

Trust in Online News: Comparing Social Media and Official Media Use by Chinese Citizens

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ABSTRACT

Since 2006 social media use has grown dramatically in China. Social media has become a stage for citizens to report and disseminate news and to vocalize viewpoints, at times competing with reports from highly curated official media sources. These competing news channels, oftentimes presenting contradictory information, raise questions about citizens' trust in these different media. This study explores the level of trust Chinese Internet users place on news from social media versus official media. We conducted a large-scale anonymous survey in China that revealed that official and citizen news attract different audience groups and each group uses different features to assess news trustworthiness. We present a model for predicting preference for news from citizen media. The results reveal features of social media that explain why some citizens trust it as a channel for news. The results also suggest that in highly regulated news environments, citizen media has the potential to become an alternative news channel where citizens can trust each other for information.

Author Keywords

Social media; citizen journalism; trust; news; authoritarian government.

ACM Classification Keywords

H.4 [Information Systems Applications]: Miscellaneous;
H.5.3 [Group and Organization Interfaces]: Computer-Supported Cooperative Work.

INTRODUCTION

In April, 2012, Chen Guangcheng, a human rights activist from Shandong Province, China, daringly escaped from house arrest and arrived at the U.S. embassy in Beijing. Chen, who is a lawyer and who is blind, had been a vocal advocate for womens' rights and the welfare of the poor in rural China. Due to his exposure of alleged violence in the enforcement of family-planning policy, as well as his organization of local protests, he experienced four years of

jail, house arrest, and apparent physical abuse from local police forces. At the U.S. embassy, Chen negotiated his case with both U.S. and Chinese top authorities.

Chen's case immediately attracted national and international media attention given its political sensitivity. Within 24 hours of his entry to the U.S. Embassy, Chen's name, his initials "CGC" and the phrase "the blind man" had all been blocked by Chinese censorship on user-generated content websites [1]. Official Chinese media outlets, on the other hand, offered a series of brief reports.

The official Chinese media reports communicated a very different story than what was expressed in social media. As reported in Chinese official newspaper reports and editorials, Chen, a "political pawn," was taken into the U.S. Embassy by Hillary Clinton via abnormal means and left of his own volition after a six-day stay [7]. The official Chinese media accused Chen of cleverly playing a role of a dissident to seek benefits from a Western power [27]. Later, the Chinese official media conveyed a negative impression of the U.S. by Chen's change of heart when he expressed his disappointment about the U.S. government [26].

However, despite government censorship, content about Chen's case still secretly circulated in Chinese social media sites. During a week of online observation, the first author observed dozens of posts from China's most popular microblogging site: Sina Weibo. In the posts, Chen was depicted as a "normal citizen" unaware that he had gained international attention and who reflects the authentic life of Chinese citizens living under the authoritarian system. Citizens reported that he should be well respected given his contribution and the injustice he endured. In short, users of social media sites showed empathy, understanding and positive interest toward Chen.

The plight of Chen Guangcheng illustrates the complexity of the role of social media in a society where an authoritarian government regulates news. What information should a citizen believe when social media citizen accounts contradict media reports from "official" sources? In any society, there are different channels through which news can be reported and disseminated: from the informal permeable word-of-mouth, to conventional television, newspapers and magazines which follow a strict production

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cycle, to the Internet, which is regarded as the ideal medium where varied forms of information can converge [19].

The purpose of this study is to examine, in an authoritarian society where the media is under strict government control, why some citizens trust news more from such official media, and why others trust news more from user-generated social media. This is an extremely important question not only in China, but also in other authoritarian-ruled countries where citizens face similar choices about trusting news from official and citizen-generated channels.

In this paper, we define trustworthiness as perceived believability of information [5]. Instead of focusing on the innate credibility of news, we seek to investigate trust from the audience perspective [8]. The reasons are two-fold: first, personal interpretations of news (such as news commentary), which often comprises reported news, cannot necessarily be assessed by “truthfulness”; second, how much a news consumer trusts the news has a direct impact on how the news is interpreted and further disseminated.

The News Media Environment in China

By *official media*, we refer to enterprises that are run or influenced by the state, generally involving professional journalists and editorial procedures. In China, examples of official media outlets run by the state are Xinhua, CCTV, and People’s Daily. Independent commercial news portals or news sites such as Sina or Tencent that need a license from the government are only allowed to reproduce news from official (i.e. government) accounts. Thus, they do not have the autonomy to produce original news content [11, 31]. We refer to both state-run and commercial media companies under governmental control as official media.

By *citizen media*, we refer to news that is posted and disseminated by citizens using various forms of social media. According to the 29th statistical report on Internet development in China [9], the number of micro-blog (**MB**) users tripled within 2011, making up 48.7% of the total 500 million Internet user population in China, while users of social-network sites (**SNSs**) comprise 47.6% of the Internet population. With the wide adoption of these two platforms, in this paper we concentrate on citizen-generated news that is only shared through SNSs and MBs. These two media channels have become a stage for users to vocalize their viewpoints and report original eyewitness reports, which often compete with, if not contradict, those from highly curated official media sources.

However citizen media is not completely free of government influence. “Opinion guidance”, as translated from Chinese, is a unique phenomenon in Chinese user-generated sites. Here, Internet commentators hired by the government (yet appearing to be citizens) are speculated to post comments favorable to the Party in order to subtly guide public opinion. Opinion guidance introduces “the hand of the state” secretly into citizen media by guiding dialogue on social and politically sensitive topics,

oftentimes, news. For example, in the most popular online forum Tianya (tianya.cn/bbs), a comment about an online information filter application sponsored by the Chinese government was widely regarded as “opinion guidance.” It said: “I think 80% of all Internet users are supporting this software...we finally have access to a free copy to this software, thank you government!” Irrespective of the personal sentiments in this comment, it distorted the fact that the software is not well accepted by the public. We believe it is important to investigate the potential influence of opinion guidance because it hinders citizen media from becoming a true public sphere. A public sphere, as Habermas [15] explains, is where rational debate is not manipulated (e.g. by an authoritative power), and is open to inspection by citizens. When the state exerts control over the discourse through opinion guidance, then this challenges the role of citizen media channels as public spheres with free and open dialogue.

Contrasting “Official” and “Citizen” Media

There are some fundamental differences between news generated and disseminated through professional, “official” channels and by citizens [11, 30, 34]. In traditional news production, news is written by professional journalists, whose practices and values adhere to institutional authority and economic resources [30]. Because official news is subject to diligent fact-checking, editorial oversight and governmental curation (in China), a certain level of accountability and objectivity is therefore expected. However, official news generally sets agendas [23] by choosing what news goes on the front page and what news should be hidden from the public. This design of news essentially directs news consumers what to read, which for some might cause suspicion or even aversion towards official media. Also, news consumers may lower their trust in official reports due to biases and the promotion of particular viewpoints, which direct them “how to think”. In addition, in a society ruled by an authoritarian government, there may be censorship of significant events (as in the case of Chen Guangcheng).

In citizen-generated news media, production rules are more relaxed. News can be written, filtered, interpreted, mutated and redistributed in the complex chain of dissemination, out of citizens’ simple desire to report news, express commentary or pass on hearsay. Although average citizens do not have as many resources compared to professional journalists, those who happen to be present at a newsworthy event can provide eyewitness accounts in what Lasica [21] calls a “random act of journalism,” which is “report what you observe, analyze events in a meaningful way but, most of all, just be fair and tell the truth as you and your sources see it.” Even if only a small proportion of social media users each report a tiny slice of news information, given the large number of reports, they might potentially provide enough news with sufficient impact, as the long tail theory suggests [2]. In contrast to official news reports, which strive to be “objective”, citizen reports can also convey

emotion, commentary, sentiment and reflection on events. Such shared emotions can stimulate a sense of community and a sense of transparency among news consumers, which can further enhance trust.

The consumer-turned-into-producer opportunity, however, has its own drawbacks. Considering that user-generated news often only contributes “soft news”, Thurman [33] raised the concern that citizens who do not have power or access to professional resources can hardly adequately report hard news such as stories at the national level. Another disadvantage is that the increasing interactive options can possibly make it harder for users to effectively digest or follow news [3]. Besides, people are found more likely to interact with those who share the same views for conformity [32]. Since citizen media can easily link like-minded people together, the consequent opinion polarization [32, 36] can potentially limit people’s ability to engage in meaningful discussion. Thus, citizen media as a news channel is two-sided: it can increase trust because of the citizen-centric values it embodies but it can also decrease trust due to poor quality of information.

Comparing Trust in Official and Citizen Media in China

Considering the frequent discrepancies in news from these two media as we discussed, news trustworthiness has become a pressing issue. A number of recent studies (e.g. [5, 10]) have examined the credibility of news information in social media in Western countries. While a considerable amount of attention has been paid to the impact of social media in China, e.g. [29, 30, 35], research is lacking that explicitly examines the trustworthiness of news generated from social media in China. We feel that it is very important to examine the trust that Internet users place on news from official and citizen media, because the Internet has the power to shape opinion about events [4]. Further, it is important to learn what features of social media potentially can enhance trust in news as this can benefit the future design of social media tools.

Trust in News: Research Questions

Our main research question addresses what leads citizen to trust or distrust news from official or citizen media. Based on the research literature, we focused on eight aspects detailed below that we expect to influence trust in online news: types of readers, participation, commentary sources, alignment with government views, strength of ties, anonymity, content, and collective behavior.

Who Trusts What News Channels: Types of Readers

Official media can promote trust due to fact-checking, editorial oversight and governmental curation. However, features of Chinese official media such as agenda-setting, censorship, biases and propaganda of particular viewpoints can also lower people’s trust in it. With citizen media, trust can be leveraged by personal relationships, the collective contribution and assessment by the crowd, and multiple viewpoints. On the other hand, concerns about news information quality and informality could also hinder trust.

The current media environment in China has been experiencing change amidst the overall rapid changes in the country. As the old meets the new (e.g. culturally and economically), we expect the emergence of different citizen groups who might have different preferences and trust in these different media. We will investigate first what kinds of news channels citizens trust more, and then, based on our data, whether we can identify different types of news consumers with different preferences and trust in news from official and citizen-generated channels. We will also consequently identify other ways that these news reader types might differ. Understanding how news reader types differ can provide insight into why some citizens trust or distrust certain news channels in an authoritarian government society. We thus ask RQ1: *Do Chinese news readers place more trust in official media or citizen media? Can we identify news reader types based on their different trust levels of media?*

Participation in News Activities

To understand trust in media channels, it is important to gain an overview of to what extent news consumers are passive spectators or active participants. According to a Pew research center report [28], in 2010, 37% of U.S. Internet users have contributed to the reporting of news, commented about it, or disseminated it using social media. It is possible that the more people participate in news activities the more they may trust news from citizen media channels. We thus ask RQ2: *How much do Chinese news readers participate in creating and commenting on news?*

Authors of News Commentary and Trust

News commentary helps consumers to make sense of news, which influences further dissemination of the news. News commentary from professional editorialists are more formal and more likely to reflect the public agenda whereas citizen news commentators are more likely to express a broad range of personal interpretations and opinions. Thus, these two types of commentary differ, e.g. in quality, style, and background research. Trust in commentary refers to trust in an author’s rationality in constructing arguments or opinions. Citizens may have higher trust in commentary from professionals, associated with official media, who may be better educated and informed on an issue. On the other hand, citizens may trust commentary more from fellow citizens due to the democratic nature of expressing a range of opinions which may be agenda-free, i.e. interests of citizens rather than of the government. We thus ask RQ3: *What is the level of trust in news commentary from different types of news authors (professionals vs. citizens)?*

Perspective of News and Trust

Chinese citizens generally perceive official media as the mouthpiece of the government [35]. Even Chinese professional journalists share the same view that information generated by the Chinese official media is of low credibility [31]. Together with the potential effect of opinion guidance in citizen media as we discussed earlier, Chinese Internet users may have different trust in news that

affirms government views than those that criticize them, regardless of the news source. We thus ask RQ4: *What is the level of trust in news information with different views (affirmative, critical and neutral) on the government?*

Strength of Ties and Trust

SNSs (and to a large degree MBs) use both strong and weak ties. One fundamental difference why people might retrieve news from SNSs or MBs compared to a government-sanctioned institution is that people often (perhaps unconsciously) trust information from individuals who they trust. Readers may trust news that is generated by their friends [13] or by those who are “like them” based on the strength of strong ties [20] and homophily [24]. The stronger the tie (family, close friends), the more similar two actors are in terms of information, experience, and values [20]. Because of this, people may place high trust on news information written or re-posted from strong ties in SNSs or MBs. Weak ties (acquaintances, friends’ friends), on the other hand, help disseminate novel information and bridge local networks into a larger community [14]. With SNSs and MBs, news consumers tend to access new information or different viewpoints from weak ties [14]. There may be a positive relationship between placing high trust in social media and in newsworthy information from weak ties. For news written or re-posted from strangers, there is no social tie to introduce either pre-existing trust or accountability associated with social capital [22]. People may therefore have different levels of trust in news from strangers, compared to strong and weak ties. We ask RQ5: *What is the relationship between trust in news (posted or re-posted) and strength of ties in the source delivering the news?*

Anonymity and Trust

Citizen reporting can be anonymous (i.e. with a non-identifiable user name or user image) or identifiable (i.e. with a perceived real name or profile image). User profile characteristics such as a profile image have been found to influence perceived trustworthiness [25]. Identifiable accounts may therefore affect news readers’ trust in citizen media news [25]. We ask RQ6: *How does anonymity of the source affect trust in citizen media news?*

Content Features and Trust

Content-related features could also potentially have an effect on news trustworthiness. Posting a URL to an original news source was reported to boost trust as it provides more evidence [25]. However, those URLs most likely linked to news from official sources. Since Chinese news readers may be skeptical of official sources, we might expect different findings. We ask RQ7: *How do content features, such as a URL, affect trust in news?*

Collective Participation and Trust

Since social media involves large-scale participation, posts can easily be re-posted, commented or “liked”. Such a collective “crowd effect” from social media users can enhance trust since an aggregation of group opinions could imply credibility; on the other hand, it could also hinder

trust due to an artificial inflation of re-posts that could be manipulated by a commercial agenda [37]. We ask RQ8: *how does reflection of the crowd (e.g. comments or affirmations) affect trust in citizen news?*

METHOD

We conducted a large-scale anonymous online survey within China. The survey was in the Chinese language, deployed through snowball sampling using multiple links to the authors’ contacts of family, friends, and professional colleagues. The survey link was spread via emails to contacts throughout China. It was also posted in Chinese social network sites, microblogging sites, online forums, and university bulletin board systems. In addition, we asked for recommendations of other contacts from all survey respondents, which we used to further disseminate our survey. After a one-month deployment in April, 2012, we received 578 responses. The survey provides us with both quantitative and qualitative data concerning trust in official and social media. The full questionnaire can be accessed here (http://www.ics.uci.edu/~yiranw2/China_News_Consumption_Survey.pdf). Survey questions that address our research questions are in Appendix A.

We asked two open-ended questions: (Q1) If you have experienced opinion guidance, to what extent has it influenced your understanding or opinion toward current news events? and (Q2) Do you have any open comments on trustworthiness of news in social media in China?

Two coders conducted content analysis on these last two questions. The first coder used a bottom-up approach to develop categories for coding and both coders applied these on the data. Cohen’s Kappa was 90.5% for Q1 and 89.4% for Q2, indicating satisfactory inter-coder reliability.

RESULTS

Overview of Results

We first present demographic information about our sample in Table 1. The gender distribution of our sample population is very similar to the Chinese Internet population [9]. The age distribution is in line with the social media user population [17]. Our sample is most representative of the Chinese population who has higher education.

Gender	Female: 45.5%		Male: 54.5%		
Age	18-25: 47.6%	26-30: 30.6%	31-40: 9.1%	41-50: 10.2%	50+: 2.5%
Education	Middle/High school: 3.8%		College: 47%	Graduate school: 49.2%	
Location	Urban: 87.9%		Suburban: 7.3%	Rural: 4.7%	

Table 1. Demographic information of sample population

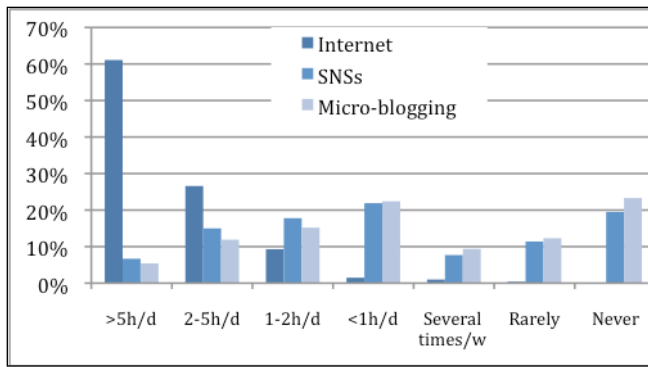


Figure 1: Internet, SNSs and MBs usage

Figure 1 shows the reported amount of overall Internet, SNS, and MB usage. Social media users tend to use it 1-2 hours a day or less. About one fifth of our respondents do not use SNSs or MBs and we exclude these in our analyses that specifically relate to trust in citizen media news.

Respondents do read news actively (i.e. deliberately reaching out for news, such as buying newspapers, going to online news sites, or checking RSS feeds). We found that 36.8% of our respondents read news several times a day and 27.2% read news once a day. Only 2.8% of the sample do not read news. For our analyses related to news consumption in our survey, we excluded those respondents who reported that they do not read news.

However, specifically when they visit SNSs or MBs, most respondents reported they tend to find news by chance. On a 7-item scale (1=completely by chance, 7=deliberately search), the mean is 2.84 (sd=1.89) and 3.01 (sd=1.82) for SNSs and MBs respectively. On a typical day 65.6% and 54.3% of respondents read at least one news item daily from SNSs and MBs respectively; 22.7% and 36.6% of respondents read over 10 news items daily from SNSs and MBs respectively.

These numbers illustrate that social media users do get a fair amount of news exposure through SNSs and MBs but they tend to find it by chance. For example, a person might log into her SNS account and happen to read a news post shared by her friend.

Results of Research Questions

We report the findings for each research question in the following sections. All questions regarding trust used a 7-point scale, where 1=strongly distrust, 7=strongly trust. For RQ2-RQ8, we report the findings on the entire sample, followed by comparisons between news reader types. A repeated measures ANOVA was used for analyses comparing survey responses. For analyses on news reader types, the survey question response is the within-subjects variable and news reader type is the between-subjects variable. RQ5-RQ8 concern trust specifically in citizen media.

	Cynical	Gullible	Traditional	NG
Male	64%	48.3%	40.7%	61.7%
Female	36%	51.5%	59.3%	38.3%
Total no.	75	60	54	47

Table 2. Percent responses to four newsreader types

RQ1: Who Trusts What

The results show that Chinese news consumers place moderate trust in both official (mean=4.07, sd=1.63) and citizen (mean=3.92, sd=1.22) media with no significant difference $t(391)=1.66$, $p<.10$, even though the two media have a different set of advantages and disadvantages.

However, if we investigate our sample more closely, we might identify types of news readers: different subsets of respondents with different types of trust preferences for media. We combined ratings of 5, 6, 7 into 'high trust' and ratings of 1, 2, 3 into 'low trust' and created four categories of respondents: 'Traditional' (T) (high trust in official, low trust in citizen), 'New Generation' (NG) (low trust in official, high trust in citizen), 'Cynical' (low trust in official, low trust in citizen) and 'Gullible' (high trust in official, high trust in citizen) as shown in Table 2. Trust rating 4 in official and/or citizen media is not counted; thus not every respondent is associated with a "reader type".

Our goal in this study is to understand why citizens prefer to trust one media channel over another. Therefore, to best understand reasons for trust and distrust among citizens we focus our further analyses on the reader types with the most contrasting (or discerning) opinions: the Traditionals, mean (official media)=5.68, sd=0.67; mean(citizen media)=2.53, sd=0.58) and the New Generation (mean(official media)=2.30, sd=0.70; mean(citizen media)=5.39, sd=0.49). Because the Cynicals and the Gullibles report trusting both media types similarly (low and high trust, respectively), our reasoning to not focus on them is that they may not distinguish the channels as much as the other reader types.

How can we characterize the differences between these groups other than their trust in media? Ts have a higher proportion of women than the NGs ($\chi^2(1) = 4.41$, $p<.04$), but surprisingly do not differ significantly in age or other demographics. NGs adopted SNSs earlier than Ts ($\chi^2(3)=8.07$, $p<.05$), but there is no significant difference with MB adoption ($\chi^2(3)=2.08$, $p<0.56$).

RQ2: Participatory News Activities

Table 3 shows results of our respondents' participation in online news production and dissemination, such as contributing original news content, commenting, posting or sharing URLs to news articles on social media, as well as feeling a sense of community with such participation.

The respondents are relatively active in writing and modifying news. Of all the respondents, 81.6% have participated in at least one type of news activity. Commenting and sharing URLs to news articles in social media are the most prevalent forms of participation.

Type of online participation	T	NG	Entire sample
Tag or Categorize online news	32.1%	39.1%	28.9%
Contribute orig'l news content*	39.6%	63.0%	44.5%
Comment	69.8%	83.6%	69.6%
Organize/participate online news events	37.7%	43.5%	36.7%
Post URL on SNSs**	41.5%	67.4%	48.2%
Share URL on SNSs	58.5%	71.7%	60.4%
Post URL on MBs	49.1%	63.0%	48.6%
Share URL on MBs	64.2%	69.6%	60.7%
Feeling a sense of community *	15.2%	33.3%	18.1%
Overall participation (participated in at least one type of activity)	83.0%	89.1%	81.6%

Table 3. Percentage of respondents who participate in online news activities. (*p< .05; **p< .01)

When asked why they participate in generating or disseminating news, 63.5% agree (responding 1, 2, or 3 on a 7-point scale) that they want to inform others by participation, 62.2% reported doing so in order to socialize with others, yet only 18.1% felt a sense of community while participating.

We also observe that a larger proportion of NGs have participated in different types of news activities than Ts. Using a Z-test on proportions, we find that significantly more NGs contribute original news content ($z=2.39$, $p<.02$) and post URLs on SNSs ($z=2.68$, $p<.01$) compared to the Ts. Trends show that NGs participate in more commenting, sharing URLs on SNSs and posting URLs on MB sites but these did not reach significance. We also find significantly more NGs have experienced a sense of community ($z=2.12$, $p<.04$) in their participation. In sum, our sample shows a relatively high participation in online citizen news activities, with a trend that more NGs participate than Ts.

RQ3: Authors of News Commentary and Trust

How much do people trust commentary from professionals versus other citizens? Figure 2 shows the results of trust in news commentary. For the entire sample, we found that Chinese news consumers have moderate trust in news commentary from both professional writers (e.g. editorialists in official media) and non-professional citizen commentators with a trend for higher trust in professional commentary ($F(1,393)=3.61$, $p<.06$).

However, Ts and NGs have quite different views on these two news commentary sources. A significant Commentary x Type interaction ($F(1,97)=56.68$, $p<.001$) shows that Ts have higher trust in commentary by professionals whereas NGs have higher trust in citizen commentary. News Commentary does not show significant differences but there is a slight trend of difference in reader type ($F(1,97)=3.028$, $p<.09$).

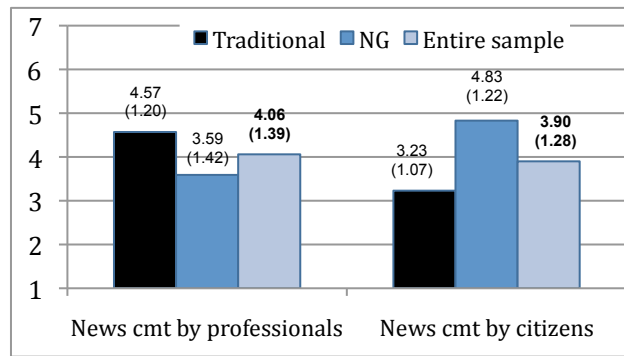


Figure 2. Trust in news commentary sources for Ts, NGs and the entire sample. Means and sd's shown.

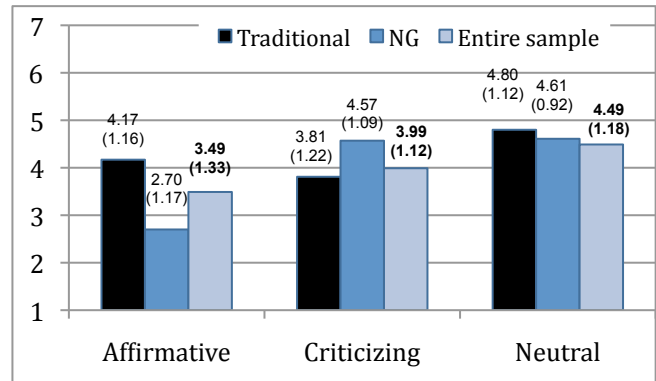


Figure 3. Perspective of government views and trust for Ts, NGs and the entire sample. Means and sd's shown.

RQ4: Perspective of News and Trust

How much do people trust news that supports the government? Figure 3 shows the results for RQ4. Chinese news consumers in general have the lowest trust in news that affirms the government perspective, moderate trust in news that criticizes the government perspective, and highest trust in neutral portrayals of the government. Though a small effect, these three trust levels are significantly different ($F(2,778)=93.52$, $p<.001$). A Bonferroni post hoc test shows all means to be significantly different ($p<.001$).

Focusing on Ts and NGs, the three trust levels are significantly different ($F(2,192)=27.02$, $p<.001$; A Bonferroni post hoc test shows all means to be significantly different ($p<.001$)), while Type is not significant. However, there is a significant Perspective x Type interaction ($F(2,192)=23.68$, $p<.001$): Ts have higher trust in news that affirms the government perspective; NGs have higher trust in news that criticizes the government perspective.

RQ5: Strength of Ties and Trust

What is the relation of strength of ties in the news source and trust in the news? Figure 4 shows the results for RQ5. For the entire sample we found a significant difference between strength of ties and level of trust ($F(2,696)=176.08$; $p<.001$). A Bonferroni post hoc test shows a significant difference among all levels: strong ties

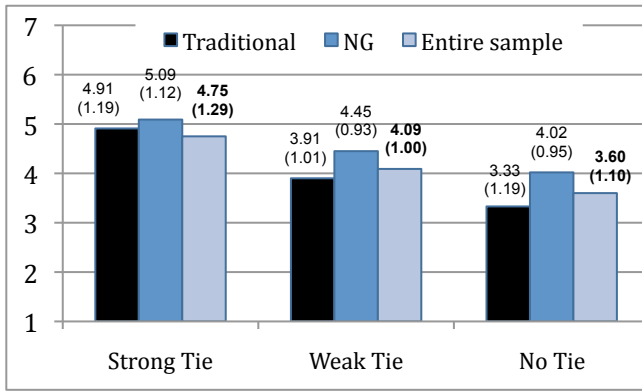


Figure 4. Tie strength and trust for Ts, NGs and the entire sample. Means and sd's shown.

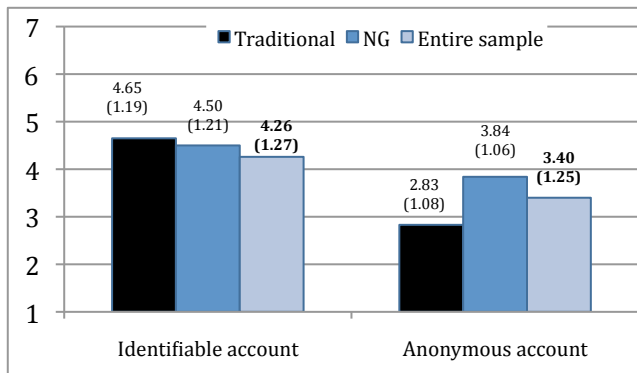


Figure 5. Anonymity and Trust for Ts, NGs and the entire sample. Means and sd's shown.

produce the highest trust, followed by weak ties, and then posts from strangers ($p < .001$).

Similarly, for Ts and NGs there is a significant difference among Tie Strength ($F(2,172)=63.69$, $p < .001$). A Bonferroni post hoc test shows that there is significant difference among all levels ($p < .001$). There is also a significant main effect of Type ($F(2,172)=7.16$, $p < .009$). There is a trend for an interaction of Tie Strength x Type ($F(2,172)=2.50$, $p < .09$): as the tie strength grows weaker, the level of trust declines less for NGs than for Ts.

RQ6: Anonymity and Trust

What is the effect of news coming from an anonymous vs. an identifiable source in citizen media? Figure 5 shows the results for RQ6. The entire sample reports significantly higher trust for identifiable accounts than anonymous accounts ($F(1,351)=113.00$, $p < .001$).

While Ts and NGs show little difference in trust in identifiable accounts, a significant Anonymity x Type interaction ($F(1,88)=11.79$, $p < .001$) shows that Ts have much lower trust in news from anonymous accounts than NGs. Main effects of Anonymity ($F(1,88)=53.49$, $p < .001$) and Type ($F(1,88)=5.94$, $p < .02$) are both significant.

RQ7: Content Features and Trust

Does including URLs as part of news content increase trust in news? Figure 6 shows the results for RQ7. For the entire

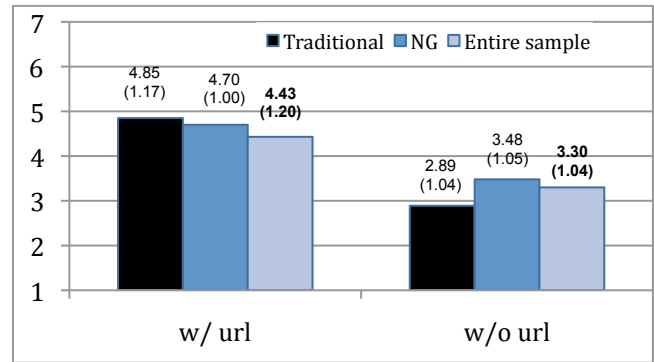


Figure 6. Content features and trust for Ts, NGs and the entire sample. Means and sd's shown.

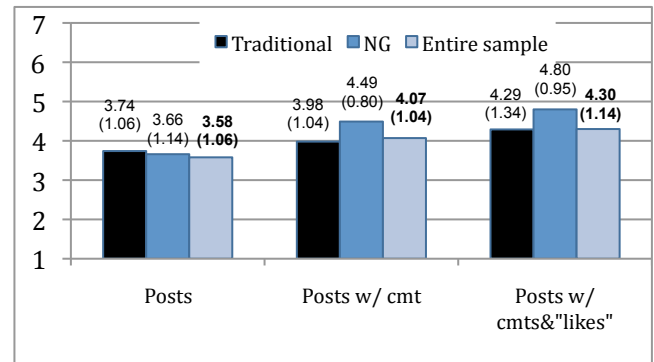


Figure 7. Comments & "Likes" and Trust for Ts, NGs and the entire sample. Means and sd's shown.

sample, respondents reported significantly higher trust in posts with URLs than those without URLs ($F(1,351)=258.95$, $p < .001$).

Comparing Ts and NGs, the main effect of URL is significant ($F(1,88)=102.54$, $p < .001$); whereas Type is not significant. However, there is a significant URL x Type interaction, indicating that the absence of a URL affects trust for Ts more than NGs ($F(1,88)=5.38$, $p < .03$).

RQ8: Collective Participation and Trust

Compared to the content posted in citizen media, comments show how others reflect on the news. How does the "crowd effect", i.e. comments or "likes" from other citizens, affect a consumer's trust in news? Figure 7 shows the results for RQ8. For the entire sample, we found a significant increase in trust among "plain" posts, posts with comments, and posts with both comments and "likes" ($F(2,688)=95.28$, $p < .001$); A Bonferroni post hoc test shows all three groups to be significantly different ($p < .001$).

Specifically, NGs have higher trust than Ts in posts with comments and in posts with both comments and "likes". The interaction of Crowd Effect x Type is significant ($F(2,172)=5.64$, $p < .005$). Crowd Effect is significant ($F(2,172)=25.84$, $p < .001$) but not the main effect of Type. These results suggest that as comments and "likes" from the crowd enhance people's trust in news in general, NGs value collective interpretation and affirmation more than Ts.

Dependent Variable	Independent Variables	β	t	p
Preference for citizen media	(Intercept)	0.441	.187	.852
	Trust in news commentary from citizens	0.466	8.885	<.001
	Frequency of Commenting	0.159	3.111	.002
	Trust in news that affirms gov't accounts	-0.331	-5.330	<.001
	Trust in news commentary from news professional	-0.306	-4.811	<.001

Table 4. Regression coefficients for model of preference for citizen media

A Model Predicting Preference of News Channels

If we were to randomly select an Internet user in China, could we predict their preference for trusting one type of media for news? To answer that question, we used a step-wise regression model using responses of the entire sample. Our dependent variable is preference of citizen over official media, as measured by trust ratings of citizen media minus trust ratings of official media. This measure ranges from +6 to -6. People who highly trust both citizen and traditional media channels would score a 0, as would those who highly distrust both channels. Our interest is focused on *trust preference*. We include all factors that might be relevant to trust in media as input for the independent variables: demographic information, media use habits, news participatory activities, and trust ratings that apply to both media. As shown in Table 4, we found that respondents' favorability of citizen media over official media is most positively associated with the trust in news commentary by citizens and the frequency of posting comments in social media, while it is negatively associated with trust in news that affirms government accounts and news commentary from professionals (adjusted $R^2=0.455$, $F(4,208) = 44.86$, $p<.001$).

Qualitative Analysis of Open-ended Questions

Opinion Guidance Impact

When asked if they have experienced opinion guidance online, 63.4% responded that they have. Among the 63.4%, 204 respondents commented on its impact. Of these, more than one third self-reported being susceptible to the manipulation of citizen media by governmental postings. However, the reliability of self-reported vulnerability to persuasion is suspect for two reasons: first, there does not exist clear criteria that people can use to determine whether a comment is opinion guidance. Second, even if such criteria existed, it can be difficult for people to assess how they might be affected by opinion guidance. Because of this methodological concern, this is a topic for future research.

Code (%)	Sample Comments (translated from Chinese)
Negative (45.97%)	<p>"There's no way to tell truth from lies."</p> <p>"There is lots of false or unverified information, they get popular because they arouse panic of the public. This kind of information blind people's eyes. Also, audience are lacking rational judgment..."</p> <p>"most official media tend to candy-coat stuff, while unofficial media environment tends to be misguided by different situations such that untruthful, or unverified information gets spread around."</p>
Hope /Suggestion (12.1%)	<p>"There shouldn't be censorship in social media."</p> <p>"Information on social media is very easy to disseminate, there should be more regulation."</p> <p>"If every social media user is prudent when they speak, higher quality of shared information can be achieved."</p>
Neutral (10.48%)	<p>"It's not a matter of trust or no trust to me, I'm just killing time there."</p>
Strategy (8.87%)	<p>"For the information circulated in SNS, I won't judge its trustworthiness just by its source. I will judge by information comparison. I'll see if it makes sense. If some information is in line with existing information, and the logic is self-sustaining, then it's easy to trust it, even if it turns out to be false."</p>
Negative and Positive (6.45%)	<p>"The good side is that it provides sources for information that is not available on official sites. The bad side is that, because Chinese citizens are gullible, with poor critical judgment, social media can cause unnecessary panic."</p> <p>"Information is easy to disseminate, and easy to be misleading."</p>
Positive (5.64%)	<p>"It's more comprehensive, and truthful, comparatively."</p> <p>"Very convenient, lots of grassroots information."</p> <p>"The freedom in China depends solely on it (social media)."</p>
Other (9.67%)	<p>"These are sharp questions, we should get some explanations from a formal institution."</p>

Table 5. Open comments on trustworthiness of social media.

Open Comments on Trustworthiness in Social Media

Comments were included in 124 of the surveys. Based on our content analysis on open comments about news trustworthiness in social media, to our surprise, negative views (45.97%) dominate. Table 5 summarizes sample quotes that are representative of the coded categories.

The reoccurring negative concerns cover mainly three themes. First, there is much false rumor and misinformation, and it is difficult to verify the authenticity of news information. Especially when there are too many re-posts, the artificially inflated popularity can make it even more difficult to objectively assess the information quality. Second, because of censorship, site moderators can easily delete posts that involve sensitive but oftentimes valuable

news information. Thus citizen media users do not feel encouraged to report. However, there is nothing to prevent users from blindly spreading unverified news information, extremely biased views or “junk”. Third, news is often too subjective, personal, and emotional in citizen media.

Among all respondents who gave negative views, 20.05% are from Ts, and 12.28% are from NGs. Yet reasons for Ts and NGs negative views differ. Ts primarily emphasize the problem of false rumors in citizen media. They express that it is difficult or impossible for them to assess the trustworthiness of citizen-reported news, and they tend to believe it as false. NGs, however, suggest that objectivity and rationality is lacking when people report or discuss news in citizen media, and describe the lack of freedom of speech. Although those comments are all negative, the attitudes from Ts appear more pessimistic towards citizen media, while the comments of NGs are more evaluative and analytic, discussing potential causes of the drawbacks.

DISCUSSION

In this study, we investigated how people trust news in a society where official news is subject to authoritarian government control and new citizen media is continuing to gain popularity. In this changing media environment in China, our survey responses show that Chinese citizens do receive a fair amount of news from citizen media but mostly by chance. Citizens are adopting citizen media as a news form: nearly half contribute news content and over two-thirds comment on news. At this point in time, Chinese news consumers show no significant difference in trust in official and citizen news channels, professional journalists or citizen commentators, yet they show particularly low trust in news that affirms governmental accounts.

These results all highlight the complex conditions of the Chinese news information environment. In 2003, the deliberate information blockade and distortion about the SARS incident evoked a national dispute around information control from the government. We infer that the low level of trust in official media is largely due to the reoccurrence of incidents of this kind (e.g. a recent case is the dispute surrounding the 2011 Yongwen train crash). In addition to recent media scandals, Chinese news media has historically been reported to cause people to distrust the government [6]. So how does the advent of citizen media--SNSs and MBs in our study, come into play in such an authoritarian society?

We argue that citizen media provides an alternative news channel to government-controlled channels, one which leverages the advantage of personal relations and crowd confirmations in news information. Instead of relying on centralized institutions run by the state for news, citizen media now provides a platform for citizens to rely on and trust each other for information. Our results support this by showing that features of citizen media related to strong ties and the collective interpretation and affirmation from the crowd enhance people’s trust in news significantly.

We found that embedding a URL to an original news source (which are mostly official media sources), boosted trust. We infer that people tend to perceive the official news to be more trustworthy when it is passed on by their friends or other peer citizens, even if they are strangers. This is in line with Katz and Lazarsfeld’s [18] model of “personal influence”: information often flows from traditional forms of mass communication (e.g. radio or print) to the influential readers and then on to a less active audience (the influenced readers) who regard news from their fellow citizen as guidance or social confirmation. The notion of interpersonal relationship as a mediating factor in news dissemination suggests that in an authoritarian society, citizen media can change how people perceive official media reports, perhaps even leading to more positive views.

As citizen media grows in popularity, it may not necessarily be a rivalry to official channels. By taking advantage of the action and wisdom of the crowd, it can provide unique news, complementary information to original news content and opinions, and can help news consumers to process and filter official news. Yet despite potential advantages, our survey results show that the value of citizen media may not yet be recognized; most citizens only moderately trust it.

To understand differences in trust for official and citizen media, we identified and focused on two types of news readers, contrasting trust in official and citizen media: NGs have high trust in citizen media and low trust in official media; Ts have the reverse pattern. What is interesting is that NGs trust features of citizen media more than Ts; they trust news commentary more by citizens, news from weak ties and strangers, from anonymous accounts, and the collective interpretations and affirmations of news.

One reason why Ts and NGs have very different trust levels on affirmative and criticizing news about the government could be due to their different political views. Our findings are in line with that of Choi et al. [8] who found that Americans with anti-governmental views on the Iraq War perceived the Internet as the most credible news source, in spite of it lacking editorializing and gatekeeping, compared to other traditional media sources such as newspaper or TV. It may be more likely for people who disagree with government views to turn to citizen media for news as it may be easier there to find news critical of the government.

Compared to NGs, Ts have less trust in news posted by anonymous sources and trust declines more as social ties weaken. Although other studies (e.g. [12]) have found that women have less risk-taking attitudes in online social networks, we did not find an effect of gender to explain the difference between Ts and NGs. Another explanation could be due to a “familiarity effect” [16] since NGs adopt citizen media earlier and are more active in online news participation than Ts. We found that NGs are more likely than Ts to trust comments and “likes” from the crowd. We cannot say however that higher involvement caused NG’s

high trust in citizen media because it is possible that NGs generally trust users of citizen media which leads to their high trust in the features of citizen media. It could also be the reverse: NGs participate in citizen media more and as a result of usage, they gain higher trust in citizen media.

Many of the open comments revealed reasons why citizen media is only partially accepted by Chinese news consumers. The existence of false rumors and misinformation is reported to be a major issue. This may be due to the lack of a mechanism for preventing the reporting and re-posting of false information. There is also governmental intervention (censorship on citizen media) for valuable newsworthy information. As NGs point out, citizen media channels can lack objectivity and rationality. In the current environment in China, it may rest on the crowd to design ways to be more diligent in writing, to be more rational in reading, and to be more responsible in disseminating news.

Based on our study, we propose that within an authoritarian state, citizen media is becoming an alternative news channel that provides a platform for citizens to trust each other for information. Because of this, citizen media could become a force for citizen empowerment. Yet there are still many challenges. High trust in citizen media in China does not currently exist and will take time. We identified a group of Chinese news consumers who embrace and take advantage of citizen media, while others are still struggling to trust it as a channel for news. Taken together, our study begins to explain how news generated in citizen media could impact China-- news trustworthiness is a critical element.

Generalizability and Limitations

We believe that our findings can generalize to other societies where the official media environment is strictly controlled by the central government while the popularity of citizen-generated media is currently fast growing. Syria is a timely case.

Since we used multiple seeds in our snowball sampling through different media channels, we believe that we reduced selection bias in our sample. Seeds were sent through various social networks using a variety of contacts in different areas across China. However, one limitation of our study is that our sample is most representative of the Chinese population who have higher education and who are from urban areas. We can thus only generalize our findings to this type of population. In addition, because opinion guidance exists in China, we cannot rule out the possibility that some respondents may have been hired by the government. Another limitation is that we asked people to self-report their general perception of trust. We feel this approach is valid because the credibility of news is not simply an innate quality of news content or sources, but is rather a subjective perception by its audience through sensemaking [8]. However, examining subjective perceptions can possibly reveal people's actual behavior

when encountering news information. In future work, we will use alternative methodologies to triangulate our findings.

CONCLUSION

Citizen media is changing the way that people worldwide are receiving news. This is especially important in societies such as China where the official media is subject to strict government control. We are optimistic in the power of citizens to generate, disseminate and to assess news. Such signals from the collective, such as 'likes' or comments, can serve to empower citizens in continuing to generate and judge news. Our study was a first step in assessing the nature of trust in competing forms of news generation in authoritarian societies. We hope this will spark further research in this topic.

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APPENDIX A. SURVEY QUESTIONS THAT ADDRESS THE RESEARCH QUESTIONS.

Research Questions	Survey Questions (All questions used a scale of 1-7, originally in Chinese.)
RQ1: Trust and news channels (official vs. citizen)	In general, how much do you trust news items (news or news comment) from: 1) Official channels (e.g. China Daily, Xinhua); 2) Unofficial channels (e.g. Renren, Sina Weibo)
RQ2: Online news participatory activities	1) Please rate how much you engage in each of the following eight news consumption activities. 2) My main goal of commenting, sharing, or contributing my own newsworthy information online is to INFORM / SOCIALIZE with other people. 3) When you participate in online news dissemination and production, how much do you feel you are part of an online community of news readers/writers?
RQ3: Trust and types of news	In general, how much do you trust the following: 1) News reporting (e.g. newspaper article); 2) News commentary from professional journalists (e.g. editorials); 3) News commentary from citizens (e.g. blog posts, microblogs, SNS posts)
RQ4: Trust and news perspectives toward government	In general, how much do you trust news commentary articles or posts with the following different types of perspectives? 1) Perspectives that AFFIRM official account; 2) Perspectives that CRITICIZE official account; 3) Perspectives that are NEUTRAL
RQ5: Trust and strength of ties in citizen media	In general, on social network sites or microblogging sites, how much do you trust news items written by: 1) Close friend; 2) Acquaintance; 3) Person you don't know; 4) Government source; 5) Media outlet; 6) Public figure
RQ6: Trust and anonymity in citizen media	In general, on social network sites or microblogging sites, how much do you trust news items written by: 1) An identifiable account; 2) An anonymous account
RQ7: Trust and news content feature in citizen media	In general, how much do you trust news items on social network sites or microblogging sites as follows: 1) Posts with links to an original source; 2) Posts without links to an original source; 3) Posts with image; 4) Posts without image
RQ8: Trust and crowd effects in citizen media	In general, how much do you trust news items on social network sites or microblogging sites as follows: 1) Post only; 2) Post with comments; 3) Post with "likes"; 4) Post with both comments and "likes"