

Impact of digital manipulation tools and techniques on public opinion: problems and solutions

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Abstract

This article examines the evolution of political manipulation on social media in Lebanon, with a particular focus on the anticipated impact of artificial intelligence (AI) on shaping public opinion ahead of future elections. The objective is to identify the main manipulation techniques historically used by political actors and to assess how AI could enhance their effectiveness. Drawing on over fifteen years of consultancy and research, including the analysis of more than two million tweets and posts, the study employs qualitative content analysis and case studies—such as campaigns against Judge Tarek Bitar—to document tactics including network engineering, psychometric targeting, majority illusion, fake profiles, and discourse polarization.

Findings show that Lebanese political groups have already adopted sophisticated strategies to silence dissent, fabricate online majorities, and redirect debates. AI is expected to amplify these methods through deepfakes, microtargeted political advertising, autonomous social bots, emotionally manipulative chatbots, and advanced sentiment analysis, enabling real-time adaptation of messages

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to segmented social cliques. These tools will make manipulative campaigns faster, cheaper, more personalized, and harder to detect.

The study concludes that the next Lebanese elections may serve as a large-scale testing ground for AI-driven political manipulation, with significant risks to democratic processes. Addressing these threats requires both public education—focusing on understanding AI's mechanisms, limitations, and biases—and robust regulation, especially in contexts where legislative bodies are intertwined with entrenched political interests.

Education and Regulations remain the only solution against the overwhelmingly omnipresence of technology in our life and its exponentially rapid growth.

1. Introduction

Influencing public opinion through propaganda and manipulation is not new (Lazarsfeld et al., 1968). If it has always been there and widely documented, especially following the Nazi regime in WWII (Hayat Adnan, 2021). The Internet and social media have helped, for a very limited amount of time, unfortunately, for citizen to connect and defend themselves against authoritarian regimes (Ahonen & Moore, 2005; Rheingold, 2002, 2010). Such powerful tools have empowered citizen and gave them the means to overthrow long-term dictatorships, especially in the Arab world. However, since 2011, everything seems to indicate that the power shifted from “communities” to “dictatorships”, making dictators and oligarchs strongest than ever.

Lebanon is no exception. For the past 15 years, I have been analyzing tweets and posts, as a consultant and researcher for international organizations. During this time, I have analyzed more than 2,000,000 tweets and posts and discovered that some Lebanese parties have used all known manipulation techniques on social media. Those methods will be discussed in details in the following section.

However, the biggest concern today, as we're looking forward to the next parliamentary elections, is how the players who have been using social media to sway public opinion will be able to use AI to improve their manipulation techniques.

2. Manipulation Techniques on Social Media

In totalitarian regimes, the simplest and most efficient method to “cut” communication amongst protestors and activists, is probably “**network engineering**”. Behind this technical and appealing name, resides a very practical approach rooted in a social approach to restructure or – in this case – dismantle a network of people. This approach has been used to improve groups cohesion amongst students, colleagues, etc. It has also been used to help people quit smoking or to reduce tensions in

classrooms. A holistic and comprehensive description of network engineering techniques has been detailed in a study by Tom Valente (2012).

In totalitarian regime, network engineering is mainly used to “eliminate” hubs or bridges (Barnes & Harary, 1983) in a social network. In short, this can be performed through assassination, threats, account hacking or blocking (by submitting hundreds of complaints and fake reports to a given platform), or simply by using security forces to forbid a person from posting on social media. The Samir Kassir Foundation (SKeyes) has reported those violations extensively (Chibani, 2022).

Psychometry has also been used as a tool to manipulate public opinion. Until recently, niche targeting on Meta (Facebook, Instagram) could be used to target groups based on very precise characteristics (this has been significantly reduced lately). Cambridge Analytica and the Trump campaign (Isaak & Hanna, 2018; Laterza, 2018, 2021; Ur Rehman, 2019) are a well know exemple of psychometry use for public opinion manipulation.

Michal Kosinski (Bachrach et al., 2012; Kosinski et al., 2013; Matz et al., 2017) who's researches are probably at the core of such method wrote: “ Most of my studies have been intended as warnings. You can imagine applications that are for the good , but it ' s much easier to think of applications that manipulate people into decisions that are against their own interests .”

The idea behind psychometry manipulation on social media is to target different groups with different messages, encouraging some to vote, others to despair or doubt in their leaders....

Majority Illusion (Conoscenti, 2019; Grandi et al., 2022) was also used in Lebanon, especially for groups and politicians who didn't have social media accounts or wanted to “hide” behind influencers and authority figures (lawyers, professors, journalists, etc.). My own study regarding the ad hominem campaign against Judge Tarek Bitar (Messarra, 2021b) shows how around 10% of users on social media were giving the “impression” that half the country was against the Judge's decisions.

In less scientific terms, but with the same meaning, assassinated activist Lokman Slim talks about Hezbollah “master keys” used to control public opinion (Hamieh, 2021).

Fake profiles has also been used extensively by political groups, some programmatically generated, mainly used to overshadow real conversations and take over the “trending hashtags” list by confusing the algorithms, others, created, acting as proxies and destroyed after posting fake and misleading information that influencers convey without taking responsibility for the information (“I just shared it”).

Finally, changing the public discourse from emotional (community clusters) to polarized (Smith et al., 2014), and vice versa, in order to push people of the streets and make them doubt their leaders. In 2017, for instance, the resignation of Prime Minister Saad Hariri and his direct accusations regarding

Hezbollah's controlling the state, was turned into a masquerade with memes extensively shared on WhatsApp.



Figure 1: Memes shared on WhatsApp to turn a political debate into an emotional one

The opposite happened when people invaded the streets complaining about the garbage not being collected for weeks in Beirut. The social debate (health, solutions, urgency, etc.) was turned into a political one through naming, shaming and accusing the movements leaders of being paid and hired by foreign governments (Messarra, 2021a).

3. AI manipulation and Social Media

With the rise of AI and its extremely rapid evolution, as well as the current political changes and tensions locally and internationally, especially with a weakened “8 march” bloc (Hezbollah, FPM, others) for whom it will be difficult to control the terrain (LADE, 2022), we anticipate that the political battle will be fought mostly on social media (WhatsApp, Instagram, TikTok, Facebook...).

For this purpose, several methods could be used:

- **Deepfakes and synthetic media:** Some Lebanese users have already started using deep fakes for fun. Technology has grown extremely easy compared to what it was five years ago. A deep fake can be almost undetectable today.



– Figure 2: A deep fake featuring P.M. Nawaf Salam

- **Microtargeted Political Advertising:** Data analysis that used to take days can now be done in a matter of minutes using AI. AI will be able to analyze trends and changes in public opinion in real time and adapt messaging and targeting accordingly. Because in a social context, people are distributed in cliques linked by common interests or demographic attributes or subcultures, or others, AI will be able, not only to divide people into major distinct groups (voters and non-voters, left voters vs right voters, etc.), it will be capable of mapping and understanding the behavior and concern of every social clique in real time and target it with the message that will shape it's opinion.
- **Bots and coordinated inauthentic behavior:** Traditionally, social bots had little autonomy and were managed by programs that gave them little space for autonomy. With AI, social bots can create their own content, adapt it to the audience and to events occurring in real life. They can improve their mimicking techniques, adapt to discourse change, generate new content and ideas, work in coordination, acting as human-like groups. They can decide if they want to reuse content, generate new one, or generate plausible-sounding misinformation, in order to maximize persuasion.
- **Emotionally manipulative chatbots and “market of one”:** Customizing prices and offers to each customer individually is not new and has been test by major companies, a while ago(Truffelli, 2006). With the autonomy and “intelligence” of AI bots, a customized “offer” can be delivered based on an analysis of the user's profile, posted content and connections, making it possible to completely manipulate him/her or worse, blackmail or threaten the person, without human intervention.

- **Sentiment Analysis and manipulation:** On a less unethical level, AI can be used to analyze trends and sentiments in a matter of minutes (what used to take days and weeks) and inform the political player of minor and major changes in public opinion, indicate potential influencers with a description of their position, followers and impact, etc.

4. Conclusion

The next elections in Lebanon, with a lot at stake for major political players who have lost their pole position (Hezbollah, FPM, etc.), will probably be ground for experimentation of AI manipulative techniques at a very large scale. It will also be an opportunity for researchers to try to understand those techniques, even if detecting them will be extremely complex, but not impossible.

The problem of AI is not only at the public opinion level, but it will affect every aspect of our lives. The younger generation is already affected by IT with reduced attention span, less social skills, reduced memory, reduced capacity to analyze, polarization, etc.

Again, one should not forget that AI is controlled today by commercial companies (OpenAI, Meta, X, Nvidia, etc.), and that those companies are not looking for tools that would work for the general good, but for products that will sell and bring more subscriptions.

Education and Regulation may be the only way to protect people. It is not about understanding how to use AI tools available, but understand how they work, what are their flaws and limitations, why do they “hallucinate”, etc. Also learn how to create our own AI systems using AI agents, or even creating our own AI agents with our own data.

Regulation is also key, especially in Lebanon where lawmakers and beneficiaries of the corrupt system, are the same. This is why our laws are always ten or twenty years behind existing technology.

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