AI Disinformation Attacks and Taiwan's Responses during the 2024 Presidential Election

Authors:
Chen-Ling Hung
Professor, Graduate Institute of Journalism, National Taiwan University, Taiwan
Wen-Cheng Fu
Professor, Department of Journalism, National Defense University
Chang-Fe Liu
Professor, Department of Journalism, National Chengchi University
Hui-Ju Tsai
Assistant Professor, Graduate Institute of Journalism, National Taiwan University

Background

Taiwan led the global community in completing its presidential election on January 13, 2024, with the ruling Democratic Progressive Party (DPP) securing an unprecedented third consecutive presidential term. The party's candidate, current Taiwan Vice President Lai Ching-te, won 40% of the vote. During his victory speech, Lai described his win as a victory for the global community of democracies because "between democracy and authoritarianism, we will stand on the side of democracy". He also noted that the Taiwanese people had successfully resisted external forces' attempts to interfere in the election, hinting at a wide range of tactics used by China during the months-long presidential campaign.

Over the past few decades, Taiwan has emerged as a beacon of democracy in Asia, showcasing a level of freedom surpassing many of its regional counterparts. As per the 2023 World Press Freedom Index by Reporters Without Borders (RSF), Taiwan ranked 35th globally from 180 countries, leading the way in Asia. This democratic evolution has transformed Taiwan's societal structure from a traditional top-down hierarchy to a more inclusive and equitable partnership between governments, businesses, and citizens. Taiwan's democracy is marked by a commitment to diverse viewpoints, freedom of speech, and open internet access.

However, these freedoms also make Taiwan susceptible to the spread of false information. As RSF comments, Taiwan is a liberal democracy that "respects the principles of media freedom but its journalists suffer from a very polarised media environment dominated by sensationalism and the pursuit of profit" (2024). The nation is grappling with internal divisions, particularly in regard to self-identity and competition between political ideologies. The phenomenon of information manipulation and the "echo chamber" effect of the internet exacerbates these tensions.

In 2019, the V-Dem Institute of the University of Gothenburg identified Taiwan as the country most targeted by foreign disinformation campaigns. This type of disinformation is strategically crafted to influence political or economic interests. China's role in disseminating disinformation in Taiwan is particularly concerning. The V-Dem Institute report noted China's efforts to meddle in Taiwan's domestic politics to promote the controversial idea of the
unification of Taiwan and China by spreading misleading content on social media and investing in Taiwanese media outlets.

In the lead-up to Taiwan's 2020 presidential election CommonWealth Magazine, a reputable Taiwanese publication, uncovered evidence of information manipulation by China. Interviews with cyber warfare operatives revealed the use of social media to disseminate false information and disrupt Taiwan's democratic process, with links to the Chinese Communist Party (CPP). Shen's (2021) study of Chinese intervention in Taiwan's 2020 election identifies several actions of psychological warfare. These included Chinese state propaganda through the media, online nationalism co-constructed by local Chinese organizations and patriotic citizens, disinformation farms driven by political and business interests, and local groups or individuals in Taiwan who helped spread disinformation. The combination of these approaches will have had a degree of impact.

In response to these threats, the Taiwanese government has taken decisive legal action. The Anti-Infiltration Act, passed by the Taiwanese Legislative Yuan on December 31, 2019, aims to counteract the Chinese propaganda influencing Taiwanese politics and democracy, including the funding of politicians and media. Additionally, between 2019 and 2020, several legislative amendments have been implemented to combat misinformation.

The rise of AI-generated disinformation poses a new challenge. Recognising this, the Legislative Yuan (Taiwan's congress) amended the Presidential and Vice Presidential Election and Recall Act and the Civil Servants Election and Recall Act in June 2023. These amendments introduced penalties, including up to seven years in prison, for the creation and distribution of deep fake audio and videos intended to influence election outcomes.

Taiwan's journey towards maintaining its democratic integrity is a complex one, marked by achievements in fostering an open and democratic society, and challenges in countering the modern threats of misinformation, disinformation and foreign interference.

This report contains examples of AI-generated disinformation used ahead of the 2024 presidential election, or during the results period. Furthermore, it analyses the themes which surfaced in the disinformation, their effect on the population and the interconnected impact on Taiwan's regional relationships in Asia Pacific. This report also examines the responses of Taiwanese media and civil organisations to disinformation attacks from China. Finally, it provides conclusions and recommendations - including what positive steps newsrooms can take, where fact-checking organisations need to sit within the news and public information ecosystem - and illuminates the potential downsides of Taiwan's current media literacy.

Disinformation Operations during the 2024 Election

Since 1996, Taiwan has held presidential elections where its people are able to directly decide their political leaders. In 2000, for the first time, the Democratic Progressive Party (DPP) replaced the Chinese nationalist party Kuomintang (KMT), which had been in power for 50 years. In the 2024 presidential election, there were three political parties and presidential candidates, including Lai Ching-te of the Democratic Progressive Party, Hou You-yi of the KMT, and Ko Wen-je of the Taiwan People’s Party (TPP). As the incumbent political party, the DPP
had the advantage of majority support, but the Taiwanese People’s Party (TPP) and Chinese nationalist party Kuomintang (KMT) sought to cooperate in the election, which created a row about ‘blue-white collaboration’ (where KMT is blue and TPP is white). In international geopolitics, confrontations between China and the United States (economic, trade and military) continue to escalate, and Taiwan must negotiate in the gap between those two great powers in order to survive. China is unhappy that the Democratic Progressive Party (DPP) remains in power, while the United States has said it will not interfere in Taiwan's elections. Taiwanese media have their own positions, while across online platforms and social media - including Douyin, the Chinese version of TikTok - false information is rife.

For this year's presidential election, disinformation operations can be analysed in three categories: ‘AI-fabricated content’, ‘misleading narratives’ and ‘coordinated behaviour’. The themes revealed by disinformation operations include AI-fabricated content which focused on domestic issues. This included targeting certain politicians’ privacy and speeches, and creating misleading narratives around government policies and voting procedures. International issues focused on the cross-strait relationship with China, the framing of the election as a choice between ‘peace and war’ (‘peace’ by unifying with China and ‘war’ by choosing continued independence), and suspicions about the US support for Taiwan. In the short term, false information does not influence the public discussion or political decisions. In the long term, the misinformation, disinformation and misleading narratives do influence public discussion about national identity, the cross-strait relationship and geopolitical affairs.

To understand the methods and influences of disinformation operations during this election, we applied a documentary method to sort and analyse second-hand data from different sources. The data are from news reports, government documents, and reports provided by citizen organisations dedicated to fact-checking and countering Chinese intervention. For example, the Taiwan FactCheck Center is devoted to debunking false information and frequently publishes the results of its debunking work on its websites. The Taiwan Information Environment Research Center (IORG) commits to improving the information environment and focuses on analysis of Chinese media and its influence on Taiwan. Taiwan AI Labs tries to use AI technology to detect disinformation. These organisations were devoted to fighting against disinformation ahead of the 2024 election. The information and reports provided on their websites helped us to identify disinformation operations, and see how these organisations responded to them.

1. AI-generated fake content

AI-generated content spans images, videos, and audio. The AI-generated fake audio and video that appeared in this election included the examples of Ko Wen-je's criticism of Lai Ching-te's visit to the US, Lai Ching-te's affirmation of the KMT-TPP collaboration, rumours Lai Ching-te had an illegitimate child, Tsai Ing-wen's secret history, and Luo Chi-cheng and Hung Sun-han's sex scandal, etc.

In the 2024 presidential election, the first instance of AI video and audio forgery broke out when an audio file supposedly ‘leaked’ out of an internal meeting on August 17, 2023. At 8 p.m. on the 16th, some media received an email titled "Audio File: Ko Reveals the Inside
Story of Vice President Lai's Visit to the United States", with a 58-second audio file, in which Taiwan People's Party Chairman Ko Wen-je criticised Vice President Lai Ching-te, for deliberately delaying the signing of a bilateral trade agreement during his visit to the United States and accused him of embezzlement (Chang, 2023).

The incident occurred during Lai's visit to Paraguay, a friendly country. Due to the technical difficulties of AI video verification, a fact-checking organisation invited experts and scholars to investigate the clip but it was difficult to accurately determine whether the content was forged. However, The People's Party immediately clarified that it was a fake audio file with the intention of misleading the media and public opinion, and reported it to the police for investigation. Subsequently, the investigation bureau explained to the public on August 25 that it had determined that the contents of the audio recordings were highly likely to be deepfakes and that an investigation was underway (Chang, 2023).

When it came to Lai Ching-te's supposed comments on KMT-TPP collaboration, Taiwan FactCheck Center examined the video and compared it with existing videos hosted by various media outlets such as "Extraordinary News", "Taiwan Television News" and "Mirror News" on November 16. The comparison found that the fake video circulated on the Internet was a misappropriation of footage of Lai Ching-te's live broadcast on the same day, but that the sound was obviously altered. The FactCheck Center made three key findings:

1. The fake video cut out the word "no" from Lai Ching-te's original speech, which completely changed the meaning of the comments.

2. The fake video had many obvious edits.

3. The voice used in the fake video was unnatural, and vocals partially overlapped.

Because many parts of the fake video are out of sync with the voice, and some of the words are different from the original live video, it is possible that the visuals may have been altered separately from the sound; the picture is edited, and the voice may be the result of AI voice models or other dubbing methods (Chen and Chen, 2023). Lai Ching-te also stated that the 'recording' of the KMT-TPP collaboration discussion misrepresents Lai's words to reverse their meaning.

Fact-checking agencies which analysed AI video and audio fraud methods, pointed out that some short video and audio content on YouTube and Douyin matched text scripts from content farms, with generated sounds added. An example of this can be seen in the incident accusing Lai Ching-te of having an illegitimate child, which broke in the mainstream media in early January this year (January 9–January 10) during the election week (Chuang, 2024).

According to a fact-checking report by the Asia Fact Check Lab, the rumour can be traced back to a post from a user named "David Lu @SteveLiss" on the social media platform X (formally known as Twitter) which directly stated that DPP presidential candidate Lai Ching-te had an illegitimate child, used a specific name for the child and accused Lai of negligence and causing chaos in the illegitimate child's private life. The post was accompanied by a DNA report as 'evidence'. The link attached to the post is "jt53ur39", a user of the hacker forum "Breach Forums". The user claimed in English that the news about Lai Ching-te's illegitimate child was true, and that a paternity test proved a 99.999% match (Chuang, 2024).
The rumour was widely spread on media platforms such as PTT, Mobile01 and Breaking News Commune, among others, and appeared in the mainstream media. Overseas media including "Sing Tao Daily", "Cambodia Daily", and "Bus Daily" published an article by the blogger "Mao Clapper" entitled "Lai Ching-te was revealed to have an illegitimate child, and the whistleblower claims that the DNA is 99.99% compatible" (Chuang, 2024). The incident spiralled even further out of control after being publicly referred to by Hsieh Long-jie, a candidate for the Kuomintang legislature, and former legislator Chiu Yi. After the incident, the fact-checking organisation traced the source of the two accounts, and the source of the information on "Breakthrough Forum" and the X platform, which showed that the users "jt53ur39" and "David Lu" joined on January 7, 2024 and 2011 respectively, and have only published one post so far, and that their pattern of behaviour on the platforms was different from that of ordinary users. Since then "David Lu @SteveLiss" has deleted the original post (Chuang, 2024).

The "Secret History of Tsai Ing-wen" provides another example. On the eve of the presidential election, a digital book titled "The Secret History of Tsai Ing-wen" suddenly appeared, filled with false information and slurs against the President and the Democratic Progressive Party. It swiftly flooded significant social media sites, including Facebook, Instagram, YouTube, X (formerly known as Twitter), and the well-known American online forum "Reddit" - it even reached Wikipedia. The rapid creation of new battlegrounds for fact-checking, known as the 'Debunking Challenge', makes official debunking and information verification futile. The volume of falsehoods overwhelms the capacity to correct misinformation, diminishing the impact of official clarifications (Chen & Chen, 2024).

**Generative AI Disinformation Caused Verification Challenges**

According to analysis of fact-checking agencies, this method - suspected of being used in the 2016 hacking and leaking of Hillary Clinton's emails before the US Presidential election - is evident in the waves of fakery before the 2024 Taiwanese election. Because of their topical nature, the Lai Ching-te's 'collaboration' audio file and Tsai Ing-wen's 'secret history' spread rapidly among the masses on the internet. The ensuing rebuttal of the candidates appear weak because the method mixes truth and falsehood in the leaked content. The influence on public opinion during the election period is also more harmful. There are similar characteristics in the 'sex video leaks' controversy that frequently surfaced during Taiwan's general election campaign, involving Luo Chi-cheng and Hung Sun-han. In the case of Luo Chi-cheng, a video was first leaked on a foreign pornographic website. Then the rumour-mongers linked the content to the candidate, making it difficult for the campaign team to refute the rumours or ask for the video to be removed. It was also difficult for the outside world to distinguish authenticity from falsehood.

Using long-term observations, fact-checking agencies had predicted that similar issues would be discussed before the election in Taiwan. These tactics are often launched through content farms online from unknown sources, and after being relayed to the public or followed by mainstream media, they are reported on and further spread. This illustrates Taiwan's particular problem: political TV programmes and media personalities have high social influence and their speech is not censored - and the mainstream media lacks a sufficient
verification mechanism, meaning it sometimes becomes complicit in the spread of disinformation.

Information operations have evolved beyond merely spreading rumours; they now involve widely disseminating information that alters the narrative framework, thereby influencing the audience’s perceptions and feelings about facts. The main challenge currently faced by fact-checking is not the existence of outright false information, but rather misleading messages that mix truth and falsehood. Through a large volume of asymmetric propaganda, these messages diminish the effectiveness of efforts to debunk them. Using the mass generation of audio, video, and text, these tactics can overwhelm fact-checking organisations and traditional media corporations, trapping them in a verification loop and allowing unverified information to influence more people.

Utilising AI technology to generate text and short videos will likely be a more widespread tactic than producing deepfake videos or images. Although the text may not be entirely falsified, asymmetric propaganda can significantly influence public sentiment (Huang, 2023).

2. False issues and Misleading narratives

When taking false issues and narratives into consideration, disinformation attacks are patterned around elections. Due to the gradual improvement of Taiwanese people's awareness and vigilance against disinformation, their methods and strategies are more flexible and delicate than in the past. They are well-versed in the nature of free speech in democratic societies and have a deep understanding of fact-checking methods.

Currently, rumourmongers use the complex and opposing ideologies in Taiwan's democratic society, as well as the derailment of the international relationship between the Taiwanese people and China, as a lever to create false issues, stir up distrust and foster differences between the two sides. They then let the falsehoods spread and ferment, gradually deepening the phenomenon of social polarisation. The above-mentioned "theory of suspicion of the United States", the "theory of choice between peace and war" and "malpractice of governance" all belong to this type of false issue operation.

These theories and narratives have long spread in the past elections between the 2020 general election, the 2021 referendum, and the 2022 9-in-1 election, when the nation used one election day to elect candidates for nine different governmental roles. According to the Taiwan FactCheck Center, during this period, a total of 157 fact-checking reports were published. Among the 157 fact-checking reports, the highest proportion of disinformation topics was in the category of “election voting” (34.39%), followed by "about government policies" (16.56%) and "about presidential and local election candidates" (8.92%). In addition, information related to “national defence” and "suspicion of the United States" accounted for 7.01% and 5.10% respectively, ranking fourth and fifth among common topics. Most of the other issues are social issues related to the referendum, or narratives that incite Taiwanese people's dissatisfaction with the governance or daily life of the Taiwan authorities, such as disinformation about law and order and education (Li, 2023).

Looking at the pre-election misinformation tactics in the past three years, the most common is ‘completely fabricated content’, with a high proportion of 43.95%. The definition
of ‘fabricated’ means that the message is completely fictitious. This content is mainly in text-only in form, and makes good use of the narrator’s first-person point of view, claiming to be an eyewitness to an incident or that they heard the story from relatives and friends, and “the narrator often gestures that he has revealed the facts that the government does not want to be known, and begs those who read the news to pass on the Information so that ‘everyone can know the facts’" (Li, 2023).

Returning to the 2024 presidential election, there are several more obvious trends in the outbreak of major waves of fabricated content, including the "US plan to destroy Taiwan" from February to March, the "egg shortage" from March to April, the "Barbiturate incident" in June, the "Fukushima nuclear wastewater" incident from August to September, the "imported eggs and American pigs" from September to October, and the Israeli-Palestinian war in October (see Taiwan FactCheck Center "2024 Presidential Election Zone" for details).

Compared with the past few years, in addition to the resurgence of food safety, public health, and education reform issues, current issues in the first three months of the election were highlighted among lifestyle issues. The Israeli-Palestinian war in October showed a trend of domestication of overseas disinformation in the 2024 general election. It showed that in addition to initiating social issues on the island, disinformation manipulators were also taking advantage of the international war situation, such as linking a disinformation message about the suicide of a 16-year-old Ukrainian teenager with Taiwan’s "All-out Defense Mobilisation Act" (全民防衛動員準備法) incident to stir up fear in the country.

In addition, rumours related to election voting caused heated discussions in society after the election. In fact, as "A brief review of disinformation spread during elections in Taiwan, 2020-2022 (Part II)" shows, since the 2020 presidential election, the "vote-for-election" narrative has been the most common category of pre-election disinformation, mostly related to false information "related to the voting process", false accusations of "vote counting fraud", and allegations of "candidate bribery and vote buying".

**Online Celebrities have social Influence without taking responsibility**

During the 2024 presidential election, some of the false information controversies which previously appeared in the 2020 election - such as ballot box stuffing and the use of invisible ink - resurfaced. This time it caused unprecedented heated discussions, fuelled by the fact that internet celebrities amplified false information, such as after the general election on January 13, when influential YouTuber "Alisasa" reposted a number of fake videos and audio content on her personal Instagram platform. The internet celebrity "Bit King" also did so, using the YouTube channel "Bit King Mission" on the 14th. A 16-minute video was uploaded in which unofficial ‘scrutineers’ assembled at polling stations in a bid to gather evidence to ‘prove’ election staff did not comply with the Standard Operating Procedure (SOP) of the vote, and publicly questioned the officials (Lin, 2024).

The popularity of Douyin has meant that the dissemination and effect of these kinds of video on the public is even greater. In addition, the opposition parties also used the slogan "Take care of your own votes!" to mobilise the people to go out and monitor voting on polling
Pre-election issues had triggered a high degree of social distrust of the electoral system, resulting in a high degree of tension between the ‘scrutineers’ and election officials on election day, and the public has repeatedly questioned the election procedures at polling sites.

According to a TFC expert, as many as 33 videos related to voting were disseminated on the internet during the election period. However, it is not easy for the TFC to uncover the source of the 33 videos in a short period of time, and to verify them with the various polling offices.

Fact-checking experts pointed out that the speeches of political representatives and internet celebrities on personal platforms or political discussion programmes do not have the requirements of fact verification in law and regulation, but they have huge social influence. Incidents of this type include former Kuomintang legislator Tsai, Cheng-Yuan citing an American radio show host on his personal Facebook on February 21, claiming that there was a plan to "destroy Taiwan" in the White House. Another example saw Kuomintang legislator candidate Hsieh Long-jie and former legislator Chiu Yi insinuating during an online programme that DPP presidential candidate Lai Ching-te had illegitimate children abroad.

A TFC fact-checking expert pointed out that the emergence of fake issues has a pattern. It can be divided into planned issue manipulation before the election, and a more mobile issue manipulation that accompanies important events as they occur. The former often is based on old issues that have been repeatedly recycled and hyped up again, with the most common being social issues such as food safety, information security, education, and transportation. After several years of responding to these ‘reheated’ problems whenever there is a visit by an important political figure - or national defence issues, cross-strait issues, or news about voting during the election - there is now a set of protective guardrails. Since 2020, TFC has set up an election zone to combat and check disinformation related to political and social issues and current affairs during the election period. The "Election Rumor Playbook", released in 2022, and even an expert consultation list for new AI disinformation, set up before the 2024 general election, are hoping to minimise the social impact of disinformation through the accumulation of practical experience and the process of prevention before, during and after the election.

3. Coordinated behaviour

In the context of Taiwan's presidential election turmoil, a comprehensive study revealed a sophisticated landscape of digital manipulation and misinformation, offering critical insights for democratic societies. The investigation was primarily focused on the significant impact of generative technology and disinformation on internet platforms and in traditional media, highlighting its effectiveness in altering the information environment. Disinformation fuelled by advanced generative algorithms became a focal point, challenging the detection efforts of both traditional and online media platforms. This development calls for media organisations to enhance their verification processes to combat the intricate tactics used in contemporary disinformation campaigns.

Moreover, the collaboration between mainstream media - the major nationwide broadcasting media networks - and Chinese government-affiliated media outlets in Taiwan, further expanded the scope and influence of these manipulated narratives. This partnership,
especially pronounced on digital platforms, demonstrated a strategic alignment between information control and political objectives. The prevalent use of short videos, news, and information for psychological manipulation introduced an additional challenge, further obscuring the distinction between reality and fabrication in the digital space. In the specific scenario of Taiwan's presidential election, the combination of technological advancements, geopolitical strategies and media distortion highlighted the complex obstacles that modern democracies face in preserving the integrity of public dialogue.

This analysis is intended to explore disinformation, information manipulation, and psychological influence of AI technology during the election period. The authors used a media ecology method to depict the landscape of Taiwanese public opinion and voting decisions. The authors also underscored the diverse tactics employed by authoritarian states to influence electoral decisions in Taiwan, emphasising the intricate challenges democracies face in the digital age. Our team summarised these reports and found that authoritarian regimes used a variety of strategies to influence Taiwanese election decisions.

‘Coordinated behaviour’ describes the method by which some information is disseminated, when the same information it is sent using multiple fake accounts. Some mainstream media systematically disseminates false information because of this. A Taiwan AI Labs report ("2024 Taiwan Presidential Election Information Operation Overall Analysis") analysed the four major social platforms of Facebook, YouTube, TikTok, and PTT (an internet forum similar to Reddit) from January 1, 2023, to January 12, 2024 - the day before the presidential election - and observed that during nearly a year, a large of percentage of online media posts were identified as "People's Republic of China (PRC) state-affiliated media." Further, almost 2.87% (14,354) of accounts studied were identified as ‘Troll Accounts’, with a total of 731,383 messages posted, which accounted for 1.62% of the total social media volume. As the election date got closer, the number of messages from co-ordinated networks of accounts also began to peak gradually in May–July 2023 (Taiwan AI Labs, 2024).

‘Collaboration behaviour’ represents a highly online interactive behaviour that shares the same narrative, working times window and same entities. Taiwan AI Labs had observed instances of information manipulation using AI-generated images, videos, and audio. Their report also looked at the effect of generative AI manipulation on disinformation this year, and found that 3.5% of the top 200 videos retweeted in Facebook ‘collaboration groups’ were suspected to be automatically generated using text-to-speech (TTS) and AI. Due to the rise of short audio and video content in recent years, collaborative groups are also more inclined to produce short audio and video content so that the content can be disseminated through algorithms (Taiwan AI Labs, 2024). In the future, such manipulations will increasingly resemble real human output, requiring AI-based detection methods for differentiation.

1) China stated-affiliated media and its Influence

Taiwan AI Labs detected a ‘collaborative operation’ on TikTok. Members of ‘collaborative groups’ shared the same narratives over a long period of time and the posts had a cosine similarity level which is higher than regular users. These collaborative volumes increased after May, and the collaborative group first got involved in Taiwan-US relations, national policies, and other issues and then further manipulated the domestic presidential election. According to the analysis of Taiwan AI Labs (2024), the collaborative community – which echoes China-
affiliated media - has a strong grasp of the heat of Taiwan's social issues and can often keep abreast of Taiwan's current affairs and make strategic changes promptly. For example, during the blue-white cooperation debate, the coordination group tried to amplify the voice of Ko Wen-je, weaken the credibility of specific political parties using social issues or other similar manipulations, and promote KMT-TPP cooperation. After the two parties' negotiations changed that narrative, the community changed its original strategy of raising Ko Wen-je's momentum and turned instead to support Kuomintang to govern.

Analysing the political tendencies in video and audio on the Chinese-funded platform TikTok revealed that TikTok focuses on supporting Ko Wen-je (65%) and the Kuomintang (23%) in Taiwan's presidential election and focuses on attacking the DPP (70%), the Kuomintang (22%) and Ko Wen-je (7%). Specific incidents include amplifying a sexual harassment controversy from July to August 2023 and manipulating the American Institute in Taiwan (AIT) expansion case; during November 2023, it carried out a strategy to lower the voice of a specific political party and promote the blue-white cooperation and operated the AIT expansion theory in parallel to attacking the ruling party's decision-making and manipulating the asymmetry in Taiwan-US relations (Taiwan AI Labs, 2024).

By comparing the narratives of the collaboration group with those of Chinese official media, the report finds that some troll groups echo Chinese state media with a similarity of 42.6% from September to December 2023. As the election gets closer, the discourse also begins to move towards war and fear of Taiwan, as well as attacks on education, the economy, and other issues (Taiwan AI Labs, 2024).

Comparatively speaking, the trend on the PTT internet forum is centred on a polarised society. Mainly these operate around Taiwan's political landscape and people's livelihood issues, such as the resumption of service trade, the importation of eggs, KMT-TPP peace, etc. Eighteen percent of the messages will attack all three parties' presidential candidates, aiming to deepen the suspicion and division in Taiwanese society - twice as many as on Facebook (9%).

In interviews, representatives of fact-checking agencies said that the link between disinformation and concerted behaviour and Chinese power is often complex, and hard to support with solid evidence, but that it can be empirically shown by the presence of several issues of Chinese concerns, or the preferred subjects of the suspicious media and accounts. Overall, the IORG and Taiwan AI Labs report proposes three criteria which help identify the themes and intentions of China's information manipulation: (1) It is concerned about domestic and overseas issues. (2) Discourse trends that conform to media discourse controlled by foreign countries. (3) Attacking parties within the group creates conflicts, polarises the political intentions of users, and causes social division (IORG, 2024; Taiwan AI Labs, 2024).

2) Some Vital Troll Groups are not Native to Taiwan

According to a research report from the Taiwan Information Environment Research Center (IORG) troll groups were observed engaging in bilingual attacks, targeting both Taiwan and the United States simultaneously. Following Biden's announcement on April 14, 2023, of his intention to seek re-election in 2024, a troll group intensified its influence operations. They
criticised the U.S. government’s diplomatic strategies in English while simultaneously attacking President Tsai Ing-wen in Mandarin Chinese over the previous Thesis Gate controversy. This approach aimed to question her legitimate leadership position and foster distrust in her presidency (IORG, 2023; IORG, 2024).

From July 2023 onwards, the focus shifted to manipulating the Taiwan presidential election. Some troll groups targeted specific political party candidates for president and vice president, aiming to impact that party's credibility.

In addition to simultaneously addressing domestic and overseas issues, another behavioural pattern suggests that these troll groups do not belong to Taiwan. These troll groups attack all political parties and candidates simultaneously. Such behaviour leads to intensified discussions, preventing peaceful discourse and causing confusion. Observations on the four main social platforms show that among the top 100 groups, 18% engage in coordinated attacks on candidates from all three major parties on PTT and 9% on Facebook. This behaviour aims to create opposition and polarise society by attacking all sides.

Taking the example of the false news about a naval officer’s body found at sea circulating on social media, the IORG noticed a significant number of accounts were hacked or stolen on Taiwanese social media platforms. By encouraging the affected users to report these incidents, it was evident that systematic account theft was happening on social media. Further investigations revealed that this was achieved through exploiting backdoor vulnerabilities in Chinese networking equipment, using implanted VPNs as a springboard to post articles on social media. Considering the scale and sophistication of these operations, it appears unlikely they will be the work of domestic P.R. firms in Taiwan; the complexity and reach of these activities exceed the capabilities typically associated with local P.R. organisations.

3) Trolls Echo PRC State-affiliated Media

In recent observations by Taiwan AI Labs, a discernible pattern has emerged, highlighting a concerted effort by significant troll groups to amplify the discourse propagated by PRC state-affiliated media. This trend, particularly noticeable from September to December, underlines a strategic alignment with narratives that serve Beijing's geopolitical interests. The echoed narratives span a range of topics designed to influence public perception and discourse within Taiwan and internationally. Among these, the portrayal of an imminent Chinese military threat was most prevalent, accounting for 25% of the echoed content. This was closely followed by narratives suggesting the U.S. was manipulating Taiwan into a precarious military confrontation, which formed 14.3% of the discourse.

Further analysis reveals a calculated focus on economic and political themes, with 10.7% of the narratives warning of the adverse impacts on Taiwan’s economy following the cessation of the Economic Cooperation Framework Agreement (ECFA) with China. Claims that Taiwan inherently belongs to China and critiques of Taiwan’s economic situation were also significant, comprising 12.5% and 5% of the content respectively. More targeted narratives included criticism of Taiwan’s educational reforms purportedly eliminating Chinese history and culture (3.5%), claims of Taiwan’s inadequate military preparedness (2.8%), and highlighting shortages in essential commodities and labour (2.3%).
The study identified the highest similarity of these troll narratives with PRC state-affiliated media among Facebook troll groups, accounting for 42.6% of the group's coordinated comments. This indicates a broad, strategic alignment and a focused effort to infiltrate and manipulate social media discourse. The period under review saw these groups consistently echoing PRC state narratives, touching on sensitive issues such as Taiwan's sovereignty, economic policies, and societal well-being (Taiwan AI Labs, 2024).

As the electoral period in Taiwan approached, the intensity and frequency of these narratives saw a notable increase. The troll groups' messaging became increasingly alarmist, focusing on war rhetoric aimed at intimidating the Taiwanese populace. Additionally, they launched attacks on the governance of the Democratic Progressive Party (DPP), accusing it of leading Taiwan into economic and military peril. This shift suggests a tactical use of social media by troll groups to sow discord, manipulate public opinion, and potentially influence electoral outcomes.

This phenomenon of state-affiliated narrative echo chambers on social media is a glaring manifestation of the modern cognitive warfare landscape. By leveraging digital platforms, these troll groups extend the reach of state propaganda, blurring the lines between genuine public discourse and manufactured narratives. This strategy not only aims to undermine Taiwan's democratic processes and social cohesion but also seeks to challenge the international community's perception of the cross-strait status quo (IORG, 2024).

The implications of these findings are profound, underscoring the need for vigilance and robust countermeasures to safeguard the integrity of public discourse. It calls for a concerted effort from social media platforms, policymakers, and the public to recognise and mitigate the impacts of such orchestrated disinformation campaigns. As the digital battlefield becomes increasingly central to geopolitical contests, understanding and countering these tactics is imperative for preserving democratic values and national security.

4) Coordinative Behaviours Influenced the General Public

In the current digital age, the dynamics of public discourse and opinion formation are increasingly influenced by coordinated behaviours, primarily through the activities of troll groups on social media platforms. These groups, often orchestrated with specific agendas, have significantly impacted public perceptions and discussions, particularly in the context of political events and international relations. This phenomenon has been notably observed in Taiwan, where troll groups have strategically focused on domestic politics and Taiwan-related international events to influence the general public's perspectives and discussions.

From March to June, the main troll groups focused primarily on domestic politics and Taiwan-related international events, such as McCarthy's event, the spy balloon incident, and the diplomatic break with Honduras, gradually influencing regular users and sparking increased discussion. From June to August, discussion intensity further escalated due to issues like the KMT primary. Subsequently, during the high-profile events of Terry Gou's petition in October and the KMT-TPP collaboration discussions in November, discussion intensity was further boosted.
Further, Jung-Chin Shen, an associate Professor at York University in Canada, noted in a Facebook post on June 6, 2023, that on Douyin, the Chinese version of TikTok, multiple accounts systematically propagated fictional videos of warfare in Israel and the Middle East. These videos claimed that "Israel had been steadily retreating for two months in an ongoing conflict with the Middle East". This misinformation campaign, which coincided with the surprise attack by Hamas on Israel on October 7, 2023, highlights the potential of coordinated behaviours to not only influence public opinion but also to blur the lines between fiction and reality in the minds of the general public (Huang, 2023).

The influence of troll groups on public discourse can be quantified by examining the rate at which discussions were generated in comparison to that by regular users. Initial observations between March and May indicated that troll groups could drive discussions at a rate seven and a half times that of regular users. As the election date drew closer, their influence notably increased, with discussions driven by these groups reaching a rate fifteen times, and eventually, just before the election, twenty-five times that of ordinary users. This escalation underscores the significant impact coordinated behaviours can have on public opinion and discourse, especially in politically sensitive periods.

The activities of troll groups and their impact on public discourse exemplify the challenges democratic societies face in the digital age. Coordinated behaviours on social media platforms can significantly influence public perceptions, discussions, and even the outcome of political events. As such, there is an urgent need for increased awareness, media literacy, and regulatory measures to mitigate the effects of these coordinated efforts to manipulate public opinion. The case of Taiwan serves as a cautionary tale, underscoring the importance of vigilance and proactive measures to safeguard the integrity of public discourse in the face of sophisticated digital manipulation tactics.

Regarding the selected research articles above, one can conclude that disinformation and its influence on the Taiwanese is complex. In addition, we noted that on the YouTube platform that troll groups extensively repeat comments under media videos to guide discussion trends or comment early to enhance video interaction and influence the algorithms. Similar strategies were observed from troll groups on Facebook and PTT, as well as engagement in guiding discussion directions through comments, flooding discussion spaces with repetitive comments, and posting early to increase the likelihood of content being seen or algorithmically recommended. Therefore, we believe it is essential to study existing narratives during the ‘Prepare’ phase to facilitate subsequent comment operations on the four platforms, Facebook, YouTube, PTT, and TikTok. Cognitive influence of the presidential election might involve multiple institutes, including traditional media, social media, and China-affiliated media. Thus, this programme organised a panel of in-depth interviews to demonstrate the overall trajectory of disinformation and China’s impact on Taiwan’s media ecology.

**Responding to Disinformation: The Role of Taiwanese Media during the 2024 Election Period**

In the contemporary landscape, characterised by the rapid advancement of digital technology, the media in Taiwan confronts unprecedented challenges, particularly amidst the
backdrop of the 2024 election. The pervasive dissemination of false information poses a significant threat to the integrity of elections and democratic consciousness. This article delves into the responses and processes of Taiwanese media in addressing false information during the election, the attendant challenges encountered, and the strategies employed to safeguard the authenticity of information and ensure transparency in its dissemination.

Throughout the election, disinformation manifests in diverse forms, ranging from fabricated content generated by artificial intelligence (AI) to the propagation of misinformation, capable of obfuscating the judgement of voters. For instance, AI technology was utilised to fabricate audio recordings, falsely attribute criticisms by presidential candidate Ko Wen-je regarding Lai Ching-te's visit to the United States, and to produce counterfeit videos depicting Cheng Wen-tsai in specific scenarios. These instances exemplify the proliferation of false narratives facilitated by AI technology. Furthermore, the circulation of malicious falsehoods during the election period, such as Legislator Hung Sun-han's purported video engaging in illicit activities, the dissemination of the so-called "secret history" video and e-book purportedly maligning Tsai Ing-wen, and the dissemination of a DNA report alleging the existence of Lai Ching-te's "illegitimate child", underscores a deliberate attempt to manipulate public opinion. Additionally, the collaborative nature of AI poses a significant challenge, as evidenced by pre-election rumours regarding the expansion of the American Institute in Taiwan (AIT) and post-election videos purportedly demonstrating voter manipulation. These instances are emblematic of disinformation orchestrated through AI technology to sway election outcomes. Furthermore, the influx of election-related disinformation from China cannot be overlooked, encompassing the dissemination of fabricated polls by the FingerMedia (指傳媒) and the misquotation of content from China Central Television (CCTV) videos. These efforts represent deliberate attempts to interfere in Taiwan's electoral processes through disinformation.

To illustrate the approaches adopted by Taiwanese media in responding to disinformation during the election period, this study engaged in comprehensive interviews with representatives from five prominent news organisations in Taiwan: Taiwan Public Television Service (PTS, 公共電視), Central News Agency (CNA,中央通訊社), Radio Taiwan International (RTI, 中央廣播電台), Formosa Television (FTV, 民視), and TVBS Media. The former three are either public service television or governmental subsidised media, while the latter two are commercial televisions. The insights provided by the newsroom managers of these media outlets offer valuable firsthand perspectives and strategic insights. The interviews were meticulously structured to ascertain how media entities allocate resources and leverage technology to detect, address, and counteract the spread of disinformation during elections.

1. Public Media and State-owned Media: Conservative and passive practices

In today's digital age, rife with misinformation, Taiwan's public media entities, such as the Taiwan Public Television Service (PTS), the Central News Agency (CNA), and Radio Taiwan International (RTI), maintain a strong dedication to upholding public values. Their operations are marked by a cautious approach, emphasising the accuracy and reliability of the information they disseminate. This conservatism in their editorial stance is not about political
ideology but reflects a commitment to prudence and a responsibility to ensure the integrity of their news content.

While these organisations are deeply invested in preserving the trust and credibility of their reporting, this careful approach means they tend to be less aggressive in directly confronting false information. Governed by public values and under the watchful eye of regulatory bodies, they prioritise the protection of their audience from misinformation. However, this emphasis on caution and adherence to established norms also implies a restrained engagement with the proactive measures needed to combat misinformation. In essence, their efforts to safeguard public interest involve a meticulous balance between maintaining journalistic standards and navigating the challenges of a landscape saturated with false information without stepping into the fray with active countermeasures against such misinformation.

1) PTS's Adherence to Core Values

Taiwan Public Television Service (PTS) steadfastly adheres to the "correctness, verification, and accuracy reporting principles", emphasising prudence in selecting information sources. It exclusively relies on information sourced from candidates, campaign office teams, and official social media pages, thus ensuring the integrity and reliability of news content. This approach underscores PTS’s adaptability in responding to shifts in information dissemination channels, prioritising the authenticity of news despite potentially widening the gap with its audience.

Key Strategies and Methods:

A. The Three-Use Principle: PTS adheres to a stringent information sourcing policy, utilising data solely from candidates' assertions, campaign office teams, and official social media platforms to mitigate reliance on unverified sources.

B. Maintaining Calm and Distance: Public Television maintains composure in the face of diverse information sources, preserving a degree of detachment from market influences to safeguard the quality and trustworthiness of reported information.

C. Stringent Information Selection Standards: PTS exercises prudence by refraining from incorporating unverified online information into its reporting practices, steadfastly upholding the principles of "correctness, verification, and accuracy".

D. Enhanced Internal Control Mechanisms: The Public Security Bureau reinforces internal control mechanisms during sensitive periods, heightening vigilance to promptly identify and address issues as they arise, ensuring the maintenance of journalistic standards and credibility.

Owing to the constraints in human resources and the allocated time for news broadcasts, public television prioritises reporting on "original" news rather than dedicating extensive time to investigating "suspected" false information from "unverified sources" for subsequent reporting. This approach is driven by two primary considerations: the limited availability of time for news coverage and the insufficiency of human resources to undertake such an exhaustive verification process. Furthermore, engaging in detailed investigations of potentially false information diverges from the core reporting style, orientation, and public
values that public television aims to uphold. This focus ensures that public television remains true to its mission of delivering authentic and valuable news content to its audience despite its operational limitations.

2) CNA: Collaboration with Professional Fact-checking Organisations

In response to the proliferation of false information, particularly that generated by artificial intelligence (AI), the Central News Agency (CNA) has embarked on innovative strategies leveraging technological advancements and collaborating with professional verification agencies, while admitting the insufficiency of technological skills in responding to the development of techniques in making and disseminating false information. This proactive approach underscores CNA's commitment to upholding journalistic integrity and ensuring the accuracy of its reports amidst evolving challenges.

A. Technological Innovations despite Difficult to Manage AI Challenges: Recognising the evolving techniques of disinformation, such as deepfakes, CNA has embraced technological innovation to combat false information. Incorporating media recognition columns and establishing a digital media laboratory signified CNA's forward-thinking approach to leveraging AI technology in discerning and addressing false information. These endeavours demonstrate CNA's stance in adapting to technological challenges and underscore its commitment to decent journalism as a national news agency. However, the head of newsroom in CNA emphasised the technical difficulties in fact-checking, considering the "quality and quantity" of false information.

B. Collaboration with Professional Fact-checking Organisations: Acknowledging the complexity of discerning truth from falsehood, particularly in AI-generated content, CNA prioritises collaboration with professional verification agencies. By relying on these agencies' expertise and specialised knowledge, CNA ensures the accuracy and credibility of its reports throughout the news production process. This collaborative approach highlights CNA's commitment to upholding journalistic standards while navigating the intricate landscape of disinformation.

C. Strategic Approaches to Address Disinformation:

(1) Reporting the events by citing various sources: CNA employs a judicious approach towards information with controversial materials, particularly video tapes showing political scandals which is difficult to verify. These materials would not be reported by CNA until they were used by authorities, such as members of Parliament or major political parties. Treating such instances as newsworthy events, CNA relies on external verification processes rather than directly determining truth and falsehood.

(2) Reliance on the Third Parties: Recognising the need for specialised skills in fact-checking, CNA awaits reports from professional verification agencies to validate their accuracy. This approach ensures the integrity of CNA’s reporting and bolsters public trust in its journalistic endeavours.
(3) Internal Review Process Enhancement: CNA strengthens its internal review processes by imposing stringent standards for information sourced from unknown or suspicious sources. As subsidised by the government, CNA strictly examines messages and posts from social media and online forums. According to the head of newsroom, posts from TikTok, which is regarded as deeply influenced by Chinese government, were hardly cited by CNA's news coverage. Furthermore, as monitored by the parliament, CNA ensures that all reports undergo rigorous verification procedures before dissemination, to mitigate the risk of false information propagation and meet the requirements from different political parties and politicians.

In conclusion, CNA's adoption of innovative technological solutions — although far from the manager’s expectation in combating the latest development of disinformation techniques, such as deepfake videos— and collaboration with professional verification agencies, demonstrate the national news agency's commitment to upholding journalistic standards and providing accurate and impartial news coverage, to meet various requirements from different political parties and authorities.

3) RTI: Educational Promotion and International Collaboration

Radio Taiwan International (RTI) has taken a multifaceted approach to uphold news reporting standards, particularly in the 2024 General Election. RTI's revision of its self-discipline principles and the introduction of specific reporting guidelines for general elections are part of its broader strategy to enhance the integrity of its news content. This strategy includes a commitment to verifying information rigorously and maintaining fairness, neutrality, and accuracy in its reports, as mandated by the 2024 General Election News Production and Broadcasting Guidelines developed in assistance with the Ministry of Information. Notably, RTI has implemented provisions requiring the verification of information and materials before election news reporting, aiming to prevent the spread of false information or misleading content. This includes collaboration with private fact-checking agencies (e.g. Taiwan FactCheck Center and Taiwan AI Labs) and confirmation of the authenticity of primary false information sources with the Ministry of Justice Investigation Bureau and the Ministry of National Defense of Taiwan.

A. Technical Means and Professional Review: RTI leverages digital tools, such as reverse image search and video analysis technologies, to detect and scrutinise suspected instances of false information. Moreover, RTI provides professional training to its reporters and editors, equipping them with the skills to discern false information effectively. By integrating technical solutions with rigorous professional review processes, RTI ensures the accuracy and reliability of its news content while mitigating the dissemination of false information.

B. Media Collaboration and International Experience Exchange: Radio Taiwan International (RTI) collaborates with Agence France-Presse (AFP). This relationship has
facilitated access to AFP’s comprehensive resources for journalist training on AI disinformation and the application of AI tools in news reporting. Recognising the value of these resources, RTI plans to integrate AFP’s training modules and innovation labs into its practices. This initiative aims to bolster RTI's capabilities in effectively managing news related to disinformation, thereby enhancing its journalistic standards and adaptability in the face of evolving technological challenges.

Additionally, RTI's engagement with international media organisations and fact-checking bodies plays a pivotal role in its strategy to combat disinformation on a global scale. The success of these international collaborations is contingent upon the substantive exchange of knowledge and the adaptability of global best practices to Taiwan's unique socio-political environment. Evaluating the tangible outcomes of these partnerships is crucial for assessing their contribution to RTI's ability to navigate the complexities of disinformation, highlighting the need for a critical approach to understanding the efficacy of these international exchanges in strengthening RTI's news reporting infrastructure.

C. Long-term Education Initiatives: RTI prioritises long-term education initiatives to enhance media literacy and foster critical thinking skills among the public by establishing educational programmes such as the Yangtze River Delta Academy. RTI endeavours to equip media practitioners with the necessary tools and knowledge to navigate the complexities of new media and AI-driven information environments. By empowering individuals with robust media literacy skills, RTI fosters a more informed and discerning society.

In summary, Radio Taiwan International (RTI) has embarked on a comprehensive strategy to uphold news integrity and counter disinformation, highlighted by efforts around the 2024 General Election. Despite the proactive adoption of digital tools, professional training, international collaborations, and educational programmes, the effectiveness of these initiatives in the rapidly evolving landscape of misinformation demands critical scrutiny. While RTI's endeavours signify a robust attempt to navigate the complexities of modern journalism and public information, the true measure of success will hinge on the adaptability, impact, and continuous evaluation of these strategies against emerging challenges. Through critical assessment and adaptation, RTI aims to maintain journalistic standards and foster a well-informed society amidst the ongoing battle against disinformation.

2. Commercial Media: Political Divides and Business Concerns

1) FTV: Diminished Influence of Traditional Media in Controlling Disinformation

Formosa Television (FTV), a commercial broadcaster, has maintained a distinct stance on its role in combating disinformation, diverging from collaborations with entities like the
Taiwan FactCheck Center. Relying on its internal editorial standards, FTV holds a sceptical view regarding the efficacy and responsibility of traditional media in incessantly policing false information.

A. Editing Strategies and Procedures

FTV operates under the belief that the omnipresence of false information transcends the capacity and obligation of traditional media to rectify. It posits that the pervasive nature of disinformation, fuelled by the digital age, places an unrealistic expectation on traditional broadcasters to serve as the arbiters of truth. FTV's internal standards prioritise journalistic integrity but recognise the limitations of traditional media's influence in the vast digital information ecosystem.

B. Measures and Methods

Reflecting a critical perspective, FTV questions the impact of traditional media in halting the spread of misinformation. It argues that when false information circulates through social media and other digital channels, it has already shaped public opinion, rendering traditional media's intervention less effective. This view is compounded by the observation that media outlets often disseminate information aligning with their respective biases, leading to a polarised environment where confirmation bias reinforces pre-existing beliefs.

C. Challenges and Reflections

FTV's reflections on the media landscape underscore a pragmatic acknowledgement of traditional media's diminished role in countering disinformation. The broadcaster suggests that the responsibility to combat false information should not rest solely on media entities. Given the entrenched nature of disinformation and the segmented influence of media based on ideological lines, FTV advocates for government intervention as a necessary measure to address the issue effectively. This position highlights a critical understanding of the challenges faced by traditional media in the current information climate, where the battle against disinformation demands a multifaceted approach involving various stakeholders beyond the media industry.

2) TVBS: Facing the Dilemma of Commercial Interests and Disseminating False Information

TVBS has delineated distinct editorial strategies, methodologies, and procedures in its engagement with disinformation, concurrently grappling with unique dilemmas and obstacles. This synopsis delineates the strategies employed by TVBS, including exemplifications, directives, methodologies, and identified lapses.

A. Editorial Strategies and Procedures

Reliance on Sources from Social Media: A predominant challenge for TVBS stems from its
inclination towards breaking news, engendering an over-dependence on social media sources, notably clubs or news fanpages on Facebook, such as Baoliao Commune (爆料公社). In its quest for exclusive stories, TVBS's heavy reliance on social media and breaking news heightens the risk of disseminating misinformation or inadequately verified information. TVBS's verification efforts to a relatively superficial level, particularly regarding sources from online forums and social media, may sometimes lack depth.

**Verification Process:** In addressing potentially false information, TVBS engages in a moderate verification process, including revisiting the incident's locale and liaising with involved parties. TVBS exhibits a judicious stance towards AI-generated content, exemplified by its treatment of purported audio files associated with Ko Wen-je. Acknowledging the susceptibility of AI-generated content to manipulation and forgery, TVBS exercises restraint in its dissemination, opting for stringent verification protocols before reporting. This discerning approach underscores a broader scepticism towards the axiom of "seeing is believing", particularly within the contemporary technological landscape. Nevertheless, TVBS website had released the "fabricated polls" without careful verification, although the TVBS Polls Center informed all managers the source was a fake immediately.

**B. Measures and Methodologies**

**Dependency on Social Media and Authorities:** TVBS undertakes primary verification when confronted with potentially false information, predominantly relying on journalists' experience and intuition rather than a structured framework of fact-checking process. While lacking formal contracts or collaboration with fact-checking organisations, TVBS journalists seek assistance from authorities, such as police and judicial institutions, on an ad hoc basis to bolster report credibility. TVBS has encountered challenges such as inadequate verification processes and an overreliance on social media sources. Enhancing verification standards and fostering collaborations with fact-checking experts or institutions could significantly augment the quality and reliability of TVBS's reporting, thereby fortifying its role in disseminating accurate information.

**C. Challenges and Reflections**

**The Imbalance of Political Talk Shows:** The proliferation of AI collaborative behaviours presents Taiwanese media, including TVBS, with a multifaceted challenge characterised by diverse information sources, notably in political talk shows (政論節目). Within these talk shows, the veracity of information provided by hosts and guests may only sometimes undergo rigorous verification processes, potentially compromising journalistic integrity and leading to deviations in programme content. While TVBS advocates preserving verification principles and the importance of balanced reporting even within informal news dissemination, operational realities underscore the formidable challenges in practice. The improvisational and open-ended nature intrinsic to such programming exacerbates quality control complexities.

**The Challenges of Online Cross-border Influences:** As political talk shows rely on revenue generated from YouTube advertisements, their objectivity is often compromised, rendering
them more susceptible to disseminating misinformation. The head of the TVBS newsroom has observed that YouTube boasts a larger Chinese user demographic compared to Taiwanese users, thereby fostering a more receptive environment for pro-China narratives. The cross-border nature of digital platforms not only facilitates the dissemination of disinformation but also heightens the susceptibility of Taiwanese television news to manipulation by such misinformation.

The Separation of News Production and Asymmetrical Regulation between TV and Website: The leader of the TV newsroom emphasised that both journalists and the news production are between TVBS channel and its website are separated, a common strategy that many Taiwanese TV news channels employ. This organisational strategy has intensified the dependence on social media sources for the online news section. While the content of TV news is strictly scrutinised by the National Communications Commission, news websites are relatively free from regulation. Following online trending topics to increase the click-through rates, news websites of TVBS have become more vulnerable to disinformation and misinformation during the election.

3. Analysis

The concerted efforts of Taiwan’s public and state media entities, exemplified by PTS, CNA, and RTI, underscore their unwavering dedication to preserving the authenticity and credibility of news coverage amidst the pervasive challenge posed by false information and distorted reporting. These media organisations demonstrate a commitment to public service values, as well as the influences from different political parties, through distinct strategies and methodologies while leveraging technological advancements to navigate contemporary challenges.

Collaboration with verification organisations such as the Taiwan FactCheck Center (台灣事實查核中心) and the Taiwan AI Labs (台灣人工智慧實驗室) has been pivotal in clarifying misinformation across these media outlets. PTS’s steadfast adherence to production and broadcasting guidelines centred on correctness, verification, and accuracy reflects its meticulous approach to news authenticity and unwavering dedication to public values. Similarly, CNA’s proactive embrace of AI technology and initiatives to enhance media literacy underscores its commitment to bolstering news quality and fostering public awareness.

RTI's reinforcement of news reporting standards by revising self-discipline principles and establishing election reporting guidelines underscores its dedication to upholding independence and objectivity in governance and news production processes. Collectively, these efforts signify Taiwan's public and state media's active engagement in combating false information, adapting to the digital era, and enhancing media literacy among the public.

The dissatisfaction of FTV and TVBS in combating disinformation, which seems to surpass the ability and commitment of individual media organisations, further highlights the imperative of collective action. Commercial media are particularly vulnerable to AI-generated disinformation due to their political affiliations and profit motives. FTV and TVBS, representing pro-independence and pro-China viewpoints respectively, have faced pressures to produce news reports either in opposition to or aligned with disinformation, often
diverging from official narratives.

Moreover, traditional TV channels and their online counterparts, driven by ratings and click-through rates, find themselves increasingly vulnerable to online AI disinformation. The verification processes on commercial websites are often inadequate, given the relatively light regulation of online media and the separation of news production between traditional and online media. The transnational nature of digital platforms also exposes commercial online media to pro-China disinformation during elections.

The challenges encountered by FTV and TVBS underscore the ongoing and complex nature of the fight against disinformation, highlighting the need for collaborative efforts and partnerships among various stakeholders.

These experiences of public media, state-owned media, and commercial television underscore media organisations' need to fortify internal fact-checking mechanisms and engage in external cooperation to establish comprehensive frameworks for information authenticity verification and education. Only through comprehensive efforts encompassing media organisations, governmental bodies, technology platforms, and the public can meaningful progress be achieved in safeguarding information authenticity, preserving media independence and credibility, and fostering the healthy development of democratic societies.

Conclusions and Recommendations

The role of Artificial Intelligence in the evolution of disinformation is characterised by three significant shifts. First, AI blurs the lines between fact and fiction, enabling the creation of hyper realistic fabrications that challenge our ability to discern truth, thereby eroding public trust in information sources. Second, the ability of AI to generate and disseminate disinformation at an unprecedented scale and volume outpaces traditional fact-checking and countermeasures, amplifying the spread of falsehoods. Third, the growing sophistication of AI techniques, such as deepfakes, complicates the detection and debunking of fake content, creating a need for innovative solutions in digital literacy and technology.

Through the analysis, several characteristics of disinformation mediation during the 2024 presidential election were obtained:

1. Compared with 2020, there are several changes in the disinformation operation: in 2020, China launched a massive information war against Taiwan through the interactive use of the state propaganda, online nationalism and disinformation farms driven by political and business interests, and in 2024, the attacks will continue unabated, but the attackers are hidden behind the scenes, and they are good at exploiting the weaknesses of Taiwan's information ecosystem. A large amount of AI-generated fake audio-visual content was produced by the disinformation/manipulation campaign around the election, and the distribution platforms were transferred to YouTube and Douyin/TikTok, posing new challenges to the response of the government and the private sector to fact-checking.

2. The AI disinformation attacks in this election include a large number of coordinated behaviours and false content, and a large number of coordinated behaviours show the
connection between the source of the data and the distribution path of China, and there are several cases of AI fraud in the false content, but it is not clear whether it is China's doing. There is still a further correlation between collaborative behaviour and false content verification and analysis.

3. Taiwan's response to the current presidential election, the government and civil society have all made a difference. Government departments have reduced the effectiveness of disinformation attacks through deterrence through law amendments, communication between the Central Election Committee and platforms, and actions by prosecutorial units; civil society organisations have helped the public identify China's information attacks by analysing and exposing concerted behaviours, and immediately checking and clarifying disinformation; mainstream media, with a certain degree of journalism expertise, may screen for online disinformation, but for the sake of speed, they will also inadvertently become accomplices in promoting disinformation, and because of the media's stance, they will affect the perception and dissemination of suspicion of the United States and the theory of peace and war.

Based on the above analysis results, this report concludes that disinformation operation and attacks have continued unabated and continues to evolve. In order to safeguard a nation’s democracy and independent development, both the government and civil society need to respond prudently and not slacken. Here are a few suggestions:

1. The government must be proactive: since 2018, the executive branch and the legislature have passed several waves of amendments to the law, increasing the penalties for spreading rumours and fake videos. The Anti-Infiltration Act also provides a basic mechanism to use against those who receive funding and instructions from China to engage in infiltration activities. However, China’s response to disinformation does not include China-based pathways. In particular, the shift of disinformation attack platforms to Douyin this year shows the lack of China’s response to Chinese platforms and Chinese disinformation and the consequences of it. In this regard, the government must have a clear attitude and action!

2. Contemporary disinformation is mainly disseminated on digital platforms and social media, and then leaks into the mainstream media circle. Therefore, it is necessary to make digital platforms and traditional media accountable. For radio and television media, Taiwan has legislated to obligate news organisations to verify facts, and under the law enforcement of the authorities, the mainstream media is required to be self-disciplined and responsible; however, the mainstream media currently does not have the ability to check online false information and the practices of blocking, or publishing and then removing it from the online platforms, is still insufficient. Online platforms are even more unmanageable, forming a major loophole in control. The European Union has enforced the “Digital Service Act” to make the digital platforms accountable and this approach should be a useful model for other countries to learn.

3. Vibrant civic groups are the most important cornerstone of Taiwan's democracy, and they have long played a role in advocating and defending against the dangers of disinformation. However, judging from this year’s analysis of China's fake interventions, there is still a large gap between the analysis of coordinated action and false content, and between discovering the Chinese intervention and the effects of its influence, and more efforts and research are needed. In addition, the introduction of
AI technology has also made it more challenging for citizen groups to check and dismantle disinformation. Citizen groups have limited resources and capabilities, so more cross-departmental and cross-professional cooperation is needed to fill the current gap in the prevention and control of AI disinformation attacks.

4. As President-elect Lai Ching-te mentioned at his victory party, Taiwan's election results confirmed that we "did not allow the mediation of external forces to succeed". Judging from the several disinformation attacks launched before the election, such as Lai Ching-te’s illegitimate son and Tsai Ing-wen’s secret history, it is true that they did not cause public discussion and did not change the election results. However, theories of ‘peace and war’, suspicion of the United States and anti-American theories related to Taiwan and geopolitics have long been entrenched in news and commentary on digital platforms, social media and mainstream media, and these discourses will subtly affect the national identity, future choices and international views of the Taiwanese people. The above issues and discussions, how they circulate on various platforms, and what kind of impact they have, need to be thoroughly studied and strategies need to be formulated.

Taiwan’s experience provides a good lesson for the international community that rumormongers or foreign forces could take advantage of the weaknesses in a country’s information ecosystem to attack, divide society, and transform national identity and international outlook. The whole information ecosystem includes digital platforms, traditional media, online media, anti-counterfeiting work of non-governmental organisations, and the reception and transmission of information by the general public. The health of the information ecosystem is an indispensable part of the overall ecosystem: a healthy and strong public media, a professional news media, responsible and transparent digital platforms, an active civil society and a discerning citizenry. The government should play an active role in building a healthy information ecosystem, providing assistance, cooperation and communication.

References

Central Election Committee (2023, December 28). Don’t interfere with elections with fake polls or non-compliant polls and no polls will be released from 10 days before polling day. Central Election Committee. Retrieved from https://web.cec.gov.tw/central/cms/112news/41287

Central Election Committee (2024, January 17). The Central Election Committee has transferred the election fraud case to the police and judicial organs for investigation and accountability. Central Election Committee. Retrieved from https://web.cec.gov.tw/central/cms/113news/41561

Chang, H. (2023, August 25). The Investigation Bureau confirmed false information on the Internet that "Audio Recording Files Reveal the Content of Vice President's Visit to the United States." Convergence News Network. Retrieved from https://tw.news.yahoo.com/%E7%B6%B2%E5%82%B3-%E9%8C%84%E9%9F%B3%E6%AA%94%E6%9F%Af%E8%B3%BD%E7%85%B1%E8%A8%AA%E7%BE%8E%E5%85%A7%E5%AE%B9-%E8%AA%BF%E6%9F%A5%E5%B1%80%E8%AD%89%E5%AF%A6%E5%81%87%E8%A8%AE%E6%81%AF-080101150.html

Chen, Y. (2023, December 20). Before the election, we should observe how China's state media have led the wind to manipulate the Taiwan army's murderous war crisis. Central Radio. Retrieved from https://www.rti.org.tw/news/view/id/2190300


IORG (2024). Taiwanese news and political YouTube videos use "CCTV" program images, with TVBS accounting for half of the videos, and "CCTV" also used in non-China stories. IORG. Retrieved from https://iorg.tw/en/da/60

IORG (2024, January 10). Rumor videos about 'rigging votes' spread on TikTok more than on YouTube within 7 days before and after the election. IORG. Retrieved from https://iorg.tw/da/67

IORG (2024, January 23). The theory of suspicion towards the US and its origins. IORG. Retrieved from https://iorg.tw/a/us-skepticism-238

Li, T. (2023, December 23). Involved in the publication of 8 fake polls! The reporter of the "Finger Media" was detained and the poll expert was released. TVBS News Network. Retrieved from https://news.tvbs.com.tw/politics/2344980


Lin, C. (2024, January 17). Ko Wen-je made his first public appearance after losing the election and persuaded Ko's supporters to make a large-scale vote. Central Radio. Retrieved from https://tw.news.yahoo.com/%E6%9F%AF%E6%96%87%E5%93%B2%E6%95%97%E9%81%B8%E5%BE%8C%E9%A6%96%E5%BA%A6%E5%85%AC%E9%96%8B%E9%9C%B2%E9%9D%A2-%E5%8B%B8%E6%9F%AF%E7%B2%89%E5%A4%A7%E8%A6%8F%E6%A8%A1%E5%81%9A%E7%A5%8E%E4%B8%8D%E5%8F%AF%E8%83%BD-015818583.html


About the authors

Chen-Ling Hung
Professor Chen-Ling Hung is Director of the Graduate Institute of Journalism, National Taiwan University (NTU). She is also Director of the Multimedia Center at NTU. Between 2016 and 2020, Professor Hung served as the Commissioner of the National Communications Commission, the media regulator in Taiwan. During her term, she worked on regulation regarding media content and structure and helped to improve enforcement of truth verification of broadcasting news. She is currently the chairperson of the Taiwan Communication Association.

Wen-Cheng Fu
Wen-Cheng Fu is a professor and the head of the journalism department at National Defense University, Taiwan. His research focuses on big data and machine learning of social media, communication & emotion, and communication & irrational behaviour. He is currently the Secretary General of the Taiwan Communication Association.

Chang-De Liu
Chang-De Liu is a professor of the Department of Journalism at the National Chengchi University. His research interests include (but are not limited to) media, sports, the globalisation of sports, the political economy of communication, and media policy.

Hui-Ju Tsai
Hui-Ju Tsai is an assistant professor in the Graduate Institute of Journalism at National Taiwan University, Taiwan. Her research orientation is critical political economy approach to studying platformisation of communication and the democratisation of popular culture.