the intensive in the middle stage of the discussion and intervened the conflicts at the end of the stage. In the middle of the conflicts, high tension is shown involving most participants and generating many sub-topics. This finding is coincident with previous study that different opinions of minority group stimulate divergent knowledge exchange in the discussion[2]. Toward the end of the discussion, neutral group (majority group) shows conflict handling behaviors such as integrating ideas to create solutions. The opposing group (minority group) sends fewer messages at the end of the discussion (351-515 messages) than the early and middle stage (1-150 and 151-350 messages). Because they are stopped by neutral group (majority group) in the end.
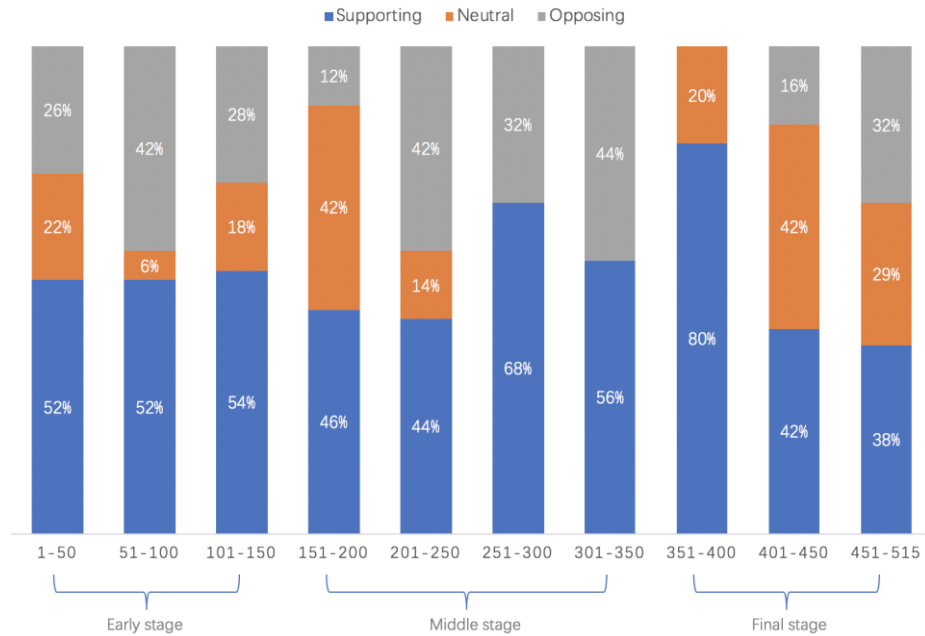
Fig. 2. Conflict phrases during the discussion

3.2 Knowledge Construction Behavior

Table 2. Behaviors in opinion conflicts

Dimension	Supporting (N%)	Neutral (N%)	Opposing (N%)
Knowledge construction			
Egocentric	156 (58.43%)	49 (57.65%)	49 (35.25%)
Allocentric	120 (41.57 %)	42 (42.35%)	91 (64.75%)
Total	276 (100%)	91 (100%)	140 (100%)
Conflict handling			
Avoiding	1 (100%)		2 (100%)
Integrating		6 (100%)	
Total	1 (100%)	6 (100%)	2 (100%)
Social construction			
Social manner	6 (37.50%)	2 (18.18%)	3 (75.00%)
Emotional	1 (6.25%)	3 (27.27%)	
Comment	9 (56.25%)	6 (54.55%)	1 (25.00%)
Total	16 (100%)	11 (100%)	4 (100%)

In terms of knowledge construction behaviors, majority groups (supporting group and neutral group) have more egocentric expressions than allocentric expressions. The percentages of egocentric expression of supporting group and neutral group are 58.43% and 57.65%, while the allocentric expressions proportions are 41.57% and 42.35% respectively. The most frequent behavior types of supporting group are state (40.58%),

rebut (15.22%), and response (14.86%). The most frequent behavior of neutral group are state (41.76%), response (19.78%), and cite (8.79%).It might because that majority group's opinions are prevailing in the discussion, they are more likely to ignore other perspective from minority group[2]. On the contrary, minority group prefer more allocentric expression (65.00%) than egocentric expression (35.00%). The most frequent knowledge construction behaviors of opposing group are response (26.43%), state (25.71%), and rebut (21.43%). It might because that minority groups need to defend their opinions in discussion by debating with challengers directly, as they face too many challenges from majority group.

3.3   Interaction between Majority and Minority Group

As for conflict handling, majority groups and minority group present different handling styles. Minority group shows more avoiding strategy than majority groups (see Table 2). When being overwhelmed by the majority group, U2 opposing to TCM mostly used avoiding strategy to handle conflicts, hopeless for reaching any consensus: "I know the answer, but I don't want to talk with you any more… It' s meaningless to talk about it because I don't think we have any consensus."

The neutral group (majority group) members use more integrating strategies in order to creating solution to mediate the conflicts in the discussion. They chose to stop the argument of opposing group (minority group) member rather than supporting group (majority group) member. This finding is coincident with previous research that people tend to minimize the influence of minority group in discussion by reducing different opinions[5]. Minority opinions seem more vulnerable.

In terms of the social interaction, supporting group (majority group) gave U2 (the member of minority group) lots of comments (see Table 2), some of which are unfair personal attacks, such as the comment that U2 has "rigid thoughts" and the personal attack that "as a Chinese…What a shame of you (U2). It is impossible for you to become 'blue-eyed blonde' no matter how much you love western medicine." It is coincident with previous findings that minority suffer from more social pressure from majority group[4].

4   Discussion and Conclusion

In this case study, majority and minority's opinion conflicts evoke the knowledge construction through arguments, which stimulates engagement and knowledge exchange in the discussion. Minority and majority groups showed different behavior patterns, majority members focused on egocentric expressions while minority members used more allocentric expressions. People in majority group have greater influence in the discussion, their opinions are more likely to prevail in the discussion and they are more likely to ignore other perspectives from minority group. When conflicts occur, minority influence would be minimized as they try to escape from the discussion or they are forced to end up the arguing. Minority group suffer more social pressure from majority

group, such as unfair comments and personal attacks. Examining knowledge construction from the perspective of majority and minority influence provides a new theoretical lens. These findings are helpful to facilitating discussions with conflicting points of views to reach consensus and resolve conflicts. Limitation lies in the small sample and the generalizability of the conclusions. Future studies can expand the selection of cases to include multiple topics and multiple platforms.

References

1. Moscovici, S.: Toward A Theory of Conversion Behavior. 13, 209-239 (1980).
2. Nemeth, C.J.: Differential contributions of majority and minority influence. Psychological Review 93, 23-32 (1986).
3. Nemeth, C.J., Wachtler, J.: Creative problem solving as a result of majority vs minority influence. European Journal of Social Psychology 13, 45-55 (1983).
4. Meyers, R.A., Brashers, D.E., Hanner, J.: Majority-minority influence: identifying argumentative patterns and predicting argument-outcome links. Journal of Communication 50, 3-30 (2000).
5. Bazarova, N.N., Walther, J.B., McLeod, P.L.: Minority Influence in Virtual Groups. Communication Research 39, 295-316 (2011).
6. Arvaja, M., Poysa-Tarhonen, J.: Tracing discursive processes of shared knowledge construction in a technology-enhanced higher education setting. Interactive Learning Environments 21, 321-337 (2013).
7. Ke, F., Xie, K.: Toward deep learning for adult students in online courses. The Internet and Higher Education 12, 136-145 (2009).
8. Gunawardena, C.N., Lowe, C.A., Anderson, T.: Analysis of a global online debate and the development of an interaction analysis model for examining social construction of knowledge in computer conferencing. Journal of educational computing research 17, 397-431 (1997).
9. Hara, N., Sanfilippo, M.R.: Analysis of roles in engaging contentious online discussions in science. Journal of the Association for Information Science and Technology 68, 1953-1966 (2017).
10. 1Rahim, A., Bonoma, T.V.: Managing organizational conflict: A model for diagnosis and intervention. Psychological reports 44, 1323-1344 (1979).
11. Davis, M.H., Capobianco, S., Kraus, L.A.: Measuring conflict-related behaviors: Reliability and validity evidence regarding the conflict dynamics profile. Educational and Psychological Measurement 64, 707-731 (2004).