



**HAL**  
open science

# CAPTURING USERS' ATTENTION, THE CORNERSTONE OF INFORMATION MANIPULATION

Pascal Martin

► **To cite this version:**

Pascal Martin. CAPTURING USERS' ATTENTION, THE CORNERSTONE OF INFORMATION  
MANIPULATION. The Creogn Research Notes, 2023, 95. hal-04583734

**HAL Id: hal-04583734**

**<https://hal.science/hal-04583734>**

Submitted on 22 May 2024

**HAL** is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

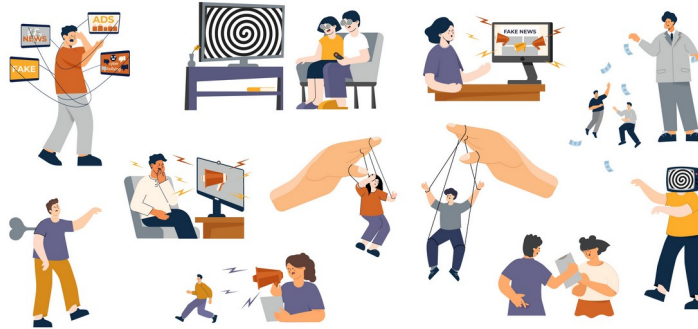
L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

# The CREOGN Research Notes

Gendarmerie Nationale Officers College Research Center

Issue 95 – December 2023

Captain Pascal Martin (PhD)



©macrovector via Freepik

Priorité stratégique de la prospective



L'avenir des territoires numériques

CREOGN certifies that this document was written by a human being

## CAPTURING USERS' ATTENTION, THE CORNERSTONE OF INFORMATION MANIPULATION

On 13 September 2019, Florence Parly, the French Minister for the Armed Forces, set out the issues involved in using information as a vector for destabilisation by capturing the attention and affecting the perceptions of target populations: *“Tomorrow's war is also a war for influence and disinformation of the public, playing with our perceptions. The battle of opinion is raging today. We are increasingly witnessing image-based conflicts, propaganda campaigns and the skilfully orchestrated manipulation of facts and ideas on social networks”*<sup>1</sup>. The Internet has changed the temporal nature of the relationship to information, which is now based on immediacy and free access to often yet often contradictory sources, leaving people confronted with the coexistence of ‘multiple truths’ and distinct interpretations of History<sup>2</sup>. Immediacy, for example, means that certain conflicts can be followed almost in real time from the point of view of the various belligerents involved. This is often to the detriment of analysis and fact checking<sup>3</sup>, while the number of people with access to this information continues to grow. The challenges for governments to capture the attention of users in order to convey messages – that suit their rhetoric or that undermine the credibility of their adversaries for geopolitical purposes – thus become evident.

### I) The pathogenic characteristics of information manipulation

The analysis and dissemination of information through the prism of State or ideological interests is not an easy way of producing reliable messages or narratives – since the intention is to direct the public's intention or to modify its perception. Moreover, the spread of manipulated or erroneous information is extremely swift and viral, leading the World Health Organisation (WHO) to coin a neologism for the phenomenon: infodemic<sup>4</sup>. The WHO has observed that manipulated information behaves like pathogens during an epidemic: it spreads more rapidly and on a larger scale, making emergency response more complex<sup>5</sup>. Capturing the attention of social

1 Speech by Florence Parly, Ministry of the Armed Forces, closing session of the Defence Summer University, "The changing face of war", 13 September 2019.

2 EGLOFF, Florian J. « Contested public attributions of cyber incidents and the role of academia ». *Contemporary Security Policy*, Volume 4, Issue 1, 2020, p. 73.

3 BENOIST, Hugo. La guerre à l'heure des réseaux sociaux. *Revue de Défense Nationale*. Comité d'Études de Défense Nationale, n° 784, 2015, p. 53.

4 WORLD HEALTH ORGANISATION (WHO). *Working together to tackle the infodemic* [online]. 29 June 2020. Available at : <https://www.euro.who.int/fr/health-topics/Health-systems/pages/news/news/2020/6/working-together-to-tackle-the-infodemic>

5 *Ibidem*.

network users is particularly important, since researchers at the Massachusetts Institute of Technology (MIT) have pointed out that on Twitter it is mainly humans, and not bots<sup>6</sup>, who are responsible for spreading misleading information<sup>7</sup>.

In this context, information manipulation strategies are based on information overload, instantaneity and the extremely swift dissemination of inaccurate information, in order to capture users' attention by inhibiting their reflexive abilities and exploiting “*emotion and fatigue [which] destroy critical thinking abilities*”<sup>8</sup>. The aim is therefore to “*turn to the ultimate target of disinformation: the human brain*”<sup>9</sup>. Back in 2004, Patrick Le Lay, then-CEO of TF1, said “*what we sell to Coca-Cola is available human brain time*”<sup>10</sup>. Michal Kosinski, a practising psychologist and assistant professor of organisational behaviour at the Stanford Graduate School of Business, describes this phenomena as an “*effective psychological targeting as a tool of digital mass persuasion*”<sup>11</sup>.

## II) The militarisation of the human mind: cognitive warfare

The militarisation of the human mind became the subject of a NATO-funded study in 2020 articulated around the concept of ‘cognitive warfare’<sup>12</sup>. The study focuses on the transition from information warfare to cognitive warfare (‘From Information Warfare to Cognitive Warfare’<sup>13</sup>). In this context, NATO organised an exercise in Canada on 30 November 2021 on cognitive warfare<sup>14</sup>. Cognitive warfare was then described as follow : “*Cognitive warfare seeks to change not only what people think, but also how they act. Attacks on the cognitive sphere involve the integration of cybernetics, disinformation, psychology and social engineering capabilities. [...] Cognitive warfare positions the mind as a battleground and a contested territory. Its aim is to sow dissonance, generate contradictory narratives, polarise opinion and radicalise groups. Cognitive warfare can incite people to act in ways that can disrupt or fragment an otherwise cohesive society. The resulting disorder can influence decision-making, change ideologies and create distrust among allies*”<sup>15</sup>.

It is worth remembering that mind control is not a recent objective: between 1953 and the early 1970s, the CIA unsuccessfully carried out a vast illegal project called ‘MK-ULTRA’, experimenting on American citizens using methods designed to control or programme the minds and behaviour of individuals<sup>16</sup>. Similar studies are still carried as of today. In 2019, the journal *Scientific Reports* reported on an experiment in which Chinese researchers managed to connect the mind of a human to that of a rat to control the latter's movements in a maze, with a 90% success rate<sup>17</sup>.

6 A ‘bot’ is a programme that performs automated tasks, repeating predefined actions. A ‘botnet’ is a network of bots whose actions can be coordinated to carry out certain tasks (e.g. distributed denial of service attacks - DDoS).

7 DIZIKES, Peter. « Study : On Twitter, false news travels faster than true stories » [online]. *Massachusetts Institute of Technology News*, 8 mars 2018. Available at : <https://news.mit.edu/2018/study-twitter-false-news-travels-faster-true-stories-0308>

8 BLOCH, Marc. Réflexions d’un historien sur les fausses nouvelles de la guerre. *Revue de synthèse historique*, n° 33, 1921, p. 32.

9 HUYGHE, François-Bernard. Préface du rapport, *Observatoire (dés)information & géopolitique au temps du COVID-19*, Institut de relations internationales et stratégiques (IRIS), Dossier final, 2021, p. 5.

10 ANIZON, Emmanuelle, MILOT, Olivier, ZARACHOWICZ, Weronika. “On me transforme en marchand de cerveaux” : quand Patrick Le Lay tentait de se défendre [online]. *Télérama*, 19 mars 2020. Available at : <https://www.telerama.fr/television/nous-vendons-du-temps-de-cerveau-humain-disponible-quand-patrick-le-lay-tentait-de-se-defendre.n6618251.php>

11 DECLOQUEMENT, Franck. La science derrière Cambridge Analytica : pourquoi le profilage psychologique est réellement efficace sur les réseaux sociaux ? [online]. *Atlantico*, 24 octobre 2018. Available at : [https://www.academia.edu/37639944/ATLANTICO\\_La\\_sciences\\_derriere\\_Cambridge\\_Analytica\\_pourquoi\\_le\\_profilage\\_psychologique\\_est\\_reellement\\_efficace\\_sur\\_les\\_reseaux\\_sociaux\\_email\\_work\\_card=view-paper](https://www.academia.edu/37639944/ATLANTICO_La_sciences_derriere_Cambridge_Analytica_pourquoi_le_profilage_psychologique_est_reellement_efficace_sur_les_reseaux_sociaux_email_work_card=view-paper)

12 DU CLUZEL, François. « Cognitive Warfare », *Innovation Hub*, 2020, 45 p.

13 *Idem*, p. 6.

14 Government of Canada. NATO Innovation Challenge - Fall 2021. The Invisible Threat: Tools to Combat Cognitive Warfare" [online]. Government of Canada, 6 December 2021. Available at: <https://www.canada.ca/fr/ministere-defense-nationale/campagnes/defi-d-innovation-de-l-otan-automne-2021.html>

15 *Ibid.*

16 ROCKFELLER, Nelson A., CONNOR, John T., DILLON, Douglas C., GRISWOLD, Erwin N., KIRKLAND, Lane, LEMNITZER, Lyman L., REAGAN, Ronald, SHANNON, Edgar F. « Report to the President by the Commission on the CIA activities within the United States. » Washington D.C, Boston Public Library, juin 1975, 324 p.

17 ZHANG, Shaomin, YUAN, Sheng, HUANG, Lipeng, ZHENG, Xiaoxing, WU, Zhaohui, XU, Kedi, PAN, Gang. « Human Mind Control of Rat Cyborg's Continuous Locomotion with Wireless Brain-to-Brain Interface ». *Scientific Reports*, 4 février 2019.



In a nutshell, the paramount thing in information warfare is to be able to control and influence public opinion<sup>18</sup>. France has developed a similar cognitive warfare project, called 'Myriade', inspired by the work of the Red Team, a group of science fiction writers who develop scenarios for the Ministry of the Armed Forces to anticipate future threats. The project includes the use of 'deep brain fakes' for advanced mind manipulation and the daily use of virtual reality to confine individuals to alternative truths<sup>19</sup>.

### III) What *modus operandi* ?

The strategy of capturing audience attention is used in particular during election campaigns. For example, Donald Trump believed that winning the attention of voters was more important than winning the battle of conviction<sup>20</sup>. This strategy led the US presidential candidate to be extremely present on social networks in 2016. He overwhelmingly dominated exchanges on Facebook, and his statements attracted, on average, twelve times more interest than Hillary Clinton's in Republican states and twice as much in Democratic states. This informational omnipresence has made Donald Trump's proposals more viral and given them greater visibility among the American electorate<sup>21</sup>.

Attention is also captured by exploiting people's emotions and cognitive biases, facilitated by the capacity for mass dissemination of information and overexposure to the latter. Cognitive biases can be defined as "*the human brain's propensity to reproduce errors of judgement (including by misinterpreting the meaning of messages), aggravated by its tendency to adopt behaviour that is visibly inconsistent with experience or commonly available knowledge*"<sup>22</sup>. For example, a "confirmation bias" is when one seeks out information that confirms that one's ideas and prejudices are borne out by the facts. In this context, the deregulation of the information market tends to reinforce "*cognitive demagoguery*"<sup>23</sup>, leading to the perpetuation and dissemination of false information that capitalises on erroneous intellectual processes that are nevertheless attractive to the mind<sup>24</sup>. In fact, cognitive biases are tools that make it possible to sort through an ever-increasing volume of information, resulting from the combined use of social networks and mass media<sup>25</sup>.

Cognitive biases can thus be used to create rapid but plausible (in most cases) reflexive processes, based on a mixture of personal preferences and social expectations. As a result, the plausibility of the shortcut inhibits any mechanism for checking sources. In this context, the manipulation of information is all the more effective if it is based on previously identified political, religious or social opinions<sup>26</sup>.

Faced with these problems, some authors believe that action against campaigns to manipulate information should be based primarily on educating citizens about access to information and the hierarchy of sources<sup>27</sup>. Indeed, belief in manipulated information is partly correlated with the low level of education and training of the target population, over and above cognitive bias or partisan attachment<sup>28</sup>.

---

Available at : <https://www.nature.com/articles/s41598-018-36885-0>

18 EUTROPE, Xavier. Entretien avec Maud Quessard. L'important dans une guerre informationnelle est d'avoir la main sur les opinions publiques [online]. *INA, La revue des médias*, 16 mars 2022. Available at : <https://larevuedesmedias.ina.fr/guerre-information-propagande-influence-russie-ukraine-medias-narratif-opinion-publique?amp>

19 BAROTTE, Nicolas. La « guerre cognitive », nouvel avatar des guerres futures [online]. *Le Figaro*, 26 novembre 2021. Available at : <https://www.lefigaro.fr/international/la-guerre-cognitive-nouvel-avatar-des-batailles-futures-20211126>

20 BRONNER, Gérald. « Information et crédulité au temps du COVID-19 », Observatoire sous la direction de François-Bernard Huyghe, directeur de recherche à l'IRIS, et Anne Sénéquier, médecin, chercheuse à l'IRIS, *Observatoire (dés)information & géopolitique au temps du...*, op. cit., p. 11.

21 *Ibid.*

22 *Id.*, p. 101.

23 *Id.*, p. 10.

24 *Ibid.*

25 FRAU-MEIGS, Divina. « Les enjeux de la réception : comment mesurer l'influence de la désinformation ». In : MARANGÉ, Céline, QUSSARD, Maud, *Les guerres de l'information à l'ère numérique*, Paris, Presses universitaires de France, éditions PUF, avec le concours de l'Institut de Recherche stratégique de l'École militaire, 2021, p. 336.

26 *Ibid.*

27 DELERUE, François. Les menaces numériques en période électorale. In : MARANGÉ, Céline, QUSSARD, Maud, op. cit. note 25, p. 362.

28 FRAU-MEIGS, Divina, op. cit. note 25, p. 338.

In addition, it is possible to provoke an "emotional contagion". In other words, this can be referred to as "*a transfer of emotions from one individual to another; a sort of wave that can, from one person to the next, affect the whole of humanity. It can be compared to contagion by a virus that acts in a few thousandths of a second*"<sup>29</sup>. Indeed, it has been found that negative emotions are much more contagious than positive ones, and that they have a more lasting impact on an individual's state of mind<sup>30</sup>. Hyperconnection generates an "*excess of emotional information*"<sup>31</sup>. Between 11 and 18 January 2012, Facebook and American academics decided to alter the news feeds of 700,000 users of the social network. It was found that the targeted users began to use more negative or positive words depending on the content they had been exposed to or the reactions of their contacts on the social network. The notion of "*mass emotional contagion via social networks*"<sup>32</sup> was used to analyse this phenomenon, demonstrating the capacity of these platforms to serve as vectors for the manipulation of information, but also the potential consequences of algorithmic access to it.

\*\*

The information age has been characterised by the rise of new communication technologies that have allowed images to circulate more widely, encouraging phenomena of "*media contagion*"<sup>33</sup>. Controlling these technologies has proved increasingly complex, as borders provide only imperfect protection from information coming from abroad, while the evolution of Western media has made democracies more vulnerable in the event of international tensions<sup>34</sup>. Faced with the increasingly rapid international dissemination of information, governments have gradually come to see the need to adopt communication strategies tailored to periods of crisis or conflict.

**Pascal MARTIN** is at the head of a department at COMCyberGEND and has a PhD in modern and contemporary history.

*Translated by Aude GREGORY, Reserve assistant gendarme*

The content of this publication is to be considered as the author's own work and does not engage the responsibility of the CREOGN.

29 Interview with Christophe HAAG, author of *La contagion émotionnelle*. SENDER, Elena. Emotions are contagious like viruses [online]. Sciences et avenir, 25 April 2019. Available at : [https://www.sciencesetavenir.fr/sante/la-contagion-emotionnelle-decryptee-par-christophe-haag\\_133145](https://www.sciencesetavenir.fr/sante/la-contagion-emotionnelle-decryptee-par-christophe-haag_133145)

30 *Ibid.*

31 *Ibid.*

32 AGENCE FRANCE PRESSE. « Contagion émotionnelle » : Facebook, objet d'une enquête pour manipulation [online]. *La Presse*, 2 juillet 2014. Available at : <https://www.lapresse.ca/techno/internet/201407/02/01-4780382-contagion-emotionnelle-facebook-objet-dune-enquete-pour-manipulation.php>

33 MARANGÉ, Céline, QUESSARD, Maud, *op. cit.* note 25, p. 12.

34 GRISET, Pascal. *Les révolutions de la communication XIXe-XXe siècle*. Paris, éditions Hachette, 1991, p. 188.