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Narrative Review on Detonation of AI-Generated Deep Fakes and Misinformation: A Threat to Politicians in Malaysia

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ABSTRACT
AI-generated content has been cropping up more frequently in politics and election campaigns, sometimes sowing confusion among voters and causing them to lose trust in the truthfulness of what is presented before them. Therefore, the purpose of this study to explore the pervasive threat posed by AI-generated deep fakes and misinformation targeting politicians in Malaysia, and its implications on public trust, democratic processes, and the integrity of information dissemination. This paper presents This study is based on qualitative data obtained through a Narrative Literature Review from 10 Google Scholar and 5 Scopus indexed sources from the year 2019-2023. The findings reveal deep fakes and AI-disinformation pose severe threats today to Malaysian politicians across partisan lines through tactics like election media manipulation, fraudulent statement impersonations, and fake imagery viralized. Targeted leaders exhibited loss of constituent trust, reputation damage, psychological pressures, diminished leadership efficacy and voter confidence from exposure to multiplying information threats driven by advancing technology rather than ethics. Politicians in Malaysia are already facing threats from deep fakes and made-up propaganda about them online. This causes the public to become confused about what is real and lose trust in leaders.

Keywords: Deep Fakes, Technologies, Artificial Intelligence, Malaysia, Politician.

INTRODUCTION

The digital transformations ushered in by 21st century disruptive technologies have yielded unforeseen societal risks that now pose unprecedented threats even to the integrity of democratic governance pillars and processes. The growing phenomenon of deep fakes represents one such risk dimension presently accelerating at scale across political arenas via the deliberate spread yet profoundly realistic, images, videos and audio recording featuring public figures in fabricated scenarios (Lim, 2022). Enabled by breakthroughs in generative artificial intelligence, deep fake media matches genuine human representations near-flawlessly in appearance and sound, rendering them potentially indistinguishable as fraudulent by everyday citizens (Seow et al., 2022).

In Malaysia, politicians now grapple with navigating emergent threats posed by weaponised deep fakes driving false narratives which reduce public trust. This research aims to elucidate local politicians' perspectives regarding deep fakes and AI-powered disinformation they perceive as undermining leadership credibility. According to Kapantai et al (2020), it will illuminate understandings around the tactics being deployed and the growing capabilities of these technologies to erode voter discernment of factual distortions.

According to Statista.com (2023), Malaysia having among the world's highest social media penetration rates, populations rely increasingly on diffuse online information sources, rendering society vulnerable to organised disinformation initiatives. Moreover, the speed at which misinformation spreads in the digital realm exacerbates the situation (Gamage, 2022). What begins as a fabricated video or audio clip can swiftly permeate social media platforms, creating a snowball effect of doubt and uncertainty. The ramifications of such deceptive practices extend beyond individual politicians to erode public faith in institutions and democratic processes.

RESEARCH OBJECTIVES

RO 1: To explore the pervasive threat posed by AI-generated deep fakes and misinformation targeting politicians in Malaysia

RO2: To examine its implications on public trust, democratic processes, and the integrity of information dissemination.

The conceptual framework of the present study is shown in Figure 1 below.

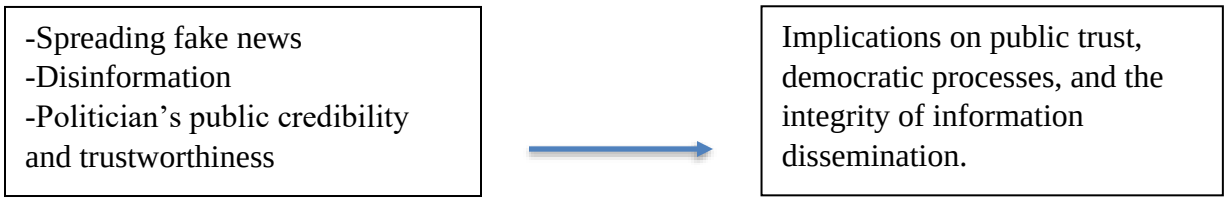

Figure 1 Conceptual Framework of Detonation of AI-Generated Deep Fakes and Misinformation: A Threat to Politicians in Malaysia.

LITERATURE REVIEW

Disinformation by AI technologies

Media represent the next phase of disinformation's evolution and a challenge with few ready countermeasures, (Voo et al., 2021). Deep fakes enabled via AI algorithms perfectly impersonate people and fabricate events with falsified realism representing deliberately constructed lies weaponized to manipulate public perceptions (Yang et al., 2022). As the technologies advance, threats become increasingly democratised allowing broader exploitation by malicious people seeking to sabotage governance legitimacy.

Recent evidence reveals coordinated disinformation campaigns targeting politicians worldwide by exploiting AI's scalable truth capabilities often via social platforms. President Biden in a statement to CNN in November 2023, highlighted deep fakes in the US election context as pressing threats requiring counter strategy prioritisation to safeguard electoral integrity . Liu et al (2021) technically demonstrated the capacity to spoof speeches by European parliamentarians using AI text and speech that observers found convincing, spotlighting risks. India witnessed circulation of faked explicit imagery of female politicians as deliberate reputational sabotage, enabled via accessible face-swap apps (Kumar & Shah, 2022). In Malaysia, statements keep being sabotaged to our politicians, and people receive misinformation. The AI version of our PMX, as an example, speaking in Korean language received many reactions that can lead to misinformation.

As deep fakes undermine public discernment of factual distortions, politicians now grapple with credibility crisis risks warns (Schick, 2020). However empirical insights into impacts within developing country contexts remain inadequately documented in scholarly discourse including Malaysia undergoing rapid modernization at the AI frontier (Andreas Jugher, 2023).

The Impact of AI and Disinformation on Politicians in Malaysia

The rapid advancement of artificial intelligence technologies has democratised sophisticated abilities to generate synthetic media and accelerate manipulation of information flows at unprecedented scales, creating novel threats actors exploit to deliberately deceive publics (Andreas Jugher, 2023). A particularly high stakes domain experiencing impacts is the political arena, where protection of leadership credibility represents an imperative for functional governance.

In western democracies, prominent examples of coordinated disinformation campaigns weaponizing AI against politicians are manifesting more frequently, demonstrated during recent US elections (Turner, 2022). However, empirical insights interrogating affects within rising Global South countries remain lacking despite equal if not higher digital vulnerabilities. Malaysia, an emergent nation with advanced IT infrastructure and among the world's highest social media penetration rates.

Initial evidence indicates Malaysian policy stakeholders are already expressing alarm regarding AI disinformation threats. Cyber Law expert, Derek Fernandez in The Star article (2023), claimed that con artists were becoming increasingly sophisticated, citing a recent

example in China in which the head of a company was tricked out of 4.3 million yuan (RM2.8 million) in less than ten minutes using cutting-edge technology, a new AI face-changing programme.

Specifically within Malaysia, the sophisticated manipulation of information poses high risks given deep political divides and highly contested information environments, especially surrounding elections. The proliferation of fake imagery and slanderous messaging apps saw rampant spread during recent leadership contests, seeking to sabotage opponent reputations, as analysed by Malaysian communication scholars (Kaur et al., 2022; Shaari et al., 2021). Such disinformation campaigns have been shown to negatively impact voter perceptions and trust.

However, according to Albahar et.al (2019), politicians themselves rarely have opportunities to directly voice concerns over technological threats they increasingly grapple with as representatives navigating the digital era. Accordingly, this study's exploration of perspectives among Malaysia's political elites themselves will provide much needed primary insights into lived experiences with AI and deep fakes that can better inform countermeasures protecting public integrity.

As Malaysians consume increasing amounts of diffuse online media sources, vulnerabilities arise for tech-enabled information manipulation cascades during election cycles. This study explores direct threats highlighted by political elites themselves as critical experts of unfolding technological landscapes, helping capture insiders' perspectives guiding policy responses on malware defending against post-truth adversarial forces (Dell, 2022)

METHODOLOGY

This study employs a narrative literature review to synthesise the current knowledge of TikTok usage patterns and influences on youth lifestyles. Peer-reviewed articles, published research reports and seminal scholarship on this research will be systematically identified using academic literature databases like Scopus, Websites and Google scholar, accessing leading communication, media studies and social science journals.

Preliminary scanning indicates scholarly analyses of deep fakes, AI Generated, and Misinformation remain at a nascent stage, especially focused Malaysian research. Key search terms will encompass "deep fakes", "Technologies", "Artificial Intelligence", "Malaysia Politician". After the process, only 15 articles that met the following selection criteria were included in the review.

FINDINGS AND DISCUSSIONS

Table 1 Article Summary

Article	Study/Author	Aim	Method	Findings
Deepfake democracy: South Korean candidate goes virtual for votes	AFP - https://www.france24.com/en/live-news/20220214-deepfake-democracy-south-korean-candidate-goes-virtual-for-votes (2022)	The aim of this article is to highlight the use of deepfake technology in the South Korean presidential election campaign, specifically focusing on the creation and deployment of a digital avatar, AI Yoon, to engage with younger voters.	Quantitative	The article discusses how the campaign team has scripted humorous and satirical responses for AI Yoon, which has garnered significant attention and engagement from the public. It also explores the potential impact and implications of using deepfake technology in election campaigns, as well as the views of both supporters and critics of this approach. Additionally, the article delves into the role of technology in shaping the future of election campaigns and the ethical considerations

				surrounding the use of deepfake technology in the political sphere.
Review on Fake News in Malaysia during the Movement Control Order (MCO) from the Ethics in ICT Perspective	N. A. Hasbullah, M. Wook, N. A. Mat Razali, N. M. Zainudin and S. Ramli (2021)	The study aims to create awareness and provide factual insights into the prevalence of fake news during the MCO.	Descriptive analysis method	The findings reveal that anxiety-inducing fake news was prevalent, with COVID-19 being the most popular fake news title during the MCO. The study also discusses the impact of fake news on public behaviour and the legal implications of creating and distributing fake news. It advocates for public awareness, ethical values in ICT education, and responsible news consumption to combat misinformation.
Deepfakes, Real	Langa. J - 2021	The objective of the document is to	Quantitative	The finding in this research shows

Consequences: Crafting Legislation To Combat Threats Posed By Deepfakes		explore the need for legislation to address the threats posed by deepfake technology, specifically in relation to national security and election integrity.		Legislation is required to tackle the threats posed by deepfake technology. Understanding the potential consequences is crucial, especially in relation to national security and election integrity. Existing and proposed state and federal legislation, as well as legal and constitutional constraints, are examined. The proposed solution involves defining deepfakes, anticipating technological changes, and aligning with national security and First Amendment law.

Digital Disinformation and the Need for Internet Co-regulation in Malaysia	Daud, M., & Azmi, I. M. A. G. (2021)	The objectives of the document are to analyse self-regulation and co-regulation approaches to combating fake news in Malaysia, examine specific legislations enacted in different jurisdictions,	Qualitative	The research concludes that self-regulation alone is not enough to combat fake news and suggests that joint regulation of the Internet with government participation and legislative support is more appropriate to address the problem.
Facial Recognition Technology in Malaysia: Concerns and Legal Issues	Chong, S.Z., & Kuek, C.Y. (2023)	This aims to recommend amendments to the existing laws in Malaysia to strike a balance between individuals' privacy rights and the applications of FRT for various purposes	The doctrinal research method	The findings of the document highlight the limited legal framework in Malaysia for governing FRT, emphasising the need to amend the Personal Data Protection Act of 2010 to regulate FRT and address privacy concerns. It suggests that the amended law should include provisions such as

				the necessity, proportionality, accuracy, fairness, transparency, and accountability in relation to the use of FRT.
Still Waters Run Deep(fakes): The Rising Concerns of "Deepfake" Technology and Its Influence on Democracy and the First Amendment	Wilkerson, L. (2021).	The aim is to explore the implications of deep fakes, particularly in the context of democracy and the First Amendment.	Qualitative	It discusses concerns over deepfake election tampering, the potential use of deepfakes as a political weapon, the popularity of deepfake parody videos on social media, legal implications and protections related to deepfakes, and the technological advancements of private platforms in detecting and removing deepfakes

Individual Legal Protection in the Deep Fake Technology Era	Tan, Z.K., Chong, S.Z., Kuek, C.Y., & Tay, E.S. (2023)	The document aims to highlight the lack of specific protection and limitations on the usage of deepfake technology in Malaysia and propose legislative measures to safeguard the rights of individuals affected by deep fake videos.	Doctrinal legal research.	The findings of the document are that the use of deepfake technology has increased significantly, with a 550% increase in deep fake videos from 2018 to 2022. While deepfake technology can have beneficial applications in industries such as filmmaking and video games, it is predominantly used for improper purposes, often without the consent of the individuals whose faces are swapped. This can lead to legal implications such as violation of individual rights, defamation, and invasion of privacy.

Eye on digital media literacy from the perspective of 'Generation Z'	Li, K. Y., Zahiri, M. A., & Jumaat, N. F. (2021).	The aim of the study was to identify indicators of media literacy scale using Exploratory Factor Analysis and to identify the structural measurement model using Confirmatory Factor Analysis (CFA)	Quantitative	The study highly contributed to Malaysia Education Policy and Malaysian Communications and Multimedia Commission for media literacy education awareness among young people.
The Liar's Dividend: Can Politicians Claim Misinformation to Evade Accountability?	Schiff, D. S., (2022)	The research discusses concerns and potential responses related to deepfake technology, particularly in the context of political campaigns and the potential impact on elections.	Qualitative	Nearly seven-in-ten (68%) say made-up news greatly affects Americans' confidence in government institutions. Roughly half (54%) say it is having a major impact on Americans' confidence in each other.
How Media Literacy Competency Contribute to Political Participation Integrity Among	Allam, S. N. S., Hassan, M. S., Ridzuan, A. R., Mohideen, R. S., & Ilyas, I. Y. (2021).	The article aims to comprehensively address the influence of media and politics on new young voters, focusing on the role of media in shaping political interest, strengthening political knowledge	Quantitative	Communication and information technology have played a significant role in increasing access to political information, ultimately forming political knowledge and promoting interest in political

Young People		structures, and encouraging political participation among new young voters.		activities among the young.
Analysis of the current state of deepfake techniques -creation and detection methods	Abu-Ein, A. A., Al-Hazaimeh, O. M., Dawood, A. M., & Swidan, A. I. (2022).	The objectives of the paper are to provide an overview of deepfake creation and detection methods, discuss challenges and trends in the field, and assist the artificial intelligence research community in addressing deepfakes.	Analysing the current state of deepfake techniques, reviewing deepfake creation and detection method	This paper provides an overview of the algorithms and datasets used to build deepfakes, as well as the approaches presented to detect deep fakes to date.
Formulation of AI Governance and Ethics Framework to Support the Implementation of Responsible AI for Malaysia	Ariffin, A. S., Maavak, M., Dolah, R., & Muhtazaruddin, M. N. (2023).	The objectives focused on exploring perceptions towards responsible AI/AI principles and implementation, understanding the challenges and opportunities in AI governance, identifying the key components of an AI governance and ethics framework, and examining the performance	Quantitative	The study revealed that the majority of respondents had positive perceptions towards responsible AI/AI principles and implementation. Additionally, the study highlighted the need for a command centre within the AI governance and ethics framework to coordinate the national AI ecosystem.

		measurement of AI ethics.		
Detecting fake news and disinformation using artificial intelligence and machine learning to avoid supply chain disruptions.	Akhtar, P., Ghouri, A. M., Khan, H. U. R., et al. (2023).	The study aimed to address the impact of fake news on supply chain disruptions and decision-making processes.	Mixed-method	It highlights the need for accurate information to enable thorough understanding of experiences in the context of key management functionaries.The study proposes an AI and ML-driven method for data analysis, utilising techniques such as Dataset Enrichment, Query Expansion, and the Support Vector Machine (SVM) classifier.
A Comparative Study on Political Propaganda Messages and the Use of Mass Media during Covid-19 in Malaysia	Mamat, M. N. S., & Mohammad, E. S. W. (2022).	To study the coverage of political candidates/parties during the Melaka state election by Buletin TV3 and Berita Perdana RTM in their premier air time.	Analysis method	The study revealed that candidates heavily utilised mass media to spread their propaganda to voters during the election campaign period. Both Buletin TV3 and Berita Perdana RTM focused heavily on political candidates or parties' messages, particularly their manifestos, as promises to potential voters. Public welfare and socioeconomic

				issues were the main intentions and promises highlighted by political candidates in their manifestos covered by both broadcasters.
Deepfakes on Twitter: Which Actors Control their spread	Pérez Dasilva, J., Meso Ayerdi, K., & Mendiguren Galdospin, T. (2021).	The study aimed to identify the main actors and research which ones hold the greatest advantage when controlling the spread of messages related to deepfakes on Twitter.	Social Network Analysis	The study found that politicians and the media are amongst the most referenced and made viral by third parties when speaking of deepfakes on Twitter. Additionally, the most relevant topics when users discuss deepfakes on Twitter are related to politics and concern over the growing difficulty in distinguishing between reality and fiction.

Table 1 shows the summarisation of the fifteen articles reviewed. This narrative literature reviews the pervasive threat posed by AI-generated deep fakes and misinformation targeting politicians in Malaysia and its implications on public trust, democratic processes, and the integrity of information dissemination. The studies adopted qualitative, quantitative, and mixed method analyses to address concerns and potential responses related to deepfake technology, particularly in the context of political campaigns and the potential impact on elections.

Only 6 articles fulfilled the objectives. Article 1, highlighted the use of deepfake technology in the South Korean presidential election campaign, specifically focusing on the creation and deployment of a digital avatar, AI Yoon, to engage with younger voters. In Article 13, addressed the impact of fake news on supply chain disruptions and decision-making processes, proposing an AI and ML-driven method for data analysis to enable thorough understanding of experiences in the context of key management functionaries.Meanwhile in

Article 14 which conducted a comparative study on political propaganda messages and the use of mass media, exploring direct threats highlighted by political elites and capturing insiders' perspectives guiding policy responses on malware defending against post-truth adversarial forces.

Article 8 explored how media literacy competency contributes to political participation integrity among young people, identifying indicators of media literacy scale and contributing to media literacy education awareness. Based on Article 9, the paper discussed concerns and potential responses related to deepfake technology, particularly in the context of political campaigns and the potential impact on elections, highlighting the impact of made-up news on Americans' confidence in government institutions and each other. Article 5, aimed to recommend amendments to the existing laws in Malaysia to strike a balance between individuals' privacy rights and the applications of Facial Recognition Technology (FRT) for various purposes, emphasising the need for regulatory amendments to address privacy concerns. Lastly, Article 6, explored the rising concerns of deep fakes and the negative impact on public anxiety and distrust among citizens, concluding that self-regulation alone is not enough to combat fake news and suggesting joint regulation of the Internet with government participation and legislative support.

CONCLUSION

In conclusion, the comprehensive review of 15 articles has shed light on the pervasive threat posed by AI-generated deep fakes and misinformation targeting politicians in Malaysia. The findings underscore the multifaceted impact of these technological advancements on public trust, democratic processes, and the integrity of information dissemination.

According to Ajder et.al (2019), from the deployment of digital avatars in political campaigns to the influence of fake news on supply chain disruptions and decision-making processes, the implications are far-reaching. Moreover, the limited legal framework for governing Facial Recognition Technology (FRT) in Malaysia highlights the urgent need for regulatory amendments to address privacy concerns and strike a balance between individual rights and technological applications. The impact of made-up news on confidence in government institutions and each other further emphasises the critical need for accurate information and media literacy education (David et.al, 2022).

These insights collectively call for comprehensive measures, including joint regulation of the Internet with government participation and legislative support, to combat the proliferation of fake news and deep fakes (Mcgray ,2021). It is imperative to address these challenges to safeguard public trust, uphold the integrity of democratic processes, and ensure the responsible use of advanced technologies in the political landscape.

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