



ADMM Cybersecurity and
Information Centre of Excellence

Monthly Digest

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A monthly round-up of significant news around the world

Cognitive Warfare

Cognitive Warfare – Breeding Ground for Alternative Realities in the Information Domain

1. Cognitive Warfare - a relatively modern term in the information domain - refers to a more holistic approach to the conduct of cognitive operations. The main aim of cognitive warfare is to influence the cognition of local communities, in order to disrupt or fragment societies, and make them more vulnerable to manipulation. Like many new hybrid warfare tactics and techniques, cognitive warfare has no kinetic component or direct physical outcomes, and typically stays below the threshold of conflict. However, cognitive warfare can have significant impact on the outcomes of the warfare or conflict. In this article, we will discuss how cognitive warfare is used in the information domain.

Examples of Cognitive Warfare

2. Some examples of cognitive warfare are as follows:
- Mass use of social media to portray friendly narratives. The porous nature of social media platforms in a country's information space allows adversaries to target local communities easily. In June 2024, Reuters reported on an alleged anti-Sinovac and anti-vaccination campaign aimed at shaping local attitudes against China's COVID-19 relief efforts in several countries. Around three hundred social media accounts in Asia and the Middle East were identified by Reuters to be spreading disinformation, portraying Sinovac as either haram or dangerous.



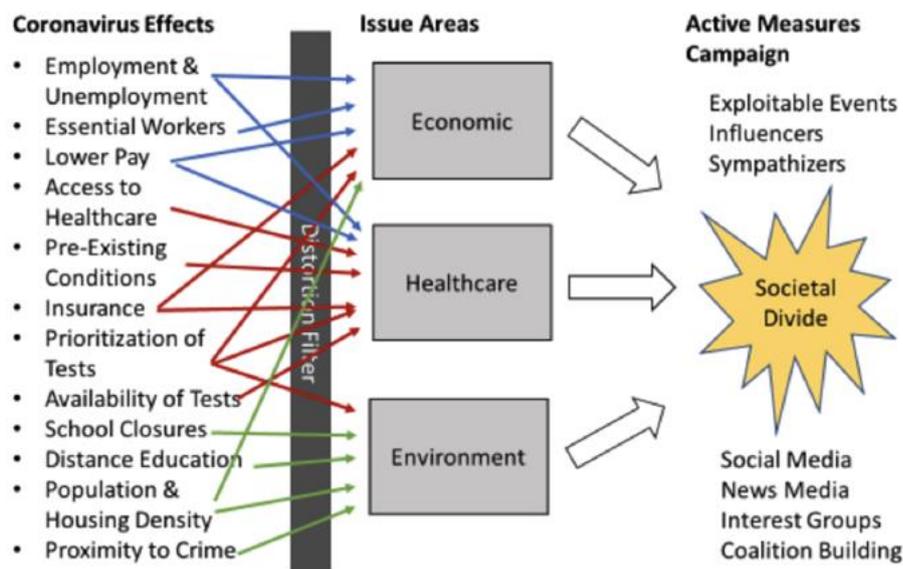
Example of alleged anti-vaccination propaganda campaign in the Philippines reading “#China is the Virus” and “Do you want that? COVID came from China and vaccines came from China” (Source: Reuters special report)

- Shape attitudes via astroturfing. Rather than seeking to create major shifts in perceptions instantaneously, cognitive warfare is often insidious and takes place over long periods of time to gradually shape attitudes. Tactics include astroturfing ¹attempts to gain grassroots communities’ mind spaces, and set the stage for subsequent hostile information campaigns. The Russian use of cognitive warfare since 2014 has set the stage for Russian influence operations to reach wider audiences at faster speed, following the onset of the Russia-Ukraine conflict in 2022. At times, Russian narratives were thus disproportionately more visible online than Ukrainian narratives. In response to Russia’s influence operations, NATO is working with alliance nations to enhance its cognitive warfare capabilities in longer term cognitive operations.
- Reduce trust in governments. Bad actors originating from the Russian and Chinese information spaces seized the opportunity of the COVID-19

¹ “Astroturfing” is defined by Cambridge dictionary as the practice of publishing opinions or comments on the internet that appear to come from ordinary members of the public, but actually come from a particular company or political group, as a way to make it seem that a product, policy, opinion, etc, is very popular.

pandemic to increase their cognitive operations, such as promoting various conspiracy theories among Western populations. For example, the Russian state supported the creation of the Internet Research Agency (IRA), run by Russian oligarch Yevgeny Prigozhin. The IRA conducted “sweeping and sustained social influence operation[s] consisting of various coordinated disinformation tactics... designed to exert political influence and exacerbate social divisions” from 2013 to 2023, when it was shut down by Russian authorities following Prigozhin’s fall from grace. These Russian-backed IRA operations included sustained social media campaigns propagating unfriendly narratives seemingly aimed to cause divisions in Western societies, ranging from COVID-19-related issues to xenophobia. For example, according to a study published in *Homeland Security Affairs* in December 2020, COVID-19 was weaponised to further divide the American society along racial and economic divisions, insinuating that the Blacks had lesser access to medical treatment and employment opportunities during the COVID-19 pandemic.

Weaponization



*How Russian disinformation weaponised COVID-19 to drive social divisions
(Source: Homeland Security Divisions)*

Countermeasures to Cognitive Warfare

3. Cognitive warfare targets citizens’ emotions, such as fear, anxiety and suspicion, and often strikes at the “cognitive gaps” among different social groups within a community. These gaps exist due to differing religious beliefs or ethnic

backgrounds, which cognitive warfare could exploit to create social fault lines. To guard against cognitive warfare tactics, governments would have to pre-empt or pre-bunk false and insidious narratives, and seek to reinforce their domestic population's social resilience over time.

4. Studies have also shown that longer periods of preparation are directly correlated to higher degrees of success in defending against cognitive warfare. For example, in an attempt to build “cognitive immunity” in its population, Finland began enhancing its social resilience as early as 2014, following Russia's annexation of Crimea. As a result, Finland is considered one of the most resilient countries in Europe to misinformation, as per the European Union's 2022 Media and News Survey. In comparison, countries like Poland, the Czech Republic and Slovakia, which had been slow to implement such countermeasures, have been less successful in measures of their population's social resilience.

Preparing for Cognitive Warfare: Building Resilience

5. Cognitive warfare's ability to change a population's mindset can be difficult to counter. As such, building the resilience of the domestic population remains key in ensuring that adversary cognitive warfare does not have a fertile ground to take root. Besides pre-empting and pre-bunking false narratives, improving information sharing among nations and educating the domestic population on cognitive warfare tactics, such as attempts to erode public trust in state institutions or electoral processes, can help strengthen the domestic population's defences.

6. Ultimately, cognitive warfare is a means to an end – it is intended to change a population's thinking, and degrade their trust in their government, to facilitate attacks in other domains. Countries could consider adopting technological solutions, such as monitoring dashboards, to help identify anomalies in longer-term trending of narratives promulgated in their information spaces. Using new capabilities to detect and classify malicious posts and campaigns would help countries to respond to cognitive threats in the information domain in a timely and effective manner.

Information

Use of Memology in Disinformation

1. Online memes, usually comprising humorous images slapped with catchy captions, have an average online lifespan of about four months. Unlike TikTok short clips, another popular form of social media which require users' patience to sit through an audio-visual medium, memes exemplify how a picture tells a thousand words. Research has shown that about one million memes were shared daily over Instagram in 2021. In *The Selfish Gene*, evolutionary biologist Richard Dawkins defined memes as "units of culture" spread through the diffusion of ideas. Memes are highly versatile and can be woven into other media forms. They have been used to amplify the messages in the original media through complementing other information tactics, thus accelerating the diffusion of such disinformation into our mind space.
2. Memos as units of culture. Internet memes "are one of the clearest manifestations of the fact that there is such a thing as digital culture", says Paolo Gerbaudo, a reader in digital politics and director of the Centre for Digital Culture at King's College London. The nature of memes containing small bits of information enables them to swiftly convey information.
3. Appeal of emotion and humour. Memes containing strong, evocative, and direct language that appeals to an individual's emotive self are more likely to be shared, as exemplified by a paper published in *Computers in Human Behaviour*. Memes that appeal to emotions also tend to receive more interactions online, as found by a study published by scientific journal *Taylor and Francis Online* in June 2024.
4. Positive effect on social resilience and effectiveness. Humorous memes about national conscription can lighten up soldiers' spirits and build camaraderie by drawing upon common experiences in the military. In Singapore, social media users like "memedef" and "childrenholdingguns" portray a light-hearted take on National Service that resonate with soldiers of all ranks and backgrounds. *Military News* presents a positive outlook on memes regarding the military, highlighting the power of memes to break down barriers amongst soldiers and build camaraderie.

Role of memology on matters of national defence

5. Political persuasion in digital war. In the Russia-Ukraine war, memes have become tools to enhance information tactics. In 2022, the North Atlantic Fellas Organisation, or NAFO, was featured by *Politico*, illustrating the approach of internet agents in utilising memes and humour in information tactics. These “fellas” on the internet weaponised memes to engage in digital warfare, coordinating social media offensives with humour to rally Ukrainian and international support by mocking the Kremlin and countering their online narratives. Additionally, Ukraine's Defence Minister Oleksii Reznikov publicly acknowledged and supported the NAFO efforts, and showed this by changing his profile picture to a Shiba Inu carrying a Ukrainian shield. “Meme wars” can be waged by various actors using seemingly harmless and humorous images to infiltrate the information space and mind space of the populace. These memes could complement military strategies while bolstering widespread support for the war, as found by research from *Brookings Institution*.



*Post by the official page of the Ministry of Defense of Ukraine on X
(Source: Cyberscoop)*

6. Propelling extremism. Extremists and nationalists may also employ harmless memes to advance their agendas. The Christchurch Mosque terrorist, Brenton Tarrant, frequently used 8chan, an imageboard that allow users to create their own topic boards with minimal online regulation and moderation. Users of 8chan have been associated with extremists or criminal behaviour, and groups such as Alt-right, neo-Nazi and white supremacist groups had been used to recruit

targets towards their causes. Attackers urged others to "create memes, post memes, and spread memes," claiming that memes had been more effective for the ethnonationalist cause than any other forms of written declaration. Following the attacks, reports indicated that the 8chan community responded with a deluge of visual memes glorifying violence, ridiculing the victims and venerating the assailant as a hero.

7. The importance of memes is sometimes overlooked in information warfare. The spread of memes in individuals' daily media usage may be subtle, but the intent of these seemingly harmless units of information is deliberate and purposeful. According to the Australian Strategic Policy Institute (ASPI), actors behind the creation of memes do not aim to prevail by putting forth cogent arguments, but to "amplify the loudest voices in that fight", and wedge further divisions in societies. The US-based Defense Advanced Research Projects Agency (DARPA) funded Dr Robert Finkelstein's conduct of relevant research on the weaponisation of memes, where he then proposed a "Meme Control Center". Based on his research, policy practitioners should devise effective strategies to guard against future warfare involving spreading of memes through social media. Governments can consider raising awareness about the malicious use of memes to advance perpetrators' adverse agendas, as a defensive move to safeguard the people's psychological resilience.

Terrorism

Targeting of Sporting Events & Facilities

1. Since the beginning of March 2024, pro-ISIS and pro-AQ media groups have incited violent attacks against sporting events and facilities. Notably, the volume of propaganda referencing such targets has increased from late April 2024.
2. The targets highlighted are mainly in the West, such as the Allianz Arena in Munich, Germany, and the Parc des Princes stadium in Paris, France. Ongoing and upcoming sporting tournaments were also mentioned explicitly, such as the International Cricket Council Men's T20 World Cup (1 – 29 June 2024), 2024 European Championship (14 June – 14 July 2024), and the 2024 Paris Olympics (26 July – 11 August 2024). Suggested tactics, techniques and procedures included knifings, improvised explosive devices (IEDs) and shootings.
3. On 21 May 2024, a man was arrested in Gironde, southwestern France for plotting a “mass killing” against the Olympic Torch Relay at Bordeaux. He was allegedly connected to the incel² movement and had planned to carry out the attack on the 10th anniversary of the 2014 Isla Vista killings.



Terror Propaganda Targeting Sporting Events & Facilities

Targeting of LGBTQIA+ related Events

4. Pro-ISIS supporters and right-wing extremists have also called for violence against the Lesbian, Gay, Bisexual, Transsexual, Queer, Intersex, Asexual and Other (LGBTQIA+) community, as well as events or venues related to the group. Notably, Pride Month commemorated worldwide in June 2024 was a target by extremists' information activities.

² According to Oxford dictionary, Incel is a term closely associated with an online subculture of people (mostly white, male, and heterosexual) who define themselves as unable to get a romantic or sexual partner despite desiring one.

5. On 10 May 2024, the US Federal Bureau of Investigation (FBI) and Department of Homeland Security (DHS) issued a joint Public Service Announcement warning that Foreign Terrorist Organisations and their supporters could target “LGBTQIA+ related events and venues” in the US during Pride Month. FBI and DHS observed that the risk of attacks was “compounded by the heightened threat environment in the US and other western countries”.

6. Right-wing extremists have also disseminated propaganda inciting others to crash drones equipped with knives/sharpened propellers into Pride parades’ participants in the US, while pro-ISIS supporters disseminated cartoons encouraging adherents to cause “fireworks” at Pride parades in Paris, France.



Extremist Propaganda Targeting LGBTQIA+-Events

Promotion of Drone Handbook for Terror Attacks

7. Between 28-30 April 2024, a Rocketchat user disseminated links to the first issue of an eight-page document titled “Modern Warfare” that featured drones on at least two pro-ISIS channels. The document’s stated purpose was to inform readers of “the most advanced weapons and techniques to fight for the sake of Allah and to establish the Khilafah [caliphate] on all Muslim land”.

8. The handbook is available in English and Arabic, and presents an overview of seven drone types comprising a mix of consumer and commercial drones, including various Da-Jiang Innovations (DJI) models, Autel Evo II, and Parrot ANAFI Thermal. The user also urged operatives to choose the type of drones “most advantageous” for them to carry out the different missions in “media production, surveillance mission, or attack”.



Excerpts from “Modern Warfare” Issue #1

Ulu Tiram Attack in May 2024

9. A security incident occurred in Malaysia on 17 May 2024 during which two policemen were killed by an assailant in the town of Ulu Tiram, Johor. The Malaysian authorities indicated that the assailant was a lone-actor, and the incident is being investigated as a murder case.

10. There were reports that the assailant’s father was previously a Jemaah Islamiyah (JI) cadre but there were no indications that the incident was linked to JI. Abu Bakar Ba’asyir, JI co-founder also appeared on video to condemn the attack and claimed that he had no connection to the attack.

CONTACT DETAILS

All reports can be retrieved from our website at www.acice-asean.org/resource/.

For any queries and/or clarifications, please contact ACICE at ACICE@defence.gov.sg.

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