

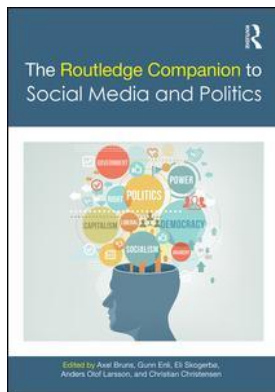
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INTERACTIONS BETWEEN DIFFERENT LANGUAGE COMMUNITIES ON TWITTER DURING THE 2012 PRESIDENTIAL ELECTION IN TAIWAN

Yu-Chung Cheng and Pai-Lin Chen

Introduction

The concept of 'global public spheres' arose at the beginning of the 21st century as new communication technologies matured. Sparks (2001) pointed out that the Internet prompts the dissemination of traditional media content across the borders of nations. Volkmer (2003) stressed the significant impact of satellite television channels such as CNN International and Al Jazeera on the flow of political information. The infrastructure of these new media allows an eyewitness view of events taking place in local contexts to spread globally, and shapes a politically relevant 'global' public sphere, even it is divergent and originating from different viewpoints. Castells (2008) also pointed out that the global networks connected by communication technologies shape the new public sphere, as the space of debate on public affairs, so that the debate progresses from the national to the global. Accordingly, this prompts a conversation between global governments and global civil societies.

The aforementioned researchers focus on the expressions and interaction of participants such as news agencies, governments, and nonprofit organisations. However, they ignore the expressions and interaction of individual users in a global public sphere. A result of the rapid spread of global social networking sites such as Twitter and Facebook, more users publish their opinions about global public affairs on these social networking sites. Castells (2009) described this as 'mass self-communication', which allows sending messages from many to many in real time and potentially reaches a global audience. Through sharing and retweeting, these individually published opinions can spread very quickly on social networking sites and influence decision-making on global public affairs. From this observation, we therefore focus on the individual users of social

networks, to investigate how social media users influence information flows on global social networking sites during an election.

We take the discussion of the 2012 Taiwan presidential election on Twitter as our case study. This is a major regional political event: not only Taiwanese, but also Chinese and Japanese societies took an interest in this election. Taiwanese users engaged in discussions with members of the local community as well as in information exchange with foreign communities. As global public spheres, social media afford local communities a space for producing and receiving public discourses for and from cross-language communities. Based on this affordance, researchers can compare the different communication patterns between cross-language communities, and explore the potential and limitations of social media as global public spheres.

Taiwan, Japan, and China have an intertwined past, present and future in East Asian politics, diplomacy, economics, and culture. Taiwan was the first colony acquired by the Japanese Empire after the Meiji Restoration. Between 1895 and 1945, Taiwan experienced a leap from medieval feudalism into social, cultural, and economic modernity under Japanese rule. Today, many elderly people are still deeply influenced by their childhood experiences of Japanese culture and education. On the other hand, the majority of the Taiwanese population are of Chinese origin, and Taiwan and China share a common language and a substantial level of cultural similarity. In 1949, the Nationalist Party (Kuomintang) was defeated by the Communists in Mainland China and withdrew to Taiwan, whose sovereignty had been transferred from Japanese to Chinese authority just four years earlier. The Nationalist-held Republic of China (Taiwan) and the Communist People's Republic of China (PRC) entered into a 40-year stand-off across the Taiwan Strait. It was only in the 1990s, when travel and commercial exchange resumed between Taiwan and China after the end of Cold War, that the cultural and commercial connections between the two began to strengthen again. These intertwining geopolitical histories gave Taiwan cultural proximity to both Chinese and Japanese society (Iwabuchi 2002). Lacking direct interaction with an individual from the other side, such cultural proximity allowed people to experience the daily lives and cultural values of the other side via representations in the form of news reports and drama in the mass media. However, after the rise of global social media, direct communication between members of different language communities has become possible.

In this chapter, we examine the interactions between different language communities to identify and compare discussion topics that are specific to each language community, and we explore the temporal patterns of discussion frequency during the election. This set of analyses focuses on the interactions within a community and on the characterisation of the core participants in the community. Furthermore, we investigate the interactions between communities to identify and characterise the types of participants who bridge different language communities to facilitate cross-language information flows in the social network. Through our analysis of cross-language interactions relating to this election on Twitter, we aim to explore how local communities interact in global social media.

Social Media as Global Public Spheres in Real-Time Events

Global social media such as Facebook and Twitter connect a large number of users online. Most of the time, this vast network consists of numerous loosely connected clusters that are defined by the extent of the daily personal social lives of individual

users. However, when provoked by acute events, such as natural disasters (earthquakes, tsunamis, volcanic eruptions, etc.), human disasters (plane crashes, car accidents, school campus shootings, etc.), or other major social events which are difficult to predict (political and sporting events, for example), a large number of social media users will turn to these specific events simultaneously and generate a substantial number of related posts within a short period of time.

General elections are highly relevant as case studies to explore the interactions between such emerging communities on social media. Burgess and Bruns (2012) examined how people participated in discussions during the 2010 election in Australia. They collected all tweets containing #ausvotes during the 38-day period from one month before the election to two days after the election, and found that 22 per cent of tweets were posted on the day of election. Among the 37,000 participating users, 51 per cent (19,000) only posted on the day of election. In other words, more than half of the users expressed their opinions and feelings along with the election broadcast, before the election outcome was known, and earlier in the day, many users tweeted to mark the casting of their vote and encourage others to vote.

Anstead and O'Loughlin (2010) analysed the audience behaviours on Twitter during the candidates' debates on TV in the 2010 UK general election. They called this new audience an 'emerging viewertariat', which means that viewers watch real-time events on TV and give their comments on social media at the same time. These new multi-screen watching behaviours are becoming even more popular for sports, reality TV shows, and political events since the adoption of mobile and tablet devices. Bruns and Burgess (2011) also pointed out that Twitter hashtags could aid the formation of *ad hoc* publics around specific themes and topics. These *ad hoc* publics emerge from within the Twitter community, and hashtags allow a group of users to coordinate information and public debates during public events.

Social media are therefore a kind of instant public sphere. As pointed out by Papacharissi (2010), it makes people feel more comfortable and safe to discuss public affairs in such an online space that mixes the public and the private. This social space allows a blending of the originally separate public and private spheres. Here, citizens can participate in public affairs and control their own public face without losing their private individuality. Therefore, Papacharissi sees the appearance of online social media technologies as recombining the traditional public-private dichotomy, which creates a new civic geography that facilitates the emergence of a new form of social relationships and conversations.

Thus, we take the 2012 presidential election in Taiwan as a case study to explore the interaction between various groups from Taiwan, China and Japan in the global social networking platform, Twitter. The various stakeholders include traditional media, political parties, celebrities, and individual users. By analysing the interactions of cross-language communities, we can further rethink the potential of global public spheres in the social media age.

Data Collection and Challenges in Language Separation

In Taiwan's 2012 presidential election, the incumbent Kuomintang (KMT) candidate Ying-jeou Ma and the challenging Democratic Progressive Party (DPP) candidate Ing-wen Tsai, who was then the chairperson of the DPP and the first ever female presidential candidate in Taiwan, matched each other in pre-election polls; the third candidate was Chu-yu Soong, who represented the People First Party (PFP). Votes were cast on

14 January 2012, and the official result of the vote count was published at 9 p.m. on the same day. Ma won 51 per cent of the votes (6.89 million) in the election; Tsai came second with 46 per cent of the votes (6.09 million); and Soong received 3 per cent of the votes (0.37 million). With such a tight contest, the election attracted a huge amount of discussion in social media communities.

This study chose the social networking site, Twitter, as our data-collecting platform. Twitter is not among the most popular social networking sites in Taiwan and the PRC. According to a GNIP analysis, 0.05 per cent of tweets featured Chinese as the user-selected language in 2012. GNIP showed that Simplified Chinese (ZH) ranked 17th and Traditional Chinese (ZH-TW) ranked 19th of all languages at that time (GNIP 2014). However, Internet censorship in China (Bamman, O'Connor, & Smith 2012) led netizens tending toward free speech to discuss democracy-related issues on Twitter (blocked by the Great Firewall in the PRC), which, unlike Chinese-based social media such as Weibo, is without censorship. According to an observation by a renowned Hong Kong journalist, there are more than one hundred thousand active Chinese Twitter users in the PRC using virtual private network technology (VPN) to access Twitter in order to avoid the Great Firewall (Lüqiu Luwei 2012). Considering that Twitter can serve as a platform for active users in the PRC to exchange information with international users or sources, including those in Taiwan, it is an important site for observing interactions between different Chinese-speaking societies. In contrast to the Chinese speaking societies, Twitter is tremendously popular in Japan, as the amount of Twitter users in Japan (30 million) was the third largest in the world in 2012, behind only the U.S. and Brazil (Semiocast 2012).

Focusing on Twitter, during January 2012 we collected data associated with Chinese-language tweets that were related to the election. Using the Twitter search API, we selected six Chinese keywords to computationally identify election-related tweets: Ying-jeou Ma, Ing-wen Tsai, Chu-yu Soong, Kuomintang, Min-chin Tang (DPP in Chinese), Chin-min Tang (PFP in Chinese)—the names of the candidates and the political parties they belonged to. Using the names of the candidates instead of their nicknames can avoid the preference bias of nicknames, but it may result in capturing many tweets that reference news stories.

Furthermore, given that Taiwan and Mainland China, the two major Chinese-speaking societies, use Traditional Chinese characters and Simplified Chinese characters respectively, this provided an effective way to separate tweets created by different language users. Hence, we have opted to explore the use of language coding in individual tweets as a way to characterise the social and community identities of the users. Based on these characterisations, we assumed that members of the Taiwanese Twitter community would mostly adopt Traditional Chinese as their writing language, and thus when a tweet was marked with 'iso_language_code: zh-TW' after filtering through the language detection software, there was a high probability that this tweet originated from Taiwanese society. Conversely, when a tweet was marked with 'iso_language_code: zh', it was more likely from Chinese society, including both Mainland China and Chinese users residing overseas.

This language detection process has a limitation of not being able to identify Hong Kong accounts, because news agencies in Hong Kong tweet in Traditional Chinese but ordinary users may tweets in Traditional Chinese or Cantonese—thus making it difficult to computationally separate Hong Kong users from Taiwanese users in the Traditional Chinese Twitter community. In the results of our language detection process,

however, Cantonese tweets accounted for less than 1 per cent of the data set, and we did not treat Cantonese as a major language community in its own right.

Tweets in the Japanese language accounted for about one third of the data set. They were collected because the names of the presidential candidates were shown in Kanji characters (sharing a common language code with Traditional Chinese and Simplified Chinese). Japanese Kanji characters represent an ancient culture imported from China; in the Unicode system, Japanese Kanji characters and Chinese characters having the same appearance share the same code, and thus the Twitter search API would collaterally collect tweets in Japanese language with these keyword terms.

Among the 27,968 unique tweets collected during the election (1 to 23 January 2012), we sorted unique tweets into different subgroups based on their respective language codes. Tweets in Traditional Chinese represented 49 per cent of the collected tweets (13,646 tweets in total). Following Traditional Chinese was Japanese (9,548 tweets, 34 per cent), and then Simplified Chinese (4,342 tweets, 15.5 per cent). Tweets in English made up only 1 per cent of total tweets, and fewer than 1 per cent of tweets were in another language or unidentifiable (Cheng & Chen 2014a).

Comparing Tweeting Patterns between Language Communities

Many media commentators thought that the candidates' attitudes toward China would influence the level of support from Taiwanese and Chinese societies (Sullivan 2013). The incumbent president, Ying-jeou Ma, is more China-friendly. He claims that more economic and trade exchange with China is beneficial for Taiwan. But the economic performance during Ma's first term (2008–2012) was not as good as people expected. Some people cited his lack of decisiveness as a reason for the poor economic performance. Many supporters who voted for Ma in the previous election were expected to switch their votes to another candidate (Wang 2011). The rival candidate, Ing-wen Tsai, advocates more autonomy for Taiwan than Ma, to avoid an overdependence on trade exchanges with China. Thus, Tsai is more attractive for people whose political tendency is in favour of Taiwanese independence. The third candidate, Chu-yu Soong, had served a highly regarded governorship of the Taiwan Province in the past, and was the chair of the PFP, a small party split off from the KMT whose attitude toward China is similar to Ma's.

Based on the reports and analysis in traditional mass media, Ma and Tsai were evenly matched in the Taiwanese poll, but the Chinese government and population were thought to support Ma because to his attitude toward China. By analysing the frequency of discussion about the three candidates within the Traditional Chinese community and Simplified Chinese community on Twitter, we can compare the dynamics of preference amongst the two communities. Furthermore, we can also examine whether the attitude of the Chinese community on Twitter is the same as the position of government.

Figure 29.1 shows the changing volume of tweets containing terms associated with a specific candidate in the Traditional Chinese community, mostly comprising Taiwanese Twitter users. The Traditional Chinese community preferred to discuss Tsai over Ma during the election period, but the gap between Tsai and Ma fluctuates with the changing amount of coverage in mass media. Only on 12 January, just before election day, the volume of discussion about Ma surpasses that about Tsai, as certain influential public figures voice their support of Ma in the mass media.

By comparison, Figure 29.2 shows the volume of tweets containing terms associated with the three candidates in the Simplified Chinese community, mostly representing

2012 PRESIDENTIAL ELECTION IN TAIWAN

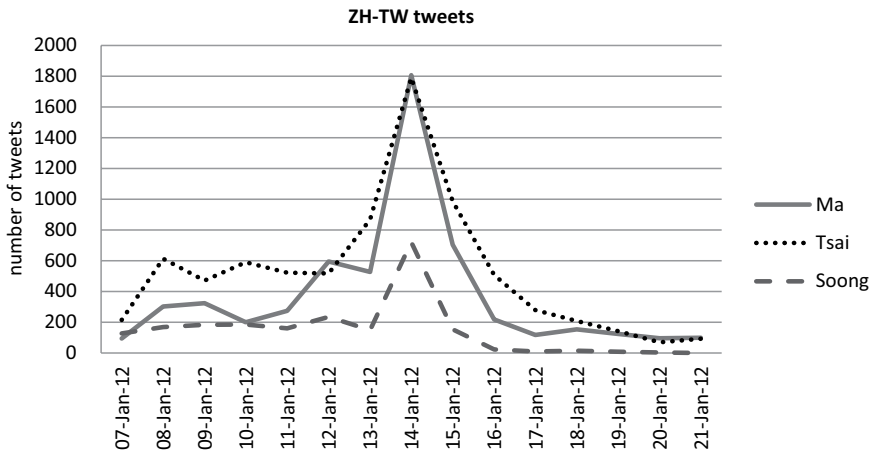


Figure 29.1 Volume of Tweets in the Traditional Chinese Community Relating to Individual Candidates

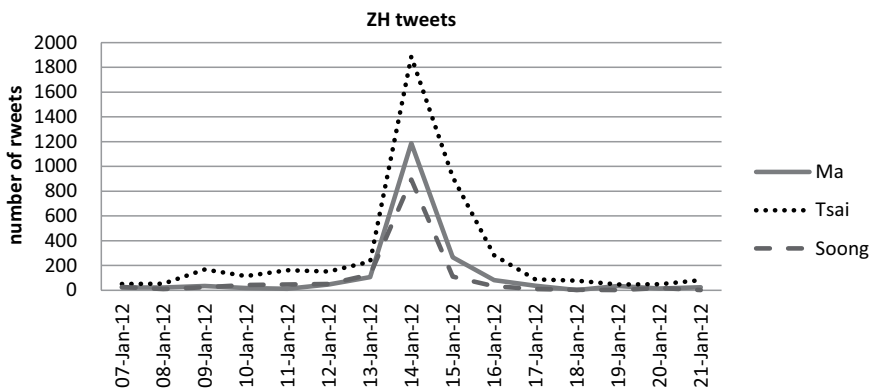


Figure 29.2 Volume of Tweets in the Simplified Chinese Community Relating to Individual Candidates

Twitter users in China, who used VPN to avoid the Great Firewall of the PRC. Unexpectedly, they preferred to discuss Tsai over Ma. This was very different from the focus of the government and the traditional media in China. In addition, by analysing the conversations in the Simplified Chinese community, we found that the Simplified Chinese users were particularly moved by the speech given by Tsai to acknowledge her loss in the election. Video of Tsai’s speech on YouTube had been shared many hundreds of times (Cheng & Shih 2014), even in spite of YouTube being officially unavailable in Mainland China, and Twitter users in China noted that this speech was an example of real democracy, which they have not yet experienced. The artist Ai Wei-wei (@aiww), for example, who had the most followers, at almost 130,000, in the Chinese Twittersphere at that time, tweeted ‘Tsai won, at least she won me’ after he saw the video. Ai’s comments were also retweeted many times in the Chinese Twittersphere.

Patterns of User Interactions in Different Language Communities

To find the key users who are the core nodes of interaction within the different language communities, we considered user visibility as a valid indicator. User visibility refers to the visibility of a user within the overall community of participants; technically, the visibility of a specific Twitter user can be defined by the number of @mentions received by that user in the data set, as this is indicative of other users reacting to tweets from that particular user account (Bruns & Stieglitz 2013).

Accordingly, we found 51 user accounts which had been @mentioned over 50 times in the total of 27,968 tweets. We excluded @youtube because it is automatically added when tweets are shared from Youtube.com, and identified the remaining 50 accounts as highly visible nodes in the 2012 Taiwan election data set. By reviewing their user profiles and postings, we classified these 50 accounts based on their type and location. On the one hand, we characterised these accounts as belonging to news agencies, journalists, celebrities, political bloggers, ordinary users, or bots in order to explain why other users retweet and reply to these accounts. On the other hand, we could identify the locations of these accounts and thus place them in four geographic contexts: Taiwan, China, Japan, and Hong Kong. The positions and viewpoints of Hong Kong news agencies are very different from those in Taiwan and China, so we have had to identify Hong Kong users manually amongst the 50 most visible user accounts. Furthermore, some visible accounts in the data set represent the Chinese diaspora living overseas (outside of the Mainland Chinese territory or Taiwan). From the contents of their tweets, we found that they are usually bilingual. In this case study, these Chinese diaspora are usually classified by their origins (as being from China or from Taiwan).

Based on these principles, we divide the 50 most-mentioned user accounts into four locations and six user types. The four locations are Taiwan, China, Japan, and Hong Kong. The six user types are listed below:

1. **News agencies:** the official Twitter accounts of news agencies, such as newspapers, magazines, television channels, and Internet media.
2. **Journalists:** professional media workers such as news reporters, columnists, radio hosts, and Internet media editors.
3. **Celebrities:** influential public figures in various areas, such as politicians (the presidential candidates), artists, writers, and scholars.
4. **Political bloggers:** bloggers who publish their political opinions and comments on current events, serious and satirical alike.
5. **Active users:** ordinary users who actively discuss with and reply to other users.
6. **Bots:** robots which automatically post tweets with certain terms.

The distribution of these six different types of highly visible users across the local Twitter communities of Taiwan, China, Japan and Hong Kong is shown in Table 29.1.

Amongst these 50 accounts, there are seven accounts belonging to news agencies. They are all from Japan, including *Asahi Shimbun* (@asahi_shinsen and @asahi_kokusai, total 567 mentions), one of the three national newspapers with a circulation of more than 7 million; *NHK News* (@nhk_news and @nhk_tonight, total 254 mentions), the national Japanese Broadcasting Corporation with several TV channels; *47 News* (@47newsflash and @47news, total 163 mentions); *Kyodo News*, founded in

Table 29.1 Matrix of User Visibility in Four Local Twitter Communities

Society	News agencies	Journalists	Celebrities	Political bloggers	Active users	Bots	Total	Total percentage
JA	7	4	1	1	1	0	14	28%
CN	0	2	4	3	12	1	22	44%
TW	0	2	3	1	4	1	11	22%
HK	0	1	0	0	2	0	3	6%
Total	7	9	8	5	19	2	50	100%
%	14%	18%	16%	10%	38%	4%	100%	

Note: JA: Japan; CN: China; TW: Taiwan; HK: Hong Kong.

1945 as a nonprofit cooperative organisation; and *Mainichi News* (@mainichijnews, 54 mentions), one of the oldest newspapers in Japan, founded in 1872.

Also, the most visible user is the Japanese columnist Kaori Fukushima (@Kaokaokao, 638 mentions). Her expertise is in Chinese issues. She was a news correspondent residing in Beijing and had about 32,000 followers on Twitter at that time. Her main tweeting language is Japanese and her comments about China-Taiwan-Japan issues would be trusted and shared in the Japanese community. Thus, Kaori Fukushima and the seven Japanese news Twitter accounts were key nodes in the Japanese community of the whole network during this election (Cheng & Chen 2014a).

Apart from the Japanese community, other visible journalists are two former Chinese reporters and two Taiwanese Internet media editors. The two former Chinese reporters (@wenyunchao, 152 mentions, and @mranti, 138 mentions) worked in Hong Kong and the U.S. at that time and maintained conversations with netizens in China on Twitter. The two Taiwanese Internet media editors (@aboutfish, 112 mentions, and @Portnoy, 69 mentions) curated noteworthy news stories or opinions from the Internet and are influential in the Taiwanese online community.

Celebrities were also influential in the election event. The Twitter accounts of the main candidates Ma (@PresidentMa19, 122 mentions) and Tsai (@iingwen, 57 mentions) were followed by several thousand users. Many followers would retweet their posts. But the account of incumbent president Ma had not followed any accounts. It meant that the candidates in Taiwan did not use social media as tools for mutual communication with voters and instead saw social media as one-way message publishing outlets. Otherwise, artists and writers such as Ai Wei-wei (@aiww, 253 mentions) are visible users in the Simplified Chinese community. Ordinary users regularly asked these celebrities to comment on people and events. In this case, the opinions of celebrities about the candidates would spread rapidly in Twitter communities.

In contrast to the Japanese Community, we found a relatively low visibility for Chinese and Taiwanese news agencies in their respective Simplified Chinese and Traditional Chinese communities. This was probably due to the different communication patterns between language communities. In the 2012 Taiwanese election, users in Taiwan could receive the exact election results from the mainstream media but preferred to discuss and express their own opinions and emotions on social media. Even several

of the Chinese websites operated by international news agencies would publish news stories about China and Taiwan on Twitter (Cheng & Chen 2014b), but users in China who cared about Taiwan's election would compare it to their own political situation, so they usually replied and retweeted other users instead of citing tweets from news agencies. Conversely, users in Japan, which was furthest from the location of the election, would depend on reports by the news media to inform them of the results of the Taiwanese election.

Further exploring the six user types in Table 29.1, we can identify two major categories of highly visible users. The first category is the user whose online identity is the same as their offline identity—such as news agencies, journalists, and celebrities. Due to their credibility in the real world, they are likely to be seen as trustworthy sources by social media users when they publish posts under their real names. The second category is the user whose online identity is more famous than their offline identity, such as political bloggers and other active users. They are anonymous in the real world and acquire their reputation through long-term interaction with other users online. Although accounts in these two categories obtain their online credibility in the different ways, they are both amongst the most trusted and most credible sources in social media.

Next, we compared the interaction patterns within different language communities, and a significant finding was that in the Japanese community, news agencies and journalists are major nodes of information dissemination. Thus, the highly visible users belong to this category. This pattern is similar to that in the U.S. and in European societies (Vis 2013). By contrast, the Simplified Chinese community is just the opposite: it did not disseminate the messages of its news agencies. Instead, it interacts directly with celebrities, political bloggers and active users. This implies that news media in China are seen as being less credible than political bloggers and active users. People prefer to retweet the postings from these trustworthy online sources and do not trust the published information from governments and traditional media. This gap may reflect how the different political systems (from democracy to despotism) bring about different cultures of information sharing on the Internet. The Traditional Chinese communities, Taiwan and Hong Kong, are situated somewhere between these two poles.

Exploring Social Networks in Cross-Language Communities

We further used the network visualisation software Gephi to analyse the connection patterns of users participating in the discussion of the 2012 Taiwanese election on Twitter, based on the tweets collected with our keyword search. As Boyd, Golder, and Lotan (2010) pointed out, retweeting represents both information dissemination and conversation, which encourages citizens to participate in public affairs. We used retweet conversations to connect each user in the analysis; 5,118 nodes were identified in total. After removal of the nodes with fewer than three connections in the network, 1,310 nodes remained. A social network map was constructed based on the filtered data set (Figure 29.3). Node size is based on betweenness centrality, and node color on degree.

There are two subnetworks in this social network. In the top left corner, there is a relatively isolated network consisting of Japanese users, centred around @koichiuno. This user was identified as Uno Koichi, a Japanese teacher and Japanese-Chinese translator in Taiwan. He ran a blog to introduce interesting things in Taiwan to a Japanese audience. Although @koichiuno was not among the top 50 users in the visibility matrix

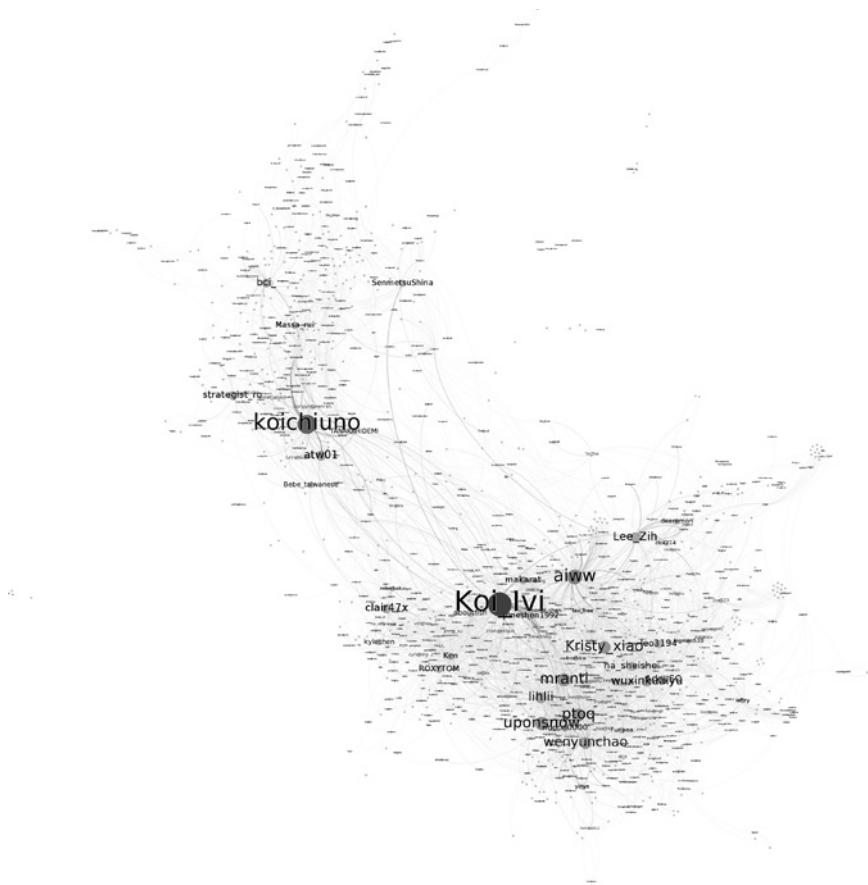


Figure 29.3 Social Network of Retweet Conversations in the 2012 Taiwanese Presidential Election

(with a ranking of 64, and 41 mentions), @koichiuno is a typical bilingual bridging user who can disseminate information from one language community to another.

In the right corner, there is a mixed subnetwork of Simplified Chinese and Traditional Chinese communities. The most notable node is @Koi_lvi. This user was an ordinary user whose real identity could not be verified. @Koi_lvi tweets in both Simplified Chinese and Traditional Chinese and interacts with other users very actively. Other significant nodes were important users from the Chinese community who often expressed their public opinions on Twitter. Their posts were frequently retweeted by other users.

In this analysis, we found that multi-language users make up about 8 per cent of the 9,416 unique tweeting users in the data set. This finding supports our earlier hypothesis that multi-language users are key nodes facilitating the transmission of information between different language communities (Cheng & Chen 2014a).

In another analysis of this Twitter network, we used only @reply conversations in our Gephi analysis. In total, 2,039 nodes were identified; after the removal of nodes with

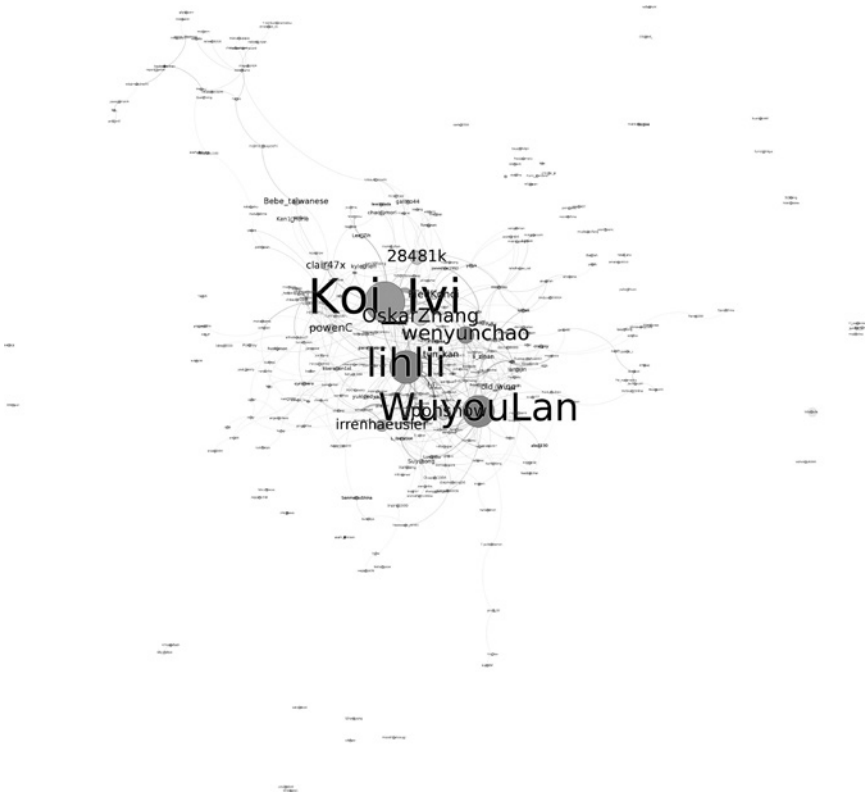


Figure 29.4 Social Network of @reply Conversations in the 2012 Taiwanese Presidential Election

fewer than three @reply connections, 319 nodes remained. A social network map of the @reply conversations was constructed from this filtered data set (see Figure 29.4).

This social network map of @reply relations was very different from the map of retweets (see Figure 29.3). The nodes in the network map of @reply connections represented mostly users in the Simplified Chinese community. Users in the Traditional Chinese and Japanese communities were far less involved. In Figure 29.4, celebrities such as journalist @wenyunchao and artist @aiww are not particularly notable, and the active ordinary users amongst the top 50 most visible users, such as @Wuyoulan (177 mentions), @lihlili (53 mentions), and @Koi_lvi (82 mentions), are the key nodes in this @reply network. As ordinary users, they are not particularly famous, but they talked and replied to other users very frequently. It thus turned out that this network was a space of mutual conversations, instead of representing unidirectional information dissemination.

Conclusion: Emerging Communities in Global Social Media

Global social networking sites can connect a large number of users as global public spheres, so that users from different places can join to discuss public affairs simultaneously.

A key challenge for social media researchers is consequently to distinguish different communities on the same social networking sites, and to compare their communication behaviours. In this case study, computationally distinguishing subgroups by language usage has proven to be an effective methodology, at least for East Asian countries. We successfully distinguished the Twitter users involved in the discussion of the 2012 Taiwanese presidential election into Traditional Chinese, Simplified Chinese, and Japanese communities, and found different interaction patterns within and between these language communities.

Furthermore, we can also distinguish various ways of community formation by the different interaction patterns that we are able to observe in social media. At least three types of communities on Twitter were identified for this election. The first community is composed of all users on Twitter engaged in the discussion of the election during the same period of time. By this definition, the community is made up of all the users we observed in this case study. Due to the popularity of real-time broadcast media, a lot of people can watch the unfolding progress of an event and discuss it on social media at the same time. On social media, users encounter others and exchange their opinions on these moments, but the interaction between them is too short to form a solid community.

The second community is the information dissemination community. It consists of celebrities, news agencies, journalists, online opinion leaders and their followers, as exemplified by the retweet and @reply network in our case (Cheng & Chen 2014a). The relations between these highly visible users and their followers are usually unidirectional: fans and ordinary users follow celebrities, but celebrities do not follow them back. This results in an information-disseminating social network in which a large number of followers retweet posts by those highly connected users (celebrities, news agencies, journalists, online opinion leaders) who are usually the key nodes in this network.

The third community is the conversational community. It is made up of active users, such as those found in the @reply network in our case (see Figure 29.4). The number of users in this community is smaller than that in the first two communities, but users in the conversation community are mutually connected. This makes collaboration, such as mobilising groups or building an online organisation, more possible in this community.

These three types would exist in all social media events. But the relation between the three types is rather liquid, as people can switch their roles from one to another at any time. We suggest that the connection and liquidity of these emerging communities exists because of the potential ability of global social media to connect several thousand people at the same moment. These emerging communities have had a tremendous impact on contemporary society. It will be necessary to further explore various emerging communities in social media through more case studies to understand the potential of social media in shaping collective wisdom and power.

References

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- Anstead, N. & O'Loughlin, B. (2010) *The Emerging Viewertariat: Twitter Responses to Nick Griffin's Appearance on BBC Question Time*, School of Political, Social and International Studies, University of East Anglia, Norwich. Retrieved from http://www.uea.ac.uk/polopoly_fs/1.147340!Anstead_O'Loughlin_BBCQT_Twitter_Final.pdf
- Bamman, B., O'Connor, B., & Smith, N. (2012) "Censorship and Deletion Practices in Chinese Social Media," *First Monday*, 17(3). Retrieved from <http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/3943/3169>

- boyd, d., Golder, S., & Lotan, G. (2010) "Tweet, Tweet, Retweet: Conversational Aspects of Retweeting on Twitter," in Proceeding HICSS '10 Proceedings of the 2010 43rd Hawaii International Conference on System Sciences, 6 January, IEEE: Kauai, HI, USA, pp. 1–10.
- Bruns, A. & Burgess, J. (2011) *The Use of Twitter Hashtags in the Formation of ad hoc Publics*, in Sixth European Consortium for Political Research General Conference, 25–27 August 2011, University of Iceland, Reykjavik.
- Bruns, A. & Stieglitz S. (2013) "Toward More Systematic Twitter Analysis: Metrics for Tweeting Activities," *International Journal of Technology in Social Research Methodology*, 16(2), pp. 91–108.
- Burgess, J. & Bruns A. (2012) "(Not) the Twitter Election: The Dynamics of the #ausvotes Conversation in Relation to the Australian Media Ecology," *Journalism Practice*, 6(3), pp. 384–402.
- Castells, M. (2008) "The New Public Sphere: Global Civil Society, Communication Networks, and Global Governance," *The ANNALS of the American Academy of Political and Social Science*, 616(1), pp. 78–93.
- Castells, M. (2009) *Communication Power*, Oxford: Oxford University Press.
- Cheng, Y.-C. & Chen, P.-L. (2014a) "Global Social Media, Local Context: A Case Study of Chinese-Language Tweets about the 2012 Presidential Election in Taiwan," *Aslib Journal of Information Management*, 66(3), pp. 342–356.
- Cheng, Y.-C. & Chen, P.-L. (2014b) "Emerging Communities in Social Media during the 2012 Taiwanese Presidential Election: A Big-Data Analysis Approach (in Chinese)," *Mass Communication Research*, 120, pp.121–165.
- Cheng, Y.-C. & Shih, S.-F. (2014). *News Sources in Social Media during the 2012 Presidential Election in Taiwan* (in Chinese), in 5th International Conference of Digital Archives and Digital Humanity, 1–2 December 2014, Taipei, Taiwan.
- GNIP (10 March 2014) "From A to B: Visualizing Language for the Entire History of Twitter," GNIP. Retrieved from <https://blog.gnip.com/data-visualization>
- Iwabuchi, K. (2002) "Becoming Culturally Proximate: Japanese TV Dramas in Taiwan," in *Recentering Globalization: Popular Culture and Japanese Transnationalism*, Durham: Duke University Press, pp.121–157.
- Lüqiu Luwei (2012) "Similarity and Difference from This Viewpoint (in Chinese)," in IP Lam Chong (ed.) *Grassroots Revolution: From the Virtual to the Real*. Hong Kong: The UP Publication Limited, pp. 4–7.
- Papacharissi, Z. (2010) *A Private Sphere: Democracy in a Digital Age*. Cambridge, UK: Polity.
- Semiocast (2012, 31 January) "Brazil Becomes 2nd Country on Twitter, Japan 3rd, Netherlands most Active Country," *Semiocast*. Retrieved from http://semiocast.com/en/publications/2012_01_31_Brazil_becomes_2nd_country_on_Twitter_supersedes_Japan
- Sparks, C. (2001) "The Internet and the Global Public Sphere," in W.L. Bennett & R.M. Entman (eds.) *Media Politics: Communication in the Future of Democracy*, Cambridge, UK: Cambridge University Press, pp.75–95.
- Sullivan, J. (2013) "Taiwan's 2012 Presidential Election," *Political Studies Review*, 11, pp. 65–74.
- Vis, F. (2013) "Twitter as a Reporting Tool for Breaking News," *Digital Journalism*, 1(1), pp. 27–47.
- Volkmer, I. (2003) "The Global Network Society and the Global Public Sphere," *Development*, 46(1), pp. 9–16.
- Wang, C. (2011, 3 November) "2012 elections: Tsai in the Lead, Brain Trust Poll Says," *Taipei Times*. Retrieved from <http://www.taipetimes.com/News/taiwan/archives/2011/11/03/2003517350>