Deepfakes, Disinformation & Rationality: A Case Study of the 2024 Bangladesh Elections

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Sheikh Hasina-led Awami League swept to a fourth straight term following the 12th Bangladesh National Parliamentary Elections in January 2024. The Awami League and its allies secured 225 of the 300 parliamentary constituencies, or a whopping 75% of the total seats, while the official turnout fell to a meagre 41 percent (Ganguly & Paul, 2024). The opposition Jatiya Party could only muster 11 seats and independent candidates took 52 seats (Anbarasan & Ng, 2024). Later, questions were raised on the election's legitimacy as the main opposition Bangladesh Nationalist Party boycotted the polls, alleging it to be a sham (Anbarasan & Ng, 2024). Similarly, governments in the United States and the United Kingdom have termed the election "not free and fair," with the United Nations Human Rights chief Volker Turk asking the government "to strengthen the underpinnings of a truly inclusive democracy" (AFP, 2024) Much of the criticism against Sheikh Hasina's government stems from its use of intimidation tactics through the arrest of opposition candidates and leaders, the use of political violence and the crackdown on dissent voices. However, one aspect that seldom gets talked about is the use of artificial intelligence and deepfakes to spread disinformation and mould people's perceptions.

Policy and tech experts studying the deepfake phenomenon have already raised alarms over political parties using such technology to influence voters (Pandey, 2024). Campaign consultant Shivam Kumar Singh, in a conversation with news organisation Medianama has pointed out that "political parties are currently experimenting with deep fakes on two fronts—legitimate uses (like translating a politician's speech) and nefarious purposes" (Pandey, 2024). This paper delves into how deepfakes, generative AIs and technological malpractices propel disinformation. It tries to understand how state structures in Bangladesh interacted with such emerging technologies. Firstly, this paper introduces the concept of deepfakes and the use of generative AIs in spreading disinformation. The paper then analyses existing literature on deepfakes, and disinformation and its impact on democracies. It

further analyses the curious case of the Bangladesh elections and seeks to establish the rationality behind using such emerging technologies by state actors.

In the build-up to the Bangladesh election, articles praising Bangladeshi government policies supposedly written by independent experts flooded the national and international media, reported news agency AFP. This form of AI-generated text also known as deepfake text was used to "promote narratives favourable to the current Bangladesh government" (AFP, 2023). According to the AFP expose, more than 700 articles were published by 35 experts, and most of them had "questionable credentials, fake photos" and sometimes did "not even exist" (AFP, 2023).

Thus the use of deepfakes that spread disinformation presents a formidable challenge to the integrity of democratic processes worldwide. Deepfakes are a form of digital forgery or modification of images and videos created by deep learning (a part of AI). Deepfakes possess the capability to generate new content and also alter and manipulate pre-existing content like images, videos, audio and texts. It can manipulate public perception about candidates, policies and events, swaying voter opinion, sowing discord and disrupting the democratic discourse.

In yet another scenario, a "distorted" video clip of Begum Khaleda Zia, Chairperson of Bangladesh Nationalist Party (BNP), a crucial opposition member to incumbent Prime Minister Sheikh Hasina's Awami League, made rounds across several social media platforms. The video had been altered with the help of technology and separate words were added to the 19-second-long clip (Raso, 2023). The manipulated video had been uploaded on the social media platform Facebook, on a page titled "Bornil Nobabgonj" with the caption "Infighting and Corruption run deep within her family. How can she run the country?" was viewed 70-80 thousand times between November 26 and December 1, 2023, and was shared across multiple Facebook IDs and pages a month ahead of the final polls on 7th January.
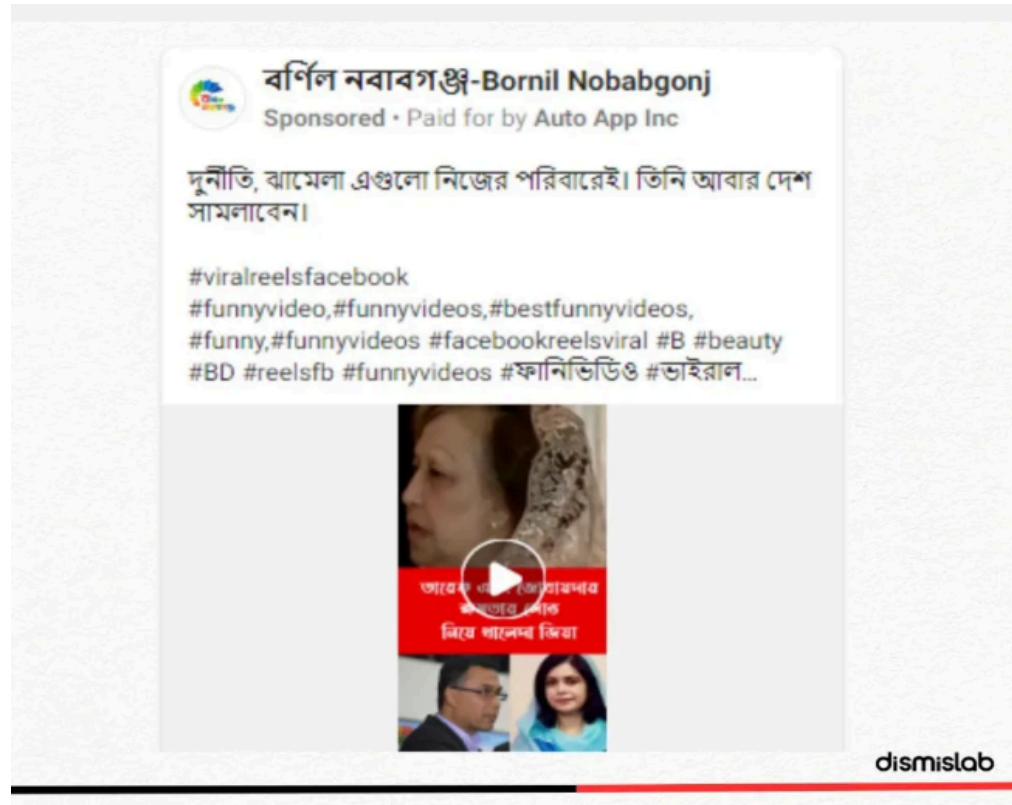
Note: Image 1: Distorted video of Begum Khaleda Zia, Chairperson of the Bangladesh Nationalist Party (Source: Dismislab.com)

Similarly, an AI-generated video was posted on the microblogging website X in September 2023 by BD Politico, an online aggregator of news related to socio-political issues in Bangladesh (Parkin, 2023). In the video, a news anchor accused diplomats from the United States of inciting political violence in Bangladesh during a segment on "World News" (Parkin, 2023). The deepfake AI avatar lambasts US representatives for their alleged interference in the Bangladeshi national elections. The video emerged in the run-up to the Bangladesh polls as Washington expressed its qualms over violence on opposition members and cracked down on dissident voices in the country.
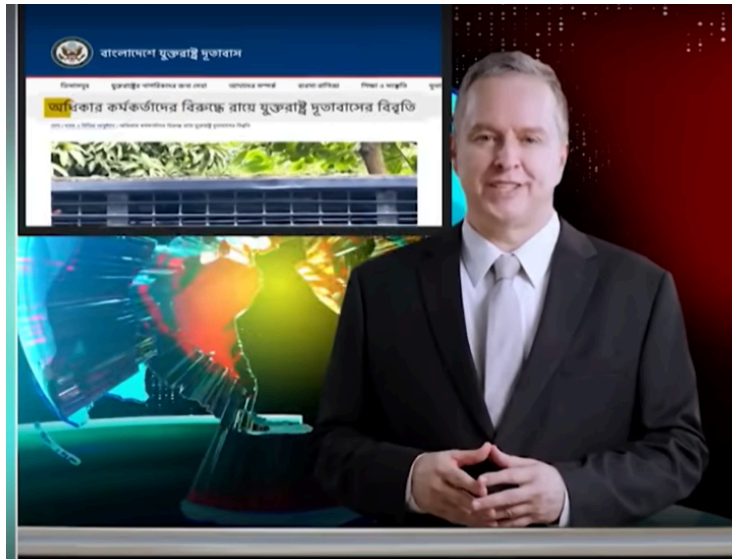
Note: Image 2: Deepfake AI Avatar lashing out at the United States, supporting Bangladesh government agenda (Source: Financial Times)

Similarly, in what might constitute election meddling, a day ahead of the Bangladesh national elections (January 7), two videos featuring independent candidates Abdullah Nahid Nigar and Beauty Begum stating their decision to withdraw from the polling process emerged on social media websites (Chowdhury, 2024). Both the videos had been "digitally manipulated using deep generative methods", and were deepfakes, as reported by digital journalism outlet Boom Live (Chowdhury, 2024). Begum's case becomes poignant, as she lost her constituency by a margin of less than 3000 votes. While it is difficult to ascertain if the deepfake video played a role in her election loss, it sets a dangerous precedent for future elections.

These are just a few instances when, deepfakes, AI-generated disinformation and shallowfakes were used either directly by the government or by other forces that indirectly accrued benefits for the ruling disposition. An investigative story published in the Financial Times in the build-up to the election stated that "pro-government news outlets and influencers in Bangladesh" played a pivotal role in spreading election-related disinformation by using cheap Artificial Intelligence (Parkin, 2023). Similarly, a report published by The Diplomat narrated testimonies from sources within the

country stating how "various government agencies, pro-government journalists, and some young entrepreneurs" united to spew disinformation online (Hasan, 2023). Thus deepfakes and other technological sophistry became primary tools in the hands of state actors who helped spread disinformation in the build-up to the national elections in Bangladesh. But why did state actors contribute to the rise of disinformation?

The Sheikh Hasina-led Awami League, in power for 15 years, has recently come under scrutiny. The government has been facing a spade of criticism from civil society actors and opposition leaders on corruption, stifling of free speech, suppression of dissent and mismanagement of the economy (Pathi. et al, 2024). These deepfake texts, and videos, come as "a coordinated influence operation," says A al-Mamum, a professor of journalism at University of Rajshahi in Bangladesh (AP, 2023). Further, he adds, "These articles primarily promote narratives that are favourable to the current Bangladesh government". It is important to remember that such information was being peddled in the build-up to the national elections and was being viewed on social media at an alarming rate.

With the development of new-age technologies that are cheap, AI avatars are available for as low as $24 a month, stated a Financial Times report. State actors are interacting and using such subversive technologies to gain the upper hand in information warfare. Given how regulation of deepfakes in Bangladesh is still at a nascent phase, such disinformation spreads quickly stated the report. A study by three Massachusetts scholars titled "The Spread of True and False News Online" has already established that false news or disinformation, "spreads more rapidly on the social network X than real news does" (Vosoughi, Roy, Aral, 2018). This is a pattern that can be observed across social media platforms.

Thus, state actors propagate AI-generated disinformation/narratives through deepfakes to successfully coerce the masses and convey particular thoughts or feelings. Political parties in power can use their financial advantage to creatively use such technologies to their benefit. As enumerated by Shivam Sankar Singh, parties are using such technology for "nefarious

purposes" (Pandey, 2024) In this information warfare, truth becomes a casualty, and technology becomes a tool to perpetuate political supremacy or hegemony.

Introduction: What are deepfakes?

Deepfakes are a specific kind of synthetic media (videos, audio or images) generated by deep learning and contain false information. These videos and images are a by-product of "generative adversarial networks" (GANS) (Helmus, Todd C, 2022) The generator creates fake images that have high veracity and are extremely realistic. Thus deepfakes blend, converge, swap and overlay images and videos to concoct falsified videos or images that appear to be authentic.

Over the years, deepfakes have evolved and there are primarily three categories that they can be classified into: face-swapping deepfakes, audio deepfakes and textual deepfakes (Sawtell,2023). Face-swapping deepfakes conduct facial manipulation through "face synthesis", "face swap" and by recontouring "facial attributes and expression" (Papastratis, 2020) In face synthesis "non-existent realistic faces" are coughed up from thin air using GANs, while for face swaps the use of computer graphics coupled with deep learning methods help generate fake videos. Finally, in facial attributes and expression manipulation, attributes of the face like skin and hair colour, age, and gender are altered for the desired effect. GANs play a pivotal role in such image-to-image translations.

Audio deepfakes, another tool for spreading disinformation, are often combined with video deepfakes, or fake voice-overs are generated from tools available online. They replace an individual's voice with that of a different person. AI technology such as deep learning algorithms is used to generate manipulated or synthetic voices that ape or copy particular individuals. Such audio forgeries are often extremely convincing and effective (Deshkar,2023).

In textual deepfakes, writings are generated that appear to be authored by someone else (Neha, 2024). Generative AI like ChatGPT or Bard, can produce human-sounding sentences which are indistinguishable from words or

texts scribbled by human counterparts. Another possible tool that is often coupled with deepfakes is shallowfakes. These are characterised by "missing context, deceptive editing and malicious transformation," and are videos that are manipulated through the use of basic editing software and are willingly and strategically misrepresented. (Washington Post, 2023)

Deepfakes and Disinformation

Deepfakes can shake the very foundation of democracies, as enumerated by W. A. Galston (2022) that deepfakes pose a potential "challenge to truth in politics." Citing the arguments of legal scholars Booby Chesney and Danielle Citron, Galston (2022) writes that deepfakes hold the potential to distort democratic discourses, manipulate elections, and weaken institutions by eroding the trust quotient enmeshed in them. It can undermine trustworthy information and journalism, aggravate social divisions and malign the credibility of elected representatives or candidates running for a public post.

Maria Pawelec in her research "Deepfakes and Democracy (Theory)" highlights how core functions of democracies such as "empowered inclusion, collective agenda, and will formation, and collective decision" are weakened through the deliberate use of deepfakes. Prof. Pawelec states that such technologies prevent empowered interventions by citizens in democratic processes through debates and deliberation. It also reduces the accountability of political representatives. It also subverts the "epistemic quality of deliberations" as discussions spiral into ad hominem attacks and screaming matches as citizens disregard mutual empathy and respect. (Pawelec, 2022).

Similarly, Todd C. Helmus' in the policy primer on "Artificial Intelligence, Deepfakes and Disinformation" acknowledges how the use of such technology affects "not only society but also national security" and democracies. Helmus cites a case study conducted on 7000 participants and writes "The researchers found that participants are more likely to believe that an event took place when they are presented with a fake video than when they are presented with fake textual evidence" (Helmus, Todd C, 2022).

However, the lacuna in most of the pre-existing research is its lack of attention to how state structures negotiate with such emerging technologies and rationalise their use. There is little research on how generative AI and deepfakes help state structures subvert democratic processes and weaken challengers and opposition forces within state structures.

Use of Deepfakes in the Bangladesh National Elections and State Rationality

In the Bangladeshi context, deepfakes were mostly used to spread misinformation against opposition parties and in some cases to generate positive sentiments for candidates from the ruling disposition, as per reports by Financial Times, The Diplomat and BoomLive. It makes sense from a rational actor perspective, that a deepfake of prominent opposition leader Tarique Rahman, would be circulated for political gains by state actors. In the controversial video, Rahman is seen urging people not to criticise Israel's bombardment of Gaza, a potentially devastating position to take in a Muslim-majority nation where sympathy for the Palestinian cause runs high.

Note: Image 7: Deepfake video of prominent opposition leader Tarique Rahman, of BNP (Source: Financial Times)

While the origins of the video remain unknown, such a gimmick indirectly accrues benefits for the ruling Awami League, as this disinformation helped spread confusion and mistrust among voters. While analysing the intent

behind such a decision it becomes clear that state actors driven by mere political interest, will utilise evolving technological prowess to their advantage in a bid to retain power.

Now, add to this, the testimony from Mustafa Jabbar, a former technocrat Minister of Post, Telecommunication and Information Technology in the Sheikh Hasina government of 2019. Jabbar nonchalantly admitted in a news interview with Somoy News that "groups of boys and girls working for the government were able to hack and even close down Facebook accounts," of opposition leaders and critics of the government (Somoy News, 2020). This information was also corroborated by The Diplomat in its article on "Deepfakes and Disinformation in Bangladesh."

A study titled "How Facebook has become a political battleground in Bangladesh" mentions how the Awami League in 2021 decided to train 100,000 "cyber warriors" (Baksh. et al., 2023). While the motive behind training such cyber warriors remains unclear, the aforementioned statements reiterate how Hasina's party, a representative of the state structure in Bangladesh tried to outmuscle Khaleda Zia's BNP, the principal opposition, in a battle of narratives across social media platforms. One possible explanation for this can be that Hasina's party wishes to establish hegemony over state institutions. The cyber warriors with their superior technological knowledge can be seen as an investment that propels the party towards establishing unquestionable dominance with the state structures of Bangladesh. Analysing this in light of rational choice theory, which states that "an agent takes the best available action given their preferences and beliefs" (Satz. et al, 1994) it becomes evident that the Awami League is driven by pure self-interest. The party wishes to tighten its grip on the body politic of the nation by subsequently eradicating opposition forces. Now, in retrospect of the election results it can be said that Awami League was successful in achieving its goal.

In the examples enumerated above, opposition leaders were the target of such deepfakes and disinformation. While shallow fakes were used to distort and spread disinformation against the primary opposition leader in Bangladesh thus damaging her credibility, in other cases, the implications

were egregious. In the final example, deepfakes were used to subvert and manipulate the election outcome, and the rationale behind it is surely maximising Awami League's control over assemblies and constituencies across the length and breadth of the country.

In Dhaka, both pro and anti-government forces, media outlets and influencers have taken recourse to AI-generated deepfakes, reported news agency Firstpost (Firstpost, 2023). However, online portal TechRadar in its article on how AI has been used to meddle in the recently concluded elections stated that the incumbent Awami League had managed to harness "the power of the new thing (generative AI) in tech to crack down on the opposition." The article quotes Miraj Chowdhury, of Digitally Right, on the use of AI-powered deepfakes in Bangladesh elections and the alarming potential it holds "to escalate and spread disinformation" (Castro, 2024). Thus state actors look to use and utilise such subversive technologies that possess the potential to subvert democracy and maintain their hegemony, thus prolonging their hold over power. The implications of such videos on public consciousness are also significant as they can alter election results and change people's perceptions very quickly in an extremely short period.

<u>Understanding the Rational Actor Approach</u>

The actions of the state actor i.e. the Awami League that currently dominates state structures in Bangladesh can be analysed from the rational actor model and rational choice theory paradigm. Allison writes about the rational actor model and states "Governments select the action that will maximize strategic goals and objectives" (Allison, 1999). He adds, "The solutions to strategic problems are the fundamental categories in terms of which the analyst perceives what is to be explained" (Allison, 1999). Similarly, the rational choice theory (RCT) is "typically defined and presented as the universal or comprehensive economic approach to human behaviour, the economic model and analysis of social action and society, including the economics of politics and religion" (Zafirovski, 2014) Thus according to RCT, an individual's actions is strictly an effort at maximizing self-interest, achieving their goals.

When viewed through the lens of rational choice theory, the dissemination of a deepfake of prominent opposition leader Tarique Rahman, and the need to employ cyber warriors to spread disinformation related to elections appear to align with the principle that agents will act in a manner that best serves their interests. Thus, the use of the deepfake video allows the Awami League to bolster its political position to undermine Rahman's credibility and diminish his influence. From the rational actor perspective, state actors can spread fabricated information and damaging content against opposition leaders to yield several benefits. From weakening political support to consolidating their power, the use of deepfakes against opposition leaders allows state actors to deceive the public and also undermine the integrity of the political process.

Applying our understanding of rational choice theory to the context of the Bangladesh elections, it can be said that the actors here are driven by their interest in retaining power and being the hegemon within state structures; this is the party's stated objective. Thus they make decisions based on logical reasoning, self-interest, and cost-benefit analysis and ultimately work towards utility maximisation. The party utilises its significant financial prowess, which they have accrued by staying in power for the past fifteen years, to employ the latest technological developments and stay ahead of the curve. This justifies their use of deepfakes and also their creation of cyber warriors, who work diligently to further the party's cause across social media platforms.

Graham Allison defined rationality as consistent value-maximising choices with specified constraints. Thus, rationality is built on certain assumptions that actions are purposive and that actors will undertake specific actions and decisions in pursuit of particular aims. Decisions are therefore not a force of habit or social expectation, but rather a careful pursuit of particular objectives. Here, we see the Awami League acting out of pure self-interest of wanting to retain power. The end goal for every party is to stay in power and ensure its grip over state mechanisms, thus retaining complete control. They do not care for democratic values or institutional development.

Similarly, in the case of Bangladesh, we see yet another one of Allison's predictions coming true, that of decision-makers acting as utility maximisers. The central tenets of the rational actor models tell us that "the goals and objectives of the agent are translated into a "payoff" or "utility" or "preference function," which represents the "value" or "utility" of alternative set of consequences." Thus, the party's decision to use deepfakes, generative AI and cyber warriors to spread disinformation shows how the party is willing to accrue the largest amount of benefit for a particular decision, therefore they can be referred to as utility maximisers. The decisions taken are a result of a rational and optimal process, which is under the control of the decision-makers. In this case, the party decides to use deepfakes to maximise its possibility of winning the elections.

Alison also tells us that "Rational choice consists simply of selecting that alternative whose consequences rank highest in the decision maker's payoff function." Applying this analysis to the context of the Bangladesh elections we see, that the actions undertaken by the Awami League can be viewed as rational choices made to maximize political advantage. From deploying deepfakes and shallow fakes to curtail the credibility of prominent opposition leaders, and employing cyberwarriors to spread disinformation across social media, the party used technological advancement strategically to achieve its political objectives. All the aforementioned tropes were used to influence voter perceptions, discredit opposition leaders and create confusion among the opposition voter base. This allowed them to ultimately secure victory in the elections, signalling a triumph of their interests and objectives.

The charges levelled against Rational Choice theory tell us that "complete information and a computer-like ability to weigh pros and cons of each potential course of action before reaching a decision" are not an absolute necessity for the paradigm (Zagare, 1989). This has often been the primary charge levelled at RCT as its critics state rational actors must possess "an infinite calculating ability" (Snyder & Diesing, 1977). Zagare goes on to write that **"Rationality requires only that a decision maker possess connected and transitive preferences over the set of outcomes as he or she perceives them,

and the ability to link the perceived choices to their presumed consequences." This means decision-makers, here the party, must possess the ability to compare and choose one outcome over the other which it believes is better suited to its cause. Similarly, for the decisions thus taken, the decision maker must possess the capability to connect these to the final consequences of their action. Therefore, if a decision maker must operate under the rational choice theory paradigm, they must have clear, connected and transitive preferences.

Conclusion

Therefore, the Awami League party prefers to retain and maintain power in Bangladesh, and they are willing to employ any means necessary even undermine democracy and negate dissident voices to maintain the status quo through their use of deepfakes and generative AI. Authoritarian regimes and governments in limited democracies exploit the technology to not only spread false and inaccurate information but also mislead people and intentionally cause public harm to Opposition and dissidents, which ultimately profits them. Through the use of deepfakes and generative AI, the Awami League sought to disrupt democratic elections and sow civil unrest. The paper establishes that it was a rational choice undertaken by the state actors to reduce societal trust, institutional trust and informational trust, and also manipulate elections by stifling and suppressing political opponents.

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