

Does Fake News Matter to Election Outcomes? The Case Study of Taiwan's 2018 Local Elections

Tai-Li Wang¹

National Taiwan University, Graduate Institute of Journalism, Taiwan

Abstract

Fake news and disinformation provoked heated arguments during Taiwan's 2018 local election. Most significantly, concerns grew that Beijing was attempting to sway the island's politics armed with a new "Russian-style influence campaign" weapon (Horton, 2018). To investigate the speculated effects of the "onslaught of misinformation," an online survey with 1068 randomly selected voters was conducted immediately after the election.

Findings confirmed that false news affected Taiwanese voters' judgment of the news and their voting decisions. More than 50% of the voters cast their votes without knowing the correct campaign news. In particular, politically neutral voters, who were the least able to discern fake news, tended to vote for the China-friendly Kuomintang (KMT) candidates. Demographic analysis further revealed that female voters tended to be more likely to believe fake news during the election period compared to male voters. Younger or lower-income voters had the lowest levels of discernment of fake news. Further analyses and the implications of these findings for international societies are deliberated in the conclusion.

Keywords: disinformation, fake news, China influence, election, voting behavior, political communication

¹ All correspondence concerning this article should be addressed to Tai-Li Wang, National Taiwan University, Graduate Institute of Journalism, No. 1, Section 4, Roosevelt Rd, Da'an District, Taipei City, Taiwan 106 or by e-mail at tailiw@ntu.edu.tw.

Research Background

According to the Digital Society Survey “Varieties of Democracy” report in 2018, Taiwan was the most severely attacked country in the world in terms of being fed misinformation by foreign governments (Lührmann & Lindberg, 2019; Chien, 2019). Taiwan’s 2018 election was part of this exact scenario and became a casualty of the misinformation.

Taiwan’s 2018 mayoral and magisterial elections were widely viewed as a midterm exam for President Tsai Ing-wen’s or the ruling Democratic Progress Party’s administration, as well as a testing battleground for Beijing’s enacting influence over Taiwan’s election through sharp power, especially the disinformation campaigns or fake news (Chen, 2019). Fake news was rampant during Taiwan’s 2018 elections to the extent that Taiwan’s Ministry of Justice Investigation Bureau issued a report before the election highlighting “unequivocal evidence” that the Chinese government was leveraging online content farms to stoke division in Taiwanese society (Chien, 2018; Tu, 2018). The Bureau cited data collected by a task force monitoring the spread of fake news and found several stories aiming to exacerbate hysteria and division in Taiwan. These stories included overblown accounts of live-fire People’s Liberation Army drills in the Taiwan Strait; a claim that China intended to reclaim Taiwan by 2020; and an article falsely suggesting that Taiwan’s bananas were riddled with pesticides (Green, 2018).

Ahead of the election, the *New York Times* and the BBC alerted the world to China’s meddling in Taiwan’s election. The *New York Times* identified Beijing’s efforts to sway Taiwan’s politics using a new “Russian-style influence campaign” weapon, bringing attention to the large-scale military-fake messages attacking Taiwan (Horton, 2018). The BBC reported that China “used trolls and content farms” with links to the military to manipulate Taiwan’s public opinion and polarize society. China denied all accusations of distributing fake information, claiming that it wasn’t even worth refuting. The proliferation of fake news during the mayoral election had the eventual objective of altering Taiwan’s political landscape in the 2020 presidential election (Jakhar, 2018).

Coupled with Taiwan's second-hand TV news reporting that proliferated disinformation 24 hours a day, the 2018 election campaign created one of the darkest periods in Taiwan's election history. However, Taiwan's society maintained very divergent opinions about fake news issues. Some citizens consider fake news a devastating weapon that threatens Taiwan's democracy, while others view it as merely the ruling DPP government's excuse to avoid criticism and legislate relevant anti-fake news laws in an effort to inhibit freedom of speech.

As Taiwanese society is severely divided on the fake news issue, this research intends to conduct an empirical study to investigate whether fake news indeed impacted the outcomes of Taiwan's 2018 election. This study also intends to provide a case study on the potential effects of fake news on elections for other democratic societies.

Literature Review

Fake News During Taiwan's 2018 Elections

Precisely speaking, fake news refers to false reports that are deliberately fabricated and disseminated in traditional news media or online media formats for the purpose of "misleading the public" and putting forth "political or commercial interests." Specifically, fake news refers to "manipulative" news that appears to be credible but that is in fact meant to deceive, confuse, or persuade the masses. It often appears in the form of online news, but its dissemination is not limited to the Internet (Fisher, 2017).

This paper argues that disinformation is an umbrella term to include various types of information wars, including different forms of fake news. The "fake news" defined in this study refers to disinformation that is reported by mainstream media without verification, deliberately fabricated to attack targeted candidates or camps for misleading voters during the election period.

There are several remarkable fake news cases that occurred during Taiwan's 2018 election. For example, Chen Chi-Mei, the DPP's Kaohsiung mayoral candidate, held a press conference on October 15, 2018 during which he condemned a Facebook (FB) account of someone named "Li Ronggui" for repeatedly posting false accusations

against him and former DPP Kaohsiung Mayor Chen Ju's "cronies" for illegally contracting the Kaohsiung government construction projects. Later, the "Li Ronggui" IP address was confirmed to be a fake FB account from Singapore. Many of the fake accounts attacking Chen Chi-Mei were found overseas, including in China. Chen Chi-Mei's lawyers found and reported to the police official evidence of 30 fabricated online news stories intending to damage Chen's reputation.

On October 31, the National Security Commissioner confirmed in response to Legislative Yuan's inquiry that the National Security Bureau monitored social media and some public online communities, but stressed that the investigation was limited to only the content involving the president and national security issues.

Kaohsiung was on the front lines of the disinformation campaign. On November 10, the *Apply Daily* and other Taiwanese media outlets reported that the DPP's mayoral candidate Chen Chi-Mei used an earpiece to cheat during a televised debate. The Central Election Commission later said the reports were false, but the story had already spread widely online, and it continued to be aired on TV (Apple Daily, 2018; Wang, 2018).

Fabricated incidents so proliferated that on October 4th, Japan's "Yomiuri Shimbun" reported prominently on Taiwan's fake news issue, pointing out that China set up a "working task team against Taiwan" to shake up Tsai Ing-wen's government. If someone successfully scams the Taiwanese media, a bonus was earned. Japan's TV TOKYO later produced a documentary entitled the "Five-Mao Party," an in-depth report on how China's Internet surveillance employed a large-scale "Internet Army" of workers to produce fake news. The "Five-Mao Party" refers these fake news workers who earned 50 cents per fake news post.

Since President Tsai Ing-wen took power in 2016, she has been strongly critical of China because of her party's (DPP) stance of pro-independence of Taiwan's future. In a November 14 report, the US-China Economic and Security Review Committee concluded that China aimed to create a "fake civil society" in Taiwan that could subvert Taiwan's democratic system (USCC, 2019).

Taiwan has long been a target of cyberattacks, because Beijing regards Taiwan as a "breakaway province which needs to be reunited with the Chinese mainland."

However, the “scope, sophistication and intensity” of the disinformation campaign during Taiwan’s 2018 election appeared to be exceptionally escalated. According to Walker and Ludwig (2017), the Chinese regime penetrates the political and information environment in the targeted countries, with the aim to tarnish the general perception of democracy, to create divisions within societies, and to distort the political environment within democracies.

Considering the unusual circumstances of Taiwan’s 2018 election, the current study serves as a timely and necessary empirical investigation to scrutinize possible effects of disinformation during the election on the outcomes of the election.

Rumor Psychology

The theory of rumor psychology (DiFonzo & Bordia, 2007) is assessed to answer the following question: Why do people like to share unverified information? According to the theory, humans try their best to obtain “facts” from their surroundings to survive, and this, in turn, motivates them to search for and spread “accurate” information. However, in the absence of “accurate” information, several reasons may drive people to spread unverified information.

Existing rumor psychology identifies five related variables: uncertainty, importance or outcome-relevant involvement, lack of control, anxiety, and belief (Bordia & DiFonzo, 2002; Rosnow, 1991; Walker & Blaine, 1991). However, how these variables affect rumor transmission has not been robustly demonstrated.

Utilizing a motivation approach, DiFonzo and Bordia (2007) identified the transmission of rumors as a human social behavior goal. Social interaction occurs when people attempt to fulfill one or more of three goals: acting effectively, building and maintaining relationships, and managing favorable self-impressions (Cialdini & Goldstein, 2004). These three goals are represented by three motivations within the context of rumor transmission: fact-finding, relationship enhancement, and self-enhancement.

Human beings’ first goal in acting effectively is their motivation to find out the facts. In a social context, people need valid and accurate knowledge about their circumstances for survival, which therefore motivates them to search for and spread accurate information. DiFonzo and Bordia (2007) further identified “uncertainty,

importance, lack of control, and anxiety” as related to people’s fact-finding motivations.

Uncertainty is defined as a psychological state in which people doubt the meaning of current events or the occurrence of future events (DiFonzo et al., 1998). Feeling anxiety and lack of control is triggered by feelings of uncertainty about issues of personal importance. This motivates people to attempt to reduce uncertainty and anxiety and restore a sense of control over their circumstances, which generates a need to know (Ashford & Black, 1996; Berger et al., 1987; Berger & Bradac, 1982). Furthermore, if people cannot obtain information through formal channels, they turn to informal networks such as friends and social communities, and the resulting informal interpretation often becomes rumor.

In this election, Taiwan voters’ uncertainty perhaps came from the sluggish economy and often fraught relations with China. Though President Tsai was not on the ballot, this election was commonly seen as a chance for the electorate to rate her performance as they vote. While Taiwan’s economy continued to show sluggish growth, tensions with Beijing had risen since President Tsai’s independence-leaning Democratic Progressive Party (DPP) swept to power in 2016. Feeling uncertain about Taiwan’s political and economic future was very common among voters prior Taiwan’s 2016 election, and became a psychological state when consuming false or unverified information during election periods.

In addition, the definition of importance is the relevance of an event’s results to a person. If the outcome of an event is deemed more relevant to some people, those people are more likely to be involved in spreading rumors.

Needless to say, Taiwan’s 2018 election was crucial not only because local candidates, including mayor and neighborhood candidates argued about local issues, but more importantly, this election included 10 referendums on highly-divisive issues, including same-sex marriage. Aside from the above issues, this midterm election was also held amid a growing sense of Taiwan’s national identity. The importance of this particular election made it an inevitable battleground for fake news or rumors to proliferate.

Some voters' sense of lack of control came from the extremely uneven distribution of wealth in Taiwan. According to UBS and Pricewaterhouse Coopers' *Billionaire Insights 2019*, the number of billionaires in Taiwan has increased to 40, and their total wealth has grown by US\$1.1 billion. The average age of Taiwan's billionaires — among whom 16 are over the age of 70 — is 69, which is higher than the global average of 64, the report said. Large inheritances are the main cause of this extremely uneven distribution of wealth and the worsening gap between rich and poor.

On the other hand, more than half of Taiwanese households had an annual disposable income of less than NTD 290,000 (USD 9,527), and among them, some had no income at all. As a result, the issue of income inequality in Taiwan was not only about a declining middle class but also the existence of a large proportion of low-income households, as evidenced by the low-income earned by many working people (Chang, 2018).

Finally, both trait anxiety and state anxiety are related to rumor transmission. Jaeger et al. (1980) found that high trait anxiety students tend to spread more rumors than low trait anxiety students. Similarly, Walker & Beckerle (1987) found that high state anxiety participants are more likely to spread rumors than low state anxiety participants. Interestingly, they also found that high state anxiety participants pay less attention to the accuracy of the rumors they spread. This means that, although uncertainty about important topics may raise one's fact-finding motivation, one's anxiety may hinder the assessment of the accuracy of the resulting fact-finding (DiFonzo & Bordia, 2007).

The 2018 election was unique to Taiwan's voters because it was the first ballot featuring ten referendums, including pro- and anti-gay marriage votes and a bid to change the name under which Taiwan competes at international sports events, which has already angered China. Among the ten referendums, gay marriage was the most contentious issue. Legalizing gay marriage was President Tsai's promise to her voters in 2016 when she ran for president, yet Taiwan society had not yet come to a consensus regarding how gay marriage could be legalized.

As President Tsai Ing-wen faced a backlash over domestic reforms, many voters were anxious that Tsai's government would lead Taiwan to become an overly-

progressive country.

The second goal of human beings acting effectively triggers the motivation to enhance relationships. Tesser and Rosen (1975) pointed out people may try to make good impressions and please others in short-term relationships or in the early stages of relationship formation, which can cause people to sacrifice honesty for relationship-oriented goals and pass on information without care for its authenticity. This is especially true during times of uncertainty and high threat, such as during wartime and natural disasters, when information becomes more valuable. People often participate in rumor transmission unintentionally for the sake of heightening their social status.

According to rumor psychology, humans try their best to obtain “facts” from their surroundings to survive, and this, in turn, motivates them to search for and spread “accurate” information. However, in the absence of “accurate” information, several reasons may drive people to spread unverified information.

Taiwan’s 2018 election was the first time for this island to be massively attacked by fake news or disinformation. During challenging times, when people encountered information that was hard to instantly verify, they were likely to turn to seemingly authoritative or believable information sources, and these sources normally were people who had a higher social status either in the real or online world.

In short, the literature of rumor psychology provides explanations about why voters may choose to spread or believe in fake news during elections. Humans try their best to obtain “facts” from their surroundings to survive, and this, in turn, motivates them to search for and spread “accurate” information. However, in the absence of “accurate” information, several reasons may drive people to spread unverified information. In addition, when people doubt the meaning of specific election events, they often feel uncertain or anxious, and the current news events, in particular, tend to be highly relevant to them. Moreover, this feeling may trigger their lack of a sense-of-control. In the context of Taiwan’s 2018 election, voters may tend to believe information that confirms their pre-existing beliefs, which unfortunately might be false information.

Selective News Exposure

Previous studies show that people essentially tend to prefer congenial political information when they have a choice because ideological slants affect people's news consumption habits (Hart et al., 2009; Iyengar & Hahn, 2009; Guess et al., 2018). However, until now, we have very limited information about how selective exposure relates to misinformation or fake news. The political science and psychology literature has revealed that misperceptions are often related to people's political identities and predispositions (Flynn et al., 2017).

As a result, in this study, we decided to take voters' political slants as a significant independent variable. Taiwan has long been divided by the polarized political ideologies of pro-independence (green camp) and pro-unification (blue camp). In recent years, more and more voters tend to hide their political identities, claiming they are "neutral" in their political stance.

In addition, we evaluate whether Taiwanese voters consume fake news that reinforces their political views, as theories of selective exposure would predict. We consider the extent to which social media usage exacerbates the tendency toward selective exposure to misinformation. Bakshy, Messing, and Adamic's (2015) study indicates that the tendency toward selective exposure to attitude-consistent news and information may be exacerbated by the process of sharing and consuming content online. In this vein, social media news consumption may exacerbate selective exposure to factually dubious, but attitude-consistent, political information.

Therefore, we inquire into two main research questions in this study:

- (1) Did voters' discernment of fake news indeed affect election turnout for Taiwan's 2018 elections based on their political inclinations?
- (2) What are the voter profiles of those who tend to believe fake news more easily than news about Taiwan's 2018 elections?

Research Methodology

An online survey of 1068 randomly selected voters was conducted via Taiwan's largest Internet survey company platform in the two weeks following Election Day, November

24, 2018. There were three reasons for choosing an online survey over a traditional telephone survey. First, the survey needed to be completed during a short period of time, while voters would still have fresh recall of fake election news. Second, the news recall questions contained 12 news discernment questions comprised of six long paragraphs of fake news reporting and another six correct counter news statements, which made telephone surveying a very challenging (if not unlikely) option. Finally, the research scope involved various aspects of voters' social media use; therefore, respondents essentially needed to be Internet users.

Eighty-three percent of Taiwan's population now use the Internet; therefore, a representative survey conducted online has become a more viable option. The survey sample was randomly stratified from the company's database of over 250,000 registered Internet users. The stratified sample was based on 2018 demographic characteristics provided by the Taiwan Ministry of the Interior. Therefore, this sample should have considerable external validity and reliability for the intended research purpose.

Based on rumor psychology and selective exposure perspectives of the news media, the survey consists of four parts. First, the survey obtained the respondents' consent to participate in the study. Second, the survey asked for participants' demographic data, including party inclination, political parties voted for in 2018, education, gender, age, place of residence, and income level. The party inclination question was as follows: Among the following political parties in Taiwan, which one can best identify your political belief? DPP, KMT, NPP, SDP, TSP, GPT, PFP, NP, Minkuotang, or no specific party inclination? (See Appendix). In the further analysis, this paper recoded voters' party inclination into five categories: blue, light blue, neutral/independent, light green, and green, according to these political parties' stances on the future of Taiwan.

Third, the survey asked voters about their news consumption during the election, including their news media use habits and behavior, time of day/night they read or watched election news, and the most important news media source during this election, and questions about online media and social media usage. Fourth, the survey selected six of the most influential fake news items in the election based on two criteria and asked respondents whether they recalled that news item and how much of it they recalled. The two criteria were the amount of coverage of fake news stories in Taiwan's

four major newspapers during the election period (*Liberty Times*, *Apple Daily*, *United Daily*, and *China Times*), and the amount of coverage of Taiwan's fake news cases in internationally renowned media during election period (*New York Times*, *Washington Post*, Reuters, *Financial Times*, CNN, Aljazeera, etc.).

For each news item, the survey asked: "Do you remember seeing this news before the election?" To establish the degree of false news identification, the survey listed the clarification reports corresponding to each of the six news stories. Fake news discernment was measured in the survey by asking respondents whether they were able to judge the corrected versions of the six fake news items on Election Day and to what degree they could judge.² The measurement items used to discern these six news items are listed in the survey questionnaire in the section of "Fake News Discernment," ranging from the Kansai airport incident to the rumors that Taiping Island would be lent to the US (See Appendix 2).

At the time, considering whether these clarification statements were true, the survey also asked whether the respondents believed that a large amount of fake news or misinformation in this election was based on speculation that China was behind and in support of it, and whether they thought China might have intervened in the 2018 election.

Analysis of Research Results

The Impact of Fake News on Voting Behavior

Generally speaking, the research results revealed that the most influential fake news item in this election was "President Tsai rode armored vehicles to visit flooded areas in a rainstorm in August 2018; not only did she not step into the water to visit

² There were six fake news items selected for this study. The selection criteria was based on the reported volume of Taiwan's four major newspapers (*Liberty Times*, *Next Media*, *United Daily*, and *China Times*) from September to November 2018, as well as on well-known international media reporting focused on Taiwan's fake news or disinformation in the 2018 election, and the Internet volume indicated by DailyView (A famous Internet data website in Taiwan)

people in person, but also the armored soldiers were loaded with military weapons to protect her." Nearly 85% of voters had heard this news before the election, but fewer than 50% knew the true version of this news on Election Day. In other words, more than 50% voted with the understanding that "President Tsai posed a very arrogant attitude toward the suffering and failed to understand the pains of the victim." Among these were mainly politically light green (i.e., somewhat pro-independence) and neutral voters (Table 1).

A chi-squared test showed that voters' discernment levels were correlated with their voting decisions ($X^2_{(16)} = 20.60$, $p < .05$). In comparison to voters with more blue (KMT) inclination (38.8%), politically light green (27.4%) or neutral voters (24.2%) were less likely to discern the correct versions of news ($X^2_{(16)} = 44.74$, $p < .001$).

The second influential false news item was the Kansai International Airport "evacuation" incident that occurred during Typhoon Jebi in October 2018. The fake news originated from China (Lee & William, 2018) and claimed that when Kansai Airport was closed by floods, China's Osaka consulate evacuated 750 Chinese from the airport. If Taiwanese travelers identified themselves as Chinese, they were permitted to get on the evacuation bus. Taiwan's representative office in Osaka was bombarded by complaint calls accusing Taiwan's representative of not providing assistance to Taiwanese tourists stranded in the airport. Later, the information was corrected to say that no evacuation buses were allowed to enter the airport pick-up area. The buses sent by the Chinese consulate picked people up from Izumisano, 11.6 km away from the airport. This fake news incident eventually led to Su Chii-cherng's suicide; as the director of Taiwan's representative office in Osaka, he was deeply pained by the flood of criticism.

Before the election, 78% of voters were aware of the Kansai Airport fake news story; yet fewer than 50% of the voters were able to identify the true version of the story. In other words, about half of the voters cast their votes under the impression that the "Taiwanese diplomatic unit was very indifferent to Taiwanese travelers overseas." The chi-squared test further showed how voters' discernment levels of the Kansai International Airport fake news were correlated with their voting decisions ($X^2_{(16)} = 48.53$, $p < .001$). In comparison to voters with more blue (KMT) inclination (35.2%), politically light green (32.2%) or neutral voters (23.5%) were less likely to

discern the correct versions of the Kansai International Airport news ($X^2_{(16)} = 32.15$, $p < .001$).

All the six selected fake news items are listed in order of prominence in Appendix 1. However, it is worth noting that the fake news about President Tsai was obtained from the *China Times*, which belongs to the Want Want China Times, a media company influenced by the Chinese government (Hille, 2019; Hsu, 2019). Moreover, a content farm named Crazy Island and News spread this fake news during the elections (Hsu, 2018). The fake news about Kansai International Airport originated from the Guancha syndicate, which operates under Beijing’s Central Network Security and Information Committee Office (Du, 2018). The fake news about a webcasting host acting as a farmer petitioning KMT candidate Yan Gao Yu was extensively reported by CTiTV, which also belongs to the Want Want Media group.

Table 1

Voters’ Recognition and Discernment of the Most Prevalent Fake News Items in Taiwan’s 2018 Elections

False News Items (In order of prevalence)	Whether voters could discern the news on Election Day (Discernment Level of Fake News)	Sources
1. President Tsai’s Rainstorm incident	Recognition of the news before election day: 83% Could discern the correct news on election day: 43% Could not discern the correct news on election day: 57%	<i>China Times</i> /Content Farms (IP located in Taiwan)
2. Kansai International Airport “evacuation” incident during Typhoon Jebi in October 2018	Recognition of the news before election day: 78% Could discern the correct news on election day: 46% Could not discern the correct news on election day: 54%	Guancha Syndicate

Table 1 (Continued)

False News Items (In order of prevalence)	Whether voters could discern the news on Election Day (Discernment Level of Fake News)	Sources
3. The “Weeping Northern Floating Youth” incident	Recognition of the news before election day: 67% Could discern the correct news on election day: 48% Could not discern the correct news on election day: 51%	KMT candidate Han Gao Yu’s Campaign Teams
4. Webcasting host acted as farmer incident	Recognition of the news before election day: 52% Could discern the correct news on election day: 47% Could not discern the correct news on election day: 53%	Internet Celebrity/CiTV
5. Li Ronggui’s fake account incident	Recognition of the news before election day: 35% Could discern the correct news on election day: 33% Could not discern the correct news on election day: 67%	Overseas Fake FB account
6. Taiping Island incident	Recognition of the news before election day: 30% Could discern the correct news on election day: 30% Could not discern the correct news on election day: 70%	Content Farms (IP located in China)

Since this study found that about half of Taiwanese voters could not discern the fake news during election periods, this study further investigated the impact of the fake news on election outcomes.

The analysis demonstrated that voters who could not judge the authenticity of fake news were more likely to cast votes for the Kuomintang candidates. This tendency was especially evident in voters whose political inclinations were lightly pro-independent or neutral. The chi-squared test further revealed that on the day of the elections, voters with a higher tendency toward pro-unification with China possessed higher levels of fake news discernment. Voters with lower discernment levels for fake news in election periods were politically more independent or neutral. The X^2 values for the six fake news items ranged from 39.75 to 20.00, but, except for the “Li Ronggui Fake Account” news, all others were above significant levels ($p < .05$).

It should be pointed out that, in this study, the relationship between fake news and voting behavior was correlational rather than causal. That is, several factors influenced voters’ decisions, and this study could only prove that fake news was one of the factors.

In addition, this study inquired into whether voters believed there was “foreign interference” in support of specific candidates or attacks against candidates from different camps in this election. Forty-eight percent of voters believed that there was foreign interference, while 52% did not believe or could not judge whether it was true. As for whether Chinese funds were involved in this election, only 40% were positive about the answer, while 60% did not believe or could not judge whether it was true.

This research also investigated how voters checked news accuracy in the election. Twenty-five percent of voters verified the authenticity of news by “comparing reports from media with different political positions;” this was the most common way that was adopted by voters. Nearly 20% of voters chose to check against cyberspace opinion leaders’ comments. As for the newly established news checking organizations in Taiwan, 57% of the voters had never heard of them. The lowest usage rate was for the “instant news clarification service” on the Executive Yuan website. Up to 60% of people had never heard of it or never used the Executive Yuan’s news checking services.

Who Tended to Believe in Fake News in Elections the Most?

Since the survey results demonstrated that fake news in Taiwan’s 2018 election may have significantly impacted voting behavior, which segments of voters found it

easier to believe in fake news apart from their political inclinations?

To answer this question, this study conducted further cross-analyses of several demographic factors, including voters' age, gender, education, income, and place of residence. Results revealed that female voters were less able to judge the authenticity of false news in this election than male voters. Nearly 50% of female voters were unable to judge the authenticity of fake news on the day of the election, in contrast to the fewer than 30% of male voters who could not judge fake news correctly ($X^2_{(4)}=53.19, p =.000, < .001$). This may be due to Taiwan's male voters paying more attention to political information and consuming more political news during the election than female voters.

Table 2

The Impact of Gender on Voters' Discernment Levels of Fake News (%)

Fake News Discernment Levels	Mostly able to judge the authenticity of fake news	Partly able to judge the authenticity of fake news	Not very able to judge the authenticity of fake news	A bit unable to judge the authenticity of fake news	Not unable to judge the authenticity of fake news	Number of Respondents /Percentage
Gender						
Male	24.2	29.6	13.5	4.3	28.9	534/50
Female	13.3	22.5	12.4	2.8	49.15	534/50

$X^2_{(4)}=53.19, p =.000, < .001, N=1068$.

As for the impact of age and education on the discernment of fake news, this study unexpectedly found that young people between 20 and 30 years old formed the age group that was least able to judge the authenticity of news during the election period.

Age was found to be positively correlated with news discernment capability. For voters aged between 20 and 29, only 48.1% could identify fake news on Election Day. However, nearly 60% (59.6%) of the voters aged 50–59 were able to correctly judge fake news. Fifty-five percentage of voters over 60 years old could also discern fake news ($X^2_{(16)}=36.60, p =.014, < .05$). In other words, the younger the voter, the more they tended to believe fake news in Taiwan's 2018 election.

Table 3

The Impact of Voters' Age on Their Discernment Levels of Fake News (%)

Discernment Levels of Fake News Age	Mostly able to judge the authenticity of fake news	Partly able to judge the authenticity of fake news	Not very able to judge the authenticity of fake news	A bit unable to judge the authenticity of fake news	Not unable to judge the authenticity of fake news
20-29	12.9	35.2%	15.6	5.1	31.2
30-39	16.0	30.2	14.2	9.7	29.9
40-49	21.6	26.3	14.4	9.0	28.8
50-59	24.6	35.0	13.7	8.7	18
60 Above	28.6	27.0	22.2	6.3	15.9

$X^2_{(16)}=36.60, p =.014, < .05, N=1068.$

Note: The observed cases and percentages in each age category are as follows: the 20-29 group, 256 cases, 24%; the 30-39 group, 288 cases, 27%; 40-49 group, 278 cases, 26%; 50-59, 183 cases, 17.1%, and voters above 60 years old, 63 cases, 5.9%.

This discovery seemingly contradicts the general impression that older people tend to disseminate more disinformation than younger people (Guess et al., 2019). However, this study focused on the discernment capability of fake news, not on forwarding disinformation. I would argue that the reason Taiwan's younger voters revealed a lower level of false news discernment may reflect their "political distrust" of the ruling DPP government and their tendency to distrust any favorable news versions of controversial issues. The six false news items selected for this study were all unfavorable to the ruling party; it may be that the grievances caused by the ruling party before the election made the younger group unwilling to believe any follow-up clarifying or correcting news reports.

Another possible explanation is that the main news sources for Taiwan's young people were social media sources, and that the massive dissemination of fake news through social media may produce a priming effect whereby young people are primed by their first impressions of news stories. The news they saw first became the most

credible news; therefore, they either ignored or were unwilling to accept the corrected versions of the news stories in order to keep their cognitive consonance.

As for voters' education levels, this study did find that education level significantly influenced voters' judgment of fake news. ($X^2_{(12)}=26.71, p =.008, < .05$). The higher educated voters (graduate school level or above) appeared to be less likely to accept false news clarifications than the lower educated voters (middle school level or high school level). This may be due to some reform policies, such as the ruling DPP party implemented annuity reforms for cutting highly-educated groups' pensions before the election, which may have led to the more highly-educated voters not being very willing to believe the corrected versions of news stories, meaning that their emotional judgment surpassed their rational judgment of truth in the news.

Table 4

The Impact of Education on Voters' Discernment Levels of Fake News (%)

Fake News Discernment Levels	Mostly able to judge the authenticity of fake news	Partly able to judge the authenticity of fake news	Not very able to judge the authenticity of fake news	A bit unable to judge the authenticity of fake news	Not unable to judge the authenticity of fake news	Number of Respondents /Percentage
Middle School or Below	14.3	35.7	25.0	3.6	21.4	28/2.6
High School	23.2	27.6	13.3	7.7	28.2	181/16.9
College or University	17.9	31.8	14.3	6.7	29.3	699/65.4
Graduate School or Above	19.4	30.6	18.1	15.0	16.9	160/15

$X^2_{(12)}=26.71, p =.008, < .01, N=1068$

In terms of income, this study divided respondents' monthly income into seven categories: less than 10,000 NT dollars (inclusive); 10,000–20,000; 20,000–30,000; 30,000–40,000; 40,000–50,000; and 50,000–100,000. We found that voters whose monthly income was between 50,000–100,000 NT dollars had the most correct judgment of fake news ($X^2_{(20)}=58.74, p =.000, < .01$). Therefore, income levels are

positively correlated with voters' discernment capability for fake news during elections.

Table 5

The Impact of Voters' Income on Their Discernment Levels of Fake News (%)

Discernment Levels of Fake News	Mostly able to judge the authenticity of fake news	Partly able to judge the authenticity of fake news	Not very able to judge the authenticity of fake news	A bit unable to judge the authenticity of fake news	Not unable to judge the authenticity of fake news
Monthly Income (Taiwan Dollars)					
Below 10,000	12.5%	30.9%	13.8%	5.9%	36.8%
10,000-20,000	17.9%	30.5%	15.8%	8.4%	27.4%
20,000-30,000	21.8%	32.2%	11.8%	6.2%	28%
30,000-40,000	18%	36.1%	17.3%	3.0%	25.6%
40,000-50,000	17.6%	29.4%	18.6%	18.6%	15.7%
50,000-100,000	25.9%	33.9%	13.4%	10.7%	16.1%
Above 100,000	24.3%	32.4%	18.9%	8.1%	16.2%

$X^2_{(30)}=58.74, p =.000, < .01, N=1068.$

Note: The income in this table indicates personal monthly income in Taiwan dollars. The observed cases and percentages in each income category are as follows: below 10,000 (\$334US), 283, 26.5%; 10,000-20,000 (\$334-\$668US), 211, 19.8%; 20,000-30,000 (\$668-\$1,003US), 190, 17.8%; 30,000-40,000 (\$1003-\$1,337US), 133, 12.5%; 40,000-50,000 (\$1,337-\$1,671US), 102, 9.6%; 50,000-100,000 (\$1,671-\$3,342US), 112, 10.5%; and over 100,000 (\$3,342US), 37, 3.5%.

For the selective news consumption effect of the fake news during this election, survey results revealed that TV news was the most influential media as compared to online news media, social media, or newspapers. More noticeably, voters demonstrated apparently selective TV news consumption patterns. Voters who were more tuned in to pro-unification TV news channels tended to believe more in fake news than voters who watched pro-independence or more neutral TV news channels across

the six selective fake news stories in this study ($X^2_{(12)}=39.85, p =.001, < .01$).

Conclusion and Discussion

This study is one of the first empirical studies to investigate the potential impacts of fake news on Taiwan's elections. Results showed that fake news indeed is correlated with voters' news judgment and voting decisions. More than 50% of voters cast their votes without knowing the correct news during the campaign period. In particular, politically neutral voters were least able to judge fake news, and they tended to vote for the Kuomintang candidates.

Regarding demographic differences, female voters were more inclined to believe fake news during election periods than male voters. Younger voters (20–29 years old) had a weaker discernment level for fake news, while voters with lower incomes and higher social media usage frequencies were least able to distinguish between fake news and true news stories.

Existing psychological literature names five characteristics related to rumor communication: uncertainty, importance or outcome-relevant involvement, lack of control, anxiety, and belief. Voters who were more vulnerable to false news in the 2018 election portrayed more of these characteristics. Younger people and lower-wage groups tended to display a greater sense of uncertainty and anxiety, perceived less control about their future and showed a stronger distrust in the ruling government.

Why were younger voters more vulnerable to fake news in Taiwan's 2018 local election than other age groups? This paper argues that Taiwan's 2018 election also included referendum ballots. Referendum issues such as gay marriage and nuclear policies particularly drew young voters' attention. Therefore, they did not strong feelings about political issues (local governance) compared to other citizens in this election. However, Taiwan's 2018 election was a local-level election. The findings may be different from elections at the national level, such as Taiwan's presidential elections, in which political issues (particularly national identities) are more likely to draw voters' attention within all age groups, including young voters.

In addition, female voters had less interest in and paid less attention to political information, which may have resulted in their lower ability to accurately judging the authenticity of fake news in the election.

The results of this study can provide inferences from several perspectives. First of all, rumor spread is not a new phenomenon in communication history. Rather, it is the evolution of media technologies through the Internet age that has increased the detrimental influence of rumor spreading. Especially in Taiwan, the TV news media relies heavily on Internet news sources regardless of whether they are verified or false; this allows false news from the Internet to be disseminated to the public with immense and far-reaching impact. During the election, the dissemination of false news caused many people to be unable to correctly judge crucial information about significant issues or candidates, which may have resulted in unfair election outcomes, threatening the foundations of democracy. The case study of Taiwan may prove that disinformation wars aims could be achieved under certain circumstances.

The unprecedented spread of false news during the elections occurred within several remarkable social areas. For example, President Tsai Ing-wen implemented a series of reforms since taking office in 2016. Among them, annuity reform offended a large number of citizens who were cut off from having pensions. The revision of the Labor Standard Acts also caused a big rebound among young people and labor groups.

Most significantly, Kaohsiung City, which had been under DPP's power for 20 years, and which used to be regarded as a "dark green" area on the political spectrum (i.e., in deep favor of Taiwan's independence), was easily taken over by a former KMT legislator, Han GaoYu, who possesses a dark blue political stance (deep pro-unification with China). Han's straightforward style of speaking was deemed primitive and full of populist sensibility, in contrast to professional politicians' elite images. "Han's Wave" is created by various Taiwanese media, particularly CTiTV's 24 hours "non-stop coverage," to describe the craze that transforms a politician into a "resurgent star" (Hille, 2019).

"Han's Wave" creates deep divisions in Taiwanese society, as Han's supporters tend to attack anyone who criticizes Han because he is viewed by his fans as "the only man who will be performing economic miracles where all others have failed" (Cole,

2019). Taiwanese society has long been divided on political perspectives with respect to its future; blue camps lean toward ultimate unification with China while green camps are inclined to pursue a politically independent country. News media in Taiwan has thus been polarized in terms of a political spectrum. With the rise of “Han’s Wave,” such long-term polarization of the Taiwan’s news media continues to diminish the possibility of voters judging false political news accurately. Biased news reports and talk show programs contribute to the Taiwanese bipolar news consumption habits. The current study further confirmed the effects of such bipolar news reception. Voters who tuned in to pro-unification TV news channels tended to believe in fake news more than voters who watched pro-independence or more neutral TV news channels across the six selective fake news stories in this study.

Since TV news channels remained the most significant sources of election information for Taiwanese voters, what can this study’s findings suggest to international societies? First of all, Taiwan’s 2018 election case study revealed that disinformation generally originated from several sources, including China’s government media, China-friendly media groups in Taiwan (specifically Want Want group’s CTiTV and China Times), and fake FB accounts either located in China or foreign countries (Singapore in this study). A general spreading out pattern shows disinformation originated outside of Taiwan, was widely discussed in Taiwan’s major online forums (the largest one was PTT), and then extensively covered by mainstream media. Once the disinformation was reported substantially by TV news stations, it became a breach of “fake news” for Taiwan’s general publics. This study suggests that politically neutral voters could be a group who are more vulnerable to fake news.

This study proved when disinformation was covered by mainstream news media and echoed the society’s dissatisfaction with certain issues, it was particularly likely to be a breach of fake news extensive dissemination.

Second, this study also finds that selective news exposure results in people’s consuming news media that is similar to their political position and rejects information of disparate points of views. Few people would try to cross reference information across media with diverse stances. Even fewer take the initiative to verify news via the NGO or government news checking services.

All in all, Taiwan's 2018 election case study revealed that fake news was extensively influential because of the coverage in mainstream news media. This scenario may be a bit different from other countries facing disinformation issues where the Internet or social media are the main battlegrounds. Would different findings be found in other societies' election under disinformation attacks, if given different media battlegrounds? As a consequence, would different voters' demographic features or segments be found in other societies to demonstrate more correlations or effects of fake news in election campaign periods? More studies are awaited to answer these inquires.

Taiwan's ruling DPP party has tried to compensate for the devastating effects of disinformation. Taiwan's Executive Yuan has proposed numerous amendments to regulate the dissemination of fake news to the Legislative Yuan. However, any measures to tighten media are extremely controversial because they may be potentially harmful to the right of freedom of speech. As a result, most bills or legal revisions regarding regulating fake news or disinformation are still suspended in the Legislative Yuan. So far, only added clauses to the Social Order Maintenance Act are in effect. The Foreign Agents Registration Act has been suspended.

However, in addition to legal regulations, the government of Taiwan has not yet taken enough action to combat fake news. For example, the Australian government set up a task force to identify potential cyberattacks and foreign influence campaigns targeting upcoming elections (Buchanan, 2020). The Taiwanese government has not yet integrated a task force to respond to disinformation operations, nor has an official report been published to inform the public about what to do about disinformation. Massive media literacy campaigns have not yet organized or taken effect.

Nonetheless, Taiwan finished its presidential election in January 2020, and the two primary candidates were the current president Tsai Ing-wen and Kaohsiung's elected mayor Han Kuo-yu. The 2020 election ended with Tsai Ing-wen's landslide victory and won her second presidential term; she secured over 57% of the ballots and a record of 8.2 million votes, well ahead of her main rival Han Kuo-yu.

Before the 2020 election, just like the scenario of the 2018 local elections, a flood of disinformation had threatened to drown Taiwan, and it was breathtaking to

see whether the voters' choices would be once again affected by disinformation or fake news.

With the backdrops of Xi's Jinping's speech in January 2019, in which he reemphasized the use of force if Taiwan resisted achieving unification, and Hong Kong's mass anti-government protest against Beijing's growing influence since mid-2019, it is too soon to determine the influence of disinformation on Taiwan's 2020 presidential and legislative election outcomes without further empirical studies' evidence. It is worth noting that a survey conducted right before Taiwan's 2020 presidential and legislative election showed that over half of Taiwan's people (54.1%) perceived the prevalence of disinformation in news media during the 2020 election. As a result, future studies will be imperative to scrutinize the possible impacts of disinformation or fake news widely circulated in the 2020 elections, given Taiwan's citizens' increased recognition of disinformation in the drastically changing political circumstances.

References

- Apply Daily*. (2018, November 10), Chen Chi-Mai wearing headsets in debates; Chen: Not truth.
<https://tw.appledaily.com/politics/20181110/AV3AGKTXOZZYBTKQWQPW7PZH4/>
- Ashford, S. J., & Black, J. S. (1996). Proactivity during organizational entry: The role of desire for control. *Journal of Applied Psychology*, 81, 199–214.
<https://doi.org/10.1037/0021-9010.81.2.199>
- Bakshy, E., Messing, S., & Adamic, L. A. (2015). Exposure to ideologically diverse news and opinion on Facebook. *Science*, 348(6239), 1130-1132.
<https://doi.org/10.1126/science.aaa1160>
- Berger, C. R., Roloff, M. E., & Miller, G. R. (1987). *Interpersonal processes: New directions in communication research*. Sage.
- Bordia, P. & DiFonzo, N. (2002). When social psychology became less social: Prasad and the history of rumor research. *Asian Journal of Social Psychology*, 5(1), 49-61. <https://doi.org/10.1111/1467-839X.00093>
- Berger, C. R., & Bradac, J. J. (1982). *Language and social knowledge: Uncertainty in interpersonal relations*. Edward Arnold.

- Buchanan, K. (2020), Government responses to disinformation on social media platforms: Australia. Library of Congress Law.
<https://www.loc.gov/law/help/social-media-disinformation/australia.php>
- Chang, C.-f. (2018). Economic inequality and low wages in Taiwan. *Taiwan Insight*.
<https://taiwaninsight.org/2018/12/21/economic-inequality-and-low-wages-in-taiwan/>
- Chen, K. W. (2019). China's sharp power and Taiwan's 9-in-1 subverting democracy with democratic means. *Taiwan Strategists*, 1, 1-15.
- Chien, H. J. (2019). Ruidian diaocha: Waiguo jia xinwen gongji Taiwan shouhai zuishen [Sweden survey: Taiwan was severely attacked by foreign misinformation]. *Liberty Times*.
<https://news.ltn.com.tw/news/focus/paper/1280728>
- Chien, L. C. (2018, September 14). Wang lu jia xinwen fanlan diaocha ju: Zhonggong muhou caozuo mingxian [Rampant fake news online, Investigation Bureau: China's manipulation behind the scenes]. *Liberty Times*.
<https://news.ltn.com.tw/news/society/breakingnews/2551310>
- Cialdini, R. B., & Goldstein, N. J. (2004). Social influence: Social norms, conformity and compliance. *Annual Review Psychology*, 55, 591–621.
- Cole, J. M. (2019). The Han Kuo-yu craze threatens democracy. *Taiwan Sentinel*.
<https://sentinel.tw/the-han-kuo-yu-craze-threatens-democracy/>
- DiFonzo, N., & Bordia, P. (2007). *Rumor psychology: Social and organizational approaches*. American Psychological Association.
- Difonzo, N., Hantula, D. A., & Bordia, P. (1998). Microworlds for experimental research: Having your (control and collection) cake, and realism too. *Behavior Research Methods, Instruments, & Computers*, 30(2), 278-286.
<https://doi.org/10.3758/BF03200656>
- Du, J. (2018). Yan cheng zheyang, mei xiangdao, zhongguo lingshiguan lai jie renle! Taiwan tongbao wen [The Chinese consulate is coming to pick up!]. *Guancha*.
https://www.guancha.cn/international/2018_09_05_470949.shtml
- Fisher, A. L. [2017, July 5]. Fake news is bad. Attempts to ban it are worse. *Vox*. Retrieved from <https://www.vox.com/the-big-idea/2017/7/5/15906382/fake-news-free-speech-facebook-google>.

- Flynn, D. J., Nyhan, B., & Reifler, J. (2017). The nature and origins of misperceptions: Understanding false and unsupported beliefs about politics. *Political Psychology, 38*. <https://doi.org/10.1111/pops.12394>
- Green, D. (2018, October 18). Taiwan takes centerstage in global fight against 'fake news.' *News Lens International*.
<https://international.thenewslens.com/article/106412>
- Guess, A., Nagler, J., & Tucker, J., (2019). Less than you think: Prevalence and predictors of fake news dissemination on Facebook. *Science Advances, 5*(1), 4586. <http://doi.org/10.1126/sciadv.aau4586>
- Guess, A., Nyhan, B. and Reifler, J., 2018. Selective exposure to misinformation: Evidence from the consumption of fake news during the 2016 US presidential campaign. *European Research Council, 9*.
- Hart, W., Albarracín, D., Eagly, A. H., Brechan, I., Lindberg, M. J., & Merrill, L. (2009). Feeling validated versus being correct: A meta-analysis of selective exposure to information. *Psychological Bulletin, 135*(4), 555–558.
<https://doi.org/10.1037/a0015701>
- Hille, K. (2019). Taiwan primaries highlight fears over China's political influence. *Financial Times*. <https://www.ft.com/content/036b609a-a768-11e9-984c-fac8325aaa04>
- Horton, C. (2018, November 22). Specter of Meddling by Beijing Looms Over Taiwan's Elections. *The New York Times, 4A*.
<https://www.nytimes.com/2018/11/22/world/asia/taiwan-elections-meddling.html>
- Hsu, S. (2019). Protesters gather in Taipei asking 'red media' to leave Taiwan. CNA
<http://focustaiwan.tw/news/acs/201906230011.aspx>
- Hsu, Y. J. (2018, October 16). Fake news caught! Rumor monger of Tsai Ing-wen's visit victims with armored soldiers was arrested. *The Storm Media*.
- Iyengar, S., & Hahn, K. S. (2009). Red media, blue media: Evidence of ideological selectivity in media use. *Journal of Communication, 59*(1), 19-39.
<https://doi.org/10.1111/j.1460-2466.2008.01402.x>
- Jaeger, M. E., Anthony, S., & Rosnow, R. L. (1980). Who hears what from whom and with what effect: A study of rumor. *Personality and Social Psychology*

- Bulletin*, 6(3), 473-478. <https://doi.org/10.1177/014616728063024>
- Jakhar, P. (2018, November 21). Analysis: 'Fake news' fears grip Taiwan ahead of local polls. BBC. <https://monitoring.bbc.co.uk/product/c200fqlq>
- Lee, H., & William, H. (2018, September 9). Chinese Kansai evacuation story 'fake news': DPP. *Taipei Times*.
<http://www.taipeitimes.com/News/taiwan/archives/2018/09/09/2003700087>
- Lührmann, A., & Lindberg, S.I. (2019). Democracy facing global challenges: V-Dem annual democracy report. V-Dem Institute. https://www.v-dem.net/media/filer_public/99/de/99dedd73-f8bc-484c-8b91-44ba601b6e6b/v-dem_democracy_report_2019.pdf
- Rosnow, R. L. (1991). Inside rumor: A personal journey. *American Psychologist*, 46(5), 484-496. <https://doi.org/10.1037/0003-066X.46.5.484>
- Tesser, A., & Rosen, S. (1975). The reluctance to transmit bad news. *Advances in Experimental Social Psychology*, 8, 193-232. [https://doi.org/10.1016/S0065-2601\(08\)60251-8](https://doi.org/10.1016/S0065-2601(08)60251-8)
- Tu, G. M. (2018, September 14). Jiaqiang sou bao meiti xunxi? Guoan ju: Zhangwo yuqing zoushi [Monitoring controversial information? Big data task force established to understand opinions]. *Liberty Times*.
<https://news.ltn.com.tw/news/politics/breakingnews/2551033>
- USCC (2019) Annual Report of the U.S.-China Economic and Security Review Commission, Chap.5, Taiwan, 445-470.
<https://www.uscc.gov/sites/default/files/2019-11/2019%20Annual%20Report%20to%20Congress.pdf>
- Walker, C., & Ludwig, J. (2017). From 'soft power' to 'sharp power': Rising authoritarian influence in the democratic world. In National Endowment for Democracy, (Ed.), *Sharp Power: Rising Authoritarian Influence*, (pp. 8-26). National Endowment for Democracy. <https://www.ned.org/wp-content/uploads/2017/12/Sharp-Power-Rising-Authoritarian-Influence-Full-Report.pdf>
- Walker, C. J. and Beckerle, C. A. (1987). The effect of state anxiety on rumor transmission. *Journal of Social Behavior and Personality*, 2(3), 353-360.
- Walker, C. J. and Blaine, B. (1991). The virulence of dread rumors: A field

experiment. *Language & Communication*, 11, 291-297.

Wang, R. (2018, November 12). Fake News Says Chen Che-Mai Wearing Headsets in Debates; Chen: Conspiratorial Smears, *Liberty Times*.
<https://news.ltn.com.tw/news/focus/paper/1246215>

Appendix 1: Fake News Stories Used in This Study

The most prominent story was President Tsai's Rainstorm incident. The false version of the news was that President Tsai Ing-wen rode a military armored vehicle to visit victims in a huge rainstorm in August 2018. She commanded the soldiers to be armored to protect her safety, stood smilingly on the vehicle, and did not step into the water to visit the victims. The correct version of the news was that the military vehicle was not armed with any weapons. Tsai stepped into the water in rain boots to visit victims. She was smiling to residents who waved to her.

The second prominent fake news was the Kansai International Airport "evacuation" incident during Typhoon Jebi in October 2018. The false news version claimed that when Kansai Airport was closed by floods, China's consulate in Osaka evacuated 750 Chinese citizens from the airport. If Taiwanese travelers identified themselves as Chinese, they were allowed to get on the evacuation bus too. Meanwhile, Taiwan's representative office in Osaka did not provide any help to Taiwan's traveling citizens. However, the truth was no evacuation buses were allowed to enter the airport pick-up area. The buses sent by the Chinese consulate picked people up from Izumisano, which was 11.6 km from the airport. No Taiwanese got on these buses either.

The third fake news case was the "Weeping Northern Floating Youth" incident. The false version was that a young lady weeping in Han Gao Yu's "Northern Floating Youth" campaign advertising videos is mourning that she has been working since graduation in Taipei (the Northern area in Taiwan) because of Kaohsiung's (the Southern area in Taiwan) economic recession. She could not even return home when her family members passed away. However, this young lady was actually a member of the cheerleading team of Premier League Fubang. She had been studying and living in Taipei since middle school. She has been also pursuing an entertainment career and

participating in China's variety shows. She identified herself as a cheerleader from "Taipei, China" on the shows.

The fourth case was about a webcasting host incident. A cabbage farmer named "Wax Brother" kneeled down and wailed in front of Han Gao Yu in a rally, crying that the cabbage price had dropped to two NT\$ for 600 kg. Later, this "Wax Brother's" true identity was revealed. He was actually a host in a webcasting/streaming show and had acted as a cabbage farmer when petitioning Han.

The fifth case was the fake Li Ronggui account incident. During the campaigns, a FB account using the name "Li Ronggui" repeatedly posted accusations against DPP Kaohsiung's mayoral candidate and former DPP Kaohsiung's mayor Chen Ju, saying that they had illegally contracted the Kaohsiung government construction projects and that they were involved in procurement fraud cases. However, the police investigation confirmed that the IP address for the "Li Ronggui" FB account was fake, and the IP address of the account was traced to Singapore. After the police revealed the investigation results, "Li Ronggui" continued distributing misinformation online until the Taiwanese police threatened the individual running the account.

The sixth case was the Taiping Island incident. During the elections, there were news reports stating that President Tsai Ing-wen considered renting Taiping Island to the United States as a military base without considering the needs and welfare of the Taiping fishermen. However, the Taiwanese government officially claimed that it never planned to rent Taiping Island to other countries, including the United States, nor has any foreign country ever made such a request.

Appendix 2: Variables and Measurements in the Survey Questionnaire

Questionnaire Section	Variable	Level of Measurement	Measure	
I. Basic Information	Voting or Not Voting	Nominal	Yes or No	
	Party of mayoral candidate voted	Nominal	KMT, DPP, Independent Candidates, or other parties	
	Gender	Nominal	Male, Female or others	
	Age	Ordinal	20 to 29, 30 to 39, 40 to 49, 50 to 59, or above 60	
	Education	Ordinal	Junior high school or below, high school, university, graduate school or above	
	Place of residence		Nominal	Taipei City, New Taipei City, Taoyuan City, Taichung City, Taichung County, Tainan City, Tainan County, Kaohsiung City, Yilan County, Hsinchu City, Hsinchu County, Miaoli County, Changhua County, Nantou County, Yunlin County, Chiayi City, Chiayi County, Pingtung County, Taitung County, Hualien County, or Keelung City

Appendix 2: Variables and Measurements in the Survey Questionnaire

Questionnaire Section	Variable	Level of Measurement	Measure
	Income level	Ordinal	5,000 and below, 5,001 to 10,000, 10,001 to 20,000, 20,001 to 30,000, 30,001 to 40,000, 40,001 to 50,000, 50,001 to 100,000, or 100,001 and above
	Party inclination	Nominal	DPP, KMT, NPP, SDP, TSP, GPT, PFP, NP, Minkuotang, or no specific party inclination
II. News Media Use	The most important news source in this mayoral election	Nominal	Social media, online news, TV News, newspaper, or radio and the others
	Average time spent consuming news or information about the election via news media	Ordinal	Less than one hour, one to two hours, two to three hours, three to four hours, four to five hours, or more than five hours
	Average time spent consuming news or information about the election via social media (e.g., Facebook, LINE, and Instagram)	Ordinal	Less than one hour, one to two hours, two to three hours, three to four hours, four to five hours, or more than five hours

Appendix 2: Variables and Measurements in the Survey Questionnaire

Questionnaire Section	Variable	Level of Measurement	Measure
	The most viewed online news platforms during the period of mayoral election	Nominal	Yahoo News, Now News, ET Today, Facebook, PTT, The Storm Media, LINE, Google sites, YouTube, and Pixnet (multiple response question, no more than three)
	The most viewed TV news channels during the period of mayoral election	Nominal	TVBS, SET, CTI, EBC, ERA, Next TV, FTV, TTV, CTV, CTS, and PTS (multiple response question, no more than three)
	The most viewed newspaper during the period of mayoral election	Nominal	Liberty Times, Apple Daily, United Daily or China Times
	The most used online campaigning platform of candidates	Nominal	Facebook, LINE, Facebook fans page, candidates' live stream, or online live programs
III. Fake News Cognition	Whether the respondents recalled the six of the most influential fake news items in the election and how much they recalled: 1. A farmer named "Wax Brother" kneeled down and wailed in front of Han Gao-yu, crying that the cabbage price had	Ordinal	Likert scale (Very clearly, clearly, a bit unclear, very unclear, or not remember at all)

Appendix 2: Variables and Measurements in the Survey Questionnaire

Questionnaire Section	Variable	Level of Measurement	Measure
	<p>dropped to two NT\$ for 600 kg.</p> <p>2. During Typhoon Jebi in October 2018, Kansai Airport was closed. If Taiwanese travelers identified themselves as Chinese, they were allowed to get on the evacuation bus, while Taiwan’s representative office didn’t provide any help.</p> <p>3. President Tsai Ing-wen visited victims in a huge rainstorm in August 2018. She commanded the soldiers to be armed to protect her safety, and did not step into the water to visit the victims.</p> <p>4. A Facebook account named “Li Ronggui” repeatedly posted accusations against DPP Kaohsiung’s mayoral candidate and former DPP Kaohsiung’s mayor Chen Ju, saying that they were involved in procurement fraud cases.</p> <p>5. In Han Gao-yu’s “Northern Floating</p>		

Appendix 2: Variables and Measurements in the Survey Questionnaire

Questionnaire Section	Variable	Level of Measurement	Measure
	<p>Youth” campaign advertising videos, a young lady was mourning that she had been working since graduation in Taipei, because of Kaohsiung’s economic recession, and she could not even return home when her family members passed away.</p> <p>6. President Tsai Ing-wen considered renting Taiping Island to the United States as a military base without considering the needs and welfare of the Taiping fishermen.</p>		
IV. Fake News Discernment	<p>Whether the respondents were able to judge the corrected versions of the six fake news items on the election day and to what degree they could judge.</p> <ol style="list-style-type: none"> 1. “Wax Brother’s” true identity was a host in a webcasting/streaming show. 2. The evacuation buses sent by the Chinese consulate picked people up from 	Ordinal	Likert scale (strongly agree the corrected report as true, partly agree, partly disagree, strongly disagree, or not able to judge)

Appendix 2: Variables and Measurements in the Survey Questionnaire

Questionnaire Section	Variable	Level of Measurement	Measure
	<p>Izumisano, 11.6 km away from Kansai airport. No Taiwanese got on the buses either.</p> <p>3. The military vehicle President Tsai rode in a huge rainstorm in August 2018 was not armed with any weapons. Tsai stepped into the water in rain boots to visit victims.</p> <p>4. The police investigation confirmed that the IP address for the “Li Ronggui” Facebook account was fake and the IP address was traced to Singapore.</p> <p>5. The young lady in Han Gao-yu’s “Northern Floating Youth” campaign advertising videos was actually a member of the cheerleading team of Premier League Fubang and has also been pursuing entertainment careers in China.</p> <p>6. The Taiwanese government officially claimed that it never planned to lend</p>		

Appendix 2: Variables and Measurements in the Survey Questionnaire

Questionnaire Section	Variable	Level of Measurement	Measure
	Taiping Island to other countries, including the United States, nor has any foreign country ever made such a request.		
V. China Influence and Fact-checking	How voters believed that China initiated cyber army to attack or support specific candidates or political parties in this election	Ordinal	Likert scale (strongly believe, believe, slightly believe, slightly disbelieve, disbelieve, strongly disbelieve, or not able to judge)
	How voters believed that China might have intervened in the 2018 election by sponsoring and funding specific candidates for buying TV news, advertising or online news.	Ordinal	Likert scale (strongly believe, believe, slightly believe, slightly disbelieve, disbelieve, strongly disbelieve, or not able to judge)
	The most important issue in this mayoral election	Nominal	Economic, livelihood, reformation, democratic system, human rights (including gay marriage), or local governance issues
	Frequency of using NGO news fact-checking services or websites to check news authenticity	Ordinal	Likert scale (never, seldom, sometimes, frequently, or never heard of such services or websites)

Appendix 2: Variables and Measurements in the Survey Questionnaire

Questionnaire Section	Variable	Level of Measurement	Measure
	Frequency of comparing news reports with different political positions to check news authenticity	Ordinal	Likert scale (never, seldom, sometimes, frequently, always)
	Frequency of comparing key opinion leaders' online comments to check news authenticity	Ordinal	Likert scale (never, seldom, sometimes, frequently, always)
	Frequency of using Executive Yuan's news clarification services to check news authenticity	Ordinal	Likert scale (never, seldom, sometimes, frequently, or never heard of such services)
	Which measures voters view as adequate to combat disinformation in Taiwan?	Nominal	Legislate to impose responsibilities on news media; no need to legislate but ask news media to self-manage, if violated, news media will be fined; no need to legislate but ask news media to self-regulate, or no opinion

Biographical Note

Tai-Li Wang is currently a professor at the Graduate Institute of Journalism at National Taiwan University. She previously served as the director of the Graduate Institute of Journalism and Multimedia Center of National Taiwan University. Her research focuses on television news research, political communication, media effects, and disinformation. Before entering academia, she was a reporter in the Taiwan Television Station and a news announcer in Taiwan's Formosa TV.

She can be reached at National Taiwan University, Graduate Institute of Journalism, No. 1, Section 4, Roosevelt Rd, Da'an District, Taipei City, Taiwan 106 or by e-mail at tailiw@ntu.edu.tw.

Date of submission: 2020-01-28

Date of the review result: 2020-03-19

Date of the decision: 2020-05-12