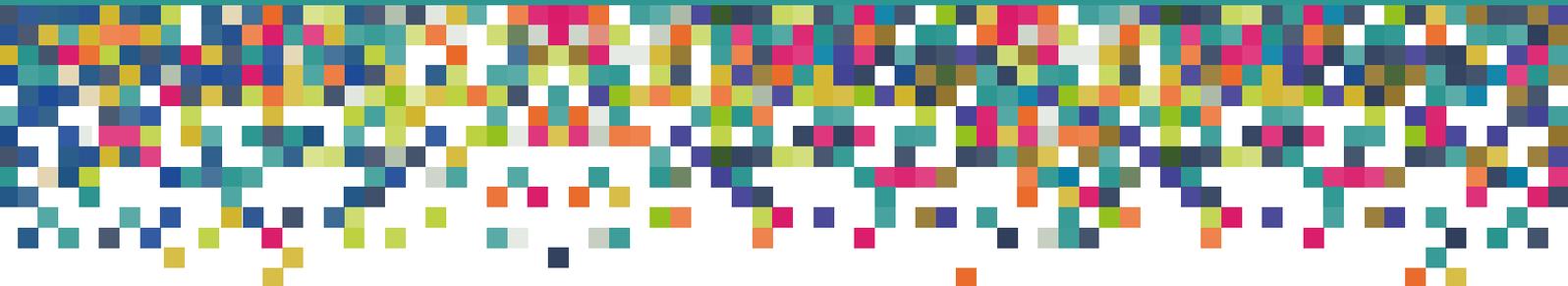




Media and
Communications

Media@LSE Working Paper Series

Editors: Bart Cammaerts, Nick Anstead and Richard Stupart



Social Media as Civic Deliberation Space

A content analysis study of the public discussion about the legalization of surrogacy on Weibo and Zhihu

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Published by Media@LSE, London School of Economics and Political Science ("LSE"), Houghton Street, London WC2A 2AE. The LSE is a School of the University of London. It is a Charity and is incorporated in England as a company limited by guarantee under the Companies Act (Reg number 70527).

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ABSTRACT

The present research aimed at delivering an update on social media public opinion in China. Drawing on theories and studies of political deliberation and civic participation, this study examined the online public discussion about the legalization policy of surrogacy. A quantitative content analysis of over 1250 Sina micro-blogs, as well as of over 250 Zhihu articles, allowed the researcher to analyse and appraise the policy discussion on social media with regard to the deliberative and civic potential. Moreover, it aimed to illustrate the factors in the diffusion of opinions and the difference between two different platforms in relation to civic deliberation.

Through the analysis of social media contents, this research demonstrated that the public discussion in Weibo was full of opinions without reasoning or with low level of justification, however the degree of rationality and logicity of this policy discussion was higher than that of mass online incidents and other social issues. Furthermore, the results indicated that in general, Zhihu is a relatively rational space for civic deliberation, since the policy discussion in Zhihu mostly met the criteria of deliberation and qualified civic participation. In addition, the findings of the study supported the existing literature which suggest the political communication research of deliberation take emotion in to account.

Evidence from the analyses added to existing research by focusing on the emotional and rational factors in the transmission of contents in online policy discussion. The results of the influence of justification levels on information diffusion differed between platforms, but the impact of emotion on the circulation of opinions were not found in both platforms. The research further proposes that in online spaces with a higher level of decentralization like Zhihu, the influence of the rational features of contents is more significant than that in virtual networks like Weibo where the identity plays a relatively crucial role in the diffusion of opinions in policy discussion.

1 INTRODUCTION

In the age of the internet, users can be connected by the virtual networks, which enhances the democratic practices, makes the circulation of information and opinion easier and more diverse, and ultimately the decisions of the authority will possibly be 'expertly-informed and democratic' (Noveck, 2009). February 3th, 2017, People's Daily published an article with the title of "Being unable to have a second child is annoying. (Focus: Tracking two-child policy)"¹. This report mentioned the difficulties for some family to have a second child, particularly middle-aged couples. After that, this piece of news was republished and widely disseminated in some online platforms and was interpreted as an authoritative inspired action to test the water for next step of implementing the new policy by lots of social media users.

Heated discussions about the proposal of the legalization of surrogacy and the news report occurred in Chinese social media and lasted for a period of time. February 8th, 2017, several media organisations published news on the statement and interviews of National Health and Family Planning Commission, saying that "NHFPC will continue to severely punish surrogacy violations and ensure that people have access to safe, regulated and effective assisted reproductive technology services"²³.

State-administered traditional media performs political and policy propaganda function. Meanwhile, the Internet gives space for citizens to discuss their opinions on policy and mobilize public opinion in against to or support certain contents on TV and newspaper. McNair (2006) points out that citizens can disrupt and mash political messages on the Internet by various editing applications, especially those who are against the policies. As a result, sometimes the official information is disseminating out of the state control.

There is a wide range of international literature on social media phenomena and the diffusion of political messages in social media during the election (Freelon & Karpf, 2014; Anstead & O'Loughlin, 2015; Stieglitz & Dang-Xuan, 2013). In the circumstance of the representative political system in China, the rare occurrence of political participation and social movement in the real world make domestic research focus differs from foreign studies. Chinese studies on the social media put more attention on social media during mass disturbances, disasters, and accidents (Xia, 2014, Wang & Li, 2013, Xie & Rong, 2013). Researches emphasising the relatively normal online discourse on public issues are relatively less (Liu, 2012). People accumulating in online spaces to express their idea as a part of the public opinion often attract the attention of the government and should receive attention from researches. Therefore, this paper will

¹ http://paper.people.com.cn/rmrb/html/2017-02/03/nw.D110000renmrb_20170203_1-19.htm

² http://www.thepaper.cn/newsDetail_forward_1614170

³ <http://www.chinanews.com/gn/2017/02-08/8144002.shtml>

employ theories and studies of the political deliberation and civic participation to conduct further research on using social media to participate in the civic discussion on policies.

Weibo and Zhihu are two popular social media platforms in China. This thesis will investigate how they were used by individuals to discuss the legalization of surrogacy, including the online responses to the People's Daily report. That is, the overall patterns and features of the public discussion on two platforms, users' focuses on particular aspects, and factors influencing the rationality and diffusion of the opinion will be analysed. Furthermore, the paper aims to examine and assess the social media public discussion from the view of ideal deliberation and civic participation. Moreover, this paper will compare these two platforms to see differences in contents and dynamics.

2 THEORETICAL BACKGROUND AND RESEARCH QUESTIONS

2.1 Political Deliberation and the Internet

The concept of deliberation emerges from democratic deliberative theory (Carpini, Cook & Jacobs, 2004). The democratic deliberative theory has its root in the conceptions of accountability and discussion, which differs from voting-centric democratic theory and other understandings of democracy. Thus, it is a talk-centric democratic theory, focusing on public articulation, explanation, and justification of public policy (Chambers, 2003, p308).

Steenbergen et al. (2003) further introduce deliberation into empirical research through the efforts at operationalization and quantification of the discourse quality. They establish a discourse quality index, anchored in Habermas (1995) and other scholars, to measure the quality of deliberative contexts. Spörndli (2003) applies it to the discussion document of the German Conference Committee. The analyses of this representative politics context indicate that the formal outputs are in large part be determined by discourse quality.

Face-to-face deliberation is one of the deliberative forms, scholars conducting researches on television program (Denver, Hands & Jones, 1995), National Issues Convention (Fishkin & Luskin 1999) and public forums (Gastil & Dillard, 1999) all indicate the phenomenon of ideological polarization among liberal and conservative participants and the relatively little change in the attitudes of them.

Gastil (2000) broadens the definition of deliberation from face-to-face setting to the electronic context on the internet. According to him, majority researchers including him claim that deliberation should not be limited to a specific setting. He argues that electronic interactions have the capability to be the alternative to face-to-face deliberation with lower cost. Kies (2010) elaborates the index required observation when researchers make claims about the potential or limits of the online political debates. To be more specific, it includes the characteristics of participants, the actors holding the debate and the function of the context.

Over the past two decades, many scholars note that it is possible for internet's decentralized communications to enrich the public sphere composed of rational discourse which will promote the cause of accountable policy-making process of the state. Scott (1999) suggests that through reducing the impact of participants' social status on the discussion, the discussion groups in virtual network generates better quantitative judgments and levels of participant satisfaction not inferior to face-to-face forums. Dahlberg's (2001a) analysis of some specific Internet research illustrates that heated exchange of standpoint and critical arguments, emerging from decentralized interaction, occurs among many online fora in the cyberspace, which are autonomous from the colonization of government and commercial power. Iyengar et al. (2003, pp. 2-3) further point out that the merits of online deliberation and argues that it not only reduces the expenditures of the organization of and difficulties in gathering people but also expands the duration and scale of deliberation with flexible participation forms.

Several researchers choose to conduct experiments on online deliberation. Investigating online deliberation during election through observations and experiments, Price and Cappella (2002) argue that the higher level awareness of the opposite side reasons emerge as well as group polarization. Participants who are undecided will follow the dominant standpoint in the discussion group. Iyengar et al. (2003) administer two parallel experiments on online and face-to-face Deliberative Pool addressing American foreign policy, and the results indicate that online setting provides less stimulus to information gain and attitude change but it is sufficient for democratic practices. Mercier and Landemore (2012) introduce the argumentative psychological theory of reasoning into the studies on deliberation and the experimental results demonstrate that it is most likely for failures of reasoning be ameliorated during the collective public discussion because it is the setting where individual reasoning mechanisms work best.

However, some theorists note the deficiency of online deliberation considering the intervene of the authority and the corporate and the inherent problems of online discussion such as less respect and self-reflection, which restrict the scale of public deliberation in the virtual space (Dahlberg, 2001a). Additionally, Katz's (1997, p. 190) examination of computer-mediated discussion also shows that "confrontation, misinformation, and insult" are the features of many public forums in the cyberspace.

Kies (2010) points out that there exists a typical flaw within the studies on the potential impact of the online deliberation, especially during early stages of the Internet. That is, the distinction between different virtual spaces are ignored and need more investigation into their specific deliberative features. Halpern and Gibbs (2013) suggest that more symmetrical participation emerges from the discussion on Facebook than in YouTube by examining the interactions under the accounts and messages managed by the White House on these two platforms. And they find that more deliberative contents occur among posts sharing others' posts than independent posts.

Since different opinions have been raised regarding the impact of online discussion on deliberation, the use of network platform for the deliberative practices and its implication still

need clarification. This paper has the aim to investigate this question further through the examination of two online spaces with difference affordances.

2.2 Online Civic Participation

Peter Dahlgren (2005) defines civic participation as individuals' participation in the 'social and political processes of their surroundings'. Moreover, it has to do with the communication among citizens, citizens' media experiences in everyday life, and the civic culture. According to Coleman (2009), being citizens means interacting with strangers within a political community, being subject to its social and legal obligation and possessing the legal rights. He emphasizes the collective efforts to collect information and to exert influence on the policy-making process of the state.

Online civic discussions have been positively related to political deliberation by some scholars, they argue that it will halt the shrinking of civic society by its democratizing impact of the internet and emerging applications, and will give a ray of hope of democratic utopia (Papacharissi, 2004). Kellner (1997) claims that new public spaces for 'information, debate, and participation' and the diffusion of rational arguments have been created by the Internet, which is likely to revitalize the democratic practices. Similarly, as McNair (2011) argues, it is the Internet that has the potential to revivify the flagging political communication through infusing new possibilities into the relationship between citizens, politicians and the state. Dahlgren and Olsson (2007) focuses on the social media use of young people and draws the conclusion that their participation in public debates has been facilitated by online social networks, which act as the alternative form of civic engagement.

Citizens are increasingly engaged in information sharing consisted of top-down dissemination of government information and messages spreading from below, instead of only being receivers of information from the authority and mass media organizations. Consequently, Coleman and Blumler (2009) regard the Internet as a probable space for the expression of citizenship. As Cormode and Krishnamurthy (2008) describe, nowadays content can be produced by any online users due to the pervasive web-applications. Niche groups emerge within which contents in various forms circulate among numbers and to individuals outside the groups. Dahlgren (2009) suggests that although the one-way centralized media models still exist and some will be there forever, internet paradigm with the diversification of communication direction has already replaced the dominant role of former patterns.

Conversely, sceptics raise concern on the accessibility of network technologies and the 'fragmented, nonsensical, and enraged discussion' on the Internet to criticize its democratic potential and paint a more complicated picture (Papacharissi, 2004; Howard & Parks, 2012). Papacharissi and Oliveira's (2012) study shows that 'some gossip, some facts, plenty of opinions' as 'affective news' are the contents that spread most rapidly online during the political crisis. According to the paper on Tanzania's Presidential election by Bailard (2012), sometimes online exposure to the political debate triggered disengagement among citizens

instead of the higher level of civic participation. Additionally, under some circumstances, the use of network technologies has been discouraged by the authoritarian regimes, as Pearce, Freelon and Kendzior (2014) demonstrate in the case of Azerbaijan. Dahlgren (2009) suggests that it is viable to retain reservations on the effect of the Internet. Although ways of engagement do increase, it does not mean that online participation is the panacea for the ills of democracy. Similarly, Howard and Parks (2012) note that simply assuming that online political discussion can be qualified as ideal civic discourse is flawed.

Some researchers conduct studies of online civic participation based on data. By conducting two experiments, Wise et al. (2006) claim that higher intention to participate is generated in online communities that have the characteristic of interactive comments. In other words, more users mentioning what others writes can stimulate greater motivation to express within the online space. Using data from Pew Research Center, Gil de Zúñiga and his colleagues (2009) demonstrate that the effects produced by citizens participating via online blogs are beyond the impacts of mass media use. Moreover, the use of online blogs not only has the consequences of self-expression but also has outcomes on the social level by the enhanced civic participation. Anstead and O'Loughlin (2011) investigate a sample edition of BBC Question Time and the parallel discussion on Twitter and writes that there is a direct link between the volume of posts and the events of the programs and there are viewertariat calling for action, which suggests that the potential of mobilization and participation is prompted in this hybrid setting. Freelon and Karpf (2014) analyse the online information transmission within the debate-relevant Twittersphere and suggest that non-traditional political actors were most responsible for circulating the viral memes, and humour was widespread in debate. Anstead and Chadwick (2017) argues that the authority of IFS, a British think tank, entering into the online space from mass media era, emerges from the 'interdependent interactions between political actors and journalists' by examining the Twitter of them and the IFS during the 2015 UK general election campaign.

In addition, there are studies into a specific field of civic participation: the relationship between emotion and civic engagement. Hoggett and Thompson (2002) write that it is essential for the theory of political engagement and civic participation to take the affectivity into account, especially the group emotion flows, instead of ignoring it or regarding it only as dangerous forces that need to be restrained. Papacharissi (2004) argues that due to the unconscious bias, some researchers neglect the democratic potential of 'robust and heated discussion' and she broadly defines civility as civil participation that enhances democratic discourse. And she claims that in the virtual network, the absence of face-to-face interactions promotes more heated debates and will ultimately foster the democratic emancipation visualized by Lyotard (1984) through controversies and anarchy.

2.3 Social Media and Public Opinion in China

The user scale of social media has experienced enormous expansion in recent years. The prevalent use of various social media and personal publishing modalities has influenced the

formation of public opinion and altered the dynamics of information transmission (Stieglitz & Dang-Xuan, 2013; Kaplan & Haenlein, 2010). Chadwick and Howard (2009, p. 20) note that the increasing relevance of political public opinion and social media indicates the structural change in the political communication and the dominant roles of political elites and mass media organisers have been challenged (p. 202).

In terms of the situation in China, numerous scholars regard social media as a democratic booster considering the increasingly significant public opinion produced online. Herold and Marolt (2013) suggest scholars not to be limited in 'resistance vs control' perspectives and it is necessary to propose that Chinese social media and other online spaces are not fully determined by the offline and sometimes challenge the state. They regard social media as carnivals being opposite to the offline normalities, which acts as an escape valve containing online parodies. Examining some specific case studies through content analysis, Hassid (2012) has a slightly different idea of the valve metaphor and claims that when mainstream media set the agenda, social media act as 'safety valve', while issues set early by online bloggers, it functions as 'pressure cooker'. He also writes that it is common for Chinese social media bloggers to assist in dealing with social problems, expose the misfeasance of officials and political inaction, and even mobilize public opinion to press the authority to change policy.

Investigating Zhihu, a social question-and-answer platform in China, Ru and Hu (2016) argue that with the self-purification function, Zhihu is closer to the trail field of internet public sphere. Lagerkvist (2010) predicts more positively that the domination of the governing party norm in public opinion will be eventually subverted by the oppositional subaltern norm as a consequence of social media's democratic influence as well as the dissent from young people and the competition between them and the party (263).

Inspired by He (2006)'s authoritarian deliberation, Jiang (2010) writes that radical democracy need not be a precursor to public deliberation. On the contrary, the implications of political participation in social media may facilitate the growth of feasible alternative engagement forms, such as citizens or organizations mobilizing public opinion and arousing widely social attention. Xiao (2011) describes that through online social networks, citizens collect information, mobilize public opinion and coordinate collective action on issues of common concern, pushing the boundaries of associative and communicative freedoms and sometimes, and the authority is ridiculed and criticized on social media. Consequently, he claims that public opinion on social media has the potential to have a powerful influence over Chinese society and politics. Lagerkvist and Sundqvist (2013) propose loyal dissent to characterize the expression on social media on political scandals through his analysis on the most popular micro-blogs. The results reveal that it is likely for Sina Weibo to be the space for assembling more critical Chinese citizens and although a majority of the posts contain criticism against certain actions of the government, they do not challenge the authority of the Party.

In addition, some negative impact of social media and inherent limits in the context of China are mentioned by researchers. Watts (2009) focuses on the social media discourse during 2009

Urumchi riots and argues that the information flow on social media such as blogs and instant messages trigger more protests and intensify higher tensions between the Han nationality and Uyghur nationality, especially the Muslim. Scotton and Hachten (2010) raise concern on the freedom of expression in China. Quoting from Xin (2006), they write that media in China are regulated mainly by administrative regulation, rather than by a well-established legal system. Due to the central government has the power to change policy and provisions flexibly, there are pitfalls and uncertainties in the future of the public opinion on social media in China.

General communication studies on the information sharing, effect and cognition are also related to this paper, although they are not conducted in China. Stieglitz and Dang-Xuan (2012) examine political tweets on Twitter, which were posted during one week from March 21 to 27, 2011, prior to the two state parliament elections. They argue that affective messages in political content can also be disseminated apart from the information itself, which has the potential to affect the political opinion-making process. Chong and Druckman's (2010) study demonstrates that when receiving competing information on different days or weeks, people tend to put more emphases on the most recent contents because the impact of previous contents declines over time. Thus, when competing content transmitted at the same time, the diverse level of opinions among individuals is less significant than when different views are conveyed for a period of time. Similarly, Sniderman and Theriault (2004) notes that when people receive opposing views from each side simultaneously, the competing effects of the opinions often cancel each other. Under this circumstances, individuals form moderate standpoint. The results of Stieglitz and Dang-Xuan's (2013) research on social network reveals that both positive and negative sentiment in information can stimulate higher motivation for sharing and participation.

2.4 Conceptual Framework

The definition and extension of political deliberation and civic participation and the dynamics of social media public opinion in China have been clearly interpreted in the previous chapter, as well as academic arguments and empirical findings of these fields, which will not be repeated in this part. However, what should be clarified is that the concepts of "deliberation" (Chambers, 2003, p. 308; Gastil; 2000; Kies 2010) and of "civic participation" (Dahlgren, 2005; Coleman & Blumler, 2009) respectively constitute the theoretical framework of the online public discussion which define the scale of the observation and the discussion of findings in this research. Since the theoretical and practical aspects of political deliberation and of civic participation, may sometimes overlap with each other, considering the object of this paper, these constructs are being considered as two reciprocal elements of the online public discussion within which public opinion are disseminated.

Sub-concepts of the concept of political deliberation and civic participation related to the research hypotheses and the discussion of the results will be briefly explained. Firstly, the levels of justification employed by Spörndli (2003) set four types of justification: no justification, inferior justification, qualified justification, sophisticated justification, which are

classified according to the occurrence of inferences and conclusions. Secondly, Steenbergen et al. (2003) develop three types of content of justifications: no interest demands; group interest demands; public interest demands. Group interest demands mean explicit statement concerning own and their group interests. Public interest demands include the statement of the well-fare for the greatest number stated in utilitarian terms (Mill & Crisp, 1998) and of the aim to help the least advantaged through the difference principle (Rawls, 1999). Thirdly, according to Gastil (2000, p. 22), full deliberation in policy debates contain the identification of possible solutions with criteria specification and evaluation within the careful analysis of the issue. Fourthly, the study of emotion and democracy by Hoggett and Thompson (2002) notes that the lack an account of affectivity is common in civic participation study and claims that researchers should not only regard it as destabilizing forces that need to be kept in check without deep examination. Lastly, Papacharissi (2004) point outs that there exists a confusion of politeness with the civic potential of participation and argues that there is overly adherence to a virtue of etiquette in civility.

2.5 Research Objectives and Hypotheses

The literature review has revealed that western researchers have developed an elaborate theoretical foundation and conducted widely studies of online deliberation and civic participation. Meanwhile, it is rare for Chinese scholars to examine the online discussion from the perspective of civic deliberation through the frame produced by western theorists. Moreover, the evaluation of Zhihu's democratic potential is higher than Weibo by some researchers (Ru & Hu, 2016; Wang,2015). Therefore, the objective of this paper is to investigate the characteristics of the content related to the legalization of surrogacy on Weibo and Zhihu from the viewpoint of ideal political deliberation and civic participation in the context of the Chinese Internet. In addition, this study will explore and compare the overall features of these two different platforms. A further objective of this research is to give more insights into the network space in China which might differ from some predicts and arguments by western scholars.

In order to accomplish the objectives, based on the literature review and in accord with the conceptual framework, this study aims to answer the following central research question:

2.5.1 Central Research Question (CRQ):

What are the overall patterns of the participation of Weibo and Zhihu users in public discussions related to the legalization of surrogacy?

In addition, two sub-questions were constructed:

Sub-question 1 (SQ1): What is the quality of the discussions on the legalization of surrogacy on Weibo and Zhihu?

Sub-question 2 (SQ2): Are there differences in the discussions between Weibo and Zhihu?

In terms of the sub-question 1, derived from previous studies, this paper will examine the discussions of the legalization of surrogacy on Weibo and Zhihu separately from the perspective of justification, interest statement, politeness, solution and emotion.

Moreover, hypotheses about the factors in the generation of justification and in the diffusion of posts from H1a to H1e will be tested on both two platforms:

H1a: There is no significant difference between emotional posts and posts without emotion in terms of the proportion of posts with justification.

H1b: There is no significant difference between polite posts and impolite posts in terms of the proportion of the posts with justification.

H1c: The re-posts and posts mentioning others have a higher proportion of the posts with justification than original posts.

H1d: The volume of re-postings, comments, and likes of posts with emotion is higher than posts without emotion.

H1e: There are significant differences between posts with different levels of justification in terms of the volume of re-postings, comments, and likes.

As for the sub-question 2, hypotheses are set for comparing two platforms through direct statistical tests instead of making indirect judgments through the results of sub-question 1:

H2a: For Weibo and Zhihu, there is a significant difference between the proportion of emotional posts.

H2b: For Weibo and Zhihu, there is a significant difference between the proportion of posts with justification.

H2c: For Weibo and Zhihu, there is a significant difference between the proportion of posts for the public interest.

H2d: For Weibo and Zhihu, there is a significant difference between the proportion of impolite posts.

H2e: For Weibo and Zhihu, there is a significant difference between the proportion of posts concerning solutions.

These hypotheses require further discussion. Domestic studies are taken into consideration because of the research objective and importance of the social environment. H1a and H1b are based on arguments from Hoggett and Thompson (2002) and Papacharissi (2004). Moreover, the empirical evidence from Hao (2015) indicates that netizens participating in online mass incidents have higher intention for expressing their emotional condition than ordinary netizens, and Zhang (2016) argues that personal emotion in social media public opinion always performs as impolite expression and foul language, which both means that emotion and

politeness are essential factors that need to be taken into account when considering the quality of online discussion. In addition, the claims of Mercier and Landemore (2012) and Wise et al. (2006) and the results of Halpern and Gibbs (2013) research provide reasons for H1c. H1d is founded on the findings of Stieglitz and Dang-Xuan (2013). Additionally, this paper will test the H1d due to deficiency of examination of the relation between the logic level and sharing. As for H2a to H2e, they are based on arguments from Ru and Hu (2016) and the indicators developed by Steenbergen et al. (2003) and other scholars mentioned in conceptualization.

The next chapter will justify the methodology selected for this studies and will specify the sampling procedure, the coding frame and data analysis approach.

3 RESEARCH DESIGN AND METHODOLOGY

3.1 Methodological Approach

Quantitative content analysis is chosen to accomplish the objective of investigating 'something about the messages, images, representations' of the public discussion on Weibo and Zhihu by identifying and calculating 'the occurrence of specified characteristics or dimensions of text' (Hansen, 1998, p. 95), which are pre-designed related to the relative studies. Moreover, it allows this paper to draw 'replicable and valid inferences from texts (or other meaningful matter) to the contexts of their use' (Krippendorff, 2004, p. 18) and to make reliable arguments on the online civic engagement on Chinese social media.

This research chooses content analysis as the methodology approach for its several advantages. First, this paper focus on analysing a sizeable number of Weibos and Zhihu answers to be able to make cogent statements about the quality and characteristics of the online public discussion and differences of the civic participation between two platforms. Additionally, the statistical analysis purpose can be achieved through quantitative content analysis, which means that the paper will make broader inferences through comparatively large data collected from counting 'salient and manifest features' (Deacon et al., 1999, p. 116) to claim specific 'characteristics of messages' (Holsti, 1969, p. 14).

Secondly, given the aim of the paper is to identify the quality and properties of the posts and related materials about the legalization on surrogacy on Sina Weibo and Zhihu, content analysis is suitable for the need of systematic identification. Berelson (1952, p. 18) defines CA as a 'technique for the objective, systematic, and quantitative description of the manifest content of communication' in the first major review of CA (as cited in Bauer & Gaskell, 2000, p. 133). As an approach to 'quantify' specific features of texts (Deacon et al., 1999, p. 116), CA can evaluate the quality of discourse and make comparisons between results on different platforms. In addition, the choice of CA enables the paper to conduct 'systematic classification' (Bauer & Gaskell, 2000, p. 132) to distil a large number of posts into the observation of online deliberation in China.

Thirdly, content analysis is widely used in political prior studies and online civic engagement research. Bondes and Schucher (2014) use CA to conduct an analysis of 4635 micro-blog posts to analyse the online mass incident that happened in the aftermath of Wenzhou accident. Tong and Zuo (2014) all select CA to explore the discourse of Weibo discussions on social protests, the overall patterns, themes of Weibo users' activities and its possible influences on the legitimacy of the authorities. Moreover, the discourse quality index and other theoretical studies open up deliberation for empirical research. Based on the operationalization of the ideal of discourse, using CA is a way to introduce theories into the study and combine it with the reality in the context of Chinese social media and this specific issue.

To tackle the big amounts of online data, Hopkins and King (2010) introduce automated nonparametric approach into the content analysis. But, it has the possibility of skating over the complex logical reasoning processes inside the messages (Deacon et al., 1999), which are essential to this study. Therefore, manual approach will be selected to avoid the deficiency of automatic classifier applications and to conduct more in-depth exploration into a smaller number of posts and answers on Sina Weibo and Zhihu to make valid arguments.

Discourse analysis is also a widely used method in studies on texts. It is more suitable to deal with relatively small amounts of material, while content analysis has the strength of managing 'large amounts of data' (Flick, 2011, p. 136). Taking into consideration of the hypotheses tests in this study, the choice of discourse analysis may not fulfil the requirement. Compared with the feature of 'scientific method' (Neuendorf, 2002, p. 10) of quantitative content analysis, personalized interpretation is more vital to the discourse analysis. Therefore, discourse analysis lacks the capability to make objective conclusions through systematic classification.

However, applying content analysis also has some concerns, Burgelin criticises that it has the question of the 'fragmentation' of the whole texts (1972, p. 11) and Hansen notes that simply counting the frequency is a common problem of CA (1998, p. 96). Actually, the critique of fragmented calculation is inappropriate. Although content analysis uses a set of code frame containing different elements, as 'an extremely directive method' (Deacon, 1999, p. 117), it 're-assembles' (Hansen, 1998, p. 96) the varied elements to analyse and to test the hypotheses. Moreover, it requires the interpretive process of researchers to make 'valid inferences from text' (1990, p. 9) and the investigation into 'symbolic meaning of messages' (Krippendorff, 1980, p. 22) beyond counting numbers.

Another concern raised by Flick (2011, p. 136) is that CA is 'often rather reductionist'. Therefore, this paper will employ previous studies on social media participation and political deliberation because CA 'should be enriched by the theoretical framework' (Hansen, 1998, p. 96), and will use a reasonable prior coding frame instead of a posteriori one (Neuendorf, 2002, p. 11).

To sum up, quantitative content analysis is an appropriate method to explore the research questions and to test the hypotheses of this study and it is necessary to keep these concerns in mind.

3.2 The Case and Selection of The Online Channel

The object of content analysis in this paper is the micro-blogs discussing the legalization of surrogacy on Sina Weibo and the posts on Zhihu answering questions related to this issue. First, there is a need to justify the choice of Sina Weibo and Zhihu to represent Chinese social media. Sina Weibo has 340 million month active users⁴ and it is the place for many online mobilization and protest, which have been studied by widely scholars. Although Wechat with 983 million monthly active users⁵ is the largest social network in China, Sina Weibo is a more public space for policy discussion, because the messages people post on Wechat basically only circulate in the private zone.

In terms of Zhihu, with 50 million registered users, it does not have as much page views as Sina Weibo. But it has been called 'elite communication platform' and its design is suitable for deliberation: a question, answers, and comments to answers are shown on one page. And Zhihu is not a simple question-and-answer platform for enquiring specific knowledge, is has been a space for social interactions and exchanging ideas on public issues.

Data collected for this research did not have a confrontation with privacy issues, since retrieved contents on Weibo and Zhihu were public. Although Wechat has 889 million monthly active users which is the largest of Chinese social media⁶, it was not be chosen for the controversial private concern. Thus, the data collection and analyses in this research project were innocuous. Therefore, this study received ethical approval from the academic supervisor and was permitted to conduct its whole research design.

3.3 Sampling

The sampling procedure of Sina Weibo comprises two stages. First, there is a need to define the time period of this study. February 3, 2017, People's Daily published an article on the difficulties in having a second child which asked that 'Should restrictions on surrogacy be appropriately relaxed?' and carried out a vote for the legalization of surrogacy on its Weibo account. After that, from February 3th to February 9th, there was an unusual surge in the discussion on the policy of the surrogacy. As seen in the figure below, the volume of discussion reached the peak on February 6th and went to normal after February 9th. Thus, the time period chosen for this study is February 3th to February 9th in 2017.

⁴ <http://tech.sina.com.cn/i/2017-05-16/doc-ifyfeivp5780397.shtml>

⁵ <http://www.jiemian.com/article/1328497.html>

⁶ Wechat's Economic and Social Impacts Report (2016). Retrieved from <http://www.tisi.org/4861>

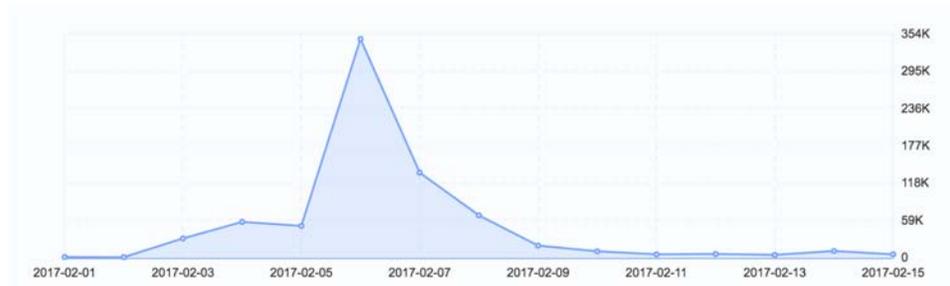


Figure 1: The trend of 'surrogacy' on Sina Weibo⁷

Secondly, samples were selected separately on Weibo and Zhihu. The sampling of micro-blogs was undertaken through Weibo's Advanced Search option. The searched micro-blogs had to contain 'surrogacy' either as a phrase in a post or as part of the hashtag and had to be written in Chinese. An overall total amount of 5192 posts were collected over the specific period. After the deletion of advertisement posts, there were 5156 weibos. The actual final sample of 1289 weibos was obtained through randomly sampling a representative 25% of each day's total body of weibos, considered to be the whole population for that day. It has to bear in mind that the number of results given by the search engine is much smaller than the real volume due to the technical reservations associated with issues of exhaustiveness (Anstead & O'Loughlin, 2011). The sampling of Zhihu also was conducted through its own search function. The searched questions had to include 'surrogacy' and the published time of the question must be within the defined time duration, so did the collected answers under the questions. The final sample of 262 answers was obtained through randomly sampling a representative 10% from 2617 answers from 9 questions. Considering the amount of time spent on coding Zhihu answers, the proportion of the final sample to the population changed because the average amount of words of Zhihu answers is 673 words, whereas the limit of almost every weibo is 140 words.

3.4 Coding Frame (See Appendix A)

The coding frame for micro-blogs on Sina Weibo is composed of 17 mutually exclusive variables, and the frame for articles on Zhihu consist of 16 mutually exclusive variables, both including objective description of the basic characteristics of the micro-blogs and categorisation requiring 'judgements based on detailed analysis' (van Zoonen 1994, p. 69, as cited in Deacon, 1999, p. 121) of texts and other signs. Account name, gender, type, publication time, the number of responses and other objective variables are included to produce the general situation of the posts of the legalization of surrogacy on Weibo and Zhihu which acts as a background of the findings and hypotheses.

Previous studies on political deliberation, civic participation, and social media public opinion are the bases of the coding frame: level of justification (Spörndli, 2003); content of justifications

⁷ Searched from the Weibo Data. Retrieved from <http://data.weibo.com/index>

or interest statement (Steenbergen et al., 2003); solution (Gastil, 2000); emotion (Hoggett and Thompson, 2002); politeness (Papacharissi, 2004).

After coding, the data was cleaned and pre-processed and then opened in SPSS for analysis. Descriptive analyses including frequency and percentages, and statistical tests such as Chi-Square test, One-way ANOVA Test and Wilcoxon Signed-Rank Test were employed in this studies to answer the research questions and test hypotheses.

3.5 Inter-Coder Reliability (See Appendix B)

Inter-coder reliability (ICR) is used for evaluating the degree to which independent coders make the same judgment after analysing the features of content and to make sure one coding process can reach the as same conclusion to another as possible on repeated tests (Carmines et al., 1979; Lombard et al., 2002). As Neuendorf (2002, p. 141) writes that, since content analysis is to identify 'relatively objective characteristics' of the texts and pictures, reliability is crucial for the validity of the study. Two communication students and Chinese native speakers as coders conducted the pilot study of the code frame.

The pilot study selected 257 micro-blogs and 52 Zhihu answers to count the ICR. The reliabilities of the normal variables in this study are above $\alpha.800$. According to the policies adopted by Krippendorff (2004, p. 241), variables with reliabilities above $\alpha=.800$ can be relied on, otherwise, they can only for drawing tentative conclusions.

4 RESULTS

This chapter will provide various numerical outputs to the questions and hypotheses through descriptive counting and statistical tests. The results obtained through the quantitative content analysis will refer mostly to the central research question as well as to two sub-questions. In the next chapter of this paper, main findings will be discussed and summarised.

4.1 Overall Basic Background

The basic information of the online discussion on Weibo including account types, users' genders, content types, users' gender, standpoint, attitudes towards government and female rights will be presented. For Zhihu, basic information consists of users' gender, content types, content length, standpoint, attitudes towards government and female rights.

First, the basic information of related micro-blogs on Sina Weibo will be shown. In terms of account types, Figure 2 displays the proportion of each of the coded account types. The data shows the composition of the participants. 82% (n = 1053) of participants were of normal users, followed by 157 (12%) master users, 63 (5%) personal V users and 16 (1%) organization users. As for the gender of the account, due to the particular topic, 993 (77%) females took more than three-quarters share of the total accounts, while males accounted for 23% (296) of accounts. Because of the asymmetrical gender distribution, statistical tests will be conducted for the whole and for each gender. If the test results for each gender differ from the result for the whole, detailed outputs will be given. Otherwise, only the result for the overall data will be represented. Figure 4 shows that 496 (38%) micro-blogs were original and 793 (62%) micro-blogs retweeted others' posts. The distribution of standpoint is delivered by Figure 5: 70% (906) micro-blogs expressed opinions against the legalization of surrogacy, while 324 (25%) took the natural stance, and only 59 (5%) posts supported government in introducing the legalized policy on surrogacy. As shown in Figure 6, the anti-government voices only occupied 4% (46) of the online discussion.

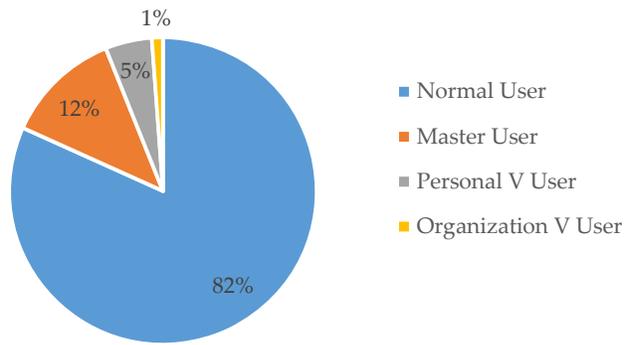


Figure 2: Weibo Account Type

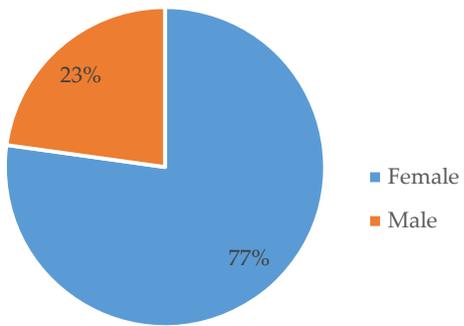


Figure 3: User Gender

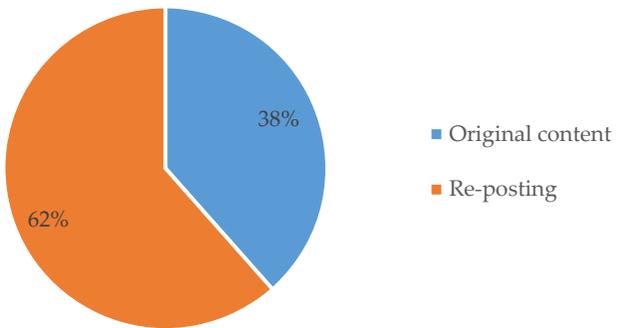


Figure 4: Content Type

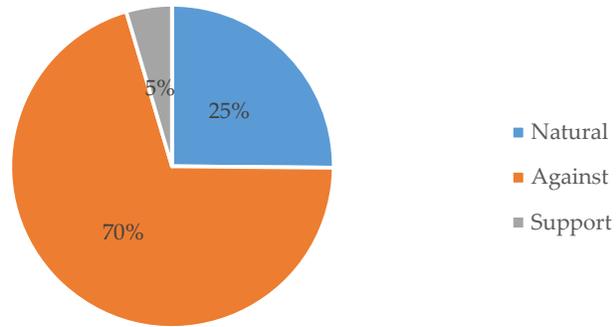


Figure 5: Standpoint

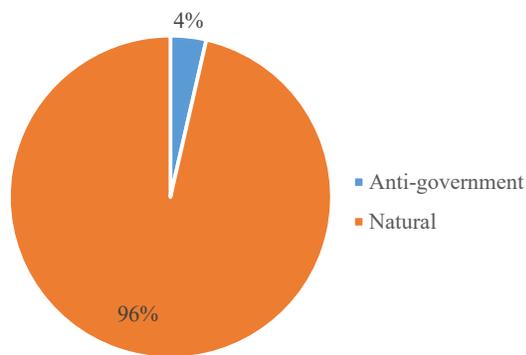


Figure 6: Attitude towards government

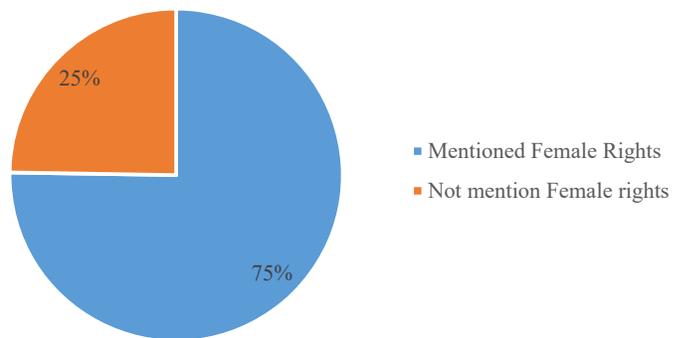


Figure 7: Female Rights

The result of the the occurrence of the female rights in micro-blogs is displayed in Figure 6. A quarter of the Weibo posts (320) mentioned the benefits of women, and 75% (969) posts did not contain opinions concerning female rights.

Secondly, the basic information of related posts on Zhihu is provided in the following Table1.

Variables	Assignment	Frequencies	Percentage
User gender	Male	152	58%
	Female	85	32%
	Unidentified	25	10%
Content type	Original	250	95%
	Mention Others	12	5%
Content length	<=100	93	35%
	<=500	88	34%
	<=1000	39	15%
	<=10000	40	15%
	>10000	2	1%
Standpoint	Against	161	61%
	Natural	71	27%
	Support	30	12%
Attitude	Natural	237	90%
to government	Anti-government	25	10%
Female rights	Without emotion	248	95%
	With emotion	14	5%

Table 1: Basic Information of Zhihu Answers

4.2 The Quality of the Discussion on Weibo

Regarding the level of justification, 48.6% of the micro-blogs were coded as 'no justification', while 51.4% of the micro-blogs were coded as expressions with logic. No significant difference was found in the proportion of posts with reasoning process and posts without justification (X^2 (df = 1) = 1.062, p = 0.303).

The result of Wilcoxon test demonstrated a significant difference between micro-blogs stating group interest and voices for the public interest: whereas 17.8% of the posts in Weibo stated the group interest, 5.7% of the posts voiced concern on the public interest ($z=-8.903$, $p<0.001$).

With regard to politeness, 85.6% of the messages were coded as polite in Weibo, whereas only 14.4% of the messages were as impolite. A Pearson Chi-Square test revealed statistically significant results (X^2 (df = 1) = 652.358, $p < 0.001$), indicating that majority of Weibo messages were polite.

In terms of the solution, only 4.4% micro-blogs mentioned the solution to the issues related to the aging society, low birthrate and the implementation of the legalization of surrogacy, whereas 95.6% micro-blogs did not express opinions on the solution (X^2 (df = 1) = 1071.082, $p < 0.001$).

Finally, the results demonstrated a significant difference between emotional posts and posts without identifiable emotion: whereas 24.8% of the messages in Weibo threads were emotional, 75.2% of the messages did not express obvious emotion (X^2 (df = 1) = 326.776, $p < 0.001$). This means that in Weibo the majority of the participants in this policy discussion were calm.

4.3 The Quality of the Discussion on Zhihu

With regard to the level of justification, 78.6% of the answers were coded as logical expressions, while 21.4% of the answers were coded as expressions without justification. A significant difference was found in the level of reasoning (X^2 (df = 1) = 85.878, $p < 0.001$), indicating that the majority of posts on Zhihu had justification.

In terms of the interest statement, the result of Wilcoxon test revealed that answers stating group interest were significantly more than voices for the public interest: whereas 16.4% of the posts in Zhihu stated the group interest, 5.7% of the posts voiced concern on the public interest ($z = -3.677$, $p < 0.001$).

Regarding politeness, 96.2% of the messages were coded as polite in Zhihu, whereas only 3.8% of the messages were as impolite. A Pearson Chi-Square test revealed statistically significant results (X^2 (df = 1) = 223.527, $p < 0.001$), indicating that most of the Zhihu messages on this issue were polite.

The result of the Chi-square test demonstrated that only 6.1% answers proposed advice for solving social problems related to surrogacy, whereas 93.9% answers did not express opinions on the solution (X^2 (df = 1) = 201.908, $p < 0.001$).

Finally, there was a significant difference between posts with emotion and posts without identifiable feelings: while 5.3% of the answers in Zhihu were emotional, 94.7% of the authors did not show their affective condition (X^2 (df = 1) = 208.992, $p < 0.001$).

4.4 Factors in justification and sharing

In terms of the impact of emotion on the level of justification, results supported H1a. That is, under different emotion condition, no significant difference was found in the level of justification (X_{weibo}^2 (df = 1) = 0.033, $p = 0.856$; X_{zhihu}^2 (df = 1) = 0.456, $p = 0.500$). Regarding the

relationship between politeness and the level of justification, no significant correlation was found, indicating that politeness is not a factor in the level of reasoning ($X_{weibo}^2(df = 1) = 3.425$, $p = 0.064$; $X_{zhihu}^2(df = 1) = 2.146$, $p = 0.143$). Thus, H1b was justified.

The result of Pearson Chi-Square test rejected H1c. In Weibo, 49.4% of the original posts were logical and 52.7% of the re-tweeting posts were logical, claim was not justified ($X_{weibo}^2(df = 1) = 1.343$, $p = 0.246$). In Zhihu, 78.0% of original posts had reasoning process and 91.7% of posts mentioning others had justification, claim was not supported ($X_{zhihu}^2(df = 1) = 1.273$, $p = 0.259$).

To test whether emotion had an impact on the volume of the retweets, replies and likes (H1d), a one-way analysis of variance (ANOVA) was performed. The results from this analysis indicated that emotion did not have a significant effect on sharing of posts, rejecting H1d ($F_{weibo}(1, 1287) = 0.103$, $p = 0.749$) ($F_{zhihu}(1, 260) = 0.006$, $p = 0.941$).

Another ANOVA test was conducted to examine whether the level of justification had an impact on the action of sharing (H1e). The results of the statistical test of Weibo posts revealed that level of justification did not have a significant impact on re-tweeting, replying and liking, and H1e was not supported ($F_{weibo}(3, 1285) = 0.438$, $p = 0.726$), whereas for Zhihu posts, H1e was justified ($F_{zhihu}(3, 258) = 3.575$, $p < 0.05$).

Although H1e was not justified on Weibo, the mean values of number of responses of four justification levels in the following table shows that the higher level of justification, the more responses.

Platform	No logic	Low logic	Qualified logic	Sophisticated logic
Weibo	M = 16.08	M = 18.76	M = 31.14	M = 54.75
Zhihu	M = 79.02	M = 148.16	M = 199.46	M = 446.49

Table 2: Mean values of the volume of retweets, replies and likes of four justification levels

The summarization of the results of hypotheses are shown as follows:

Hypotheses	Weibo	Zhihu
1a	Accepted	Accepted
1b	Accepted	Accepted
1c	Reject	Reject
1d	Reject	Reject
1e	Reject	Accepted

Table 3: Hypotheses tests results of H1a to H1e

Additionally, in testing the influence of the account type on the number of responses, results gave more insights on the factors in sharing. On Weibo, the mean values of four account categories show significant difference in sharing (Normal Account: $M = 8.71$; Master Account: $M = 23.03$; Personal V: $M = 122.11$; Organization V: $M = 287.19$). There was significant effect of account types on the volume of retweets, replies and likes ($F_{\text{weibo}}(3, 1285) = 17.909, p < 0.000$).

4.5 Compare Weibo and zhihu

In terms of emotion, 24.8% micro-blogs on Weibo expressed obvious emotion, whereas 5.3% answers on Zhihu contained affective messages ($X^2 (df = 1) = 48.909, p < 0.001$). Therefore, the claim that the proportion of emotional posts on two platforms had significant difference was justified (H2a).

With regard to the level of justification, 51.4% of the posts were coded as the logical statement on Weibo, whereas 78.6% of the posts on Zhihu had reasoning process. The Chi-Square test revealed statistically significant results ($X^2 (df = 1) = 65.344, p < 0.001$), indicating that the proportion of posts with justification on Zhihu was significantly higher. This result provided support for H2b.

Regarding the interest statement, 24.2% of the Weibo micro-blogs stating interest were coded as the voice for the public, and 25.9% of Zhihu answers stating interest were coded as the statement for public benefits. No significant difference was found in the distribution of interest statement ($X^2 (df = 1) = 0.075, p = 0.784$). Thus, H3c was rejected.

The result of the statistical test demonstrated a significant difference between Weibo and Zhihu in the proportion of impolite posts: whereas 14.4% of the micro-blogs in Weibo were impolite, 3.8% of the articles on Zhihu contained impolite messages ($X^2 (df = 1) = 22.215, p < 0.001$), providing support for H2d.

Finally, the results indicated that articles on Zhihu had significant larger part of posts proposing solutions: 1.2% of the micro-blogs in Weibo expresses ideas on solving related social issues, whereas 6.1% of the answers in Zhihu wrote about solutions ($X^2 (df = 1) = 25.511, p < 0.001$). This justified H1e and revealed that Zhihu has a higher percentage of participants considering solutions.

The summarization of the results of hypotheses are shown as follows:

Hypotheses	2A	2B	2C	2D	2E
Results	Accepted	Accepted	Rejected	Accepted	Accepted

Table 4: Hypotheses tests results of H2a to H2e

5 DISCUSSION

By analyzing the debate of the legalization policy of surrogacy on Weibo and Zhihu, this study aims to provide a deeper understanding of public discussion in social media. For this purpose, 1289 Sina micro-blogs and 262 Zhihu articles were analyzed and appraised through criteria derived from the literature of political deliberation and civic participation. The theoretical background mentioned in previous chapters will be taken into consideration for critical interpretation. Findings of this research will be reported in this chapter.

5.1 Overall Basic Background

In relation to the basic features of this online discussion about public issues on Weibo, the participants were formed mostly by normal users. The vast majority of micro-blogs had less than 140 words and retweeting micro-blogs took more than half of the whole. As for the standpoint, seven out of ten participants were against the proposal to be realized in the near future in China and only very few users expressed discontent with the government or criticized the officials. The results differ from Lagerkvist and Sundqvist's (2013) claim that the majority of the micro-blogs on Weibo contain criticism against specific actions of the authority. Thus, it may be more reasonable to be cautious about making predictions for the subversion of party domination resulted from the dissent on social media (Lagerkvist, 2010).

In terms of the situation on Zhihu, more than half of the participants were male and a small part of participants chose anonymity. The average length of the articles on Zhihu is nearly 700 words, within which around 60% answers had more than 140 words and less than 5% of users mentioned others' opinions. The voices of supporting and being natural took four out of ten posts and about 10% users criticised the authority.

Additionally, about 25% of participants on Weibo and more than 30% of the authors on Zhihu related the problems of female rights with the legalization of surrogacy in their expression, whereas only less than 5% and 1% of the users on Weibo and Zhihu mentioned the ethical issue, indicating it was not a focal point of the discussion.

Considering the proportion of posts containing others' messages, conversations on Weibo seemed to perform better than conversations on Zhihu regarding to reciprocity, which is feature of the real discussion (Graham, 2002, p. 45). There is only monologue if participants refuse to read what others write and interact within online space. Weibo users were more active in giving responses to others' claims, but mentioning others' arguments is not the sufficient condition for a micro-blog to be rational and logical since it can simultaneously be discourteous, pointless or poorly justified. Although in some previous studies (Kies, 2010), reciprocity has been operationalized to count the occurrence of replies to others' posts. Considering the reciprocal feature of the posts can be annihilated by the non-deliberative content, this paper chose not to regard it as an indicator.

5.2 The Quality of the Discussion on Weibo

From the point view of ideal deliberation and qualified civic participation, discussions on Weibo performed better on politeness and calmness than on the logical level of expression, the focus on the public benefits and the consideration of solutions.

Nearly half of the posts on Weibo did not give reasons for their opinions, which means that this part of users only expressed their standpoint or only paid attention to this issue without saying their ideas. In addition, only an eighth of micro-blogs met the requirements of qualified justification and sophisticated justification. Thus, it is reasonable to say that the online discussion space in Weibo is full of statement without logic or having a low level of justification and there is much room for improvement in the rationality and logicity for the posts participating in the public discussion.

The percentage of arguments without the justification in this public policy debate is much less than 90%, which is the figure of the study on public opinion during online mass incidents and sudden events in China (Lu, Liu & Li, 2017). A large number of users stated their opinion with support after simple reasoning process, although the average level was low, it was still better than the situation of the online discussion unrelated to policies.

Three-quarters of participants on Weibo did not show their starting point of interest. Among those who stated it, very few users mentioned public interest including the benefits of the latest advantages and nearly one in five micro-blogs wrote about group interest. Interestingly, about 80% of the voices for the latest advantages were to protect the independent reproductive rights and personal development of women in the rural and underdeveloped area and about 90% of the voices for group benefits mentioned the possible impact of legalization of surrogacy on the female rights, interests, self-safety and social status. This finding showed that in respect of deliberation and civic participation, the focus on public welfare had much space for promotion. However, what is reasonable to understand is that it was difficult for some users to avoid paying most attention to women, regarding the particularity of this issue and Chinese national conditions. Although only a few users analysed how to solve the potential negative effect of legalization of surrogacy or other approaches to deal with the problems of the low birthrate and aging society. Being consistent with Wang and Zheng's (2011) argument, the findings suggest that the online expression of the citizens is not limited to own narrow interest, but contain consideration on others and the social whole, especially empathy with the vulnerable.

5.3 The Quality of the Discussion on Zhihu

The discussions on Zhihu basically satisfied the criteria of justification, politeness, and dispassion, and there was a lack of consideration of solution and public interest. Nearly 80% of participants provided opinions with reasoning process, moreover, articles with qualified justification or sophisticated justification made up to half of the contents related to the legalization of surrogacy. From the view of characteristics of deliberation and civic participation, most articles on Zhihu met the requirement of having founded and sound

arguments, and even nearly a quarter of answers gave two or more than two rational evidence for their opinions. According to (Habermas, 1995), the quality of discourse has an impact on the outcome of the exchange of opinions, because if assertions do not make orderly with coherent justification and reasonable claims, they can not be critically assessed. Thus, fruitful discussion with greater consistency between arguments and conclusions has the potential to stimulate the deliberative process and is more effective for deliberation. Although, few contents presented concerns on the solution of social problems and national condition related to this particular issue. It is still reasonable to say that most discussions on Zhihu of this issue were deliberative, and the influence of attitude and standpoint was larger than the analyses on the alternative methods to achieve the goal of the government and to ameliorate the situation of some disadvantaged women.

Nearly 80% of the participants did not express their starting point of interest and within those who directly expressed interest statement, three-quarters were for group interest and one quarter was for the public. Moreover, about 90% mentioned the relationship between the legalization of surrogacy and female rights, and additionally, only one was in favour of this possible policy. Therefore, to a large extent, the motivation of protecting and guaranteeing the rights, benefits, happiness, and development of women mostly accounted for the starting point of Zhihu authors' action of participation. Although participants in the public discussion should take the common good into consideration, it does not imply that individuals are supposed to separate group interests from the public benefits. And the voice for group interest can also be compassionate and other-directed to reflect on others' welfare, which is compatible with the public interests (Steenbergen et al., 2003).

5.4 Factors in the generation of justification

The findings of the analyses on the factors that affect the justification level of posts showed that emotion did not have a significant impact on the generation of justification on both platforms. That is, to some extent, users expressing their emotions and those who were calm had equal possibilities to produce qualified justification. This finding suggests that affective condition does not have an inhibitory effect on the process of reasoning in the online discussion space, which supports the claim of Hoggett and Thompson (2002) and Papacharissi (2004) with small scale empirical results. Thus, affectivity should not be excluded from the description of deliberation since our abilities to 'communicate, listen, understand, and learn are affective as much as cognitive capacities' (Hoggett and Thompson, 2002).

In addition, the findings of two platforms both showed that polite posts and impolite posts did not have significantly different proportion of posts with justification. Papacharissi (2004) notes that some studies on the loss of civility in deliberative discourse and civic participation highlight etiquette as a merit, lacking which may have negative implications for the democratic society. However, this paper suggest that polite manners are not sufficient for civility and deliberation, and it is not reasonable to measure deliberative potential with a focus on interpersonal politeness, which neglects the benefits of heated discussion (Papacharissi, 2004).

Conover et al. (2011) point out that as a consequence of the controversial and polarizing nature of politics, political communication is permeated by a high level of emotion associated with public topics and political parties, such as fear, hatred, and empathy. Therefore, it is necessary for analyses on deliberation and participation to take the emotions into account, instead of being abstract away from the sentiment in order to specify the conditions.

5.5 Factors in the volume of responses

For Weibo, the results of the analyses of the factors in the diffusion of micro-blogs showed that emotional micro-blogs and micro-blogs without emotion did not have a significant difference in the quantity of retweets, replies and likes. This finding is not consistent with the argument of Stieglitz and Dang-Xuan (2012), who suggests that politically relevant tweets containing words that reflect affective condition have higher 'retweetability', triggering larger scale of information diffusion. Surprisingly, micro-blogs with different levels of justification also did not have a significantly different quantity of retweets, replies and likes.

To explain these results, this studies conducted further analysis of the relationship between account types and the volume of responses, showing that there was a significant difference between four types accounts in the retweet-ability. Thus, this finding suggests that compared with the features of the content itself, such as levels of justification and emotional condition, the identity of the author have a higher impact on the scale and depth of diffusion of micro-blogs in Weibo public discussion. Another result can support this judgment: there was no significant difference between accounts with V and accounts without V in the proportion of posts with justification. There did not exist the phenomenon that accounts with V have more rational and powerful arguments. The following table shows the top twenty retweeted Weibo accounts by microblogs in the sample.

Account	Re(in sample)	Account Type	Followers ⁸
Vista Magazine	141	Organization V	12074794
Genius say	60	Personal V	5360766
Peace Zhongyuan	42	Organization V	5686106
Cheng Yancicicicici	35	Normal	311
Never renamed Mogu	34	Master	4007
Global Times	29	Organization V	8465693
PS Guy	20	Personal V	6193071
Feminist Tieba	18	Organization V	50160

⁸ Retrieved from Sina Weibo (2017, July 15).

Financial.com	18	Organization V	23119650
Lin Xiaoming Vash	13	Personal V	110306
Li Qingchen	11	Personal V	76690
Legal Daily	11	Organization V	1761954
Chinanews.com	10	Organization V	32567540
Holding fan in hand	10	Master	3016
sven_shi	10	Personal V	137415
Brynhild Eason	10	Master	563
New media women	9	Organization V	81917
Focus on ideas	9	Personal V	19225744
Love to ask a doctor	8	Organization V	864383
Doctor Gongxiaoming	8	Personal V	965914

Table 5: Top 20 Sina Weibo accounts in sample

It can be seen that most of the accounts are personal V accounts and organization V accounts. These accounts are larger nodes in social media attracting more attention from users and to some extent act as opinion leaders in Weibo (Park, 2013). Study of Dahlberg (2001, b) shows that key opinion leaders often use new technology to mobilize followers to do collective action.

This concentration may have the possibility of leading to a control of the debate if the agenda-setting processes and information diffusion are controlled by most influential accounts that have the power to influence the formation of public opinion in the online policy discussion.

In Zhihu, emotion also did not have a significant influence on the volume of responses, but in contrast to Weibo, answers with different levels of justification had a significant difference in the quantity of acceptance and comments.

This finding suggests that in Weibo, V accounts are easier to attract eyes and obtain outstanding positions with in the public discussion than normal accounts, but in Zhihu, whether the justification of the answer is qualified or not and whether the argument is valid or not significantly affect the degree of acceptance.

The no-difference setting of the identity of Zhihu personal users may account for this result. Although the quantity of acceptance is shown in the profiles of users, it is not shown in discussion pages and there is not a V logo at the corner of the user's photo, which is different with the design of Weibo. Therefore, it is reasonable to say that the public policy discussion in Zhihu was more equality and decentralized.

5.6 Compare Weibo and Zhihu

Although several distinctions have been mentioned in the previous discussions, this part focuses on the findings and interpretation of the differences between Weibo and Zhihu in terms of the quality of discourse through comparing two platforms through deliberative and civic criteria.

Weibo and Zhihu had a significant difference in the proportion of emotional posts, posts with justification, impolite content and posts considering solutions. In general, the public discussion of the legalization of surrogacy in Zhihu was closer to the qualified deliberation and Zhihu users had a higher level of civic participation.

These two platforms had differences in product positioning and users' features. According to the analyses about the Weibo users, they pay most attention to social topics and the celebrities⁹. Zhihu originally set invitation function to gather intellectual elites in its online space, establishing something indefinable atmosphere (Wang, 2014). Scholars argues that among various online communities in China, Zhihu can be seen as the forefront of culture consist of an elite team. Although Zhihu has been open for public register since 2013, it is still a relatively rational space for the diffusion of public opinion (Ru & Hu, 2016).

The design and function of social media, especially the provision of information thread, differ between Weibo and Zhihu. Weibo users can know this public debate issue from hot micro-blogs, hot searching key words or others' micro-blogs, and some of them choose to express their ideas. That is, Weibo itself provide active information flow and various approaches to get messages for users. Whereas, it is less likely for Zhihu users to know this issue on their front pages, which show the topics and answers they are already interested in. Moreover, there are rare media organization accounts in Zhihu to provide news. Thus, if a user participates in the debate in Zhihu, he or she may have to transfer from other platforms where they know the issue and search key words in Zhihu to join in the debate or set a new question. In a sense, Zhihu users may have a relatively higher level of active participating motivation than Weibo users, since they need stronger expression desire and more enthusiasm to finish the transferring process and to become a member of the discussion. From the view of the results, public discussion requiring higher level of activeness on Zhihu produced more contents with qualified justification.

⁹ 2015 Sina Weibo Users Development Report. Retrieved from:

<http://data.weibo.com/report/reportDetail?id=304>

6 CONCLUSION

Investigating the online discussion about the legalization of surrogacy in Sina Weibo and Zhihu, this research focuses on its deliberative and civic potential.

The findings of Weibo suggest in spite of the fact that expressions without justification and opinions having low level of reasoning are pervasive in the online discussion in Weibo, it provides a virtual place for users to discuss public issues and may facilitate indirect civic participation, with a relatively higher degree of reciprocity and wide sympathy for others. The examination of Zhihu indicates that to some extent it provides a space for intensive and in-depth policy discussion and civic participation since the expressions in Zhihu basically meet the requirement of justification, politeness, dispassion and being compatible with common goods.

Users can experience indirect and mediated consumption of political information on social media. That is, they may not directly read news from the People's Daily, however, they may be exposed to discussions about its report on the legalization policy by the engagement of some people they follow, and they may also be tempted to reply or to retweet the posts by these people. The gap between the discussion in Weibo and ideal deliberation may be obvious, but users of Weibo in this policy debate presented a higher level of civic participation, regarding the logic of statement, politeness, and calmness, than the performance in other social issues and sudden incidents.

The major standpoint on both Weibo and Zhihu is against the legalization of surrogacy. After the mainstream media People's Daily set the agenda, these two platforms acted as safety valves for the voices of dissent. Given the statement of National Health and Family Planning Commission, which declared that it would continue to severely punish surrogacy violation, as Hassid (2012) says, it is possible for Chinese social media users to mobilize public opinion to press the government to change plans of policies.

Analysing the factors related to the level of justification, this paper argues that emotion and politeness are both not on the opposite side of justification and rationality. Moreover, emotion should not be excluded from the conceptualization of qualified deliberation and civic participation. Additionally, specific descriptions of different types of affective conditions under different settings need further investigation of their implication for the deliberative potential.

The findings of the factors in the diffusion of posts suggest that contents with emotion may not trigger higher response than contents without explicit sentiment. Specifically, this paper argues that, in Weibo, the types of account have impacts on the circulation of micro-blogs, and in Zhihu, the level of justification influences the degree of acceptance of answers. Further, the findings of comparing Weibo and Zhihu suggest it is possible that some online platforms are more appropriate for civic participation and policy deliberation than others, since these platforms may require a higher level of activeness and motivation from participants or have

egalitarian affordances facilitate more equality and decentralized deliberative participation within rational users.

In sum, this research investigates online discussion on public policy and suggests that social media is not used only for social connections, interpersonal interactions and entertainment purposes, but also for civic deliberation as political engagement, and different online spaces have different features related to deliberative and civic potential. Additionally, this paper identifies particular elements that affect the diffusion of opinions and factors not related to the rationality of discussion.

6.1 Limitation

This study has several limitations that need to be mentioned. Due to the inherent limitations of the design of the research and content analysis, the observation of the online discussion lacks the reflexivity, which is a meaningful indicator of deliberative potential and of the rational-critical discourse that constitutes the public sphere (Lincoln Dahlberg,2001,a).The absence of surveys and interviews as complementary approaches lead to this deficiency of the investigation into reflexivity, which requires internal examination of personal cognitive processes, such as opinions changing upon critically reflection and opinions adjustment after being informed additional information.

Furthermore, this study only analysed Weibo and Zhihu contents during this specific online policy discussion transpiring in the context of China. This restrict comprehensive generalizations about the democratic potential of social media, practices of online civic deliberation, and factors influencing deliberation, in other social media platforms and in different countries.

Moreover, it is difficult to know whether micro-blogs were posted by real users. Actually, on Weibo there is a type of 'dead users' managed by some V accounts or hired by social media promotion corporations to increase their impact and reputation since the degree of influence is related to their income of marketing.

Additionally, for technical reasons, only a limited part of the contents posted during the seven-day period could be shown through key words searching in Weibo and a subpart of that was analysed, suggesting conclusions are based on limited information.

6.2 Further Studies

As the political and civic part of our lives have been embraced the pervasive social media platforms, it is necessary to further explore how they are used by individuals and organizations for political deliberation and civic participation, and the impact of the intervene of social media on the democratic process and civic culture broadly.

Specifically, there are broad opportunities for future research to conduct interviews or surveys to realize examinations into the inner world of social media users and participants in the online

public discussion. For instance, the prerequisite of expressing opinions on public issues, the reason for choosing particular platforms, the expect and aim of the expression, the response and the self-evaluation of their participation, the prerequisite and ways of replying others' opinion, etc.

Further studies may analyse the potential of social media for promoting democratic deliberation and fostering virtual spheres for civic participations and the distinctions between different platforms through investigations into more platforms from the aspects of degree of anonymity, open or private space, specific designs, the intervene of the authority and other important variables.

Additionally, the effect of emotion in political information diffusion and factors having impact on generation of deliberation may need further examination, especially of the distinctions between different political events or different political environments.

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APPENDIX A CODEBOOK

Codebook for Weibo

	No.	Name of Variable	Description
Basic Information	1	Account name	/
	2	Account Gender	0=Female 1=Male
	3	Account type	0=Normal account 1=Master account 2=Personal V account 3=Origination V account
	4	Date of publication	Standard format: yyyy/mm/dd
	5	Type of content	0=Original 1=Retweeting
	6	Re Account name	The name of the retweeted account (N/A for original content)
	7	Re	Number of retweets
	8	Comment	Number of replies
	9	Like	Number of likes
Content	10	Standpoint	0=Neutral (Micro-blogs that do not explicitly support any side, including those post or retweet news without comments, and ask questions about the news or others' posts, or say they are neutral.) 1=Against (Micro-blogs that explicitly oppose the legalization policy, including those question the intention of the

			<p>policy, concern negative influences of the policy, and insult the proposer of the policy.)</p> <p>2=Support</p> <p>(Micro-blogs that explicitly support the legalization policy, including those justify the rational existence of surrogacy, and propose the positive impact of the policy.)</p>
	11	Female rights	<p>Does the microblog mention rights or the welfare of women?</p> <p>- Yes (1)</p> <p>- No (0)</p> <p>(Add: 'Yes' include micro-blogs mention the influence of the policy on particular groups of women and those question the policy regarding the equality of genders.)</p>
	12	Government	<p>Does the micro-blog express discontent with the government?</p> <p>- Yes (1)</p> <p>- No (0)</p> <p>(Add: 'Yes' include micro-blogs that mention 'government' , 'your country' and the officials, such as Winnie as the nick name of Xi, and meanwhile oppose the action of the government.)</p>
Indicator	13	Justification	<p>0=No justification</p> <p>(Conclusion(s) without any inference.)</p> <p>1=Low justification</p>

		<p>(Conclusion(s) embedded in (an) incomplete inference(s).)</p> <p>2=Qualified justification</p> <p>(One conclusion embedded in a complete inference; additional conclusions embedded in incomplete inferences may be present.)</p> <p>3= Sophisticated justification</p> <p>(More than one conclusion, each embedded in a complete inference; or one conclusion embedded in more than one complete inference.)</p>
14	Interest	<p>0=No interest statement</p> <p>(No explicit references to group interests or to the common good.)</p> <p>1=Group interest</p> <p>(Explicit statement references to group interests including individual interest demands within the group.)</p> <p>2=Least advantaged interest</p> <p>(Explicit statement of the welfare of the least advantaged in a society.)</p> <p>3=Public interest</p> <p>(Explicit statement of the common good of the social whole.)</p>
15	Politeness	<p>Does the micro-blog use impolite words?</p> <p>(Add: Impolite messages include online invented words.)</p> <p>- Yes (1)</p>

			- No (0)
	16	Solution	Does the micro-blog mention the approach to solve problems related to the legalization of surrogacy? - Yes (1) - No (0) (Add: Include other ways to deal with the aged society and low birth rate and methods to alleviate the negative effects of the policy.)
	17	Emotion	Does the micro-blog include one or more following radar terms? Words describe feelings, such as sad, upset, angry, crazy and afraid. Rude things or profanities. Emoji (The explanation of the emoji given by the applicants contain (a) or (b) or (e).) Three times or over use of some punctuation marks, such as '!' and '?'. Onomatopoeia, such as 'Aaaa', 'Hahaha', and 'Waaaa'. - Yes (1) - No (0)

Codebook for Zhihu

	No.	Name of Variable	Description
Basic Information	1	Account name	/
	2	Account Gender	0=Female 1=Male

			N/A=Anonymity
	3	Word count	Number of words (including text in picture.)
	4	Date of publication	Standard format: yyyy/mm/dd
	5	Type of Content	0=Original 1=Mention other account(s)
	6	Re Account name	The name of the mentioned account (N/A for original content)
	7	Comment	Number of replies
	8	Like	Number of likes (Number of accounts that agree with the answers.)
Content	9	Standpoint	0=Neutral (Answers that do not explicitly support any side or say they are neutral.) 1=Against (Answers that explicitly oppose the legalization policy, including those question the intention of the policy, concern negative influences of the policy, and insult the proposer of the policy.) 2=Support (Answers that explicitly support the legalization policy, including those justify the rational existence of surrogacy, and propose the positive impacts of the policy.)
	10	Female rights	Does the answer mention rights or the welfare of women?

			<p>- Yes (1)</p> <p>- No (0)</p> <p>(Add: 'Yes' include answers mention the influence of the policy on particular groups of women and those question the policy regarding the equality of genders.)</p>
	11	Government	<p>Does the answer express discontent with the government?</p> <p>- Yes (1)</p> <p>- No (0)</p> <p>(Add: 'Yes' include answers that mention 'government' , 'your country' and the officials, such as Winnie as the nickname of Xi, and meanwhile oppose the action of the government.)</p>
Indicator	12	Justification	<p>0=No justification</p> <p>(Conclusion(s) without any inference.)</p> <p>1=Low justification</p> <p>(Conclusion(s) embedded in (an) incomplete inference(s).)</p> <p>2=Qualified justification</p> <p>(One conclusion embedded in a complete inference; additional conclusions embedded in incomplete inferences may be present)</p> <p>3= Sophisticated justification</p> <p>(More than one conclusion, each embedded in a complete inference;</p>

		<p>or one conclusion embedded in more than one complete inference.)</p> <p>(Add: As for answers include short stories, comics or news reports, coding should be made according to the relation between standpoint and inner arguments.)</p>
13	Interest	<p>0=No interest statement</p> <p>(No explicit references to group interests or to the common good.)</p> <p>1=Group interest</p> <p>(Explicit statement references to group interests, including individual interest demands within the group.)</p> <p>2=Least advantaged interest</p> <p>(Explicit statement of the welfare of the least advantaged in a society.)</p> <p>3=Public interest</p> <p>(Explicit statement of the common good of the social whole.)</p>
14	Politeness	<p>Does the answer use impolite words?</p> <p>(Add: Impolite messages include online invented words.)</p> <p>- Yes (1)</p> <p>- No (0)</p>
15	Solution	<p>Does the answer mention the approach to solve problems related to the legalization of surrogacy?</p> <p>- Yes (1)</p> <p>- No (0)</p>

			(Add: Include other ways to deal with the aged society and low birth rate and methods to alleviate the negative effects of the policy.)
	16	Emotion	<p>Does the answer include one or more following radar terms?</p> <p>Words describe feelings, such as sad, upset, angry, crazy and afraid.</p> <p>Rude things or profanities.</p> <p>Emoji (The explanation of the emoji given by the applicants contain (a) or (b) or (e).)</p> <p>Three times or over use of some punctuation marks, such as '!' and '?'.</p> <p>Onomatopoeia, such as 'Aaaa', 'Hahaha', and 'Waaaa'.</p> <p>- Yes (1)</p> <p>- No (0)</p>

APPENDIX B INTER-CODER RELIABILITY DATA

Weibo

Variable	Level of Measurement	Krippendorff's Alpha ¹⁰
Account name	/	/
Account Gender	/	/
Account type	/	/
Date of publication	/	/
Type of content	/	/
Re Account name	/	/
Re	Scale	/
Comment	Scale	/
Like	Scale	/
Standpoint	Nominal	0.9049
Female rights	Nominal	0.8559
Government	Nominal	0.8857
Justification	Nominal	0.8066
Interest	Nominal	0.8219
Politeness	Nominal	0.8516
Solution	Nominal	0.8432
Emotion	Nominal	0.8375

Zhihu

Variable	Level of Measurement	Krippendorff's Alpha
Account name	/	/

¹⁰ Calculated by the SPSS custom dialog file from Andrew F. Hayes, Ph.D. Retrieved from <http://afhayes.com/spss-sas-and-mplus-macros-and-code.html>.

Account Gender	/	/
Word count	/	/
Date of publication	/	/
Type of content	/	/
Re Account name	/	/
Comment	Scale	/
Like	Scale	/
Standpoint	Nominal	0.9505
Female rights	Nominal	0.8435
Government	Nominal	0.8889
Justification	Nominal	0.8144
Interest	Nominal	0.8064
Politeness	Nominal	0.8984
Solution	Nominal	0.8927
Emotion	Nominal	0.8558

APPENDIX C SPSS OUTPUT

Weibo:

Justification:¹¹

logic			
	Observed N	Expected N	Residual
No logic	626	644.5	-18.5
Logical	663	644.5	18.5
Total	1289		

Test Statistics	
	logic
Chi-Square	1.062 ^a
df	1
Asymp. Sig.	.303
a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 644.5.	

Interest statement:¹²

Test Statistics ^a	
	ip - ig
Z	-8.903 ^b
Asymp. Sig. (2-tailed)	.000
a. Wilcoxon Signed Ranks Test	
b. Based on positive ranks.	

Politeness:

¹¹ Variable 'Justification' was changed to a dichotomous variable (0=No Justification, 1=With Justification) in this test and the tests for H1a, H1b, H1c and H2b.

¹² Variable 'Interest' was separated to two dichotomous variables: 'Public Interest' (0=Public Interest, 1=No Public Interest); 'Group Interest' (0=Group Interest, 1= No Group Interest) in this test and H2c.

polite			
	Observed N	Expected N	Residual
polite	1103	644.5	458.5
impolite	186	644.5	-458.5
Total	1289		

Test Statistics	
	polite
Chi-Square	652.358 ^a
df	1
Asymp. Sig.	.000
a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 644.5.	

Solution:

solution			
	Observed N	Expected N	Residual
No solution	1232	644.5	587.5
Solution	57	644.5	-587.5
Total	1289		

Test Statistics	
	solution
Chi-Square	1071.082 ^a
df	1
Asymp. Sig.	.000
a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 644.5.	

Emotion:

emotion			
	Observed N	Expected N	Residual
No Emotion	969	644.5	324.5
Emotion	320	644.5	-324.5
Total	1289		

Test Statistics	
	emotion
Chi-Square	326.766 ^a
df	1
Asymp. Sig.	.000
a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 644.5.	

H1a:

emotion2 * logical Crosstabulation					
			logical		Total
			No logic	logic	
emotion2	No Emotion	Count	472	497	969
		Expected Count	470.6	498.4	969.0
	Emotion	Count	154	166	320
		Expected Count	155.4	164.6	320.0
Total	Count		626	663	1289
	Expected Count		626.0	663.0	1289.0

Chi-Square Tests					
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.033 ^a	1	.856		
Continuity Correction ^b	.014	1	.907		
Likelihood Ratio	.033	1	.856		
Fisher's Exact Test				.897	.454
Linear-by-Linear Association	.033	1	.856		
N of Valid Cases	1289				
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 155.41.					
b. Computed only for a 2x2 table					

H1b:

polite * logic Crosstabulation				
Count				
		logic		Total
		no logic	logic	
polite	polite	524	579	1103
	impolite	102	84	186
Total		626	663	1289

Chi-Square Tests					
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	3.425 ^a	1	.064		
Continuity Correction ^b	3.138	1	.076		
Likelihood Ratio	3.426	1	.064		
Fisher's Exact Test				.068	.038
Linear-by-Linear Association	3.423	1	.064		
N of Valid Cases	1289				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 90.33.
b. Computed only for a 2x2 table

H1c:

reoriginal * logic Crosstabulation				
Count				
		logic		Total
		no logic	logic	
reoriginal	original	251	245	496
	re	375	418	793
Total		626	663	1289

Chi-Square Tests					
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.343 ^a	1	.246		
Continuity Correction ^b	1.214	1	.271		
Likelihood Ratio	1.343	1	.246		
Fisher's Exact Test				.252	.135
Linear-by-Linear Association	1.342	1	.247		
N of Valid Cases	1289				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 240.88.
b. Computed only for a 2x2 table

H1d:

Descriptives								
zpz								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
No Emotion	969	20.44	216.807	6.965	6.78	34.11	0	5041
Emotion	320	16.45	91.891	5.137	6.34	26.55	0	1391
Total	1289	19.45	193.446	5.388	8.88	30.02	0	5041

ANOVA					
zpz					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3844.923	1	3844.923	.103	.749
Within Groups	48194834.4	1287	37447.424		
Total	48198679.3	1288			

H1e:

Descriptives								
zpz								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
No	626	16.08	175.476	7.013	2.31	29.85	0	4073
Low	486	18.76	230.191	10.442	-1.76	39.28	0	5041
Qualified	161	31.14	128.829	10.153	11.09	51.19	0	811
Sophisticated	16	54.75	191.494	47.874	-47.29	156.79	0	772
Total	1289	19.45	193.446	5.388	8.88	30.02	0	5041

ANOVA					
zpz					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	49260.164	3	16420.055	.438	.726
Within Groups	48149419.2	1285	37470.365		
Total	48198679.3	1288			

Account & Responses

Descriptives								
zpz								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Normal	1053	8.71	60.295	1.858	5.06	12.36	0	1391
Master	157	23.03	89.850	7.171	8.86	37.19	0	692
Personal V	63	122.11	645.168	81.284	-40.37	284.59	0	5041
Organization V	16	287.19	1012.370	253.092	-252.27	826.64	0	4073
Total	1289	19.45	193.446	5.388	8.88	30.02	0	5041

ANOVA					
zpz					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1934391.68	3	644797.227	17.909	.000
Within Groups	46264287.6	1285	36003.337		
Total	48198679.3	1288			

Zhihu:

Justification:¹³

logic			
	Observed N	Expected N	Residual
no logic	56	131.0	-75.0
logic	206	131.0	75.0
Total	262		

Test Statistics	
	logic
Chi-Square	85.878 ^a
df	1
Asymp. Sig.	.000
a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 131.0.	

Interest statement:¹⁴

¹³ Variable 'Justification' was changed to a dichotomous variable (0=No Justification, 1= With Justification) for this test and the tests for H1a, H1b and H1c.

¹⁴ Variable 'Interest' was separated to two dichotomous variables: 'Public Interest' (0=Public Interest, 1= No Public Interest); 'Group Interest' (0=Group Interest, 1= No Group Interest) in this test and H2c.

Test Statistics ^a	
	interestpublic - interestgruop
Z	-3.677 ^b
Asymp. Sig. (2-tailed)	.000
a. Wilcoxon Signed Ranks Test	
b. Based on positive ranks.	

Politeness:

polite			
	Observed N	Expected N	Residual
polite	252	131.0	121.0
impolite	10	131.0	-121.0
Total	262		

Test Statistics	
	polite
Chi-Square	223.527 ^a
df	1
Asymp. Sig.	.000
a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 131.0.	

Solution:

solution			
	Observed N	Expected N	Residual
No solution	246	131.0	115.0
With solution	16	131.0	-115.0
Total	262		

Test Statistics	
	solution
Chi-Square	201.908 ^a
df	1
Asymp. Sig.	.000
a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 131.0.	

Emotion

emotion			
	Observed N	Expected N	Residual
no emotion	248	131.0	117.0
emotion	14	131.0	-117.0
Total	262		

Test Statistics	
	emotion
Chi-Square	208.992 ^a
df	1
Asymp. Sig.	.000
a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 131.0.	

H1a:

emotion * reasoning Crosstabulation				
Count				
		reasoning		Total
		no reasoning	reasoning	
emotion	no emotion	52	196	248
	emotion	4	10	14
Total		56	206	262

Chi-Square Tests					
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.456 ^a	1	.500		
Continuity Correction ^b	.116	1	.734		
Likelihood Ratio	.426	1	.514		
Fisher's Exact Test				.507	.348
Linear-by-Linear Association	.454	1	.500		
N of Valid Cases	262				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 2.99.
b. Computed only for a 2x2 table

H1b:

polite * logic Crosstabulation				
Count		logic		Total
		no logic	logic	
polite	polite	52	200	252
	impolite	4	6	10
Total		56	206	262

Chi-Square Tests					
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	2.146 ^a	1	.143		
Continuity Correction ^b	1.149	1	.284		
Likelihood Ratio	1.852	1	.174		
Fisher's Exact Test				.228	.142
Linear-by-Linear Association	2.138	1	.144		
N of Valid Cases	262				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 2.14.
b. Computed only for a 2x2 table

H1c:

re * justification Crosstabulation				
Count		justification		Total
		no justification	justification	
re	original	55	195	250
	re	1	11	12
Total		56	206	262

Chi-Square Tests					
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.273 ^a	1	.259		
Continuity Correction ^b	.589	1	.443		
Likelihood Ratio	1.550	1	.213		
Fisher's Exact Test				.471	.231
Linear-by-Linear Association	1.268	1	.260		
N of Valid Cases	262				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 2.56.
b. Computed only for a 2x2 table

H1d:

Descriptives								
zpz								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
non emotional	248	214.54	685.694	43.542	128.78	300.30	0	7912
emotional	14	200.71	393.998	105.300	-26.77	428.20	5	1426
Total	262	213.81	672.828	41.567	131.96	295.66	0	7912

ANOVA					
zpz					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2534.703	1	2534.703	.006	.941
Within Groups	118151498	260	454428.840		
Total	118154033	261			

H1e:

Descriptives								
zpz								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
No	56	79.02	190.392	25.442	28.03	130.01	0	1322
Low	89	148.16	332.167	35.210	78.19	218.13	0	2443
Qualified	56	199.46	411.627	55.006	89.23	309.70	0	2684
Sophisticated	61	446.49	1241.079	158.904	128.64	764.35	1	7912
Total	262	213.81	672.828	41.567	131.96	295.66	0	7912

ANOVA					
zpz					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4715189.12	3	1571729.71	3.575	.015
Within Groups	113438844	258	439685.442		
Total	118154033	261			

H2a:

platform1 * emotion Crosstabulation				
Count				
		emotion		Total
		no emotion	emotional	
platform1	weibo	969	320	1289
	zhihu	248	14	262
Total		1217	334	1551

Chi-Square Tests					
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	48.909 ^a	1	.000		
Continuity Correction ^b	47.763	1	.000		
Likelihood Ratio	62.002	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	48.878	1	.000		
N of Valid Cases	1551				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 56.42.
b. Computed only for a 2x2 table

H2b:

platform1 * logic Crosstabulation				
Count				
		logic		Total
		no logic	logical	
platform1	weibo	626	663	1289
	zhihu	56	206	262
Total		682	869	1551

Chi-Square Tests					
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	65.344 ^a	1	.000		
Continuity Correction ^b	64.245	1	.000		
Likelihood Ratio	69.782	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	65.302	1	.000		
N of Valid Cases	1551				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 115.21.
b. Computed only for a 2x2 table

H2c:

platform * interest Crosstabulation				
Count		interest		Total
		grup	public	
platform	weibo	229	73	302
	zhihu	43	15	58
Total		272	88	360

Chi-Square Tests					
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.075 ^a	1	.784		
Continuity Correction ^b	.012	1	.914		
Likelihood Ratio	.074	1	.785		
Fisher's Exact Test				.868	.450
Linear-by-Linear Association	.075	1	.784		
N of Valid Cases	360				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 14.18.
b. Computed only for a 2x2 table

H2d:

platform * polite Crosstabulation				
Count		polite		Total
		0	1	
platform	weibo	1103	186	1289
	zhihu	252	10	262
Total		1355	196	1551

Chi-Square Tests					
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	22.215 ^a	1	.000		
Continuity Correction ^b	21.264	1	.000		
Likelihood Ratio	28.143	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	22.201	1	.000		
N of Valid Cases	1551				
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 33.11.					
b. Computed only for a 2x2 table					

H2e:

platform * solution Crosstabulation				
Count		solution		Total
		0	1	
platform	weibo	1273	16	1289
	zhihu	246	16	262
Total		1519	32	1551

Chi-Square Tests					
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	25.511 ^a	1	.000		
Continuity Correction ^b	23.160	1	.000		
Likelihood Ratio	18.998	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	25.495	1	.000		
N of Valid Cases	1551				
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.41.					
b. Computed only for a 2x2 table					

Addition:

accounttype * Justification Crosstabulation				
Count		Justification		Total
		No Justification	Justification	
accounttype	Account without V	589	621	1210
	V Account	38	41	79
Total		627	662	1289

Chi-Square Tests					
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2- sided)	Exact Sig. (1- sided)
Pearson Chi-Square	.010 ^a	1	.921		
Continuity Correction ^b	.000	1	1.000		
Likelihood Ratio	.010	1	.921		
Fisher's Exact Test				1.000	.507
Linear-by-Linear Association	.010	1	.921		
N of Valid Cases	1289				
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 38.43.					
b. Computed only for a 2x2 table					

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ISSN: 1474-1938/1946