The Hague Centre
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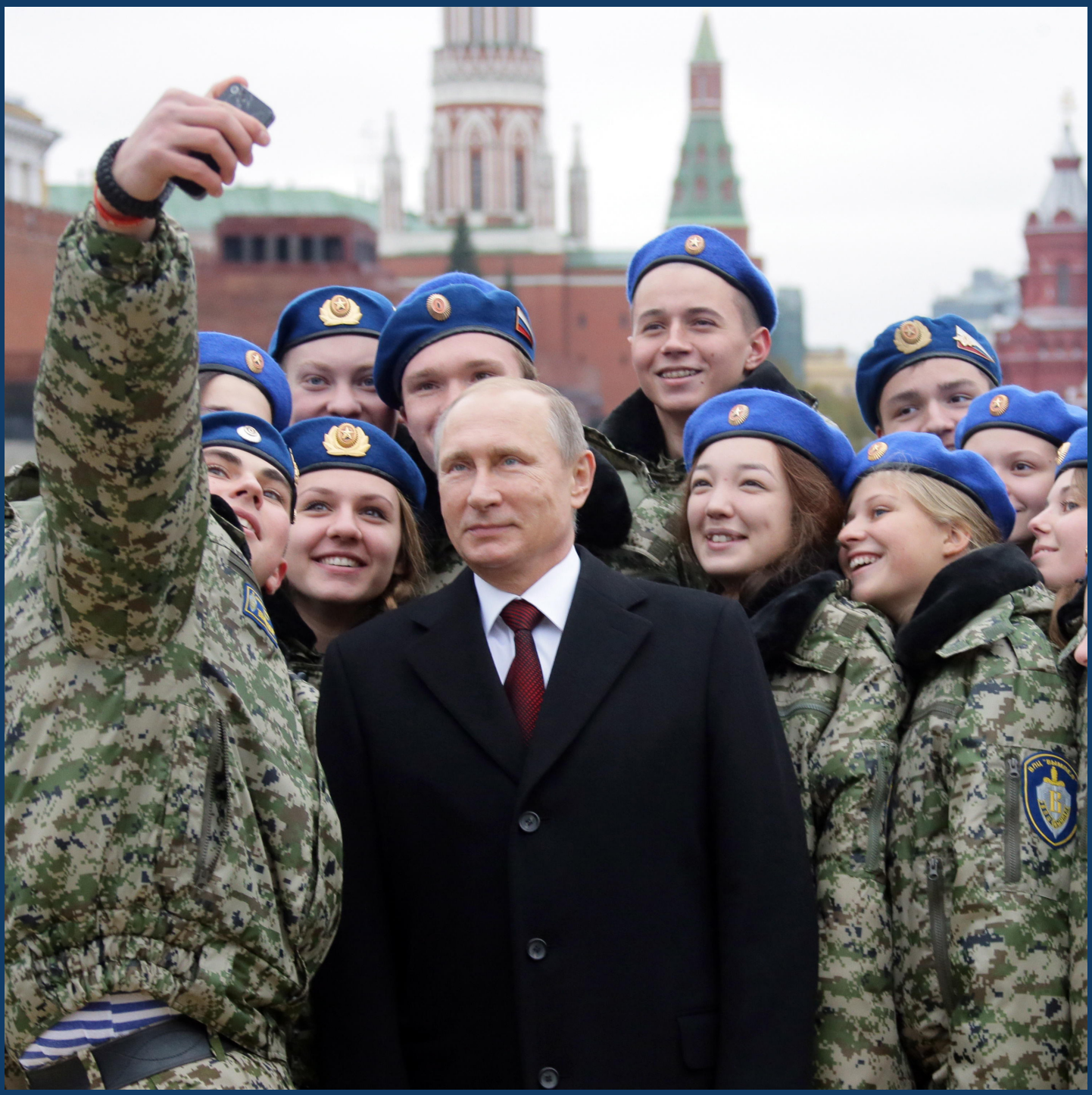
Weapons of mass influence

Shaping attitudes, perceptions and behaviours in today's information warfare

Lotje Boswinkel, Neill Bo Finlayson, John Michaelis and Michel Rademaker

April 2022



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Introduction

Russia's invasion of Ukraine has highlighted once again that fighting does not just take place on the physical front lines. Since the early onset of the war, footage of burning enemy tanks, disillusioned Russian soldiers, and a lone heroic fighter pilot defending Kyiv were shared countlessly on social media, bolstering troop morale and mobilising public support.[1] The use of information in warfare is nothing new: already during the Peloponnesian war between Sparta and Athens some 2400 years ago, the information space was exploited to deceive enemy forces, maintain troop confidence, and sway public opinion. An early military thinker, Sun Tzu, wrote in the sixth century BC that "the skilful leader subdues the enemy's troops without any fighting,"[2] highlighting the essential role played by non-lethal, information-related capabilities in achieving military outcomes.[3]

Already during the Peloponnesian war between Sparta and Athens some 2400 years ago, the information space was exploited

Even if information has always been used to shape adversary thinking and decision-making, rapid advancements in information and communications technologies as well as cognitive psychology have added to their centrality.[4] As a result, state and nonstate actors alike have ramped up efforts to exploit and manipulate the information environment for both tactical and strategic purposes. With such influencing efforts becoming increasingly pervasive, Western military organisations across the Atlantic have begun to shift their attention accordingly. In 2009, NATO published its Allied Joint Doctrine for Information Operations, emphasising the need for "increased attention on Info Ops".[5] Throughout the 2010s, information has taken an increasingly central place in national military doctrines and operations.[6] In 2015, the British Army launched the 77th Brigade, a specialised force skilled in psychological operations and the use of social media.[7] In 2020, the Royal Netherlands Army incepted the 'weapon of information manoeuvre' – the first time since 1949 it added a weapon to its arsenal.[8] And most

1 Elias Visontay, "Ukraine Soldiers Told Russian Officer 'Go Fuck Yourself' before They Died on Island," *The Guardian*, February 25, 2022, sec. World news, https://www.theguardian.com/world/2022/feb/25/ukraine-soldiers-told-russians-to-go-fuck-yourself-before-black-sea-island-death; Stuart A. Thompson and Davey Alba, "Fact and Mythmaking Blend in Ukraine's Information War," *The New York Times*, March 3, 2022, sec. Technology, https://www.nytimes.com/2022/03/03/technology/ukraine-war-misinfo.html; Elisabeth Braw, "Virality Isn't Victory for Ukraine," *Foreign Policy*, March 8, 2022, https://foreignpolicy.com/2022/03/08/ukraine-propaganda-war/.

2 Sun Tzu, *The Art of War*, trans. Lionel Giles (Forgotten Books, 2010), 7.

3 Niccolò Machiavelli, *The Prince*, 2017, https://www.earlymoderntexts.com/assets/pdfs/machiavelli1532.pdf; Carl von Clausewitz et al., *On War*, Oxford World's Classics (New York: Oxford University Press, 2006); Tzu, *The Art of War*.

4 Alicia Wanless and Michael Berk, "The Changing Nature of Propaganda," in *The World Information War: Western Resilience, Campaigning, and Cognitive Effects*, ed. Timothy Clack and Robert Johnson (Routledge/Taylor & Francis Group, 2021), https://www.taylorfrancis.com/chapters/edit/10.4324/9781003046905-16/information-warfare-robert-johnson.

5 NATO, "AJP-3.10 Allied Joint Doctrine for Information Operations" (NATO Standardization Office, November 23, 2009), 2, https://info.publicintelligence.net/NATO-IO.pdf.

6 See for instance Ministry of Defence, "Netherlands Defence Doctrine" (The Hague, June 2019), https://english.defensie.nl/downloads/publications/2019/06/27/netherlands-defence-doctrine; Ministère des Armées, "Strategic Update 2021" (DICoD - Bureau des Éditions, January 2021).

7 Ewen MacAskill and defence correspondent, "British Army Creates Team of Facebook Warriors," *The Guardian*, January 31, 2015, sec. UK news, https://www.theguardian.com/uk-news/2015/jan/31/british-army-facebook-warriors-77th-brigade.

8 KAP Arthur van Beveren, "KL creëert Wapen van de Informatiemanoeuvre," Koninklijke Landmacht, accessed November 16, 2021, https://doi.org/10/02_wapen-van-de-informatiemanoeuvre.

recently, in October 2021, the French Ministry of Defence launched a special doctrine for its conduct of information operations.[9]

In information warfare, non-kinetic, information-driven capabilities are employed to target human cognition, seeking changes in attitudes, perceptions and behaviour. While physical, kinetic means can do just that – think of the deterrent effect of a military exercise or the compellent intention of bombing civilian targets – here the emphasis is on manipulating the information flow. At its core are behavioural influencing tactics that exploit flaws in human cognition. This paper sets out a number of crucial tactics that have proven effective at doing just that. It specifically focuses on methods aimed at influencing larger groups of people. This can be done especially effectively via the virtual dimension, but the influencing principles often apply to the offline world too. What is more, many of the tactics can likewise be implemented at the tactical level.

The relationship between liberal democracy and information warfare is an uneasy one

Evidently, the relationship between liberal democracy and information warfare is an uneasy one, not least because influencing activities may fall outside the scope of what is deemed appropriate by democratic norms and standards. What is more, because information warfare is principally concerned with the "goal of collapsing the enemy internally rather than physically destroying him", the demarcation of clear battle fronts and distinction between war and peace fade.[10] Russian activity to shape public opinion surrounding the 2014 intervention in Ukraine,[11] its meddling in democratic processes, or the Islamic State's campaign to recruit foreign fighters[12] are among the first examples of pervasive and concerted persuasion efforts exploiting the modern information environment. Most recently, China's online response to the Covid-19 pandemic has caught worldwide attention.[13] From a Western perspective, such activities may fall outside the scope of the military. Political influencing is conducted by governments while military activity is limited to theatres of operations, principally at the tactical level. Yet, the hyperconnectivity-induced blurring of peace and conflict, and the entangling of domestic and foreign spaces (and audiences), undercut the separation between the political and military and between the tactical and the strategic.[14] "The use of information to influence audiences," therefore, "tends to fall (...) in a grey area without boundaries, rules or inherent clarity, which hinders countering information threats."[15]

Perhaps unsurprisingly then, Western discussions have largely focused on the defensive side of information warfare: finding methods and tools to counter adversary influence efforts and build domestic resilience against disinformation and propaganda campaigns. The persistent exploitation of information in conflict however also demands a closer look at the offensive side: through which means and techniques are human minds most effectively targeted in present-day influencing efforts? Indeed, such an understanding is necessary to comprehend adversary tactics and to design effective countermeasures. But as information plays an

9 Ministère des Armées, "Florence Parly présente la doctrine militaire de lutte informatique d'influence," October 21, 2021, https://www.defense.gouv.fr/actualites/articles/florence-parly-presente-la-doctrine-militaire-de-lutte-informatique-d-influence.

10 William S. Lind, Col Keith Nightengale, et al., "The Changing Face of War: Into the Fourth Generation," *Marine Corps Gazette*, n.d., 23.

11 Max Seddon, "Documents Show How Russia's Troll Army Hit America," BuzzFeed News, June 2, 2014, https://www.buzzfeednews.com/article/maxseddon/documents-show-how-russias-troll-army-hit-america.

12 Imran Awan, "Cyber-Extremism: Isis and the Power of Social Media," *Society* 54, no. 2 (April 2017): 138–49, https://doi.org/10.1007/s12115-017-0114-0.

13 Jacob Wallis et al., "Retweeting through the Great Firewall: A Persistent and Undeterred Threat Actor" (The Australian Strategic Policy Institute, June 2020), https://www.aspi.org.au/report/retweeting-through-great-firewall.

14 Wanless and Berk, "The Changing Nature of Propaganda."

15 Wanless and Berk, 64.

increasingly important role in present-day conflict, military organisations across the Atlantic are also gearing up to master the art of using information for persuasive aims.

The use of information for persuasive aims in conflict thus necessitates a rigorous debate about the when and how of influencing, one that entails legal, social and ethical considerations and broader strategic questions.[16] Considerations and discussions about the preconditions and norms for using influencing tactics are beyond the scope of this paper but will be elaborated on later in this project commissioned by the Royal Netherlands Army.

This specific contribution takes a behavioural theoretical approach to grasp the mechanisms and tactics that information warfare seeks to exploit and utilise. It examines the ways in which flaws in human cognition can be exploited for military advantages, using information instead of force. In doing so, it lays out nine influencing tactics that have proven effective at manipulating the information environment to the end of changing attitudes, perceptions and ultimately behaviour. Before doing so, this paper first dissects the conceptual debate, clarifying and defining the broad range of terms used in discussions on the use of information in conflict. The section which lays out the various influencing tactics begins with a brief introduction to behavioural sciences to explain the cognitive mechanisms that underlie influencing methods, and ends with what can be treated as a rough practitioner's guide. The final part reflects on the implications and potential use of the influencing techniques for military organisations.

This paper is the accumulation of desk research and an elaborate expert session that brought together a variety of military and non-military experts and practitioners with backgrounds in behavioural science, strategic communications and marketing.[17]

16 For a discussion of the legal and ethical aspects, see for instance Peter B.M.J. Pijpers, "Influence Operations in Cyberspace: On the Applicability of Public International Law during Influence Operations in a Situation below the Threshold of the Use of Force" (Universiteit van Amsterdam, 2022), https://pure.uva.nl/ws/files/66794608/Thesis.pdf; Jens David Ohlin, Kevin Govern, and Claire Oakes Finkelstein, eds., *Cyberwar: Law and Ethics for Virtual Conflicts*, First edition (Oxford, United Kingdom: Oxford University Press, 2015); Michael L. Gross and Tamar Meisels, eds., *Soft War: The Ethics of Unarmed Conflict* (Cambridge: Cambridge University Press, 2017), https://doi.org/10.1017/9781316450802.

17 The expert session was held virtually, due to Covid-19 restrictions, on 25 November 2021.

The use of information in conflict: what it entails

Over time, a myriad of terms came to describe the exploitation of the information environment in conflict. During the Cold War, *psychological operations* (PsyOps) described the non-lethal warfighting tactics that use information to influence the emotions, motives and behaviour.[18] As technologies evolved, first *electronic warfare* and then *cyber warfare* came into existence, whereby operations focus on the hardware elements of the information environment: that is, targeting the networks, infrastructures and institutions that (military) communications and information exchange rely on.[19]

Information operations seek to control the information flow in order to exert behavioural and cognitive changes in groups and individuals

As information became increasingly important to both everyday life and warfare, the term *information operations* was coined, encompassing a wide range of concepts and tools including PsyOps, electronic warfare, cyber warfare, military deception, operational security, intelligence and public affairs. Ultimately, information operations seek to control the information flow in order to exert behavioural and cognitive changes in groups and individuals. In NATO doctrine, behaviour is understood as rooted in a decision-maker's *will*, made up of factors such as motivation, intent, attitude, beliefs and values; *understanding*, or perceptions of a situation and situational awareness; and the *capabilities* that allow an adversary to understand a situation and apply his will. Information operations therefore include activities that "aim to influence an adversary's will and undermine cohesion"; efforts which "deny, degrade, disrupt and manipulate the information available to a decision-maker in order to affect their understanding and thereby perception"; and actions that "degrade, disrupt, deceive, destroy or deny those capabilities that allow adversary decision-makers to increase their understanding; bolster, impose, apply and sustain their will and to exercise effective command."[20]

Efforts aimed at influencing a target audience's will, understanding and capabilities take place in the three dimensions that make up the information environment: the physical, the virtual and the cognitive (or human minds). The physical dimension of the information environment refers to the hard infrastructures enabling the transmission, reception and storage of information, including command and control centres. The virtual dimension comprises the networks facilitating the collection, processing, storage, dissemination, display and protection of data and information. Finally, the cognitive dimension comprises the individual and collective minds who receive, transmit and respond to or act on information. Information operations take place in and target all three dimensions, even if the first two are ultimately used to achieve effects in the latter – that is, to shape human attitudes, perceptions and ultimately decision-making.

18 Sunil Narula, "Psychological Operations (PSYOPs): A Conceptual Overview," *Strategic Analysis* 28, no. 1 (January 2004): 184, https://doi.org/10.1080/09700160408450124.

19 Alonso Bernal et al., "Cognitive Warfare: An Attack on Truth and Thought" (NATO, Fall 2020), https://www.innovationhub-act.org/sites/default/files/2021-03/Cognitive%20Warfare.pdf; François du Cluzel, "Cognitive Warfare" (Innovation Hub, 2021), https://www.innovationhub-act.org/sites/default/files/2021-01/20210113_CW%20Final%20v2%20.pdf.

20 NATO, "AJP-3.10 Allied Joint Doctrine for Information Operations."

In information warfare, cyber operations play a distinct but amplifying role. Cyber capabilities focus on the exploitation of software and infrastructure ('hard' cyberspace logic-focused operations) – indeed those activities that impair an adversary's capabilities allowing for adequate decision-making.[21] Despite this emphasis on the physical and virtual, rather than the cognitive, dimension of the information environment, in recent years the potential of using cyberspace to influence the human mind in the cognitive dimension has come to the fore. As information technologies fundamentally changed the scale, reach, speed and controllability of information operations, cyber operations have come to play an indispensable role in enabling, accelerating and intensifying manipulation in the cognitive dimension. The following quote by Thomas Rid explains this dynamic neatly:

> Networked computers, their vulnerabilities baked in, meant that information no longer targeted only minds; it could also now target machines. It had long been possible to convince, deceive, or even buy publishers, but now their platforms could also be hacked, altered, or defaced. Machines, moreover, put up less resistance than human minds did. Active measures could even be technically amplified, by using semi-automated accounts and fully automated bots, for example. (...) Moreover, computer networks could now be breached in order to achieve effects that once required a human hand, such as manipulating or incapacitating infrastructure, logistics, or supply chains. Automation and hacking, in short, became natural extensions of the active measures playbook.[22]

Information technologies fundamentally changed the scale, reach, speed and controllability of information operations

Although information operations are not strictly limited to online activities, the potential of current and future information technologies, including artificial intelligence, have moved information operations increasingly online.

Closely related to information warfare is *information manoeuvre,* a term that came into vogue in recent years particularly in British and Dutch military circles. It builds on the concept of information-driven operations, defined by the Netherlands Royal Army as the ability to "acquire, process and disseminate all relevant data and information to create insight, foresight and understanding and enable military decision-making and military action in the [cognitive, virtual and physical] dimensions".[23] Information manoeuvre then goes one step further to not only extract and utilise information in operations but to exploit it strategically to influence the will, behaviour and perceptions of adversaries and other relevant actors, for both offensive and defensive purposes, and by using all power instruments available. In a recent paper by Pijpers and Ducheine (2021), information manoeuvre is understood somewhat more narrowly, with a focus on the non-lethal, informational instrument of power as an alternative the use of kinetic force as a means to generate behavioural change. Their definition reads as follows:

> Information manoeuvre means using information as a source for understanding and decision-making but also as a means to act, thereby generating informational effects in the cognitive, virtual or physical dimension (directly or indirectly), using information as a target, vector or weapon to ultimately affect the cognitive dimension of audiences, friend or foe.[24]

21 Paul A.L. Ducheine and Frans P.B. Osinga, *Netherlands Annual Review of Military Studies - Winning without Killing: The Strategic and Operational Utility of Non-Kinetic Capabilities in Crises.*, NL ARMS (TMC Asser Press, 2017), https://surfsharekit.nl/public/d71e36e5-784a-4784-8326-6e4535392372.

22 Thomas Rid, *Active Measures: The Secret History of Disinformation and Political Warfare* (New York: Farrar, Straus and Giroux, 2020), 13–14. Rid, 13–14.

23 Koninklijke Landmacht, "Visie Informatie Gestuurd Optreden Voor De Landmacht: Manoeuvreren in De Informatieomgeving" (Commando Landstrijdkrachten (CLAS), November 2020), 11.

24 Peter B.M.J. Pijpers and Paul A.L. Ducheine, "'If You Have a Hammer...' Reshaping the Armed Forces' Discourse on Information Maneuver" (Amsterdam Center for International Law, 2021), 1.

To affect the information environment of others, or indeed to weaponise information, effects are sought in the physical, virtual and cognitive dimensions. Behavioural change is then achieved through targeting the will, understanding and capabilities of target audiences. Despite some nuances, and with the term information manoeuvre being more conceptual and the term information operations more operational, the two can thus be understood as closely related.

This paper is specifically concerned with efforts aimed at controlling the flow of information and manipulating the way individuals and populations *react* to presented information. It thus focuses on tactics that affect the will and understanding of audiences, not their capabilities. Cyber operations that disrupt or degrade the capabilities needed for effective decision-making are thus not included. Still, when influencing public opinion, the virtual dimension is key, because of its instrumental role in enabling, accelerating and intensifying manipulation in the cognitive dimension. That said, many tactics can also be used outside of the virtual dimension or employed for tactical effects such as influencing adversary troops.

This paper is specifically concerned with efforts aimed at controlling the flow of information and manipulating the way individuals and populations react to presented information

Finally, it should be noted that the use of the terms conflict and warfare is inherently problematic when discussing influencing operations. In recent years, the line between war and peace has become blurred, leading to conceptualisations such as hybrid warfare, grey zone conflict and measures short of war.[25] This development has been largely – but not solely – driven by the information environment offering novel instruments of power usable in conflict or competition below the threshold of war. Some have therefore argued against the use of the language of war, advising to refer to subversion instead.[26] What is more, a distinction should be made between in-theatre (tactical and operational) and out-of-theatre (strategic) operations. Especially in the case of the latter, the use of terms such as warfare can be considered problematic. Having stressed this, however, short of alternative, commonly accepted terms, this paper has opted to use terms such as conflict and warfare regardless.

25 Elie Perot, "The Blurring of War and Peace," *Survival* 61, no. 2 (March 4, 2019): 101–10, https://doi.org/10.1080/00396338.2019.1589089.

26 See for instance Lennart Maschmeyer, "Subversion over Offense: Why the Practice of Cyber Conflict Looks Nothing like Its Theory and What This Means for Strategy and Scholarship," *Offensive Cyber Working Group* (blog), January 19, 2022, https://offensivecyber.org/2022/01/19/subversion-over-offense-why-the-practice-of-cyber-conflict-looks-nothing-like-its-theory-and-what-this-means-for-strategy-and-scholarship/.

Destabilise and influence: exploring the toolbox

This section aims to better understand the cognitive mechanisms that are at the root of influence and manipulation tactics, outlining nine that appear particularly effective weapons of mass influence. Before doing so, it briefly introduces some key concepts in behavioural science that help understand the ways in which influencing tactics exploit patterns in the way humans think.

Thinking: two ways

For anyone trying to influence behaviour, it is crucial to understand the cognitive processes that underlie human decision-making. Humans receive, process and decide how to act on information in the cognitive dimension. Contrary to previously held assumptions, human information processing and decision-making however are bounded by internal constraints, which explains why behaviour is not necessarily based on rational calculations.[27] To grasp why rationality in decision-making is bounded, it is crucial to distinguish between two types of thinking: fast, effortless, associative thinking, known as System 1; and slow, reflective, rational thinking, or System 2. The first type is instinctive, or a gut reaction; the second type of thinking is conscious thought.[28]

Behaviour is often driven by automation (such as reflexes) and mental short-cuts that are based on if-then rules and are gathered through experience

Because time is limited and attention spans are short, people are simply not able to process and analyse all information through conscious, rational – yet slow – thinking. Indeed, to cope with the large amount of data the human mind is constantly exposed to, it has evolved to process information quickly, without exerting too much effort.[29] As a result, the mind relies on rules of thumb, or rule-based *heuristics*.[30] This means that behaviour is often driven by automation (such as reflexes) and mental short-cuts that are based on if-then rules and are gathered through experience. For instance, when somebody describes a neat and tidy person with a love for books, people are more likely to think of a librarian than a farmer, despite the fact that there are a lot more farmers in the world than librarians (which makes the person described being a farmer much more likely).[31] Our brain would arrive at this conclusion without much deliberation.

27 H. A. Simon, "Rational Choice and the Structure of the Environment.," *Psychological Review* 63, no. 2 (1956): 129–38, https://doi.org/10.1037/h0042769.

28 Richard H. Thaler and Cass R. Sunstein, *Nudge: Improving Decisions about Health, Wealth, and Happiness* (New Haven: Yale University Press, 2008), 20.

29 For evidence of the narrow processing of information see Galen V. Bodenhausen, "Stereotypes as Judgmental Heuristics: Evidence of Circadian Variations in Discrimination," *Psychological Science* 1, no. 5 (September 1, 1990): 319–22, https://doi.org/10.1111/j.1467-9280.1990.tb00226.x; Stanley Milgram, "The Experience of Living in Cities," *Science*, March 13, 1970, https://www.science.org/doi/abs/10.1126/science.167.3924.1461; Amos Tversky and Daniel Kahneman, "Judgment under Uncertainty: Heuristics and Biases," *Science*, September 27, 1974, https://www.science.org/doi/abs/10.1126/science.185.4157.1124.

30 Tversky and Kahneman, "Judgment under Uncertainty."

31 Daniel Kahneman, *Thinking, Fast and Slow* (New York: Macmillan, 2013).

Crucially, such rules of thumb cause a wide variety of biases that make people susceptible to influencing. "[People's] choices are, even in life's most important decisions, influenced in ways that would not be anticipated in a standard economic framework," – or indeed, does not follow a rational logic.[32] In the decades that followed Amos Tversky and Daniel Kahneman's initial publication outlining three heuristics (anchoring, availability and representativeness), extensive research resulted in a long list of cognitive biases which systematically undermine rationality in judgement.[33]

Behavioural theories, which seek to explain attitude formation and change, exploit these heuristics and cognitive biases and "help planners of influence operations by focusing attention on the key variables that regulate the efficacy of persuasive communications".[34] Some limitations should be noted. As behaviour tends to be grounded in imperfect mental models that are not necessarily representative of reality or in accordance with stated individual preferences, human decision-making is difficult to predict. This complexity is further exacerbated by the complex adaptive social system that human behaviour is embedded in. While a foundation in behavioural theories is crucial for any effective analysis, their predictive and explanatory value is generally modest. Behavioural theories tend to zero-in on specific cognitive processes that influence behaviour in specific (experimental) situations. As a result, few general behavioural theories exist that would apply across contexts and influencing efforts.

Therefore, rather than focusing on selected behavioural theories, this paper sets forth a selection of key influence tactics that are commonly deployed and have proven generally effective in manipulating thought processes. For each tactic, we identify the relevant behavioural theories as well as cognitive biases and heuristics that it exploits and illustrate its working by drawing on recent examples of influencing efforts undertaken by both state and non-state actors.

The tactics: exploit, manipulate, distort

A review of the literature and an exploration of current practices puts forward a list of nine common and effective influence and destabilisation tactics.[35] This study groups them into three clusters: those that exploit reality; those that manipulate reality; and those that distort reality. Cluster 1 encompasses tactics that work with what is already there: they exploit the human tendency to observe, react to and mimic others, and take advantage of realities that already exist. Tactics include emotional appeal, social contagion and appeal to authority. Tactics in Cluster 2 work with the reality on the ground, too, but manipulate it by rearranging, overwhelming, targeting and prioritising information. Tactics are repeated exposure, sequence manipulation, microtargeting and media agenda-setting. Finally, Cluster 3 tactics work to create an entirely new reality: either by spreading false information or by injecting new storylines. Narrative persuasion and disinformation fall in this last category. Clearly, distinctions between the clusters are not always rigid: narratives may very well exploit existing and real doubts among populations. What is more, tactics are mutually reinforcing

32 Thaler and Sunstein, *Nudge*, 37.

33 See for instance Buster Benson, "Cognitive Bias Cheat Sheet," Medium, December 20, 2021, https://betterhumans.pub/cognitive-bias-cheat-sheet-55a472476b18.

34 Eric V. Larson et al., "Foundations of Effective Influence Operations: A Framework for Enhancing Army Capabilities" (Santa Monica, CA: RAND, 2009).

35 The list of tactics expands on the one proposed by Cassandra Brooker, "The Effectiveness of Influence Activities in Information Warfare" (Australian Army Research Centre, 2021).

and therefore often employed in a concerted manner. Indeed, disinformation that relies on emotion increases credibility, and is likely to be shared via social media more rapidly.[36] The subsequent repeated exposure to false information then further increases people's tendency to reshare such content,[37] with clear knock-on effects for herd mentality – indeed the effect of social contagion.

Figure 1. Clusters of influencing tactics

Cluster 1: exploit

Tactics in Cluster 1 exploit existing realities, first and foremost by utilising the human tendency to observe and react to others. Emotions, especially negative ones, can be manipulated effectively as they are processed relatively automatically, requiring often low levels of cognitive involvement. As they spread rapidly, the potential to reach large audiences is high. In addition, there is a strong human tendency to mimic one another's behaviour: peer-to-peer influence or herd mentality is thus a powerful tool to stimulate certain types of behaviour. Finally, and closely related, in every society certain group members are more influential than others: such figures of authority can range from the a monarch or scientist to an influencer on Instagram. By compelling such figures to exhibit or promote a certain behaviour, the behaviours of others in the group can be effectively changed.

Emotional appeal

Emotions influence multiple cognitive processes, including attention, perception, memory encoding and associative learning. Most crucially, they incite people to act ('emere' in Latin means to win over, 'movere' to move, stir or impel[38]), because they push people from feeling

36 Cameron Martel, Gordon Pennycook, and David G. Rand, "Reliance on Emotion Promotes Belief in Fake News," *Cognitive Research: Principles and Implications* 5, no. 1 (October 7, 2020): 47, https://doi.org/10.1186/s41235-020-00252-3.

37 Daniel A. Effron and Medha Raj, "Misinformation and Morality: Encountering Fake-News Headlines Makes Them Seem Less Unethical to Publish and Share," *Psychological Science* 31, no. 1 (January 1, 2020): 75–87, https://doi.org/10.1177/0956797619887896.

38 Glare P.G.W., *Oxford Latin Dictionary* (Oxfort at the Clarendon Press, 1968), 605, 1138.

mere sympathy to feeling empathy – the difference between intellectually *understanding* another person's suffering and *experiencing* her or his feelings.[39] Through emotional appeals, people can be transported into a plotline, pushing them to act as if they are the main character in a story.[40] Emotions are thus key in persuasion efforts as they are so vital to human action. What is more, they can be effectively manipulated. To understand how, it is first important to grasp the ways through which emotions and emotional content spread.

Emotions, especially negative ones, can be manipulated effectively as they are processed relatively automatically

Emotional cues, such as facial expressions, movements or tones, spread through emotional contagion: the process through which people automatically adopt the emotional state of others even before they become aware of what triggered the emotional state of the other.[41] Against previous assumptions, emotional contagion not only occurs through in-person interactions but equally through pictures, videos, text or other content spread via online (social) networks.[42] Crucially, emotional contagion describes the process through which emotions are processed more readily than other types of information and thus encourages non-analytical decision-making – indeed, System 1 thinking. For instance, seeing (a video of) a cheerful crowd may cause a similar feeling of cheerfulness, based on which one may decide that the context (of the video) is positive (e.g., a new leader being elected).

But there is an important distinction to be made between adopting emotional cues and reacting to emotion-evoking information, such as a provocative text. Emotion-evoking information may be processed actively or passively depending on how the elicited emotion is interpreted (e.g. pleasant/unpleasant; confidence-building/doubt-raising).[43] To illustrate, an information campaign aimed at disincentivising speeding sometimes uses pictures of its consequences, such as crashes. Yet, while showing pictures of crashes has been shown to elicit strong neural activation, it did not incentivise less risky driving.[44] Instead, the strong, unpleasant feeling of seeing car crashes led to cognitive disengagement and dismissal of the relevant information.

Utilising emotion for influence tactics therefore requires careful deliberation of what is to be achieved. Petty and Cacioppo's Elaboration Likelihood Model states that there is both a peripheral (System 1, passive) and a central (System 2, active) route to persuasion.[45]

39 Manuel Garcia-Garcia, "The Role of Emotion in Human Decision-Making" (The Advertising Research Foundation, 2020).

40 Kerry Patterson, ed., *Influencer: The Power to Change Anything* (New York: McGraw-Hill, 2008).

41 Marvin L. Simner, "Newborn's Response to the Cry of Another Infant.," *Developmental Psychology* 5, no. 1 (1971): 136–150, https://content.apa.org/doi/10.1037/h0031066; Neil A. Harrison et al., "Pupillary Contagion: Central Mechanisms Engaged in Sadness Processing," *Social Cognitive and Affective Neuroscience* 1, no. 1 (June 1, 2006): 5–17, https://doi.org/10.1093/scan/nsl006.

42 Giuliana Isabella and Hamilton C. Carvalho, "Chapter 4 - Emotional Contagion and Socialization: Reflection on Virtual Interaction," in *Emotions, Technology, and Behaviors*, ed. Sharon Y. Tettegah and Dorothy L. Espelage, Emotions and Technology (San Diego: Academic Press, 2016), 63–82, https://doi.org/10.1016/B978-0-12-801873-6.00004-2; A.D.I. Kramer, J.E. Guillory, and J.T. Hancock, "Experimental Evidence of Massive-Scale Emotional Contagion through Social Networks," *Proceedings of the National Academy of Sciences* 111, no. 24 (June 17, 2014): 8788–90, https://doi.org/10.1073/pnas.1320040111.

43 Maria Stavraki et al., "The Influence of Emotions on Information Processing and Persuasion: A Differential Appraisals Perspective," *Journal of Experimental Social Psychology* 93 (March 1, 2021): 104085, https://doi.org/10.1016/j.jesp.2020.104085; Richard E. Petty and Pablo Briñol, "Emotion and Persuasion: Cognitive and Meta-Cognitive Processes Impact Attitudes," *Cognition and Emotion* 29, no. 1 (January 2, 2015): 1–26, https://doi.org/10.1080/02699931.2014.967183.

44 Anna Borawska, Tomasz Oleksy, and Dominika Maison, "Do Negative Emotions in Social Advertising Really Work? Confrontation of Classic vs. EEG Reaction toward Advertising That Promotes Safe Driving," *PloS One* 15, no. 5 (2020), https://doi.org/10.1371/journal.pone.0233036; Bernice R. C. Plant, Julia D. Irwin, and Eugene Chekaluk, "The Effects of Anti-Speeding Advertisements on the Simulated Driving Behaviour of Young Drivers," *Accident; Analysis and Prevention* 100 (March 2017): 65–74, https://doi.org/10.1016/j.aap.2017.01.003.

45 Richard E. Petty and John T. Cacioppo, *Communication and Persuasion: Central and Peripheral Routes to Attitude Change*, Springer Series in Social Psychology (New York Berlin Heidelberg: Springer, 1986).

An individual's ability and willingness to think about an argument and its supporting evidence explain the likely effectiveness of each route in a given situation. High cognitive involvement corresponds to central processing, whereas low involvement corresponds to peripheral processing. Because both pathways can promote persuasion, emotion-evoking information is a delicate tool that can influence the level of cognitive involvement and the type of processing. Inducing lower processing via emotional messaging may be advantageous if the aim is the exposure to information, without promoting much interaction. Distraction and repetition will lure an audience into following a peripheral route of processing. Emotions can however also be used to facilitate higher processing, if the goal is to incentivise the target audience to engage with an argument more thoroughly (e.g. using a headline like "This is why people do not understand climate change" to explain the counterintuitive fact that it leads to more extreme temperatures, including cold ones).[46] As a result, carefully designed influencing tactics that use emotional appeal may be useful tools to shape a target audience's perception and processing of information based on the objective. [47]

Distraction and repetition will lure an audience into following a peripheral route of processing

The cyber domain, and social media in particular, provide new platforms through which emotional targeting can occur. Negative emotions, and especially anger, are particularly effective in facilitating engagement.[48] This was recently illustrated by Facebook's prioritisation of negative content as a way to spur user traffic.[49] The negativity bias is mainly responsible for why humans respond more to negative than positive information – and are therefore drawn more towards negative emotions such as anger.[50] That said, the increased attention paid to negative content could potentially mitigate the persuasion effect: when processing negative content more attentively,[51] humans may recognise persuasion attempts more easily,[52] affecting their credibility.[53]

46 For a discussion on the differential impacts of specific emotions, see Martel, Pennycook, and Rand, "Reliance on Emotion Promotes Belief in Fake News"; Galen V. Bodenhausen, Lori A. Sheppard, and Geoffrey P. Kramer, "Negative Affect and Social Judgment: The Differential Impact of Anger and Sadness," *European Journal of Social Psychology* 24, no. 1 (1994): 45–62, https://doi.org/10.1002/ejsp.2420240104.

47 Larissa Z. Tiedens and Susan Linton, "Judgment under Emotional Certainty and Uncertainty: The Effects of Specific Emotions on Information Processing," *Journal of Personality and Social Psychology* 81, no. 6 (2001): 973–88, https://doi.org/10.1037/0022-3514.81.6.973.

48 Rui Fan et al., "Anger Is More Influential than Joy: Sentiment Correlation in Weibo," ed. Rodrigo Huerta-Quintanilla, *PLoS ONE* 9, no. 10 (October 15, 2014): e110184, https://doi.org/10.1371/journal.pone.0110184.

49 Mark Scott, "The Facebook Papers Reveal the Limits of Regulation. It's Time to Think Bigger.," *POLITICO*, October 26, 2021, https://www.politico.eu/article/facebook-papers-reveal-limits-of-regulation-online-content-lawmakers/.

50 John T. Cacioppo and Wendi L. Gardner, "Emotion," *Annual Review of Psychology*, 1999; Paul Rozin and Edward B. Royzman, "Negativity Bias, Negativity Dominance, and Contagion," *Personality and Social Psychology Review* 5, no. 4 (November 1, 2001): 296–320, https://doi.org/10.1207/S15327957PSPR0504_2; Roy F. Baumeister et al., "Bad Is Stronger than Good," *Review of General Psychology* 5, no. 4 (December 1, 2001): 323–70, https://doi.org/10.1037/1089-2680.5.4.323.

51 Annie Lang, John Newhagen, and Byron Reeves, "Negative Video as Structure: Emotion, Attention, Capacity, and Memory," *Journal of Broadcasting & Electronic Media* 40 (1996): 460; N. Kyle Smith et al., "Being Bad Isn't Always Good: Affective Context Moderates the Attention Bias toward Negative Information.," *Journal of Personality and Social Psychology* 90, no. 2 (2006): 210–20, https://doi.org/10.1037/0022-3514.90.2.210; Stuart Soroka and Stephen McAdams, "News, Politics, and Negativity," *Political Communication* 32, no. 1 (January 2, 2015): 1–22, https://doi.org/10.1080/10584609.2014.881942.

52 Nicole Ernst, "Effects of Message Repetition and Negativity on Credibility Judgments and Political Attitudes," *International Journal of Communication* 11 (2017): 22.

53 Thomas Koch and Thomas Zerback, "Helpful or Harmful? How Frequent Repetition Affects Perceived Statement Credibility: Helpful or Harmful," *Journal of Communication* 63, no. 6 (December 2013): 993–1010, https://doi.org/10.1111/jcom.12063.

In recent years, populists have illustrated the effectiveness of utilising emotion to enhance engagement and persuasiveness. Populist appeals cause a stronger emotion than neutral appeals and it is these emotions that influence the persuasiveness of the appeal.[54]

Table 1. Emotional appeal

Tactic	Mechanism	Behavioural process	Explanation
Emotional appeal	Emotions are processed more readily than other types of information	Emotional contagion	People automatically adopt the emotional state of others even before they become aware of what triggered the emotional state of the other
	Emotion-evoking information can influence the level of cognitive involvement and the type of processing	Dual process theory	Distinguishes between intuitive, automatic (System 1) thinking, and effortful, rational (System 2) thinking
		Elaboration-likelihood model	Distinguishes between a central and peripheral route of processing, corresponding to high and low cognitive involvement respectively
	Negative emotions facilitate engagement	Negativity bias	People respond more to negative than positive information

Case study: During the 2016 Brexit referendum in the UK, the Leave camp framed its campaign as an emotional appeal to 'take back control', in opposition to the more utilitarian cost-benefit approach of the Remain campaign.[55] Messaging that evoked strong feelings of resentment towards Brussels-based bureaucrats stoked the emotional charge and appeal of the campaign.[56] This elevated the campaign beyond the realm of 'normal' politics and refocused the Brexit debate around deeper, more emotive issues of nationality and identity, ultimately suggesting that the Leave campaign reflected the authentic and incontestable will of the people.[57]

Social contagion

Peer-to-peer influence has similarly proven a powerful mechanism affecting human behaviour. Through social contagion, people mirror one another's attitudes, perceptions and actions.[58] This process can be both conscious and unconscious: conscious, when an individual has a pre-existing desire to engage but refrains from doing so as to comply with social norms; and unconscious, when an individual spontaneously imitates behaviour even if the root of the other people's attitudes, perceptions or behaviours is unknown (this process is closely

54 Dominique Wirz, "Persuasion Through Emotion? An Experimental Test of the Emotion-Eliciting Nature of Populist Communication," *International Journal of Communication* 12 (2018): 1114–38, https://doi.org/10.5167/UZH-149959.

55 Simon Usherwood and Katharine AM Wright, "Sticks and Stones: Comparing Twitter Campaigning Strategies in the European Union Referendum," *The British Journal of Politics and International Relations* 19, no. 2 (May 1, 2017): 371–88, https://doi.org/10.1177/1369148117700659.

56 Ece Özlem Atikcan, Richard Nadeau, and Éric Bélanger, "Framing Risky Choices: How the Leave Campaign Convinced Britain to Take a Leap into the Unknown," *LSE Blog* (blog), November 3, 2020, https://blogs.lse.ac.uk/europpblog/2020/11/03/framing-risky-choices-how-the-leave-campaign-convinced-britain-to-take-a-leap-into-the-unknown/.

57 Jonathan Moss, Emily Robinson, and Jake Watts, "Brexit and the Everyday Politics of Emotion: Methodological Lessons from History," *Political Studies* 68, no. 4 (November 1, 2020): 837–56, https://doi.org/10.1177/0032321720911915.

58 David Levy and Paul Nail, "Contagion: A Theoretical and Empirical Review and Reconceptualization," *Genetic, Social, and General Psychology Monographs* 119 (June 1, 1993): 233–84.

related to emotional contagion).[59] The social cues that are transmitted through groups and networks can be attractive or desirable, but not necessarily (for example, collective panic).

To explain the human tendency to mimic one another's behaviour, Bandura's Social Cognitive Theory posits that observing other people's behaviour is a crucial source of information and that individuals learn by observing and modelling one another's behaviour. Drawing on the Social Identity Approach, people may be particularly likely to assimilate the behaviour of fellow group members to build a shared self-definition in terms of the group-defining properties, especially when they are regarded as a reliable source of information.[60] Some people may therefore be better sources of information than others. Indeed, to effectively utilise social contagion for influence operations, identifying and incorporating these individuals should be an important step, and a social network analysis is often applied prior to military engagement. This provides a basis to apply existing methods and algorithms for identifying the most influential people in a target audience and match these role models and opinion leaders with individuals receptive to influence.[61] However, while being an important point of engagement, solely focusing on influential individuals is not enough. Utilising reciprocal interactions of group members and community structures may be as important to influence efforts as targeting impersonal opinion leaders.[62]

Social media amplify the dynamics of social contagion as today's communication technologies have fundamentally changed the way in which humans form groups

Social media amplify the dynamics of social contagion as today's communication technologies have fundamentally changed the way in which humans form groups and expand their social networks.[63] Social groups can now be virtual and independent of geographical location, thereby reconfiguring the network structure that influences behaviour.[64] Utilising peer-to-peer influence has become a common tactic in marketing. To illustrate, engineering products in a way that makes them more likely to be shared by peers is a concept used by marketeers since 1888 when the first chain letter was sent.[65] By operationalising the virtual domain, the use of viral and network-based marketing to promote the adoption of new consumer behaviour has become more popular than ever.[66] Applications of social contagion to viral marketing highlight its effectiveness and also provide a model as to how randomised controlled trials can identify peer influence in social networks.[67]

59 Levy and Nail.

60 Ian E. Morley, "Henri Tajfel's Human Groups and Social Categories," *British Journal of Social Psychology* 21, no. 3 (1982): 189–201, https://doi.org/10.1111/j.2044-8309.1982.tb00540.x.

61 Thomas W. Valente and Rebecca L. Davis, "Accelerating the Diffusion of Innovations Using Opinion Leaders," *The ANNALS of the American Academy of Political and Social Science* 566, no. 1 (November 1, 1999): 55–67, https://doi.org/10.1177/000271629956600105; Hamidreza Mahyar et al., "Identifying Central Nodes for Information Flow in Social Networks Using Compressive Sensing," *Social Network Analysis and Mining* 8 (April 18, 2018): 33, https://doi.org/10.1007/s13278-018-0506-1; Jia Wu, Zhigang Chen, and Ming Zhao, "An Efficient Data Packet Iteration and Transmission Algorithm in Opportunistic Social Networks," *Journal of Ambient Intelligence and Humanized Computing* 11 (August 1, 2020), https://doi.org/10.1007/s12652-019-01480-2; Li Yang et al., "Identifying Opinion Leader Nodes in Online Social Networks with a New Closeness Evaluation Algorithm," *Soft Computing* 22, no. 2 (January 1, 2018): 453–64, https://doi.org/10.1007/s00500-016-2335-3.

62 Nicholas Harrigan, Palakorn Achananuparp, and Ee Peng Lim, "Influentials, Novelty, and Social Contagion: The Viral Power of Average Friends, Close Communities, and Old News," *Social Networks* 34, no. 4 (October 1, 2012): 470–80, https://doi.org/10.1016/j.socnet.2012.02.005.

63 Nathan O. Hodas and Kristina Lerman, "The Simple Rules of Social Contagion," *Scientific Reports* 4, no. 1 (March 11, 2014): 4343, https://doi.org/10.1038/srep04343.

64 *Daniel Kahneman and Yuval Noah Harari in Conversation*, 2021 Nexus Online Summit, 2021, https://www.youtube.com/watch?v=7yhg7NmTeVg.

65 Sinan Aral and Dylan Walker, "Creating Social Contagion Through Viral Product Design: A Randomized Trial of Peer Influence in Networks," *Management Science* 57, no. 9 (2011): 1623–39.

66 Shawndra Hill, Foster Provost, and Chris Volinsky, "Network-Based Marketing: Identifying Likely Adopters via Consumer Networks," *Statistical Science* 21, no. 2 (May 2006): 256–76, https://doi.org/10.1214/088342306000000222.

67 Aral and Walker, "Creating Social Contagion Through Viral Product Design."

To illustrate the effect of social contagion in the political theatre, the Arab Spring movement was largely supported by the diffusion and use of social networking tools, the growing online civil society and improved access to public discourse for a greater number of women and ethnic minority communities. Using these new virtual tools, people with a shared interest in democracy built extensive new networks and activated collective action movements. The broadcasting of protests throughout these networks helped to shift behavioural norms, which in turn encouraged more similar action across the public.[68]

Table 2. Social contagion

Tactic	Mechanism	Behavioural process	Explanation
Social contagion	People mirror (consciously or unconsciously) one another's attitudes, perceptions and actions	Social cognitive theory	Individuals learn by observing and modelling other's behaviour. Throughout life it remains a crucial source of information.
		Social identity approach	People are more likely to mimic the behaviour of fellow group members to build a shared self-definition, especially when they are considered a reliable source of information

Case study: The success of the Arab Spring movement in 2011 rested largely on the effective use of social contagion, particularly in the exploitation of new online social networking tools. For the first time, people across the Arab world with a shared interest in democracy were able to build new networks and organise collective action to effectively elicit behavioural change in the population. The ability to spread messages instantaneously through online networks also helped accelerate cross-border social contagion and encourage similar action in neighbouring states.[69]

Just as a prime minister, president or monarch has legitimate authority, so too have religious leaders, community organisers and social media influencers

Appeal to authority

As the section on social contagion has highlighted, specific individuals in wider groups or networks can be particularly influential in setting examples and guiding other group members' behaviour. In most societies and organisations, power is embedded within an authority hierarchy.[70] Legitimate power – attained from an elected, selected, or appointed position of authority – is one of the main bases of social power, as identified in French and Raven's framework.[71] But just as a prime minister, president or monarch has legitimate authority, so too have more informal figures of authority, such as religious leaders, community organisers, political activists and social media influencers. A prime example of this was when Dutch intensive care specialist, Diederik Gommers, teamed up with Famke Louise Meijer, an influencer with one million followers on Instagram, to promote awareness of the necessity of coronavirus

68 M. M. Hussain and Philip N. Howard, "Democracy's Fourth Wave? Information Technologies and the Fuzzy Causes of the Arab Spring," *SSRN Scholarly Paper* (Rochester, NY: Social Science Research Network, March 27, 2012), https://doi.org/10.2139/ssrn.2029711.

69 Hussain and Howard.

70 Bertram H. Raven, "The Bases of Power and the Power/Interaction Model of Interpersonal Influence: Bases of Power," *Analyses of Social Issues and Public Policy* 8, no. 1 (September 15, 2008): 1–22, https://doi.org/10.1111/j.1530-2415.2008.00159.x.

71 John R. P. French Jr. and Bertram Raven, "The Bases of Social Power," in *Studies in Social Power* (Oxford, England: Univer. Michigan, 1959), 150–67.

measures among young people.[72] The collaboration proved remarkably powerful and has been widely lauded as a success in shifting young people's attitudes.[73] This influencing power of authoritive figures is underpinned by social norms which require the target of influence, the subordinates, to comply with accepting the power of the influencing agent. Those with legitimate social power, therefore, have the ability to bring about social change by influencing behaviour and attitudes through their actions or orders. Another important but separate basis of social power, according to French and Raven, is informational power: the ability of agents of influence to control the flow of information for the purpose of exerting influence or generating social change.[74] Essentially, the ability to use, retain or manipulate information is a power base in itself within an authority hierarchy. Furthermore, as information and data become increasingly important in the exertion and consolidation of power across the world, so too does the role of the informational power base. Therefore, when attempting to exert influence on other societies and organisations, it is important to target not only those in legitimate power positions, but also those with informational power.

The proverbial gatekeepers of the information environment play a crucial role in shaping the flow of communication within a social system

To do this effectively, it is important to understand how information flows within the authority hierarchy and social systems more generally. A useful guide for this is the theory of the diffusion of innovations which explains the process in which new ideas, practices and technologies spread through networks.[75] Although numerous factors influence information diffusion, there is consensus that interpersonal contacts within and between networks are fundamental to the spread and adoption of new ideas, information and thus behaviour.[76] Fundamental to this is the role of opinion leaders – credible and trustworthy role models that wield influence over peers – who are able to diffuse new ideas effectively and thus drive behaviour change thanks to their elevated role in their network.[77]

As discussed above, individuals rely heavily on partisan, ideological and heuristic cues to make sense of complex choices and debates, which makes them receptive to opinion leaders. This mirrors the two-step flow of the communication model, which posits that people are not directly influenced by mass media but instead by opinion leaders, who pass on their own interpretation of the mass communicated messages. The two-step model retains significant explanatory power in understanding the flow of information through social networks on social media. Recent research has reiterated the strategic importance of intermediary opinion leaders as amplifiers of mass communicated messages within their particular network, whether it be political influencers on Twitter[78] or discussion forum contributors.[79]

Gatekeeping theory is relevant here. The proverbial gatekeepers of the information environment play a crucial role in shaping the flow of communication within a social system. Each information environment has a primary entrance, channel or gate through which information

72 Niels Klaassen, "Famke Louise Werkt Nu Samen Met Ic-Arts Gommers: Vandaag Begint Mondkapjes-Campagne," *AD*, October 5, 2020, https://www.ad.nl/binnenland/famke-louise-werkt-nu-samen-met-ic-arts-gommers-vandaag-begint-mondkapjes-campagne~a5691426/?referrer=https%3A%2F%2Fwww.google.com%2F.

73 It was referenced as an example of the power of social media influencers in influencing behaviour during the expert session.

74 Bertram Herbert Raven, *Social Influence and Power* (University of California, Department of Psychology, 1964).

75 Everett M Rogers, *Diffusion of Innovations*, 5th Edition (New York: Simon & Schuster, 2003)

76 Valente and Davis, "Accelerating the Diffusion of Innovations Using Opinion Leaders."

77 Valente and Davis, "Accelerating the diffusion".

78 Martin Hilbert et al., "One Step, Two Step, Network Step? Complementary Perspectives on Communication Flows in Twittered Citizen Protests," *Social Science Computer Review* 35, no. 4 (August 1, 2017): 444–61, https://doi.org/10.1177/0894439316639561.

79 Sujin Choi, "The Two-Step Flow of Communication in Twitter-Based Public Forums," *Social Science Computer Review* 33, no. 6 (December 1, 2015): 696–711, https://doi.org/10.1177/0894439314556599.

first flows, which is controlled by one or more gatekeepers using a system of norms and rules.[80] These gatekeepers not only facilitate or constrain the diffusion of information as they decide which messages to allow to pass through the gates but also control the content and nature of the messages.[81] The most obvious example of gatekeepers are editors and journalists who carry out a rigorous process of rejection and selection of stories, materials and sources in news production. However, each information environment has their own gatekeepers, and extremist groups, too, can determine which content reaches the public and which does not.[82]

Boko Haram's rise to prominence in Nigeria is illustrative. Not only do the groups' leaders engage with journalists to communicate threats, violence and recruitment appeals, they also employ gatekeeping strategies themselves. Already in the early days of the group's formation, Boko Haram set up a strategic communications unit known as the Public Awareness Department, placed under direct guidance from supreme leader Abubakar Shekau.[83] Through this department, Boko Haram leaders has kept effective control of information flowing from the group to the public, releasing carefully selected information through the gates with strategic intent. The group's gatekeeping strategy is such that most of the information that the mainstream media receives about the organisation is supplied to them directly from the core leadership or strategic communicators. Even Nigerian journalists admit that this process is conducted "selectively and effectively" by the group.[84] Notably, the gatekeeping process is working both ways here: Boko Haram realise the importance of maintaining control of their information gate while also recognising the role of journalists as gatekeepers of the mainstream media news flow.

The role of the gatekeeper has, however, taken on a different meaning in the age of social media. The digital era has generated a two-step gatekeeping process in which users act as secondary gatekeepers.[85] Digital and social media provides greater opportunities for the public to interact with not only news makers but also each other, and this high level of interactivity is turning previously passive audience members into active gatekeepers within their social network.[86] As such, the new technologies and ideologies that underpin this new digital era are emboldening and empowering the public. Despite this, the aforementioned power dynamics involved in the diffusion of information in a social system still leverage control of information flows, whether on a state-level with legitimate leaders and gatekeepers or within social networks through opinion leaders. Overall, the theory underlines the central role of authority figures in the diffusion of information within social systems, whether it be through mainstream media or in the digital realm. Therefore, targeting and manipulating these authority figures would be the first, and perhaps most crucial, step in shaping and manipulating an information environment.

80 Pamela J. Shoemaker and Timothy Vos, *Gatekeeping Theory* (New York: Routledge, 2009), https://doi.org/10.4324/9780203931653.

81 Shoemaker and Vos.

82 Abdullahi Tasiu Abubakar, "Hostile Gatekeeping: The Strategy of Engaging with Journalists in Extremism Reporting.," *Defence Strategic Communications* 5 (2018): 36.

83 Abubakar.

84 Abubakar.

85 Jane B Singer, "User-Generated Visibility: Secondary Gatekeeping in a Shared Media Space," *New Media & Society* 16, no. 1 (February 1, 2014): 55–73, https://doi.org/10.1177/1461444813477833.

86 Shoemaker and Vos, *Gatekeeping Theory*.

Table 3. Appeal to authority

Tactic	Mechanism	Behavioural process	Explanation
Appeal to authority	People with authority are often perceived as good sources of information	Bases of power theory	There are six bases of social power that tap into heuristics and facilitate the perception of authority: legitimate, informational, coercive, expert, reward and referent power
	As central nodes in social networks, people with authority are effective in spreading information	Theory of diffusion of innovations	Interpersonal contacts within and between networks facilitate the spread and adoption of information, new ideas and behaviour. Thanks to their elevated role among peers, opinion leaders are diffuse new ideas effectively and therewith drive behaviour change
		Two-step flow of communication model	People are not directly influenced by mass media but instead by opinion leaders who pass on their own interpretation of the mass communicated messages
		Gatekeeping theory	Each information environment has a primary entrance, channel or gate through which information first flows, which is controlled by one or more gatekeepers

Case study: The power that figures of authority have in influencing their audiences has been a decisive factor in the perpetuation of misinformation around the coronavirus pandemic.[87] Indeed, the vast majority of false information and conspiracy theories regarding Covid-19 last year originated from only 12 people, among which were bodybuilders, wellness bloggers and public figures, like Robert F Kennedy jr.[88] The effect of these influencers in changing behaviour was put to the test when Dutch intensive care specialist, Diederik Gommers, teamed up with social media influencer Famke Louise Meijer, who previously peddled scepticism around Covid-19 measures to her one million followers, to promote awareness of the necessity of coronavirus measures among young people.[89] The collaboration was considered as a success in shifting young people's attitudes.[90]

Cluster 2: manipulate

Tactics in Cluster 2 manipulate realities by rearranging, overwhelming, targeting and prioritising information. These tactics uniquely rely on certain techniques such as (semi-) automated algorithms but also human agents. When making decisions, people tend to rely on information that was recently and repeatedly brought to their attention. In a similar vein, people are more susceptible to information first presented to them. Repetition and order manipulation are thus powerful ways to affect judgement and therewith manipulate behaviour. Microtargeting further adds to perceptibility to messages by presenting and targeting information in a way that taps into pre-existing beliefs, rendering the receiver more susceptible to the persuasive content. Finally, public opinion continues to be shaped by the mass media, allowing it to influence political structures and decision-making. Manipulating the mass media's agenda is thus a final tool within the manipulate cluster.

87 Arie W. Kruglanski et al., "Says Who?: Epistemic Authority Effects in Social Judgment," in *Advances in Experimental Social Psychology*, vol. 37 (Elsevier Science & Technology, 2005), 345–392, https://doi.org/10.1016/S0065-2601(05)37006-7.

88 Erum Salam, "Majority of Covid Misinformation Came from 12 People, Report Finds," *The Guardian*, July 17, 2021, sec. World news, https://www.theguardian.com/world/2021/jul/17/covid-misinformation-conspiracy-theories-ccdh-report.

89 Klaassen, "Famke Louise Werkt Nu Samen Met Ic-Arts Gommers: Vandaag Begint Mondkapjes-Campagne."

90 It was referenced as an example of the power of social media influencers in influencing behaviour during the expert session.

Repeated exposure

Repeated exposure to messaging and information can have strong persuasive effects. This is largely the result of the accessibility and availability biases that make sure that people are more perceptible to information that was recently and repeatedly brought to their attention. Repeated exposure to perceptually familiar cues makes the information easier to process and increases information accessibility which, when activated, is known to affect judgement, opinions and preferences.[91] This is because people are more likely to deploy cognitive heuristics and rely on prior preferences (or accessible information) when confronted with a complex choice situation.[92] As a result, in their decision-making humans rely more on information that was continuously made accessible.[93] Indeed, research suggests that exposure to repetitive messaging leads both to stronger and more persistent effects on recipients' opinions and attitudes than single or limited exposures.[94]

Repeated exposure is a tactic commonly used in political campaigning, whereby repeated exposure to candidate messaging leads to increased agreement and improved evaluations of that candidate and message, especially if repetitions are spaced over longer periods of time.[95] When it comes to negative campaign messaging – a common campaign tactic in which the message sponsor negatively attacks an opponent – repeated exposure can have varying effects. Research shows that high-frequency exposure to negative political campaign messaging, in particular, results in a more negative attitude toward the presented issue.[96] However, if negative message exposures are repeated too frequently within a short space of time, then the persuasive effects of the message diminish and may even backfire. In other words, the target being attacked in the messaging could potentially benefit from repeated attacks.[97] This backlash effect is a well-established phenomenon in research on negative political campaigning.[98] As such, campaigns involving negative attacks against an opponent must be handled with care as the spacing of message exposure becomes that much more critical to success.

In any case, the effect of repeated exposures is often contingent on how credible the statement is perceived to be. Credibility should not necessarily be equated with truth, however. In fact, the 'illusory truth effect' dictates that high frequency exposure to messaging positively influences how recipients evaluate the message's credibility, even if the information is

91 Jonah Berger and Gráinne Fitzsimons, "Dogs on the Street, Pumas on Your Feet: How Cues in the Environment Influence Product Evaluation and Choice," *Journal of Marketing Research* 45, no. 1 (February 1, 2008): 1–14, https://doi.org/10.1509/jmkr.45.1.001.

92 Richard R. Lau and David P. Redlawsk, "Advantages and Disadvantages of Cognitive Heuristics in Political Decision Making," *American Journal of Political Science* 45, no. 4 (October 2001): 951, https://doi.org/10.2307/2669334.

93 Vincent Price and David Tewksbury, "News Values and Public Opinion: A Theoretical Account of Media Priming and Framing," vol. 13, 1997, 173–212.

94 Sophie Lecheler et al., "The Effects of Repetitive News Framing on Political Opinions over Time," *Communication Monographs* 82, no. 3 (July 3, 2015): 339–58, https://doi.org/10.1080/03637751.2014.994646.

95 Juliana Fernandes, "Effects of Negative Political Advertising and Message Repetition on Candidate Evaluation," *Mass Communication and Society* 16, no. 2 (March 1, 2013): 268–91, https://doi.org/10.1080/15205436.2012.672615.

96 Nicole Ernst, Rinaldo Kühne, and Werner Wirth, "Effects of Message Repetition and Negativity on Credibility Judgments and Political Attitudes," *International Journal of Communication* 11, no. 0 (August 14, 2017): 21.

97 Fernandes, "Effects of Negative Political Advertising and Message Repetition on Candidate Evaluation."

98 Alessandro Nai and Jürgen Maier, "Is Negative Campaigning a Matter of Taste? Political Attacks, Incivility, and the Moderating Role of Individual Differences," *American Politics Research* 49, no. 3 (May 1, 2021): 269–81, https://doi.org/10.1177/1532673X20965548.

false.[99] Essentially, familiarity overrides rationality when people assess message credibility using heuristic cues. This "glitch in the human psych that equates repetition with truth"[100] is exploited by political campaigners to spin their own narrative and sway voters. Donald Trump's presidency is a prime example of how bludgeoning repetition can skew perceptions of reality. His description of the state of violent crime in the US as "American carnage" did not chime with crime statistics which showed such crimes at their lowest levels in decades.[101] Despite the falsehoods, it worked. A Pew Research Centre report from November 2016 shows that a majority of US voters believed crime had gotten worse since 2008, despite statistics showing violent crime and property crime decreased 19% and 23% respectively in that time frame.[102] The effect of repeated exposure to Trump's rhetoric translated into changes in vote preferences as violent crime became the second most salient issue in the 2020 election for Trump voters.[103]

Donald Trump's presidency is a prime example of how bludgeoning repetition can skew perceptions of reality

Ultimately, repeated exposure to certain messages through mass media – true or not – can influence how people, or societies at large, perceive reality. This is best assessed through the lens of cultivation theory, which explains that repeated exposure to media, especially television, cultivates the belief that the messages conveyed by the media apply to the real world.[104] A classic example of this is that heavy exposure to violent dramatic programming and crime-related news stories on prime-time television fuels widespread fear of crime in society, which does not reflect, and is disproportionate to, real crime statistics.[105] Similarly, exposure to negative and threatening media stories about immigration was found to directly affect attitudes towards immigrants.[106] The effect of cultivation theory has also been supported in research on soft power influence through the media. For example, consumption of US television in India and South Korea was associated with heightened perceptions of relative deprivation among viewers, with viewers in both countries dissatisfied with their own societies.[107]

99 Ernst, Kühne, and Wirth, "Effects of Message Repetition and Negativity on Credibility Judgments and Political Attitudes."

100 Emily Dreyfuss, "Want to Make a Lie Seem True? Say It Again. And Again. And Again | WIRED," Wired, February 11, 2017, https://www.wired.com/2017/02/dont-believe-lies-just-people-repeat/.

101 Dreyfuss.

102 John Gramlich, "Voters' Perceptions of Crime Continue to Conflict with Reality," *Pew Research Center* (blog), accessed January 17, 2022, https://www.pewresearch.org/fact-tank/2016/11/16/voters-perceptions-of-crime-continue-to-conflict-with-reality/.

103 Pew Research Center, "Important Issues in the 2020 Election," August 13, 2020, https://www.pewresearch.org/politics/2020/08/13/important-issues-in-the-2020-election/.

104 Cultivation theory was first developed by George Gerbner through the 1960s and 70s in a series of studies and experiments.

105 Daniel Romer, Kathleen Hall Jamieson, and Sean Aday, "Television News and the Cultivation of Fear of Crime," *Journal of Communication* 53, no. 1 (2003): 88–104, https://doi.org/10.1111/j.1460-2466.2003.tb03007.x.

106 Anita Atwell Seate and Dana Mastro, "Media's Influence on Immigration Attitudes: An Intergroup Threat Theory Approach," *Communication Monographs* 83, no. 2 (April 2, 2016): 194–213, https://doi.org/10.1080/03637751.2015.1068433.

107 Hyeseung Yang, Srividya Ramasubramanian, and Mary Beth Oliver, "Cultivation Effects on Quality of Life Indicators: Exploring the Effects of American Television Consumption on Feelings of Relative Deprivation in South Korea and India," *Journal of Broadcasting & Electronic Media* 52, no. 2 (May 30, 2008): 247–67, https://doi.org/10.1080/08838150801992060.

Table 4. Repeated exposure

Tactic	Mechanism	Behavioural process	Explanation
Repeated exposure	People are more perceptible to information that was recently and repeatedly brought to their attention	Availability bias	People rely on information that is readily available in their memory (but not necessarily representative)
		Familiarity bias	Familiarity makes information easier to process and increases information accessibility which affects judgement, opinions and preferences

Case study: Donald Trump's description of the state of violent crime in the US as "American carnage" did not chime with crime statistics which showed such crimes at their lowest levels in decades.[108] Despite the falsehoods, it worked. Leading up to the 2016 election he emphasised the false claim that the murder rate was at its highest in 45 years at least three times during campaign events.[109] He continued making false claims about crime prevalence well into his presidency. For instance, the claim that crime in New York "is through the roof, it's gone up in some cases, 150 to 300%" he repeated 21 times in 2020.[110] In November 2016, a majority of US voters believed crime had gotten worse since 2008, despite statistics showing violent crime and property crime decreased 19% and 23% respectively in that time frame.[111] Here, the effect of repeated exposure on attitudes translates into changes in vote preferences as violent crime became the second most salient issue in the 2020 election for Trump voters.[112]

Sequence manipulation

The sequence in which information is presented to people also affects their processing and subsequently their attitude formation and decision-making.[113] Rank-order effects, such as the primacy effect, imply that any sort of information that is presented sequentially is susceptible to receiving varying levels of attention based on its listing position,[114] with implications for attitude formation[115] and consumer behaviour.[116] The tendency to prioritise information that one is first exposed to may work in conjunction with the halo effect, a form of anchoring bias that increases the value people attach to their first impressions. For instance, a person that looks smart or attractive may be consequently judged more positively for no additional reason. This halo effect arises because System 1 (the intuitive, fast approach to processing information) generates a first impression, which System 2 (the analytical but taxing approach

108 Dreyfuss, "Want to Make a Lie Seem True? Say It Again. And Again. And Again | WIRED."

109 D'Angelo Gore, "Trump Wrong on Murder Rate," *FactCheck.Org* (blog), October 28, 2016, https://www.factcheck.org/2016/10/trump-wrong-on-murder-rate/; Michelle Ye Hee Lee, "Trump's False Claim That the Murder Rate Is the 'Highest It's Been in 45 Years,'" *Washington Post*, March 11, 2016, https://www.washingtonpost.com/news/fact-checker/wp/2016/11/03/trumps-false-claim-that-the-murder-rate-is-the-highest-its-been-in-45-years/.

110 "Tracking All of President Trump's False or Misleading Claims," Washington Post, January 20, 2021, https://www.washingtonpost.com/graphics/politics/trump-claims-database/.

111 Gramlich, "Voters' Perceptions of Crime Continue to Conflict with Reality."

112 Pew Research Center, "Important Issues in the 2020 Election."

113 C.I. Hovland, *The Order of Presentation in Persuasion* (New Haven, CT, US: Yale University Press, 1957).

114 Bennet B. Murdock Jr., "The Serial Position Effect of Free Recall," *Journal of Experimental Psychology* 64, no. 5 (1962): 482–88, https://doi.org/10.1037/h0045106.

115 Hovland, *The Order of Presentation in Persuasion*.

116 Arch G. Woodside and Mark D. Uncles, "How Behavioral Primacy Interacts with Short-Term Marketing Tactics to Influence Subsequent Long-Term Brand Choice," *Journal of Advertising Research* 45, no. 2 (June 2005): 229–40, https://doi.org/10.1017/S0021849905050257.

to processing) is then likely to endorse.[117] As a result, the persuasive impact of information is strongly related to the order it is presented in, such as its position on a list.[118]

When it comes to internet search engines, this means that users prioritise high-ranking results over low-ranking results and place greater trust in the information first presented to them.[119] This is a key reason for why companies pay search engines like Google billions of dollars to place their ads on top of users search results.[120] Rank-orders can have major societal implications as it may affect political processes such as voting behaviour.[121] Investigating how manipulating search rankings can change voter preferences, Epstein and Robertson found not only that undecided voters are strongly influenced by what they call the search engine manipulation effect but also that people can be completely unaware of this influence.[122] Manipulating search engine results may therefore have the power to significantly affect election outcomes.

Internet search engines users prioritise high-ranking results over low-ranking results and place greater trust in the information first presented to them

State actors make increasing use of paid advertisement and search engine optimisation as a result.[123] It is well-known that established media sources, such as newspapers, can influence people's political preferences.[124] However, in influencing people, search engines have a distinct advantage over traditional media sources: internet search is dominated by a single company, in most countries. With people's attention shifting away from traditional media outlets and towards the internet, algorithmic preferences may turn search engine results into a highly biased information feed with little chance for users to register contesting information.

Political groups, such as the alt-right, the far-right movement in the United States, have already started to take advantage of utilising rank-order effects to further their interest. By using a variety of different techniques, they trick the algorithm to push propaganda and misinformation to the top of Google's search rankings. As a result, Google has been found to prioritise websites that push conspiracy theories and promote neo-Nazis.[125]

117 Kahneman, *Thinking, Fast and Slow*.

118 Hovland, *The Order of Presentation in Persuasion*; Murdock Jr., "The Serial Position Effect of Free Recall"; Roger Tourangeau, Mick P. Couper, and Frederick G. Conrad, "'Up Means Good': The Effect of Screen Position on Evaluative Ratings in Web Surveys," *Public Opinion Quarterly* 77, no. Suppl 1 (2013): 69–88, https://doi.org/10.1093/poq/nfs063.

119 Lori Lorigo et al., "Eye tracking and online search: Lessons learned and challenges ahead," *Journal of the American Society for Information Science and Technology* 59, no. 7 (2008): 1041–52, https://doi.org/10.1002/asi.20794.

120 Chitika, "The Value of Google Result Positioning," December 6, 2013, https://perma.cc/7AGC-HTDH; Michael Learmonth, "What Big Brands Are Spending on Google," Advertising Age, 2010, https://perma.cc/5L3B-SPTX.

121 Jonathan Gs Koppell and Jennifer A. Steen, "The Effects of Ballot Position on Election Outcomes," *The Journal of Politics* 66, no. 1 (February 2004): 267–81, https://doi.org/10.1046/j.1468-2508.2004.00151.x; Nuri Kim, Jon Krosnick, and Daniel Casasanto, "Moderators of Candidate Name-Order Effects in Elections: An Experiment," *Political Psychology* 36, no. 5 (2015): 525–42, https://doi.org/10.1111/pops.12178; Eric Chen et al., "The Impact of Candidate Name Order on Election Outcomes in North Dakota," *Electoral Studies* 35 (September 1, 2014): 115–22, https://doi.org/10.1016/j.electstud.2014.04.018.

122 Robert Epstein and Ronald E. Robertson, "The Search Engine Manipulation Effect (SEME) and Its Possible Impact on the Outcomes of Elections," *Proceedings of the National Academy of Sciences* 112, no. 33 (August 18, 2015): E4512–21, https://doi.org/10.1073/pnas.1419828112.

123 Samantha Bradshaw and Philip N Howard, "Challenging Truth and Trust: A Global Inventory of Organized Social Media Manipulation" (Programme on Democracy and Technology, 2018).

124 Alan S. Gerber, Dean Karlan, and Daniel Bergan, "Does the Media Matter? A Field Experiment Measuring the Effect of Newspapers on Voting Behavior and Political Opinions," *American Economic Journal: Applied Economics* 1, no. 2 (April 2009): 35–52, https://doi.org/10.1257/app.1.2.35; Chun-Fang Chiang and Brian Knight, "Media Bias and Influence: Evidence from Newspaper Endorsements," *The Review of Economic Studies* 78, no. 3 (July 1, 2011): 795–820, https://doi.org/10.1093/restud/rdq037.

125 Olivia Solon and Sam Levin, "How Google's Search Algorithm Spreads False Information with a Rightwing Bias," *The Guardian*, December 16, 2016, sec. Technology, https://www.theguardian.com/technology/2016/dec/16/google-autocomplete-rightwing-bias-algorithm-political-propaganda.

Table 5. Sequence manipulation

Tactic	Mechanism	Behavioural process	Explanation
Sequence manipulation	People prioritise information they are first exposed to	Primacy effect	Information that is presented sequentially is susceptible to receiving varying levels of attention based on its listing position
		Halo effect	A form of anchoring bias that increases the value people attach to their first impression

Case study: By using a variety of techniques, the alt-right and far-right movements in the United States trick algorithms to push propaganda and misinformation to the top of Google's search rankings. As a result, Google has been found to prioritise websites that push conspiracy theories and promote neo-Nazis.[126]

Microtargeting

Microtargeting takes advantage of the increasing amounts of data generated by virtual interactions and encompasses a number of techniques using online user data to direct content at individuals or groups with defined characteristics.[127] Through microtargeting, influencers may engage every segment of the population, instead of exclusively developing messages based on the characteristics of the population's median person, as was done in the past.[128]

Microtargeting exploits the confirmation bias: the tendency to favour and better recall information that in some way supports or confirms one's prior values or beliefs

One key reason for why microtargeting can be an effective tool is that it exploits the confirmation bias: the tendency to favour and better recall information that in some way supports or confirms one's prior values or beliefs.[129] By tracking people's general interests, planners are able to modify their message in a way that is compatible with a person's pre-existing opinions, increasing its retention and persuasiveness.[130] By controlling who sees which message, the risk of alienating individuals or groups that would be less amenable to the message decreases.[131] This practice of microtargeting is now commonplace in marketing whereby marketeers collect data to build up detailed online profiles of consumers and direct advertising towards profiles that match their target audience.[132]

Psychographic microtargeting goes one step further than identifying data such as geolocation, demographics and political preferences, as it aims to infer a user's personality from their online activity to then target users based on their personality type. This is what Cambridge

126 Solon and Levin.

127 International IDEA, "Online Political Advertising and Microtargeting: The Latest Legal, Ethical, Political and Technological Evolutions" (International Institute for Democracy and Electoral Assistance, December 16, 2020), https://doi.org/10.31752/idea.2020.65.

128 Anthony Downs, "An Economic Theory of Political Action in a Democracy," *Journal of Political Economy* 65, no. 2 (1957): 135–50.

129 Raymond S. Nickerson, "Confirmation Bias: A Ubiquitous Phenomenon in Many Guises," *Review of General Psychology* 2, no. 2 (June 1, 1998): 175–220, https://doi.org/10.1037/1089-2680.2.2.175.

130 Robert Bond and Solomon Messing, "Quantifying Social Media's Political Space: Estimating Ideology from Publicly Revealed Preferences on Facebook," *American Political Science Review* 109, no. 1 (February 2015): 62–78, https://doi.org/10.1017/S0003055414000525.

131 Orestis Papakyriakopoulos et al., "Social Media and Microtargeting: Political Data Processing and the Consequences for Germany," *Big Data & Society* 5, no. 2 (July 1, 2018): 2053951718811844, https://doi.org/10.1177/2053951718811844.

132 As discussed, and described during the expert session.

Analytica was mining Facebook data for during the 2016 US election campaign.[133] Targeting based on personality has been shown to effectively influence consumer behaviour,[134] but it is unclear whether personality targeting also works in more complex contexts such as political campaigns.[135] In fact, there is a lack of comprehensive studies that prove the effectiveness of microtargeting.[136]

Still, the growing datafication of societies, aided by the rapid advancement of artificial intelligence, has allowed microtargeting to become the new standard of political campaigning.[137] Because people spend large amounts of time on social media, online campaigning makes it easier for political candidates to establish themselves and extend their reach at low cost. For instance, in the 2021 German elections, the Free Democrats (FDP) employed microtargeting to send contradicting messages about what the party stands for to different target groups in order to appeal to a larger variety of voters.[138] Similarly, malign actors are using microtargeting to disrupt democratic processes by engaging in computational propaganda. This is the purposeful distribution of misleading information via social media that involves unleashing small artificial intelligence programs called bots into cyberspace. These then infer political preferences based on demographic and consumer data to target and deliver information strategically to the people most receptive to it.[139] Microtargeting is thus already a widely established, multifaceted tool that may be combined with a variety of other techniques. If the Cambridge Analytica scandal highlighted one thing, it is that microtargeting does require a high level of sophistication – but that it is easy to use.[140] Its applications are manifold and due to ever increasing online traffic, microtargeting becomes ever more powerful.

133 Matthew Rosenberg, Nicholas Confessore, and Carole Cadwalladr, "How Trump Consultants Exploited the Facebook Data of Millions," *The New York Times*, March 17, 2018, sec. U.S., https://www.nytimes.com/2018/03/17/us/politics/cambridge-analytica-trump-campaign.html.

134 S.C. Matz et al., "Psychological Targeting as an Effective Approach to Digital Mass Persuasion," *Proceedings of the National Academy of Sciences* 114, no. 48 (November 28, 2017): 12714–19, https://doi.org/10.1073/pnas.1710966114.

135 Brian Resnick, "Cambridge Analytica's 'Psychographic Microtargeting': What's Bullshit and What's Legit," Vox, March 23, 2018, https://www.vox.com/science-and-health/2018/3/23/17152564/cambridge-analytica-psychographic-microtargeting-what.

136 Papakyriakopoulos et al., "Social Media and Microtargeting."

137 Costas Panagopoulos, "All about That Base: Changing Campaign Strategies in U.S. Presidential Elections," *Party Politics* 22, no. 2 (March 1, 2016): 179–90, https://doi.org/10.1177/1354068815605676.

138 For instance, suggested here: *The Dirty Facebook Tricks of the Different Parties*, 2021, https://youtu.be/8vq6MzGNZyM?t=803.

139 Samuel C. Woolley and Philip N. Howard, "Automation, Algorithms, and Politics: Political Communication, Computational Propaganda, and Autonomous Agents," *International Journal of Communication* 10 (October 12, 2016): 9.

140 David Runciman, Hellen Thompson, and Peter Geoghegan, "Talking Politics - Democracy for Sale," accessed November 10, 2021, https://www.talkingpoliticspodcast.com/blog/tag/Cambridge+Analytica.

Table 6. Microtargeting

Tactic	Mechanism	Behavioural process	Explanation
Micro-targeting	Messages are modified (and subsequentially targeted) in a way that is compatible with a person's pre-existing opinions	Confirmation bias	The tendency to favour and better recall information that in some way supports or confirms prior values or beliefs, increasing its retention and persuasiveness

Case study: The Kremlin-backed Internet Research Agency (IRA) micro-targeted African American voters during the 2020 US election by creating Black Lives Matter Facebook pages and Instagram accounts to try and convince African American voters to stay at home on election day. The IRA supplemented this with paid-for pro-Trump Facebook ads that peddled "race-baiting and xenophobic memes".[141]

Media agenda-setting

Despite the expansion of new media in the last decade, mass media retains significant power in shaping the public agenda and information environment generally. Studying the role of mass media, as a channel of communication between policymakers and the public, is key to understanding the levers of power behind political change.[142] The process of mediatisation – a transformative phenomenon of social change whereby societal institutions have become deeply engrained with and shaped by the media[143] – means that mass media now plays an increasingly central role in political life across the world.[144] Not only does mass media wield influence over public opinion but it has the power to influence political structures and decision-making processes, meaning that serious political actors or institutions cannot afford to ignore the role of mass media in pursuit of their goals.[145]

Agenda-setting theory explains the ability of mass media to influence the public agenda. It centres on the notion that making certain issues or topics more salient in news media helps to shape public opinion.[146] That is, as Scheufele and Tewksbury found, "there is a strong correlation between the emphasis that mass media place on certain issues and the importance attributed to these issues by mass audiences".[147] This agenda-setting effect occurs through the accessibility bias, which stipulates that information which is more easily accessible in people's minds tends to dominate opinion formation, judgements and decision-making.[148]

141 Nicole Perlroth, *This Is How They Tell Me the World Ends: The Cyberweapons Arms Race* (Bloomsbury Publishing, 2021).

142 Jesper Strömbäck and Frank Esser, "Mediatization of Politics: Towards a Theoretical Framework," in *Mediatization of Politics: Understanding the Transformation of Western Democracies*, ed. Frank Esser and Jesper Strömbäck (London: Palgrave Macmillan UK, 2014), 3–28, https://doi.org/10.1057/9781137275844_1.

143 Gianpietro Mazzoleni and Winfried Schulz, "'Mediatization' of Politics: A Challenge for Democracy?," *Political Communication* 16, no. 3 (July 1, 1999): 247–61, https://doi.org/10.1080/105846099198613.

144 Sigrid Koch-Baumgarten and Katrin Voltmer, eds., *Public Policy and the Mass Media: The Interplay of Mass Communication and Political Decision Making* (London: Routledge, 2010), https://doi.org/10.4324/9780203858493.

145 Strömbäck and Esser, "Mediatization of Politics."

146 Maxwell McCombs, "A Look at Agenda-Setting: Past, Present and Future," *Journalism Studies* 6, no. 4 (November 1, 2005): 543–57, https://doi.org/10.1080/14616700500250438.

147 Dietram A. Scheufele and David Tewksbury, "Framing, Agenda Setting, and Priming: The Evolution of Three Media Effects Models: Models of Media Effects," *Journal of Communication* 57, no. 1 (March 2007): 9–20, https://doi.org/10.1111/j.0021-9916.2007.00326.x.

148 Shanto Iyengar, "The Accessibility Bias in Politics: Television News and Public Opinion," *International Journal of Public Opinion Research* 2, no. 1 (March 1, 1990): 1–15, https://doi.org/10.1093/ijpor/2.1.1.

In a mass media context, this means that the more frequently and prominently certain issues are covered by news media, the more accessible and retrievable these issues are in audiences' memories, influencing the processes of decision-making and opinion formation.[149] Naturally, agenda-setting's powerful indirect influence on public attitudes and values hence explains why state and non-state actors commit such considerable time and money into dominating the news agenda and manipulating media actors.

Extremist groups, too, effectively use this agenda-setting function of the media. As was previously mentioned, Boko Haram relies heavily on mass media to spread its ideology, intimidate its enemies and recruit new members. The concept of agenda-setting is one of the driving forces behind the group's ability to manipulate the media and put their stamp on the public news agenda, and thus public opinion.[150] This is complemented by a deft understanding of 'newsworthiness', which means the group's media output consistently satisfies key news value criteria: it regularly contains conflict and drama; pertains to 'bad news' of a grand magnitude; involves dangerous threats which are proximate and relevant to viewers; and features shareable video, audio and visuals.[151] Boko Haram's capacity to create highly newsworthy content, combined with an adept understanding of the agenda-setting function of the media, provides an effective way to exert influence over the Nigerian population.[152] Owing to the success of their strategy, Boko Haram leaders rarely shy away from an opportunity to secure air time or column inches and continue to openly engage with mainstream journalists.[153]

Boko Haram's capacity to create highly newsworthy content provides an effective way to exert influence

Framing theory also helps to explain the ways in which the media, and the elites that manipulate it, can influence not only audiences' political attitudes but human consciousness itself.[154] Frames present communicative texts in a way that selects certain aspects of perceived reality and gives them greater salience so as to promote a particular problem, moral evaluation or interpretation of the information.[155] Thus, the presence of both agenda-setting and framing in the production of news means "the media not only can be successful in telling us what to think about, they also can be successful in telling us how to think about it".[156] Like agenda-setting, framing relies on accessibility biases – frames can be built to make certain beliefs more accessible and thus more prevalent in people's cognitive evaluations.[157] However, framing effects are also determined by applicability – that is, the extent to which concepts conveyed in a message will connect in the minds of audiences.[158] In essence, the more familiar the audience is with the frame of reference, the more effective the frame will be in influencing the audience.

149 Iyengar.

150 Abdullahi Tasiu Abubakar, "Strategic Communications, Boko Haram, and Counter-Insurgency," *Defence Strategic Communications* 3, no. 3 (2017): 139–70.

151 Tony Harcup and Deirdre O'Neill, "What Is News?," *Journalism Studies* 18, no. 12 (December 2, 2017): 1470–88, https://doi.org/10.1080/1461670X.2016.1150193.

152 Abdullahi Tasiu Abubakar, "News Values and the Ethical Dilemmas of Covering Violent Extremism," *Journalism & Mass Communication Quarterly* 97, no. 1 (March 1, 2020): 278–98, https://doi.org/10.1177/1077699019847258.

153 Abubakar, "Strategic Communications, Boko Haram, and Counter-Insurgency."

154 Gaye Tuchman, "Making News by Doing Work: Routinizing the Unexpected," *American Journal of Sociology* 79, no. 1 (July 1, 1973): 110–31, https://doi.org/10.1086/225510.

155 Robert M. Entman, "Framing: Towards Clarification of a Fractured Paradigm," *Journal of Communication* 43, no. 4 (1993): 51–58.

156 McCombs, "A Look at Agenda-Setting."

157 Dennis Chong and James N. Druckman, "Framing Theory," *Annual Review of Political Science* 10, no. 1 (2007): 103–26, https://doi.org/10.1146/annurev.polisci.10.072805.103054.

158 A. Ardèvol-Abreu, "Framing Theory in Communication Research. Origins, Development and Current Situation in Spain," *Revista Latina de Comunicacion Social* 70 (January 1, 2015): 423–50, https://doi.org/10.4185/RLCS-2015-1053.

To put this in context, research comparing coverage of the Iraq war in the United States, the United Kingdom, Czech Republic, Germany, South Africa and the Arabic world (Al-Jazeera) found that how the war was framed by news media depended on the national and international contexts from which the news was being produced.[159] Another study comparing news coverage of terrorist attacks by national media organisations found that religious proximity and bilateral relations were significant determinants on how the story would be framed. The less religious proximity there was between the media host country and the country of the attackers and the closer the bilateral relations between the media host country and the victim country, the more likely the media will apply negative, 'anti-human' news frames in their reports about the attack.[160]

This echo chamber function of online social networks exacerbate the effects of framing

Although social media is now a major gateway for news and information, the proliferation of such new media has done little to alter the way groups and networks frame global events differently, according to their structural and cultural biases. Not only can individuals just select and interpret information consistent with their prior beliefs, but they can now generate their own news content and share it within "highly homophilic self-selected online social networks",[161] more commonly referred to as echo chambers or filter bubbles. This has helped drive preference-based reinforcement[162] and internet communities are capitalising on fractured media environments to cultivate their own news frames, set their own agenda and propagate new, unfiltered and often dangerous ideas.[163]

For example, research on pro-Ukrainian and pro-Russian online communities found "profound differences" in the way the armed conflict in Eastern Ukraine in 2014 was framed within each community.[164] Pro-Ukrainian users deployed nationalistic frames to portray the conflict as a 'good war' utilising limited military action aimed at local insurgents, while pro-Russian users framed it as an 'all-out war' against the Russian diaspora in Ukraine, akin to a humanitarian crisis – meaning there was little overlap in the two sides' expectations for conflict resolution.[165] This echo chamber function of online social networks can therefore exacerbate the effects of framing in that online communities can now cultivate, reinforce and propagate their own frames on global events or conflicts. It is precisely this function of new media that allowed the Islamic State to run such an effective online propaganda machine in their recruitment of foreign fighters and why they devoted significant human and technical resources to do so.[166]

159 Christian Kolmer and Holli A. Semetko, "Framing the Iraq War: Perspectives from American, U.K., Czech, German, South African, and Al-Jazeera News," *American Behavioral Scientist* 52, no. 5 (January 1, 2009): 643–56, https://doi.org/10.1177/0002764208326513.

160 Liu Yang and Huailin Chen, "Framing Terrorist Attacks: A Multi-Proximity Model," *International Communication Gazette* 81, no. 5 (August 1, 2019): 395–417, https://doi.org/10.1177/1748048518802245.

161 Michael A. Cacciatore, Dietram A. Scheufele, and Shanto Iyengar, "The End of Framing as We Know It ... and the Future of Media Effects," *Mass Communication and Society* 19, no. 1 (January 2, 2016): 7–23, https://doi.org/10.1080/15205436.2015.1068811.

162 Cacciatore, Scheufele, and Iyengar.

163 Becca Lewis and Alice E. Marwick, "Media Manipulation and Disinformation Online," Data & Society (Data & Society Research Institute, May 15, 2017), https://datasociety.net/library/media-manipulation-and-disinfo-online/.

164 Mykola Makhortykh and Maryna Sydorova, "Social Media and Visual Framing of the Conflict in Eastern Ukraine," *Media, War & Conflict* 10, no. 3 (December 2017): 359–81, https://doi.org/10.1177/1750635217702539.

165 Makhortykh and Sydorova.

166 Scott Gates and Sukanya Podder, "Social Media, Recruitment, Allegiance and the Islamic State," *Perspectives on Terrorism* 9, no. 4 (2015): 107–16.

Table 7. Media agenda-setting

Tactic	Mechanism	Behavioural process	Explanation
Media agenda-setting	Mass media wields influence over public opinion and has the power to influence political structures and decision-making	Agenda-setting theory	Making certain issues or topics more salient in news media helps to shape public opinion

Case study: Boko Haram relies heavily on mass media to spread its ideology, intimidate its enemies and recruit new members. The concept of agenda-setting is one of the driving forces behind the group's ability to manipulate the media and put their stamp on the public news agenda, and thus public opinion.[167] This is supported by a deft understanding of 'news-worthiness', which means the group's media output consistently satisfies key news value criteria. [168]

Cluster 3: distort

The deeper an individual delves into a narrative, the less time and energy they spend on actively opposing a message

The tactics in Cluster 3 create an entirely new reality, either by pushing a certain narrative or storyline, or by spreading false information. Narrative persuasion is a powerful instrument to shape behaviour as spinning narratives can help connect problems with solutions in the minds of the audience. Narratives encourage uncritical thinking and render people less able to resist information, increasing its persuasiveness. The last tactic, disinformation, works to predetermine an adversary's decision or response by altering and manipulating key factors in their information environment. Combining a variety of techniques, disinformation specifically taps into people's inability to tell truth from fiction.

Narrative persuasion[169]

People use narratives to organise and interpret the complex events that shape their lives.[170] They are stories made up of protagonists, antagonists and plotlines. Because narratives identify problems and resolutions – or story goals – they guide behaviour: in helping humans to define "what is right and what is wrong, what's real and what's not", narratives are an important tool in deciding on a course of action.[171] Unsurprisingly, therefore, the use of narrative storytelling can be an effective tactic to influence behaviour.

Essentially, the deeper an individual delves into a narrative, the less time and energy they spend on actively opposing a message.[172] This process involves what is called transportation:

167 Abubakar. "Strategic communications, Boko Haram"

168 Harcup, and O'neill. "What is news?"

169 Narrative persuasion, for the purposes of this section, pertains to storytelling techniques that aim to influence human behaviour. However, a broader notion of narrative – focused less on individual behavioural change and more on the strategic communication of objectives to generate support among mass audiences – is also relevant. Creating a compelling and persuasive political narrative helps to garner political will among domestic or neutral audience for the given military operation, which provides a degree of legitimation.

170 Simon Bushell et al., "Strategic Narratives in Climate Change: Towards a Unifying Narrative to Address the Action Gap on Climate Change," *Energy Research & Social Science* 28 (June 2017): 39–49, https://doi.org/10.1016/j.erss.2017.04.001.

171 P.W. Singer and Emerson T. Brooking, *LikeWar: The Weaponization of Social Media* (Houghton Mifflin Harcourt, 2018).

172 Melanie C. Green and Timothy C. Brock, "The Role of Transportation in the Persuasiveness of Public Narratives.," *Journal of Personality and Social Psychology* 79, no. 5 (November 2000): 701–21, https://doi.org/10.1037/0022-3514.79.5.701.

recipients are transported by the narrative to consider different perspectives. By transporting recipients out of their usual bounded rationality, they are less likely to detect false statements, less likely to counterargue or resist the information and more open to the persuasive messages contained in the narrative to thus change their beliefs and evaluations along with the story.[173] An important dimension of this is the notion of absorption (or identification): being absorbed by, and identifying with, the fiction helps to suppress ideology and encourage uncritical thinking as recipients become absorbed in the narrative.[174]

There are several notions of what makes an effective narrative. For one, it has been suggested that narrative is particularly useful when using information to influence feelings and thoughts that pertain to morality, religious and personal values – that is, issues for which people's reason and logic can be circumvented.[175] Singer and Brooking identified three traits of successful narratives: simplicity, resonance and novelty. Narratives need to be simple because attention spans are short; they need to fit into pre-existing story lines so people can instantly and deeply relate; and yet simultaneously involve an element of surprise to not bore the audience.[176]

The long-term effects of narrative persuasion can be profound, creating an 'absolute sleeper effect' whereby the persuasive effects of the narrative can actually increase over time.[177] This is because recipients remember the arguments or beliefs of the message but not the source, largely because it was couched in fictive narrative.[178] Importantly, source credibility and argument strength are irrelevant when it comes to narrative persuasion. In other words, the source or sender of the message and the validity of its claims become less relevant to recipients if the narrative is sufficiently engaging. That said, the narrative must serve the needs and goals of the reader or viewer – indeed, the content must strike a chord.[179]

These tactics of narrative persuasion are a key feature of health communication, where behavioural change is the ultimate goal. Health communication strategists constantly use entertainment education, storytelling and testimonials to persuade and motivate people to adopt behavioural changes – and it works.[180] A meta-analysis of health communication shows that narratives had a significant effect on persuasion, as measured by changes in attitudes, intentions and behaviours.[181] This has proven to be particularly effective for more vulnerable or resistant populations by eliciting a greater emotional response than traditional informational or descriptive communication.[182] Basically, the more recipients absorbed the narrative, the more attention they paid to the message and the less likely they were to reject the message.[183]

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173 Green and Brock.

174 Michael D. Slater, Donna Rouner, and Marilee Long, "Television Dramas and Support for Controversial Public Policies: Effects and Mechanisms," *Journal of Communication* 56, no. 2 (June 1, 2006): 235–52, https://doi.org/10.1111/j.1460-2466.2006.00017.x.

175 Leslie J. Hinyard and Matthew W. Kreuter, "Using Narrative Communication as a Tool for Health Behavior Change: A Conceptual, Theoretical, and Empirical Overview," *Health Education & Behavior* 34, no. 5 (October 2007): 777–92, https://doi.org/10.1177/1090198106291963.

176 Singer and Brooking, *LikeWar: The Weaponization of Social Media*.

177 Markus Appel and Tobias Richter, "Persuasive Effects of Fictional Narratives Increase Over Time," *Media Psychology* 10, no. 1 (June 21, 2007): 113–34, https://doi.org/10.1080/15213260701301194.

178 Appel and Richter.

179 Hinyard and Kreuter, "Using Narrative Communication as a Tool for Health Behavior Change."

180 Hinyard and Kreuter.

181 Fuyuan Shen, Vivian C. Sheer, and Ruobing Li, "Impact of Narratives on Persuasion in Health Communication: A Meta-Analysis," *Journal of Advertising* 44, no. 2 (April 3, 2015): 105–13, https://doi.org/10.1080/00913367.2015.1018467.

182 Jina H. Yoo et al., "Understanding Narrative Effects: The Role of Discrete Negative Emotions on Message Processing and Attitudes among Low-Income African American Women," *Health Communication* 29, no. 5 (2014): 494–504, https://doi.org/10.1080/10410236.2013.776001.

183 Yoo et al.

The importance of creating an emotive and appealing narrative is key, as evidence by the relatively successful recruitment campaigns of extremist groups shows. Extremist groups such as Al-Qaeda, the Islamic State, Boko Haram and al-Shabaab all employ strategic communications campaigns that carefully and effectively deploy clear emotive narratives to entice and engage potential recruits.[184] This, along with their use of new digital technologies, boosts the appeal and virality of their campaigns. If narratives fail to engage emotionally with the audience, then they risk failure. For example, research into climate change communication shows that top-down alarmist narrative strategies are ineffective while narratives that appeal more to human cognition, social norms and life experience would be more effective in generating behavioural change.[185]

Table 8. Narrative persuasion

Tactic	Mechanism	Behavioural process	Explanation
Narrative persuasion	Narratives guide behaviour by identifying problems and their resolutions	Circumventing logic / absorption	Fiction helps to suppress ideology and encourage uncritical thinking
		Transportation	Recipients are less likely to detect false statements in stories, less likely to counterargue or resist the information, and are more open to the persuasive messages contained in the narrative

Case study: When reporting on the Syrian migrant crisis, journalists in the US often used narrative persuasion and storytelling to circumvent prejudices and stereotypes about refugees in order to elicit greater engagement with the story. As such, studies found that exposure to narratively engaging news stories can diminish the stigma attached to Syrian refugees and attitudes towards refugees generally.[186]

Disinformation

Of the nine tactics, disinformation is the odd one out. Since Russian meddling in the 2016 US elections, the term has become somewhat of a synonym for influencing efforts that rely more generally on all eight tactics described above. Nevertheless, the concept should be treated separately to highlight its distinct effects.

Disinformation is either the intentional, deliberate dissemination of false information with the intent to actively disinform people or the use of a false outlet to disseminate content, whether true or not.[187] As a behavioural influencing tactic, disinformation exploits people's inability to discern between what is true and false. One explanation for the failure to tell fact from fiction is that people engage in identity-protective cognition: the tendency to believe statements that confirm prior-held (political) beliefs and feelings of identity.[188] According to this line of

184 Abubakar, "Hostile Gatekeeping: The Strategy of Engaging with Journalists in Extremism Reporting."

185 Bushell et al., "Strategic Narratives in Climate Change."

186 Daniel J. Tamul and Jessica C. Hotter, "Exploring Mechanisms of Narrative Persuasion in a News Context: The Role of Narrative Structure, Perceived Similarity, Stigma, and Affect in Changing Attitudes," ed. Simine Vazire and Chris Chambers, *Collabra: Psychology* 5, no. 1 (January 1, 2019): 51, https://doi.org/10.1525/collabra.172.

187 Keir Giles, "Handbook of Russian Information Warfare" (Nato Defense College, November 2016).

188 Dan M. Kahan, "Misconceptions, Misinformation, and the Logic of Identity-Protective Cognition," *SSRN Electronic Journal*, 2017, https://doi.org/10.2139/ssrn.2973067.

reasoning, the more deliberative, politically-motivated (System 2) thinking is associated with a higher trust in false claims. While not untrue, the effect of political concordance does appear to be overstated.[189]

Alternatively, dual-process reasoning theories consider rapid, intuitive System 1 thinking to be at the root of people's ability to buy into fake stories. Indeed, more recent studies confirm this thesis, arguing that people who are more reflective are less likely believe disinformation.[190] Prior knowledge and media or information literary have been shown to have a moderating effect on the role of reasoning in truth discernment, suggesting that disinformation is most effective in context where there is little prior knowledge on topics or where prior knowledge is already heavily distorted.[191]

Disinformation is most effective in context where there is little prior knowledge on topics or where prior knowledge is already heavily distorted

Most, if not all, aforementioned tactics and underlying cognitive mechanisms are relevant here. For one, repeated statements are processed more rapidly and automatically, and subsequently more easily taken as truth.[192] This 'illusory truth effect' holds as false information contradicts political beliefs[193] or common knowledge,[194] and even when information is known to be false.[195] Furthermore, the extent to which people perceive the source of information as credible affects their perception of information as true or false.[196] Perceptions of expertise and authority are evidently crucial, with a clear link to French and Raven's Bases of Power theory.[197] But the effect is not one-directional, and false statements can also lower source credibility.[198] Another factor determining the credibility of disinformation is the number of times content is liked or shared, with higher numbers decreasing the ability to detect false

189 Gordon Pennycook and David G. Rand, "Lazy, Not Biased: Susceptibility to Partisan Fake News Is Better Explained by Lack of Reasoning than by Motivated Reasoning," *Cognition*, The Cognitive Science of Political Thought, 188 (July 1, 2019): 39–50, https://doi.org/10.1016/j.cognition.2018.06.011.

190 See for instance Bence Bago, David G. Rand, and Gordon Pennycook, "Fake News, Fast and Slow: Deliberation Reduces Belief in False (but Not True) News Headlines," *Journal of Experimental Psychology. General* 149, no. 8 (August 2020): 1608–13, https://doi.org/10.1037/xge0000729; Michael V. Bronstein et al., "Belief in Fake News Is Associated with Delusionality, Dogmatism, Religious Fundamentalism, and Reduced Analytic Thinking," *Journal of Applied Research in Memory and Cognition* 8, no. 1 (March 2019): 108–17, https://doi.org/10.1016/j.jarmac.2018.09.005; Pennycook and Rand, "Lazy, Not Biased"; Robert M. Ross, David Rand, and Gordon Pennycook, "Beyond 'Fake News': Analytic Thinking and the Detection of False and Hyperpartisan News Headlines" (PsyArXiv, November 13, 2019), https://doi.org/10.31234/osf.io/cgsx6.

191 Gordon Pennycook and David G. Rand, "The Psychology of Fake News," *Trends in Cognitive Sciences* 25, no. 5 (May 2021): 388–402, https://doi.org/10.1016/j.tics.2021.02.007.

192 Lisa K. Fazio, "Repetition Increases Perceived Truth Even for Known Falsehoods," ed. Amy Perfors and Ullrich Ecker, *Collabra: Psychology* 6, no. 1 (July 28, 2020): 38, https://doi.org/10.1525/collabra.347; Alice Dechêne et al., "The Truth about the Truth: A Meta-Analytic Review of the Truth Effect," *Personality and Social Psychology Review: An Official Journal of the Society for Personality and Social Psychology, Inc* 14, no. 2 (May 2010): 238–57, https://doi.org/10.1177/1088868309352251; Lynn Hasher, David Goldstein, and Thomas Toppino, "Frequency and the Conference of Referential Validity," *Journal of Verbal Learning and Verbal Behavior* 16, no. 1 (February 1, 1977): 107–12, https://doi.org/10.1016/S0022-5371(77)80012-1; Thomas J. Smelter and Dustin P. Calvillo, "Pictures and Repeated Exposure Increase Perceived Accuracy of News Headlines," *Applied Cognitive Psychology* 34, no. 5 (2020): 1061–71, https://doi.org/10.1002/acp.3684.

193 Gordon Pennycook, Tyrone D. Cannon, and David G. Rand, "Prior Exposure Increases Perceived Accuracy of Fake News," *Journal of Experimental Psychology. General* 147, no. 12 (December 2018): 1865–80, https://doi.org/10.1037/xge0000465.

194 Nadia M. Brashier et al., "Competing Cues: Older Adults Rely on Knowledge in the Face of Fluency." 32, no. 4 (2017): 331–337; Lisa K. Fazio et al., "Knowledge Does Not Protect against Illusory Truth," *Journal of Experimental Psychology. General* 144, no. 5 (October 2015): 993–1002, https://doi.org/10.1037/xge0000098.

195 Fazio et al., "Knowledge Does Not Protect against Illusory Truth."

196 Chanthika Pornpitakpan, "The Persuasiveness of Source Credibility: A Critical Review of Five Decades' Evidence," *Journal of Applied Social Psychology* 34, no. 2 (2004): 243–81, https://doi.org/10.1111/j.1559-1816.2004.tb02547.x.

197 French Jr. and Raven, "The Bases of Social Power."

198 Marco Visentin, Gabriele Pizzi, and Marco Pichierri, "Fake News, Real Problems for Brands: The Impact of Content Truthfulness and Source Credibility on Consumers' Behavioral Intentions toward the Advertised Brands," *Journal of Interactive Marketing* 45 (February 1, 2019): 99–112, https://doi.org/10.1016/j.intmar.2018.09.001.

statements.[199] Finally, emotional content renders people less likely to detect false statements, as it stimulates automatic, less reflective System 1 thinking.[200]

Interestingly, people's inclination to share content via social media does not depend on the perceived credibility the information. Even while stating that credibility is an "extremely important" precondition for sharing, participants of an experiment based their decision to share online content on other factors such as conformity with ideology.[201] And again, because disinformation often relies on other tactics such as emotional appeal, narrative persuasion and appeal to authority, the tendency for fake information to spread rapidly and go viral is high. The knock-on effects from high exposure to false information may be substantial as a result.

Russia's use of disinformation is predicated on the concept of reflexive control. This is the ability to influence adversaries' behaviour by altering and manipulating key factors in their information environment that change their perception of the world.[202] Operations focus on the deep-seated norms and values which help filter data and information about the world in decision-making processes.[203] As such, reflexive control consists of a broad programme of measures and tactics. Far from simply spreading fake news and peddling lies, Russian disinformation campaigns go much deeper into exploiting culture, history, heritage, language, nationalism and disaffection to achieve much wider objectives that see information warfare as a means of resolving strategic conflicts.[204]

The purpose of this reflexive control tactic is to exert information-psychological influence on enemy states without them even being aware.[205] This, in fact, can create a paradoxical situation whereby the aggressor achieves its strategic goals along with the active support of the enemy state's population.[206] This, of course, requires the target of disinformation campaigns is receptive and permissive to such information. In other words, because Western leaders and policymakers are sensitive and receptive to the attitudes of the electorate, Russia's pollution of the public information environment has an effect further up the political ladder – even if the disinformation fails to break through into policymaking circles.[207] Such deployment of reflexive control can also involve a process called priming whereby propaganda is used to fertilise the information environment first, making the audience more receptive to foreign messaging, which improves the potency of disinformation.[208]

The means by which Russia exerts reflexive control over adversaries is through its propaganda model referred to as "the firehose of falsehood",[209] whereby disinformation is "shamelessly" disseminated through a high volume of messages across various channels.[210]

199 Mihai Avram et al., "Exposure to Social Engagement Metrics Increases Vulnerability to Misinformation," *Harvard Kennedy School Misinformation Review*, July 28, 2020, https://doi.org/10.37016/mr-2020-033.

200 Martel, Pennycook, and Rand, "Reliance on Emotion Promotes Belief in Fake News."

201 Gordon Pennycook et al., "Shifting Attention to Accuracy Can Reduce Misinformation Online," *Nature* 592, no. 7855 (April 2021): 590–95, https://doi.org/10.1038/s41586-021-03344-2.

202 Media Ajir and Bethany Vailliant, "Russian Information Warfare: Implications for Deterrence Theory," *Strategic Studies Quarterly* 12, no. 3 (2018): 70–89.

203 Ajir and Vailliant.

204 Giles, "Handbook of Russian Information Warfare."

205 Timothy Thomas, "Russia's Reflexive Control Theory and the Military," *The Journal of Slavic Military Studies* 17, no. 2 (June 2004): 237–56, https://doi.org/10.1080/13518040490450529.

206 Ajir and Vailliant, "Russian Information Warfare."

207 Giles, "Handbook of Russian Information Warfare."

208 As suggested in the expert session.

209 Christopher Paul and Miriam Matthews, *The Russian "Firehose of Falsehood" Propaganda Model: Why It Might Work and Options to Counter It* (RAND Corporation, 2016), https://doi.org/10.7249/PE198.

210 Paul and Matthews.

Fundamental to this is an inherent disregard for objectivity, logic and consistency. This is apparent in how Moscow was able to spin a false narrative about Russia's military intervention in Syria as a response to the domestic terror threat posed by the Islamic State. The Russian Ministry of Defence regularly published disinformation that its airstrikes were aimed at Islamic State targets, even though local reporting confirmed the strikes targeted Syrian rebel groups rather than the Islamic State.[211] As such, Russia was able to conceal its true intentions in Syria and achieve its goals, all while manipulating US and regional actors' perceptions and actions to help him do so – a prime example of the reflexive control doctrine.[212]

Of course, disinformation has a wider remit than just pushing Russia's foreign policy agenda. As research shows, they deliberately stoke pre-existing partisan cleavages in Western society to serve Russia's wider strategic goal of causing division and disruption within the populations of adversary nations.[213] This is best exemplified by Russian trolls' continued reinforcement of pro-Trump propaganda.[214] Such flagrant use of disinformation tactics, in which truth and credibility bear no relevance, utterly defies traditional conventions of state communication strategies. However, as explained by the reflexive control doctrine, this is why disinformation is so effective.

Table 9. Disinformation

Tactic	Mechanism	Behavioural process	Explanation
Disinformation	Exploits people's inability to discern between what is true and false	Dual-process theory	The likelihood to believe false information increases when people rely on rapid, automatic System 1 thinking
	Influences the deep-seated norms and values which help filter data and information about the world in decision-making processes	Reflexive control	The ability to predetermine an adversary's decision or response by altering and manipulating key factors in their information environment

Case study: During the 2020 Central African Republic elections, France and Russia ran competing disinformation campaigns to deceive and influence voters through online media. The French effort, which began in mid-2019, peddled pro-French messages while the rival Russian operation attempted to promote Russian business and diplomatic interests, as well as the candidacy of President Faustin-Archange Touadera in the election. Eventually, the campaigns turned on each other with Russian accounts trying to out the French accounts that were trying to out them.[215]

211 Hugo Spaulding, "Russia's False ISIS Narrative in Syria" (Institute for the Study of War, December 1, 2015), https://www.understandingwar.org/sites/default/files/Russia%20False%20Narrative%20in%20Syria_1.pdf.

212 Spaulding.

213 Darren L. Linvill and Patrick L. Warren, "Troll Factories: Manufacturing Specialized Disinformation on Twitter," *Political Communication* 37, no. 4 (July 3, 2020): 447–67, https://doi.org/10.1080/10584609.2020.1718257.

214 Savvas Zannettou et al., "Who Let The Trolls Out?: Towards Understanding State-Sponsored Trolls," 2019, 353–62, https://doi.org/10.1145/3292522.3326016.

215 Reuters, "Rival Disinformation Campaigns Targeted African Users, Facebook Says," *The Guardian*, December 15, 2020, sec. Technology, https://www.theguardian.com/technology/2020/dec/15/central-african-republic-facebook-disinformation-france-russia.

Towards implementation: an influencer's guide

Unsurprisingly, there are some caveats to keep in mind when considering the influencing tactics laid out in the previous section.

Figure 2. Intervention caveats

Influencing campaigns are unlikely to generate attitudes and behaviours that are diametrically opposed to those previously held

First, behaviour interventions cannot achieve just any effect. It is largely agreed upon that influencing campaigns are unlikely to generate attitudes and behaviours that are diametrically opposed to those previously held and exhibited by target audiences. Influence campaigns instead tend to target audiences on issues for which they do not (yet) have strong convictions, or on ideas they may already be inclined to believe.[216] Still, previously-held perceptions and beliefs do not need to be rock-solid: an analysis of 193 suspects in the Capitol riot of 6 January 2021 shows that only one-tenth of the arrestees were supporters of right-wing extremist groups such as the Proud Boys, Three Percenters and Oath Keepers. The majority came from counties won by Joe Biden, not deep-red strongholds. Many were CEOs, doctors, lawyers, accountants and students – and previously non-political.[217]

Second, in military operations it can be difficult to identify a specific target audience and know it well enough to successfully implement an intervention. Rich digital data allows marketeers to divide groups into subgroups that may be more susceptible to an influence campaign. Target audience analysis is used to understand the subgroup behaviour and the social context in which it exists. But due to access barriers, an understanding of target audiences in military behaviour interventions can be limited. For instance, the absence of an entrenched digital infrastructure may limit the availability of individual data and subsequent advanced analytics, forcing a reliance on less technically sophisticated methods or the need to infer the

216 Raphael S. Cohen et al., "Combating Foreign Disinformation on Social Media: Study Overview and Conclusions" (RAND Corporation, July 19, 2021), 35, https://www.rand.org/pubs/research_reports/RR4373z1.html.

217 Robert A. Pape Ruby Keven, "The Capitol Rioters Aren't Like Other Extremists," The Atlantic, February 2, 2021, https://www.theatlantic.com/ideas/archive/2021/02/the-capitol-rioters-arent-like-other-extremists/617895/.

data. Using sample selection models, data on relatively similar individuals elsewhere can still produce crucial insights into the unobserved group of individuals.[218]

Third, in military operations, desirable effects may be more difficult to pinpoint. In marketing, rather uniform effects are sought: whether a campaign aims to increase market share, word of mouth sales, purchase size or repetition, in the end it comes down to boosting sales. In health care, another field in which behaviour change techniques are widely applied, typical desired effects include healthier eating patterns or more regular workout schedules. The complexity of military operations makes it harder (but not impossible) to establish what types of behaviour are desired. Additionally, identifying the threshold for success can be difficult. Swaying one percent of voters may alter the outcome of elections, and increasing sales by a few percentage points can be considered a decent success for marketeers.[219] Yet in military operations, such changes in behaviour could be negligible.

Even if behaviour changes can be observed, establishing causality remains highly complex

Fourth, measuring the effects of influencing campaigns is all but evident. Approaches to behavioural change, both within the military and beyond, have been often intuition-driven and theory-inspired, rather than evidence- and theory-based.[220] There is a limited understanding of the effectiveness of behaviour change methods and procedures under certain circumstances. The key reason for this is the difficulty in establishing which influence efforts are responsible for observed behaviour change, as different approaches may be used in conjunction and potential intervening factors are hard to exclude. Conflict situations are not clean nor represent a controlled setting in which to adequately test influencing effects on behaviour and so a trade-off is usually made in the implementation of tactics and the measurement of effectiveness. Indeed, even if behaviour changes can be observed (which is not necessarily the case for perceptions and attitudes), establishing causality remains highly complex.

Recent assessments of Russian influencing campaigns, such as the use of disinformation in the 2016 US elections and the Brexit referendum, are inconclusive with regard to their effects, or avoided the question altogether.[221] A recent study by RAND points to some measurable operational effects of disinformation campaigns, such as the use of disinformation to locate and target Ukrainian soldiers. After false death reports were sent to family members, phone calls and text messages would reveal Ukrainian soldiers' location, who could then be subsequently targeted. The most quantifiable effect of disinformation, the report suggested, "was perhaps best described by a senior Taiwan official, who said disinformation ate up senior policymakers' limited time by forcing them to respond to every false or misleading story."[222] Proof of strategic-level effects, however, remain largely absent.

218 For example, a given diaspora who just moved out of the region of interest may have attitudes and behaviours that could be representative for the target audience. See Jacques-Emmanuel Galimard et al., "Heckman Imputation Models for Binary or Continuous MNAR Outcomes and MAR Predictors," *BMC Medical Research Methodology* 18, no. 1 (August 31, 2018): 90, https://doi.org/10.1186/s12874-018-0547-1.

219 "The Social Dilemma" (Netflix), accessed November 18, 2021, https://www.netflix.com/nl/title/81254224.

220 S Michie, "Making Psychological Theory Useful for Implementing Evidence Based Practice: A Consensus Approach," *Quality and Safety in Health Care* 14, no. 1 (February 1, 2005): 26, https://doi.org/10.1136/qshc.2004.011155; Susan Michie et al., "From Theory-Inspired to Theory-Based Interventions: A Protocol for Developing and Testing a Methodology for Linking Behaviour Change Techniques to Theoretical Mechanisms of Action," *Annals of Behavioral Medicine* 52, no. 6 (May 18, 2018): 501–12, https://doi.org/10.1007/s12160-016-9816-6.

221 "Background to 'Assessing Russian Activities and Intentions in Recent US Elections': The Analytic Process and Cyber Incident Attribution 6" (Intelligence Community Assessment, 2017), i, https://www.dni.gov/files/documents/ICA_2017_01.pdf; House of Commons, "Disinformation and 'Fake News': Final Report" (London: Digital, Culture, Media and Sport Committee, February 18, 2019), 70, https://publications.parliament.uk/pa/cm201719/cmselect/cmcumeds/1791/1791.pdf.

222 Cohen et al., "Combating Foreign Disinformation on Social Media," 34.

Indeed, and again, access to target audiences and data can prove especially difficult in military operations, complicating evaluation efforts. When valuable data is lacking, measuring instead relies on untrustworthy indicators. For instance, with Russia Today, analysts have pointed to the Russian government's growing investments in the news channel as a cue of its success in pushing the government's agenda.[223]

Despite widely recognised limitations, a variety of methodologies and tools exist to provide some insights into the behavioural effects of information operations. Surveys and polling have been used extensively to measure influence efforts, ranging from (attempts at) assessing the impact of western radio on the democratisation of Soviet youth to gauging the effects of flyers on Afghan attitudes towards the Taliban.[224] Today, the wide availability of data allows for large improvements in exposure measurement.[225] The advancement and proliferation of automated data collection strategies and quantitative statistical modelling offers opportunities not only for greater target audience analysis prior to the intervention, but also for improved effectiveness measurement. Yet crucially, the number of views, clicks and likes cannot always be equated to changes in attitudes, perceptions or behaviours.[226] Still, in scenarios with enough additional information, it might be possible to quantify how these measures relate to attitudes, perceptions or behaviors using sophisticated neural networks that link these input data non-linearly to known outcomes. Interpreting text data and shared images may also be valuable, even quantifiable, tools. Machine learning techniques can be used to track an individual's social media posts change over time, in terms of topics and vocabulary.[227] In addition, some general conditions for measuring the effectiveness of information operations have been identified, including proper baselining; establishing identifiable behavioural indicators; awareness of the difference between causality and correlation; and acknowledging that behaviour change occurs gradually at multiple stages, meaning that more subtle changes in attitudes, intentions and perceptions should also be included.[228]

Fifth, the effectiveness of any of the above influencing tactics in changing behaviour varies depending on contextual factors, such as an operation's timeframe, location and mission. Culture is an especially important moderator: for instance, a marketing intervention may work on a Western audience but may be totally ineffective in an East Asian context. Evidently in military information operations, too, understanding the cultural context in which information operations are being implemented is critical to success. With advances in artificial intelligence, machine learning and natural language processing, it may soon be possible to develop a more sophisticated understanding of the underlying processes linked to cultural differences and how to appeal to them respectively.[229]

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223 Ilya Yablokov, "Conspiracy Theories as a Russian Public Diplomacy Tool: The Case of *Russia Today* (*RT*)," *Politics* 35, no. 3–4 (November 2015): 301–15, https://doi.org/10.1111/1467-9256.12097.

224 Arturo Munoz, *U.S. Military Information Operations in Afghanistan: Effectiveness of Psychological Operations 2001-2010*, Rand Corporation Monograph Series (Santa Monica, CA: RAND, 2012); Oleg Manaev, "The Influence of Western Radio on the Democratization of Soviet Youth," *Journal of Communication* 41, no. 2 (June 1, 1991): 72–91, https://doi.org/10.1111/j.1460-2466.1991.tb02310.x.

225 Harry Jones, "A Guide to Monitoring and Evaluating Policy Influence" (Overseas Development Institute, 2011), https://cdn.odi.org/media/documents/6453.pdf.

226 Pennycook et al., "Shifting Attention to Accuracy Can Reduce Misinformation Online."

227 Rajdeep Grewal, Sachin Gupta, and Rebecca Hamilton, "Marketing Insights from Multimedia Data: Text, Image, Audio, and Video," *Journal of Marketing Research* 58, no. 6 (December 1, 2021): 1025–33, https://doi.org/10.1177/00222437211054601; Mi Zhou et al., "Consumer Behavior in the Online Classroom: Using Video Analytics and Machine Learning to Understand the Consumption of Video Courseware," *Journal of Marketing Research* 58, no. 6 (December 1, 2021): 1079–1100, https://doi.org/10.1177/00222437211042013.

228 S. A Tatham, Defence Academy of the United Kingdom, and Advanced Research and Assessment Group, *Strategic Communication: A Primer* (Shrivenham: Defence Academy of the United Kingdom, Advanced Research and Assessment Group, 2008).

229 As discussed during the expert session.

Fortunately, there are numerous frameworks for analysing and assessing cross-cultural differences. Among the most comprehensive and most widely accepted is Hofstede's framework for cross-cultural communication which outlines six distinct dimensions of national culture: power distance; uncertainty avoidance; individualism/collectivism; masculinity/femininity; long/short-term orientation; and indulgence/constraint.[230] Where cultures score on these dimensions can determine the effect of behaviour influencing interventions. For instance, for collectivist cultures (such as Indonesia, China and South Korea), consensus takes precedence over mediated processing and rational argumentation, which means they may rely more on heuristic cues (System 1 processing) which align with their cultural ingroup than those in individualist cultures (such as the United States, Australia and the Netherlands), who may favour more reasoned thought processing.[231] Or, according to Schwartz's model, some cultures may place higher value on hierarchies and autonomy rather than egalitarianism and embeddedness.[232] The implementation of influencing tactics can then be honed to tap into these cultural values of the target audience.

The risks of unintended consequences, including a backlash, run high in military operations

Ultimately, every intervention is different. In designing an appropriate intervention and deciding on behaviour influencing tactics, many factors need to be taken into account, including: whether the intervention aims to achieve long or short-term effects; whether it is aimed at groups or individuals; whether it concerns single or multiple interventions; or whether the intervention seeks changes in behaviour only or in perceptions and attitudes as well.[233] Finally, the risks of unintended consequences, including a backlash, run high in military operations, and should be considered carefully pre-intervention.[234]

230 Geert Hofstede, "Dimensionalizing Cultures: The Hofstede Model in Context," *Online Readings in Psychology and Culture* 2, no. 1 (December 1, 2011), https://doi.org/10.9707/2307-0919.1014.

231 Geert Hofstede, Gert Jan Hofstede, and Michael Minkov, *Cultures and Organizations: Software of the Mind: Intercultural Cooperation and Its Importance for Survival*, 3rd ed (New York: McGraw-Hill, 2010).

232 Shalom H. Schwartz, "Universals in the Content and Structure of Values: Theoretical Advances and Empirical Tests in 20 Countries," in *Advances in Experimental Social Psychology*, ed. Mark P. Zanna, vol. 25 (Academic Press, 1992), 1–65, https://doi.org/10.1016/S0065-2601(08)60281-6.

233 Derived from a presentation given by a marketing expert at the expert session.

234 Andrew Mackay, Steve Tatham, and Lee Rowland, "The Effectiveness of US Military Information Operations in Afghanistan 2001-2010 : Why RAND Missed the Point — Defence Academy of the United Kingdom" (RAND Corporation, 2012), 6.

Table 10. Influencer's checklist

Phase	Objective	Actions	Tools
Pre-intervention	Set the aim	Establish the intervention's intended behavioural effect	
		Identify the relevant target population	
		Identify the time horizon	
	Design the intervention	Select and analyse the target audience	Target audience analysis Social network analysis Cultural identity assessment
		Determine effect factors such as duration of intended effects; number of interventions	
		Identify behavioural change mechanisms	Literature review, expert interviews
		Collect data	Focus groups, survey panels, community groups, mining social media, web-browsing, online search data, intrusive observation methods, sensor data
		Select influencing tactics	
		Establish baseline and identify the key performance indicators (KPIs)	
	Bulletproof the intervention	Identify potential external effects on target audience behaviour	System analysis Individual social material model
		Identify potential countermeasures and backlash	Dry-runs, war games
		Verify the intervention's predicted effects & estimate success likelihood	Randomised controlled trials, quasi-experimental methods
Mid- intervention	Monitor effectiveness	Monitor KPIs and compare them to expectations and the mission objectives	Tracking, analytics
	Reinforce or adjust	Continuously monitor the predefined KPIs when adjusting the intervention to create reference points	
Post-intervention	Data analysis	Assess causality and the effectiveness of the intervention	Statistical analysis
	Adjust intervention for future missions	Identify lessons learned; scrutinise work process	

Conclusion: implications for the military

The conjunction of renewed international competition and rapid advancements in information technologies has pushed the information environment to the centre stage of modern conflict. More than ever, the struggle for influence over attitudes, perceptions and behaviour has become competitors' prime focus, not only during conflict but in peacetime too. Evidently, and unfortunately, in information warfare not all players are equal. Democracies that depend on the free flow of accurate information are at a disadvantage. Not only are open democratic societies more vulnerable to the influence and destabilisation efforts of outsiders, the values that they foster render offensive influencing attempts problematic, to say the least. But not all influencing relies on disinformation, and understanding and grasping the techniques of influencing becomes increasingly necessary if not indispensable in present-day competition, conflict and war. While in past conflicts, the use of the (online) information environment became especially known for its potential to recruit fighters or spread disinformation, Russia's invasion of Ukraine in 2022 has shown that it can be effectively employed to boost troop morale and sway public opinion.

Understanding and grasping the techniques of influencing becomes increasingly necessary if not indispensable

Western military organisations, too, will need to step up their game in shaping public attitudes, perceptions and even behaviour. As Machiavelli already suggested, "however strong your armed forces are, in entering a new province you will need the goodwill of the people."[235] Today, a number of interrelated trends and developments have only added to the veracity of this statement. First, increased battlefield transparency and extremely rapid information diffusion make active control of information all the more important. Second, decreasing appetite among Western audiences to intervene militarily makes non-lethal, information-driven tactics more desirable. British influence efforts to boost the moderate opposition in Syria as an alternative to military intervention serves as an example. This trend ties in closely with the rising casualty aversion that only strengthened as battlefields increasingly moved to cities, spurring the desire for an alternative to physical force.[236] Third, adversary influencing campaigns are in full swing, and unlikely to dwindle down. Indeed, the opposite should be expected. Not being able to master adversary tactics will put Western militaries at a disadvantage. The parallel influencing by Russian and French armed forces in the Central African Republic is illustrative.

The aim of this paper was to examine the means and techniques through which human minds can be targeted in present-day influencing efforts. In doing so, it lays outs a toolbox for effectively manipulating thought processes. Clearly, discussions on the ethical, legal and military-strategic conditions under which such tools can be employed are needed. These are beyond the scope of this paper but are set to attract attention in the years to come as the use of information in conflict only further expands.

235 Machiavelli, *The Prince*, 3.

236 Christian Aditya Niksch, "The Strategic Challenges of Urban Warfare," *University of Denver Electronic Theses and Dissertations*, no. 1285 (June 2017): 119.

Annex A.
Summary of influence tactics and concepts

Table 11: Influence tactics and concepts

Tactic	Mechanism	Behavioural process	Explanation
Emotional appeal	Emotions are processed more readily than other types of information	Emotional contagion	People automatically adopt the emotional state of others even before they become aware of what triggered the emotional state of the other
	Emotion-evoking information can influence the level of cognitive involvement and the type of processing	Dual process theory	Distinguishes between intuitive, automatic (System 1) thinking, and effortful, rational (System 2) thinking
		Elaboration-likelihood model	Distinguishes between a central and peripheral route of processing, corresponding to high and low cognitive involvement respectively
	Negative emotions facilitate engagement	Negativity bias	People respond more to negative than positive information
Social contagion	People mirror (consciously or unconsciously) one another's attitudes, perceptions and actions	Social cognitive theory	Individuals learn by observing and modelling other's behaviour. Throughout life it remains a crucial source of information.
		Social identity approach	People are more likely to mimic the behaviour of fellow group members to build a shared self-definition, especially when they are considered a reliable source of information
Appeal to authority	People with authority are often perceived as good sources of information	Bases of power theory	There are six bases of social power that tap into heuristics and facilitate the perception of authority: legitimate, informational, coercive, expert, reward and referent power
	As central nodes in social networks, people with authority are effective in spreading information	Theory of diffusion of innovations	Interpersonal contacts within and between networks facilitate the spread and adoption of information, new ideas and behaviour. Thanks to their elevated role among peers, opinion leaders are diffuse new ideas effectively and therewith drive behaviour change
		Two-step flow of communication model	People are not directly influenced by mass media but instead by opinion leaders who pass on their own interpretation of the mass communicated messages
		Gatekeeping theory	Each information environment has a primary entrance, channel or gate through which information first flows, which is controlled by one or more gatekeepers
Repeated exposure	People are more perceptible to information that was recently and repeatedly brought to their attention	Availability bias	People rely on information that is readily available in their memory (but not necessarily representative)
		Familiarity bias	Familiarity makes information easier to process and increases information accessibility which affects judgement, opinions and preferences

Tactic	Mechanism	Behavioural process	Explanation
Sequence manipulation	People prioritise information they are first exposed to	Primacy effect	Information that is presented sequentially is susceptible to receiving varying levels of attention based on its listing position
		Halo effect	A form of anchoring bias that increases the value people attach to their first impression
Micro-targeting	Messages are modified (and subsequentially targeted) in a way that is compatible with a person's pre-existing opinions	Confirmation bias	The tendency to favour and better recall information that in some way supports or confirms prior values or beliefs, increasing its retention and persuasiveness
Media agenda-setting	Mass media wields influence over public opinion and has the power to influence political structures and decision-making	Agenda-setting theory	Making certain issues or topics more salient in news media helps to shape public opinion
Narrative persuasion	Narratives guide behaviour by identifying problems and their resolutions	Circumventing logic / absorption	Fiction helps to suppress ideology and encourage uncritical thinking
		Transportation	Recipients are less likely to detect false statements in stories, less likely to counterargue or resist the information, and are more open to the persuasive messages contained in the narrative
Disinformation	Exploits people's inability to discern between what is true and false	Dual-process theory	The likelihood to believe false information increases when people rely on rapid, automatic System 1 thinking
	Influences the deep-seated norms and values which help filter data and information about the world in decision-making processes	Reflexive control	The ability to predetermine an adversary's decision or response by altering and manipulating key factors in their information environment

Annex B.
Expert session results

The nine behaviour influencing tactics were analysed and scrutinised during a virtual expert session held in November 2021. In a moderated discussion using the online tool Mentimeter, participants identified the tactics' strengths and weaknesses and discussed conditions for success.

Overall, the experts emphasised the effectiveness of the nine influencing tactics as well as their relevance for military information operations. Participants with backgrounds in the behavioural sciences felt microtargeting was particularly indispensable in the modern age, while they lauded social contagion, emotional appeal, narrative persuasion and repeated exposure for their ability to tap into deep-seated cognitive mechanisms. Narrative persuasion and repeated exposure were deemed to have particularly long-lasting effects. In addition, most tactics can be adapted and applied to a wide variety of (military) contexts and scenarios while retaining significant influencing power.

That said, the implementation of influence tactics is not without constraints, the most important of which being the ability to collect data, the unpredictability of outcomes, and the difficulty of determining and measuring causality. As for the first, the vast data and technological resources needed to implement effective microtargeting are so great that it may be impossible in conflict conditions, particularly when there is a scarcity of data on the operational area or audience. The same goes for collecting data when measuring effects. When it comes to the unpredictability of outcomes, the potential for backfire effects was highlighted. Experts felt that many of the tactics were risky in the sense that they may incite backlash or encourage counter-interventions from opponents or adversary populations, particularly when implementing more aggressive influencing tactics such as disinformation. As for establishing and measuring success, the question was raised as to how (military) influencers can say with certainty that it is their intervention that caused the change in behaviour. Finally, the experts noted some practical and ethical considerations for the implementation of influence tactics. First, concerns were raised over the wide variance in the length, sustainability or durability of effects from the tactics – some could expect short explosive impact, others longer and for some it was completely unknown. This may make it difficult to adequately compare and contrast the tactics during decision-making processes. The same goes for identifying the target audience for each tactic; whether it should be targeted at individuals or groups. Finally, and inevitable, experts raised concerns over the ethical dilemmas related to some of the tactics, especially with regard to disinformation that was deemed wholly unethical therefore off-limits. It was noted that NATO doctrine, for instance, rests on the principles of credibility and accountability, something to which such underhand information operations may fall foul.

During the expert session, there was a consensus on the importance of having in-depth knowledge or data on the cultural, political and social context of the target information environment. Target Audience Analysis was consistently referred to as an important pre-requisite for success. This is especially the case for microtargeting and disinformation, but relevant in

all other tactics that seek to exploit certain biases and blind spots in the cognitive processes of the target audience, such as emotional appeal and narrative persuasion.

On a more methodological level, the experts emphasised the importance of measurements and data collection for not only informing decision-making but also predicting likelihoods of success and post-hoc measurements of intervention effectiveness. Related to this, a pre-requisite for success discussed at length was the need to test tactics thoroughly before implementing in the field, for instance using a more methodological approach ('theorise-test-theorise-test') to improve effectiveness in the field.

References

Abubakar, Abdullahi Tasiu. "Hostile Gatekeeping: The Strategy of Engaging with Journalists in Extremism Reporting." *Defence Strategic Communications* 5 (2018): 36.

———. "News Values and the Ethical Dilemmas of Covering Violent Extremism." *Journalism & Mass Communication Quarterly* 97, no. 1 (March 1, 2020): 278–98. https://doi.org/10.1177/1077699019847258.

———. "Strategic Communications, Boko Haram, and Counter-Insurgency." *Defence Strategic Communications* 3, no. 3 (2017): 139–70.

Ajir, Media, and Bethany Vailliant. "Russian Information Warfare: Implications for Deterrence Theory." *Strategic Studies Quarterly* 12, no. 3 (2018): 70–89.

Appel, Markus, and Tobias Richter. "Persuasive Effects of Fictional Narratives Increase Over Time." *Media Psychology* 10, no. 1 (June 21, 2007): 113–34. https://doi.org/10.1080/15213260701301194.

Aral, Sinan, and Dylan Walker. "Creating Social Contagion Through Viral Product Design: A Randomized Trial of Peer Influence in Networks." *Management Science* 57, no. 9 (2011): 1623–39.

Ardèvol-Abreu, A. "Framing Theory in Communication Research. Origins, Development and Current Situation in Spain." *Revista Latina de Comunicacion Social* 70 (January 1, 2015): 423–50. https://doi.org/10.4185/RLCS-2015-1053.

Atikcan, Ece Özlem, Richard Nadeau, and Éric Bélanger. "Framing Risky Choices: How the Leave Campaign Convinced Britain to Take a Leap into the Unknown." *LSE Blog* (blog), November 3, 2020. https://blogs.lse.ac.uk/europpblog/2020/11/03/framing-risky-choices-how-the-leave-campaign-convinced-britain-to-take-a-leap-into-the-unknown/.

Atwell Seate, Anita, and Dana Mastro. "Media's Influence on Immigration Attitudes: An Intergroup Threat Theory Approach." *Communication Monographs* 83, no. 2 (April 2, 2016): 194–213. https://doi.org/10.1080/03637751.2015.1068433.

Avram, Mihai, Nicholas Micallef, Sameer Patil, and Filippo Menczer. "Exposure to Social Engagement Metrics Increases Vulnerability to Misinformation." *Harvard Kennedy School Misinformation Review*, July 28, 2020. https://doi.org/10.37016/mr-2020-033.

Awan, Imran. "Cyber-Extremism: Isis and the Power of Social Media." *Society* 54, no. 2 (April 2017): 138–49. https://doi.org/10.1007/s12115-017-0114-0.

"Background to 'Assessing Russian Activities and Intentions in Recent US Elections': The Analytic Process and Cyber Incident Attribution 6." Intelligence Community Assessment, 2017. https://www.dni.gov/files/documents/ICA_2017_01.pdf.

Bago, Bence, David G. Rand, and Gordon Pennycook. "Fake News, Fast and Slow: Deliberation Reduces Belief in False (but Not True) News Headlines." *Journal of Experimental Psychology. General* 149, no. 8 (August 2020): 1608–13. https://doi.org/10.1037/xge0000729.

Baumeister, Roy F., Ellen Bratslavsky, Catrin Finkenauer, and Kathleen D. Vohs. "Bad Is Stronger than Good." *Review of General Psychology* 5, no. 4 (December 1, 2001): 323–70. https://doi.org/10.1037/1089-2680.5.4.323.

Benson, Buster. "Cognitive Bias Cheat Sheet." Medium, December 20, 2021. https://betterhumans.pub/cognitive-bias-cheat-sheet-55a472476b18.

Berger, Jonah, and Gráinne Fitzsimons. "Dogs on the Street, Pumas on Your Feet: How Cues in the Environment Influence Product Evaluation and Choice." *Journal of Marketing Research* 45, no. 1 (February 1, 2008): 1–14. https://doi.org/10.1509/jmkr.45.1.001.

Bernal, Alonso, Cameron Carter, Ishpreet Singh, Kathy Cao, and Olivia Madreperla. "Cognitive Warfare: An Attack on Truth and Thought." NATO, Fall 2020. https://www.innovationhub-act.org/sites/default/files/2021-03/Cognitive%20Warfare.pdf.

Beveren, KAP Arthur van. "KL creëert Wapen van de Informatiemanoeuvre." Koninklijke Landmacht. Accessed November 16, 2021. https://doi.org/10/02_wapen-van-de-informatiemanoeuvre.

Bodenhausen, Galen V. "Stereotypes as Judgmental Heuristics: Evidence of Circadian Variations in Discrimination." *Psychological Science* 1, no. 5 (September 1, 1990): 319–22. https://doi.org/10.1111/j.1467-9280.1990.tb00226.x.

Bodenhausen, Galen V., Lori A. Sheppard, and Geoffrey P. Kramer. "Negative Affect and Social Judgment: The Differential Impact of Anger and Sadness." *European Journal of Social Psychology* 24, no. 1 (1994): 45–62. https://doi.org/10.1002/ejsp.2420240104.

Bond, Robert, and Solomon Messing. "Quantifying Social Media's Political Space: Estimating Ideology from Publicly Revealed Preferences on Facebook." *American Political Science Review* 109, no. 1 (February 2015): 62–78. https://doi.org/10.1017/S0003055414000525.

Borawska, Anna, Tomasz Oleksy, and Dominika Maison. "Do Negative Emotions in Social Advertising Really Work? Confrontation of Classic vs. EEG Reaction toward Advertising That Promotes Safe Driving." *PloS One* 15, no. 5 (2020). https://doi.org/10.1371/journal.pone.0233036.

Bradshaw, Samantha, and Philip N Howard. "Challenging Truth and Trust: A Global Inventory of Organized Social Media Manipulation." Programme on Democracy and Technology, 2018.

Brashier, Nadia M., S. Umanath, R. Cabeza, and E. J. Marsh. "Competing Cues: Older Adults Rely on Knowledge in the Face of Fluency." 32, no. 4 (2017): 331–337.

Braw, Elisabeth. "Virality Isn't Victory for Ukraine." *Foreign Policy*, March 8, 2022. https://foreignpolicy.com/2022/03/08/ukraine-propaganda-war/.

Bronstein, Michael V., Gordon Pennycook, Adam Bear, David G. Rand, and Tyrone D. Cannon. "Belief in Fake News Is Associated with Delusionality, Dogmatism, Religious Fundamentalism, and Reduced Analytic Thinking." *Journal of Applied Research in Memory and Cognition* 8, no. 1 (March 2019): 108–17. https://doi.org/10.1016/j.jarmac.2018.09.005.

Brooker, Cassandra. "The Effectiveness of Influence Activities in Information Warfare." Australian Army Research Centre, 2021.

Bushell, Simon, Géraldine Satre Buisson, Mark Workman, and Thomas Colley. "Strategic Narratives in Climate Change: Towards a Unifying Narrative to Address the Action Gap on Climate Change." *Energy Research & Social Science* 28 (June 2017): 39–49. https://doi.org/10.1016/j.erss.2017.04.001.

Cacciatore, Michael A., Dietram A. Scheufele, and Shanto Iyengar. "The End of Framing as We Know It ... and the Future of Media Effects." *Mass Communication and Society* 19, no. 1 (January 2, 2016): 7–23. https://doi.org/10.1080/15205436.2015.1068811.

Cacioppo, John T., and Wendi L. Gardner. "Emotion." *Annual Review of Psychology*, 1999.

Chen, Eric, Gábor Simonovits, Jon A. Krosnick, and Josh Pasek. "The Impact of Candidate Name Order on Election Outcomes in North Dakota." *Electoral Studies* 35 (September 1, 2014): 115–22. https://doi.org/10.1016/j.electstud.2014.04.018.

Chiang, Chun-Fang, and Brian Knight. "Media Bias and Influence: Evidence from Newspaper Endorsements." *The Review of Economic Studies* 78, no. 3 (July 1, 2011): 795–820. https://doi.org/10.1093/restud/rdq037.

Chitika. "The Value of Google Result Positioning," December 6, 2013. https://perma.cc/7AGC-HTDH.

Choi, Sujin. "The Two-Step Flow of Communication in Twitter-Based Public Forums." *Social Science Computer Review* 33, no. 6 (December 1, 2015): 696–711. https://doi.org/10.1177/0894439314556599.

Chong, Dennis, and James N. Druckman. "Framing Theory." *Annual Review of Political Science* 10, no. 1 (2007): 103–26. https://doi.org/10.1146/annurev.polisci.10.072805.103054.

Clausewitz, Carl von, Michael Howard, Peter Paret, and Beatrice Heuser. *On War*. Oxford World's Classics. New York: Oxford University Press, 2006.

Cluzel, François du. "Cognitive Warfare." Innovation Hub, 2021. https://www.innovationhub-act.org/sites/default/files/2021-01/20210113_CW%20Final%20v2%20.pdf.

Cohen, Raphael S., Nathan Beauchamp-Mustafaga, Joe Cheravitch, Alyssa Demus, Scott W. Harold, Jeffrey W. Hornung, Jenny Jun, Michael Schwille, Elina Treyger, and Nathan Vest. "Combating Foreign Disinformation on Social Media: Study Overview and Conclusions." RAND Corporation, July 19, 2021. https://www.rand.org/pubs/research_reports/RR4373z1.html.

Daniel Kahneman and Yuval Noah Harari in Conversation. 2021 Nexus Online Summit, 2021. https://www.youtube.com/watch?v=7yhg7NmTeVg.

Dechêne, Alice, Christoph Stahl, Jochim Hansen, and Michaela Wänke. "The Truth about the Truth: A Meta-Analytic Review of the Truth Effect." *Personality and Social Psychology Review: An Official Journal of the Society for Personality and Social Psychology, Inc* 14, no. 2 (May 2010): 238–57. https://doi.org/10.1177/1088868309352251.

Downs, Anthony. "An Economic Theory of Political Action in a Democracy." *Journal of Political Economy* 65, no. 2 (1957): 135–50.

Dreyfuss, Emily. "Want to Make a Lie Seem True? Say It Again. And Again. And Again | WIRED." Wired, February 11, 2017. https://www.wired.com/2017/02/dont-believe-lies-just-people-repeat/.

Ducheine, Paul A.L., and Frans P.B. Osinga. *Netherlands Annual Review of Military Studies - Winning without Killing: The Strategic and Operational Utility of Non-Kinetic Capabilities in Crises.* NL ARMS. TMC Asser Press, 2017. https://surfsharekit.nl/public/d71e36e5-784a-4784-8326-6e4535392372.

Effron, Daniel A., and Medha Raj. "Misinformation and Morality: Encountering Fake-News Headlines Makes Them Seem Less Unethical to Publish and Share." *Psychological Science* 31, no. 1 (January 1, 2020): 75–87. https://doi.org/10.1177/0956797619887896.

Entman, Robert M. "Framing: Towards Clarification of a Fractured Paradigm." *Journal of Communication* 43, no. 4 (1993): 51–58.

Epstein, Robert, and Ronald E. Robertson. "The Search Engine Manipulation Effect (SEME) and Its Possible Impact on the Outcomes of Elections." *Proceedings of the National Academy of Sciences* 112, no. 33 (August 18, 2015): E4512–21. https://doi.org/10.1073/pnas.1419828112.

Ernst, Nicole. "Effects of Message Repetition and Negativity on Credibility Judgments and Political Attitudes." *International Journal of Communication* 11 (2017): 22.

Ernst, Nicole, Rinaldo Kühne, and Werner Wirth. "Effects of Message Repetition and Negativity on Credibility Judgments and Political Attitudes." *International Journal of Communication* 11, no. 0 (August 14, 2017): 21.

Fan, Rui, Jichang Zhao, Yan Chen, and Ke Xu. "Anger Is More Influential than Joy: Sentiment Correlation in Weibo." Edited by Rodrigo Huerta-Quintanilla. *PLoS ONE* 9, no. 10 (October 15, 2014): e110184. https://doi.org/10.1371/journal.pone.0110184.

Fazio, Lisa K. "Repetition Increases Perceived Truth Even for Known Falsehoods." Edited by Amy Perfors and Ullrich Ecker. *Collabra: Psychology* 6, no. 1 (July 28, 2020): 38. https://doi.org/10.1525/collabra.347.

Fazio, Lisa K., Nadia M. Brashier, B. Keith Payne, and Elizabeth J. Marsh. "Knowledge Does Not Protect against Illusory Truth." *Journal of Experimental Psychology. General* 144, no. 5 (October 2015): 993–1002. https://doi.org/10.1037/xge0000098.

Fernandes, Juliana. "Effects of Negative Political Advertising and Message Repetition on Candidate Evaluation." *Mass Communication and Society* 16, no. 2 (March 1, 2013): 268–91. https://doi.org/10.1080/15205436.2012.672615.

French Jr., John R. P., and Bertram Raven. "The Bases of Social Power." In *Studies in Social Power*, 150–67. Oxford, England: Univer. Michigan, 1959.

Galimard, Jacques-Emmanuel, Sylvie Chevret, Emmanuel Curis, and Matthieu Resche-Rigon. "Heckman Imputation Models for Binary or Continuous MNAR Outcomes and MAR Predictors." *BMC Medical Research Methodology* 18, no. 1 (August 31, 2018): 90. https://doi.org/10.1186/s12874-018-0547-1.

Garcia-Garcia, Manuel. "The Role of Emotion in Human Decision-Making." The Advertising Research Foundation, 2020.

Gates, Scott, and Sukanya Podder. "Social Media, Recruitment, Allegiance and the Islamic State." *Perspectives on Terrorism* 9, no. 4 (2015): 107–16.

Gerber, Alan S., Dean Karlan, and Daniel Bergan. "Does the Media Matter? A Field Experiment Measuring the Effect of Newspapers on Voting Behavior and Political Opinions." *American Economic Journal: Applied Economics* 1, no. 2 (April 2009): 35–52. https://doi.org/10.1257/app.1.2.35.

Giles, Keir. "Handbook of Russian Information Warfare." Nato Defense College, November 2016.

Glare P.G.W. *Oxford Latin Dictionary*. Oxfort at the Clarendon Press, 1968.

Gore, D'Angelo. "Trump Wrong on Murder Rate." *FactCheck.Org* (blog), October 28, 2016. https://www.factcheck.org/2016/10/trump-wrong-on-murder-rate/.

Gramlich, John. "Voters' Perceptions of Crime Continue to Conflict with Reality." *Pew Research Center* (blog). Accessed January 17, 2022. https://www.pewresearch.org/fact-tank/2016/11/16/voters-perceptions-of-crime-continue-to-conflict-with-reality/.

Green, Melanie C., and Timothy C. Brock. "The Role of Transportation in the Persuasiveness of Public Narratives." *Journal of Personality and Social Psychology* 79, no. 5 (November 2000): 701–21. https://doi.org/10.1037/0022-3514.79.5.701.

Grewal, Rajdeep, Sachin Gupta, and Rebecca Hamilton. "Marketing Insights from Multimedia Data: Text, Image, Audio, and Video." *Journal of Marketing Research* 58, no. 6 (December 1, 2021): 1025–33. https://doi.org/10.1177/00222437211054601.

Gross, Michael L., and Tamar Meisels, eds. *Soft War: The Ethics of Unarmed Conflict*. Cambridge: Cambridge University Press, 2017. https://doi.org/10.1017/9781316450802.

Harcup, Tony, and Deirdre O'Neill. "What Is News?" *Journalism Studies* 18, no. 12 (December 2, 2017): 1470–88. https://doi.org/10.1080/1461670X.2016.1150193.

Harrigan, Nicholas, Palakorn Achananuparp, and Ee Peng Lim. "Influentials, Novelty, and Social Contagion: The Viral Power of Average Friends, Close Communities, and Old News." *Social Networks* 34, no. 4 (October 1, 2012): 470–80. https://doi.org/10.1016/j.socnet.2012.02.005.

Harrison, Neil A., Tania Singer, Pia Rotshtein, Ray J. Dolan, and Hugo D. Critchley. "Pupillary Contagion: Central Mechanisms Engaged in Sadness Processing." *Social Cognitive and Affective Neuroscience* 1, no. 1 (June 1, 2006): 5–17. https://doi.org/10.1093/scan/nsl006.

Hasher, Lynn, David Goldstein, and Thomas Toppino. "Frequency and the Conference of Referential Validity." *Journal of Verbal Learning and Verbal Behavior* 16, no. 1 (February 1, 1977): 107–12. https://doi.org/10.1016/S0022-5371(77)80012-1.

Hilbert, Martin, Javier Vásquez, Daniel Halpern, Sebastián Valenzuela, and Eduardo Arriagada. "One Step, Two Step, Network Step? Complementary Perspectives on Communication Flows in Twittered Citizen Protests." *Social Science Computer Review* 35, no. 4 (August 1, 2017): 444–61. https://doi.org/10.1177/0894439316639561.

Hill, Shawndra, Foster Provost, and Chris Volinsky. "Network-Based Marketing: Identifying Likely Adopters via Consumer Networks." *Statistical Science* 21, no. 2 (May 2006): 256–76. https://doi.org/10.1214/088342306000000222.

Hinyard, Leslie J., and Matthew W. Kreuter. "Using Narrative Communication as a Tool for Health Behavior Change: A Conceptual, Theoretical, and Empirical Overview." *Health Education & Behavior* 34, no. 5 (October 2007): 777–92. https://doi.org/10.1177/1090198106291963.

Hodas, Nathan O., and Kristina Lerman. "The Simple Rules of Social Contagion." *Scientific Reports* 4, no. 1 (March 11, 2014): 4343. https://doi.org/10.1038/srep04343.

Hofstede, Geert. "Dimensionalizing Cultures: The Hofstede Model in Context." *Online Readings in Psychology and Culture* 2, no. 1 (December 1, 2011). https://doi.org/10.9707/2307-0919.1014.

Hofstede, Geert, Gert Jan Hofstede, and Michael Minkov. *Cultures and Organizations: Software of the Mind: Intercultural Cooperation and Its Importance for Survival*. 3rd ed. New York: McGraw-Hill, 2010.

House of Commons. "Disinformation and 'Fake News': Final Report." London: Digital, Culture, Media and Sport Committee, February 18, 2019. https://publications.parliament.uk/pa/cm201719/cmselect/cmcumeds/1791/1791.pdf.

Hovland, C.I. *The Order of Presentation in Persuasion*. New Haven, CT, US: Yale University Press, 1957.

Hussain, M. M., and Philip N. Howard. "Democracy's Fourth Wave? Information Technologies and the Fuzzy Causes of the Arab Spring." SSRN Scholarly Paper. Rochester, NY: Social Science Research Network, March 27, 2012. https://doi.org/10.2139/ssrn.2029711.

International IDEA. "Online Political Advertising and Microtargeting: The Latest Legal, Ethical, Political and Technological Evolutions." International Institute for Democracy and Electoral Assistance, December 16, 2020. https://doi.org/10.31752/idea.2020.65.

Isabella, Giuliana, and Hamilton C. Carvalho. "Chapter 4 - Emotional Contagion and Socialization: Reflection on Virtual Interaction." In *Emotions, Technology, and Behaviors*, edited by Sharon Y. Tettegah and Dorothy L. Espelage, 63–82. Emotions and Technology. San Diego: Academic Press, 2016. https://doi.org/10.1016/B978-0-12-801873-6.00004-2.

Iyengar, Shanto. "The Accessibility Bias in Politics: Television News and Public Opinion." *International Journal of Public Opinion Research* 2, no. 1 (March 1, 1990): 1–15. https://doi.org/10.1093/ijpor/2.1.1.

Jones, Harry. "A Guide to Monitoring and Evaluating Policy Influence." Overseas Development Institute, 2011. https://cdn.odi.org/media/documents/6453.pdf.

Kahan, Dan M. "Misconceptions, Misinformation, and the Logic of Identity-Protective Cognition." *SSRN Electronic Journal*, 2017. https://doi.org/10.2139/ssrn.2973067.

Kahneman, Daniel. *Thinking, Fast and Slow*. New York: Macmillan, 2013.

Kim, Nuri, Jon Krosnick, and Daniel Casasanto. "Moderators of Candidate Name-Order Effects in Elections: An Experiment." *Political Psychology* 36, no. 5 (2015): 525–42. https://doi.org/10.1111/pops.12178.

Klaassen, Niels. "Famke Louise Werkt Nu Samen Met Ic-Arts Gommers: Vandaag Begint Mondkapjes-Campagne." *AD*, October 5, 2020. https://www.ad.nl/binnenland/famke-louise-werkt-nu-samen-met-ic-arts-gommers-vandaag-begint-mondkapjes-campagne~a5691426/?referrer=https%3A%2F%2Fwww.google.com%2F.

Koch, Thomas, and Thomas Zerback. "Helpful or Harmful? How Frequent Repetition Affects Perceived Statement Credibility: Helpful or Harmful." *Journal of Communication* 63, no. 6 (December 2013): 993–1010. https://doi.org/10.1111/jcom.12063.

Koch-Baumgarten, Sigrid, and Katrin Voltmer, eds. *Public Policy and the Mass Media: The Interplay of Mass Communication and Political Decision Making*. London: Routledge, 2010. https://doi.org/10.4324/9780203858493.

Kolmer, Christian, and Holli A. Semetko. "Framing the Iraq War: Perspectives from American, U.K., Czech, German, South African, and Al-Jazeera News." *American Behavioral Scientist* 52, no. 5 (January 1, 2009): 643–56. https://doi.org/10.1177/0002764208326513.

Koninklijke Landmacht. "Visie Informatie Gestuurd Optreden Voor De Landmacht: Manoeuvreren in De Informatieomgeving." Commando Landstrijdkrachten (CLAS), November 2020.

Koppell, Jonathan Gs, and Jennifer A. Steen. "The Effects of Ballot Position on Election Outcomes." *The Journal of Politics* 66, no. 1 (February 2004): 267–81. https://doi.org/10.1046/j.1468-2508.2004.00151.x.

Kramer, A.D.I., J.E. Guillory, and J.T. Hancock. "Experimental Evidence of Massive-Scale Emotional Contagion through Social Networks." *Proceedings of the National Academy of Sciences* 111, no. 24 (June 17, 2014): 8788–90. https://doi.org/10.1073/pnas.1320040111.

Kruglanski, Arie W., Amiram Raviv, Daniel Bar-Tal, Alona Raviv, Keren Sharvit, Shmuel Ellis, Ruth Bar, Antonio Pierro, and Lucia Mannetti. "Says Who?: Epistemic Authority Effects in Social Judgment." In *Advances in Experimental Social Psychology*, 37:345–392. Elsevier Science & Technology, 2005. https://doi.org/10.1016/S0065-2601(05)37006-7.

Lang, Annie, John Newhagen, and Byron Reeves. "Negative Video as Structure: Emotion, Attention, Capacity, and Memory." *Journal of Broadcasting & Electronic Media* 40 (1996): 460.

Larson, Eric V., Richard E. Darilek, Daniel Gibran, Brian Nichiporuk, Amy Richardson, Lowell H. Schwartz, and Cathryn Quantic Thurston. "Foundations of Effective Influence Operations: A Framework for Enhancing Army Capabilities." Santa Monica, CA: RAND, 2009.

Lau, Richard R., and David P. Redlawsk. "Advantages and Disadvantages of Cognitive Heuristics in Political Decision Making." *American Journal of Political Science* 45, no. 4 (October 2001): 951. https://doi.org/10.2307/2669334.

Learmonth, Michael. "What Big Brands Are Spending on Google." Advertising Age, 2010. https://perma.cc/5L3B-SPTX.

Lecheler, Sophie, Mario Keer, Andreas R.T. Schuck, and Regula Hänggli. "The Effects of Repetitive News Framing on Political Opinions over Time." *Communication Monographs* 82, no. 3 (July 3, 2015): 339–58. https://doi.org/10.1080/03637751.2014.994646.

Levy, David, and Paul Nail. "Contagion: A Theoretical and Empirical Review and Reconceptualization." *Genetic, Social, and General Psychology Monographs* 119 (June 1, 1993): 233–84.

Lewis, Becca, and Alice E. Marwick. "Media Manipulation and Disinformation Online." Data & Society. Data & Society Research Institute, May 15, 2017. https://datasociety.net/library/media-manipulation-and-disinfo-online/.

Lind, William S., Col Keith Nightengale, Capt John F. Schmitt, Col Joseph W. Sutton, and LtCol Gary I. Wilson. "The Changing Face of War: Into the Fourth Generation." *Marine Corps Gazette*, n.d., 1989.

Linvill, Darren L., and Patrick L. Warren. "Troll Factories: Manufacturing Specialized Disinformation on Twitter." *Political Communication* 37, no. 4 (July 3, 2020): 447–67. https://doi.org/10.1080/10584609.2020.1718257.

Lorigo, Lori, Maya Haridasan, Hrönn Brynjarsdóttir, Ling Xia, Thorsten Joachims, Geri Gay, Laura Granka, Fabio Pellacini, and Bing Pan. "Eye tracking and online search: Lessons learned and challenges

ahead." *Journal of the American Society for Information Science and Technology* 59, no. 7 (2008): 1041–52. https://doi.org/10.1002/asi.20794.

MacAskill, Ewen, and defence correspondent. "British Army Creates Team of Facebook Warriors." *The Guardian*, January 31, 2015, sec. UK news. https://www.theguardian.com/uk-news/2015/jan/31/british-army-facebook-warriors-77th-brigade.

Machiavelli, Niccolò. *The Prince*, 2017. https://www.earlymoderntexts.com/assets/pdfs/machiavelli1532.pdf.

Mackay, Andrew, Steve Tatham, and Lee Rowland. "The Effectiveness of US Military Information Operations in Afghanistan 2001-2010 : Why RAND Missed the Point — Defence Academy of the United Kingdom." RAND Corporation, 2012.

Mahyar, Hamidreza, Seyed Rouzbeh Hasheminezhad, Elahe Ghalebi, Ali Nazemian, Radu Grosu, Ali Movaghar, and Hamid Rabiee. "Identifying Central Nodes for Information Flow in Social Networks Using Compressive Sensing." *Social Network Analysis and Mining* 8 (April 18, 2018): 33. https://doi.org/10.1007/s13278-018-0506-1.

Makhortykh, Mykola, and Maryna Sydorova. "Social Media and Visual Framing of the Conflict in Eastern Ukraine." *Media, War & Conflict* 10, no. 3 (December 2017): 359–81. https://doi.org/10.1177/1750635217702539.

Manaev, Oleg. "The Influence of Western Radio on the Democratization of Soviet Youth." *Journal of Communication* 41, no. 2 (June 1, 1991): 72–91. https://doi.org/10.1111/j.1460-2466.1991.tb02310.x.

Martel, Cameron, Gordon Pennycook, and David G. Rand. "Reliance on Emotion Promotes Belief in Fake News." *Cognitive Research: Principles and Implications* 5, no. 1 (October 7, 2020): 47. https://doi.org/10.1186/s41235-020-00252-3.

Maschmeyer, Lennart. "Subversion over Offense: Why the Practice of Cyber Conflict Looks Nothing like Its Theory and What This Means for Strategy and Scholarship." *Offensive Cyber Working Group* (blog), January 19, 2022. https://offensivecyber.org/2022/01/19/subversion-over-offense-why-the-practice-of-cyber-conflict-looks-nothing-like-its-theory-and-what-this-means-for-strategy-and-scholarship/.

Matz, S.C., M. Kosinski, G. Nave, and D. J. Stillwell. "Psychological Targeting as an Effective Approach to Digital Mass Persuasion." *Proceedings of the National Academy of Sciences* 114, no. 48 (November 28, 2017): 12714–19. https://doi.org/10.1073/pnas.1710966114.

Mazzoleni, Gianpietro, and Winfried Schulz. "'Mediatization' of Politics: A Challenge for Democracy?" *Political Communication* 16, no. 3 (July 1, 1999): 247–61. https://doi.org/10.1080/105846099198613.

McCombs, Maxwell. "A Look at Agenda-Setting: Past, Present and Future." *Journalism Studies* 6, no. 4 (November 1, 2005): 543–57. https://doi.org/10.1080/14616700500250438.

Michie, S. "Making Psychological Theory Useful for Implementing Evidence Based Practice: A Consensus Approach." *Quality and Safety in Health Care* 14, no. 1 (February 1, 2005): 26–33. https://doi.org/10.1136/qshc.2004.011155.

Michie, Susan, Rachel N Carey, Marie Johnston, Alexander J Rothman, Marijn de Bruin, Michael P Kelly, and Lauren E Connell. "From Theory-Inspired to Theory-Based Interventions: A Protocol for Developing and Testing a Methodology for Linking Behaviour Change Techniques to Theoretical Mechanisms of Action." *Annals of Behavioral Medicine* 52, no. 6 (May 18, 2018): 501–12. https://doi.org/10.1007/s12160-016-9816-6.

Milgram, Stanley. "The Experience of Living in Cities." *Science*, March 13, 1970. https://www.science.org/doi/abs/10.1126/science.167.3924.1461.

Ministère des Armées. "Florence Parly présente la doctrine militaire de lutte informatique d'influence," October 21, 2021. https://www.defense.gouv.fr/actualites/articles/florence-parly-presente-la-doctrine-militaire-de-lutte-informatique-d-influence.

———. "Strategic Update 2021." DICoD - Bureau des Éditions, January 2021.

Ministry of Defence. "Netherlands Defence Doctrine." The Hague, June 2019. https://english.defensie.nl/downloads/publications/2019/06/27/netherlands-defence-doctrine.

Morley, Ian E. "Henri Tajfel's Human Groups and Social Categories." *British Journal of Social Psychology* 21, no. 3 (1982): 189–201. https://doi.org/10.1111/j.2044-8309.1982.tb00540.x.

Moss, Jonathan, Emily Robinson, and Jake Watts. "Brexit and the Everyday Politics of Emotion: Methodological Lessons from History." *Political Studies* 68, no. 4 (November 1, 2020): 837–56. https://doi.org/10.1177/0032321720911915.

Munoz, Arturo. *U.S. Military Information Operations in Afghanistan: Effectiveness of Psychological Operations 2001-2010*. Rand Corporation Monograph Series. Santa Monica, CA: RAND, 2012.

Murdock Jr., Bennet B. "The Serial Position Effect of Free Recall." *Journal of Experimental Psychology* 64, no. 5 (1962): 482–88. https://doi.org/10.1037/h0045106.

Nai, Alessandro, and Jürgen Maier. "Is Negative Campaigning a Matter of Taste? Political Attacks, Incivility, and the Moderating Role of Individual Differences." *American Politics Research* 49, no. 3 (May 1, 2021): 269–81. https://doi.org/10.1177/1532673X20965548.

Narula, Sunil. "Psychological Operations (PSYOPs): A Conceptual Overview." *Strategic Analysis* 28, no. 1 (January 2004): 177–92. https://doi.org/10.1080/09700160408450124.

NATO. "AJP-3.10 Allied Joint Doctrine for Information Operations." NATO Standardization Office, November 23, 2009. https://info.publicintelligence.net/NATO-IO.pdf.

Nickerson, Raymond S. "Confirmation Bias: A Ubiquitous Phenomenon in Many Guises." *Review of General Psychology* 2, no. 2 (June 1, 1998): 175–220. https://doi.org/10.1037/1089-2680.2.2.175.

Niksch, Christian Aditya. "The Strategic Challenges of Urban Warfare." *University of Denver Electronic Theses and Dissertations*, no. 1285 (June 2017): 119.

Ohlin, Jens David, Kevin Govern, and Claire Oakes Finkelstein, eds. *Cyberwar: Law and Ethics for Virtual Conflicts*. First edition. Oxford, United Kingdom: Oxford University Press, 2015.

Panagopoulos, Costas. "All about That Base: Changing Campaign Strategies in U.S. Presidential Elections." *Party Politics* 22, no. 2 (March 1, 2016): 179–90. https://doi.org/10.1177/1354068815605676.

Papakyriakopoulos, Orestis, Simon Hegelich, Morteza Shahrezaye, and Juan Carlos Medina Serrano. "Social Media and Microtargeting: Political Data Processing and the Consequences for Germany." *Big Data & Society* 5, no. 2 (July 1, 2018): 2053951718811844. https://doi.org/10.1177/2053951718811844.

Patterson, Kerry, ed. *Influencer: The Power to Change Anything*. New York: McGraw-Hill, 2008.

Paul, Christopher, and Miriam Matthews. *The Russian "Firehose of Falsehood" Propaganda Model: Why It Might Work and Options to Counter It*. RAND Corporation, 2016. https://doi.org/10.7249/PE198.

Pennycook, Gordon, Tyrone D. Cannon, and David G. Rand. "Prior Exposure Increases Perceived Accuracy of Fake News." *Journal of Experimental Psychology. General* 147, no. 12 (December 2018): 1865–80. https://doi.org/10.1037/xge0000465.

Pennycook, Gordon, Ziv Epstein, Mohsen Mosleh, Antonio A. Arechar, Dean Eckles, and David G. Rand. "Shifting Attention to Accuracy Can Reduce Misinformation Online." *Nature* 592, no. 7855 (April 2021): 590–95. https://doi.org/10.1038/s41586-021-03344-2.

Pennycook, Gordon, and David G. Rand. "Lazy, Not Biased: Susceptibility to Partisan Fake News Is Better Explained by Lack of Reasoning than by Motivated Reasoning." *Cognition*, The Cognitive Science of Political Thought, 188 (July 1, 2019): 39–50. https://doi.org/10.1016/j.cognition.2018.06.011.

———. "The Psychology of Fake News." *Trends in Cognitive Sciences* 25, no. 5 (May 2021): 388–402. https://doi.org/10.1016/j.tics.2021.02.007.

Perlroth, Nicole. *This Is How They Tell Me the World Ends: The Cyberweapons Arms Race*. Bloomsbury Publishing, 2021.

Perot, Elie. "The Blurring of War and Peace." *Survival* 61, no. 2 (March 4, 2019): 101–10. https://doi.org/10.1080/00396338.2019.1589089.

Petty, Richard E., and Pablo Briñol. "Emotion and Persuasion: Cognitive and Meta-Cognitive Processes Impact Attitudes." *Cognition and Emotion* 29, no. 1 (January 2, 2015): 1–26. https://doi.org/10.1080/02699931.2014.967183.

Petty, Richard E., and John T. Cacioppo. *Communication and Persuasion: Central and Peripheral Routes to Attitude Change*. Springer Series in Social Psychology. New York Berlin Heidelberg: Springer, 1986.

Pew Research Center. "Important Issues in the 2020 Election," August 13, 2020. https://www.pewresearch.org/politics/2020/08/13/important-issues-in-the-2020-election/.

Pijpers, Peter B.M.J. "Influence Operations in Cyberspace: On the Applicability of Public International Law during Influence Operations in a Situation below the Threshold of the Use of Force." Universiteit van Amsterdam, 2022. https://pure.uva.nl/ws/files/66794608/Thesis.pdf.

Pijpers, Peter B.M.J., and Paul A.L. Ducheine. "'If You Have a Hammer…' Reshaping the Armed Forces' Discourse on Information Maneuver." Amsterdam Center for International Law, 2021.

Plant, Bernice R. C., Julia D. Irwin, and Eugene Chekaluk. "The Effects of Anti-Speeding Advertisements on the Simulated Driving Behaviour of Young Drivers." *Accident; Analysis and Prevention* 100 (March 2017): 65–74. https://doi.org/10.1016/j.aap.2017.01.003.

Pornpitakpan, Chanthika. "The Persuasiveness of Source Credibility: A Critical Review of Five Decades' Evidence." *Journal of Applied Social Psychology* 34, no. 2 (2004): 243–81. https://doi.org/10.1111/j.1559-1816.2004.tb02547.x.

Price, Vincent, and David Tewksbury. "News Values and Public Opinion: A Theoretical Account of Media Priming and Framing," 13:173–212, 1997.

Raven, Bertram H. "The Bases of Power and the Power/Interaction Model of Interpersonal Influence: Bases of Power." *Analyses of Social Issues and Public Policy* 8, no. 1 (September 15, 2008): 1–22. https://doi.org/10.1111/j.1530-2415.2008.00159.x.

Raven, Bertram Herbert. *Social Influence and Power*. University of California, Department of Psychology, 1964.

Resnick, Brian. "Cambridge Analytica's 'Psychographic Microtargeting': What's Bullshit and What's Legit." Vox, March 23, 2018. https://www.vox.com/science-and-health/2018/3/23/17152564/cambridge-analytica-psychographic-microtargeting-what.

Reuters. "Rival Disinformation Campaigns Targeted African Users, Facebook Says." *The Guardian*, December 15, 2020, sec. Technology. https://www.theguardian.com/technology/2020/dec/15/central-african-republic-facebook-disinformation-france-russia.

Rid, Thomas. *Active Measures: The Secret History of Disinformation and Political Warfare*. New York: Farrar, Straus and Giroux, 2020.

Rogers, Everett M. *Diffusion of Innovations*. 5th Edition. New York: Simon & Schuster, 2003.

Romer, Daniel, Kathleen Hall Jamieson, and Sean Aday. "Television News and the Cultivation of Fear of Crime." *Journal of Communication* 53, no. 1 (2003): 88–104. https://doi.org/10.1111/j.1460-2466.2003.tb03007.x.

Rosenberg, Matthew, Nicholas Confessore, and Carole Cadwalladr. "How Trump Consultants Exploited the Facebook Data of Millions." *The New York Times*, March 17, 2018, sec. U.S. https://www.nytimes.com/2018/03/17/us/politics/cambridge-analytica-trump-campaign.html.

Ross, Robert M., David Rand, and Gordon Pennycook. "Beyond 'Fake News': Analytic Thinking and the Detection of False and Hyperpartisan News Headlines." PsyArXiv, November 13, 2019. https://doi.org/10.31234/osf.io/cgsx6.

Rozin, Paul, and Edward B. Royzman. "Negativity Bias, Negativity Dominance, and Contagion." *Personality and Social Psychology Review* 5, no. 4 (November 1, 2001): 296–320. https://doi.org/10.1207/S15327957PSPR0504_2.

Ruby, Robert A. Pape, Keven. "The Capitol Rioters Aren't Like Other Extremists." The Atlantic, February 2, 2021. https://www.theatlantic.com/ideas/archive/2021/02/the-capitol-rioters-arent-like-other-extremists/617895/.

Runciman, David, Hellen Thompson, and Peter Geoghegan. "Talking Politics - Democracy for Sale." Accessed November 10, 2021. https://www.talkingpoliticspodcast.com/blog/tag/Cambridge+Analytica.

Salam, Erum. "Majority of Covid Misinformation Came from 12 People, Report Finds." *The Guardian*, July 17, 2021, sec. World news. https://www.theguardian.com/world/2021/jul/17/covid-misinformation-conspiracy-theories-ccdh-report.

Scheufele, Dietram A., and David Tewksbury. "Framing, Agenda Setting, and Priming: The Evolution of Three Media Effects Models: Models of Media Effects." *Journal of Communication* 57, no. 1 (March 2007): 9–20. https://doi.org/10.1111/j.0021-9916.2007.00326.x.

Schwartz, Shalom H. "Universals in the Content and Structure of Values: Theoretical Advances and Empirical Tests in 20 Countries." In *Advances in Experimental Social Psychology*, edited by Mark P. Zanna, 25:1–65. Academic Press, 1992. https://doi.org/10.1016/S0065-2601(08)60281-6.

Scott, Mark. "The Facebook Papers Reveal the Limits of Regulation. It's Time to Think Bigger." *POLITICO*, October 26, 2021. https://www.politico.eu/article/facebook-papers-reveal-limits-of-regulation-online-content-lawmakers/.

Seddon, Max. "Documents Show How Russia's Troll Army Hit America." BuzzFeed News, June 2, 2014. https://www.buzzfeednews.com/article/maxseddon/documents-show-how-russias-troll-army-hit-america.

Shen, Fuyuan, Vivian C. Sheer, and Ruobing Li. "Impact of Narratives on Persuasion in Health Communication: A Meta-Analysis." *Journal of Advertising* 44, no. 2 (April 3, 2015): 105–13. https://doi.org/10.1080/00913367.2015.1018467.

Shoemaker, Pamela J., and Timothy Vos. *Gatekeeping Theory*. New York: Routledge, 2009. https://doi.org/10.4324/9780203931653.

Simner, Marvin L. "Newborn's Response to the Cry of Another Infant." *Developmental Psychology* 5, no. 1 (1971): 136–150. https://content.apa.org/doi/10.1037/h0031066.

Simon, H. A. "Rational Choice and the Structure of the Environment." *Psychological Review* 63, no. 2 (1956): 129–38. https://doi.org/10.1037/h0042769.

Singer, Jane B. "User-Generated Visibility: Secondary Gatekeeping in a Shared Media Space." *New Media & Society* 16, no. 1 (February 1, 2014): 55–73. https://doi.org/10.1177/1461444813477833.

Singer, P.W., and Emerson T. Brooking. *LikeWar: The Weaponization of Social Media*. Houghton Mifflin Harcourt, 2018.

Slater, Michael D., Donna Rouner, and Marilee Long. "Television Dramas and Support for Controversial Public Policies: Effects and Mechanisms." *Journal of Communication* 56, no. 2 (June 1, 2006): 235–52. https://doi.org/10.1111/j.1460-2466.2006.00017.x.

Smelter, Thomas J., and Dustin P. Calvillo. "Pictures and Repeated Exposure Increase Perceived Accuracy of News Headlines." *Applied Cognitive Psychology* 34, no. 5 (2020): 1061–71. https://doi.org/10.1002/acp.3684.

Smith, N. Kyle, Jeff T. Larsen, Tanya L. Chartrand, John T. Cacioppo, Heather A. Katafiasz, and Kathleen E. Moran. "Being Bad Isn't Always Good: Affective Context Moderates the Attention Bias toward Negative Information." *Journal of Personality and Social Psychology* 90, no. 2 (2006): 210–20. https://doi.org/10.1037/0022-3514.90.2.210.

Solon, Olivia, and Sam Levin. "How Google's Search Algorithm Spreads False Information with a Rightwing Bias." *The Guardian*, December 16, 2016, sec. Technology. https://www.theguardian.com/technology/2016/dec/16/google-autocomplete-rightwing-bias-algorithm-political-propaganda.

Soroka, Stuart, and Stephen McAdams. "News, Politics, and Negativity." *Political Communication* 32, no. 1 (January 2, 2015): 1–22. https://doi.org/10.1080/10584609.2014.881942.

Spaulding, Hugo. "Russia's False ISIS Narrative in Syria." Institute for the Study of War, December 1, 2015. https://www.understandingwar.org/sites/default/files/Russia%20False%20Narrative%20in%20Syria_1.pdf.

Stavraki, Maria, Grigorios Lamprinakos, Pablo Briñol, Richard E. Petty, Kalipso Karantinou, and Darío Díaz. "The Influence of Emotions on Information Processing and Persuasion: A Differential Appraisals Perspective." *Journal of Experimental Social Psychology* 93 (March 1, 2021): 104085. https://doi.org/10.1016/j.jesp.2020.104085.

Strömbäck, Jesper, and Frank Esser. "Mediatization of Politics: Towards a Theoretical Framework." In *Mediatization of Politics: Understanding the Transformation of Western Democracies*, edited by Frank Esser and Jesper Strömbäck, 3–28. London: Palgrave Macmillan UK, 2014. https://doi.org/10.1057/9781137275844_1.

Tamul, Daniel J., and Jessica C. Hotter. "Exploring Mechanisms of Narrative Persuasion in a News Context: The Role of Narrative Structure, Perceived Similarity, Stigma, and Affect in Changing Attitudes." Edited by Simine Vazire and Chris Chambers. *Collabra: Psychology* 5, no. 1 (January 1, 2019): 51. https://doi.org/10.1525/collabra.172.

Tatham, S. A, Defence Academy of the United Kingdom, and Advanced Research and Assessment Group. *Strategic Communication: A Primer*. Shrivenham: Defence Academy of the United Kingdom, Advanced Research and Assessment Group, 2008.

Thaler, Richard H., and Cass R. Sunstein. *Nudge: Improving Decisions about Health, Wealth, and Happiness*. New Haven: Yale University Press, 2008.

The Dirty Facebook Tricks of the Different Parties, 2021. https://youtu.be/8vq6MzGNZyM?t=803.

"The Social Dilemma." Netflix. Accessed November 18, 2021. https://www.netflix.com/nl/title/81254224.

Thomas, Timothy. "Russia's Reflexive Control Theory and the Military." *The Journal of Slavic Military Studies* 17, no. 2 (June 2004): 237–56. https://doi.org/10.1080/13518040490450529.

Thompson, Stuart A., and Davey Alba. "Fact and Mythmaking Blend in Ukraine's Information War." *The New York Times*, March 3, 2022, sec. Technology. https://www.nytimes.com/2022/03/03/technology/ukraine-war-misinfo.html.

Tiedens, Larissa Z., and Susan Linton. "Judgment under Emotional Certainty and Uncertainty: The Effects of Specific Emotions on Information Processing." *Journal of Personality and Social Psychology* 81, no. 6 (2001): 973–88. https://doi.org/10.1037/0022-3514.81.6.973.

Tourangeau, Roger, Mick P. Couper, and Frederick G. Conrad. "'Up Means Good': The Effect of Screen Position on Evaluative Ratings in Web Surveys." *Public Opinion Quarterly* 77, no. Suppl 1 (2013): 69–88. https://doi.org/10.1093/poq/nfs063.

Washington Post. "Tracking All of President Trump's False or Misleading Claims," January 20, 2021. https://www.washingtonpost.com/graphics/politics/trump-claims-database/.

Tuchman, Gaye. "Making News by Doing Work: Routinizing the Unexpected." *American Journal of Sociology* 79, no. 1 (July 1, 1973): 110–31. https://doi.org/10.1086/225510.

Tversky, Amos, and Daniel Kahneman. "Judgment under Uncertainty: Heuristics and Biases." *Science*, September 27, 1974. https://www.science.org/doi/abs/10.1126/science.185.4157.1124.

Tzu, Sun. *The Art of War*. Translated by Lionel Giles. Forgotten Books, 2010.

Usherwood, Simon, and Katharine AM Wright. "Sticks and Stones: Comparing Twitter Campaigning Strategies in the European Union Referendum." *The British Journal of Politics and International Relations* 19, no. 2 (May 1, 2017): 371–88. https://doi.org/10.1177/1369148117700659.

Valente, Thomas W., and Rebecca L. Davis. "Accelerating the Diffusion of Innovations Using Opinion Leaders." *The ANNALS of the American Academy of Political and Social Science* 566, no. 1 (November 1, 1999): 55–67. https://doi.org/10.1177/000271629956600105.

Visentin, Marco, Gabriele Pizzi, and Marco Pichierri. "Fake News, Real Problems for Brands: The Impact of Content Truthfulness and Source Credibility on Consumers' Behavioral Intentions toward the Advertised Brands." *Journal of Interactive Marketing* 45 (February 1, 2019): 99–112. https://doi.org/10.1016/j.intmar.2018.09.001.

Visontay, Elias. "Ukraine Soldiers Told Russian Officer 'Go Fuck Yourself' before They Died on Island." *The Guardian*, February 25, 2022, sec. World news. https://www.theguardian.com/world/2022/feb/25/ukraine-soldiers-told-russians-to-go-fuck-yourself-before-black-sea-island-death.

Wallis, Jacob, Tom Uren, Elise Thomas, Albert Zhang, Samantha Hoffman, Lin Li, Alexandra Pascoe, and Danielle Cave. "Retweeting through the Great Firewall: A Persistent and Undeterred Threat Actor." The Australian Strategic Policy Institute, June 2020. https://www.aspi.org.au/report/retweeting-through-great-firewall.

Wanless, Alicia, and Michael Berk. "The Changing Nature of Propaganda." In *The World Information War: Western Resilience, Campaigning, and Cognitive Effects*, edited by Timothy Clack and Robert Johnson. Routledge/Taylor & Francis Group, 2021. https://www.taylorfrancis.com/chapters/edit/10.4324/9781003046905-16/information-warfare-robert-johnson.

Wirz, Dominique. "Persuasion Through Emotion? An Experimental Test of the Emotion-Eliciting Nature of Populist Communication." *International Journal of Communication* 12 (2018): 1114–38. https://doi.org/10.5167/UZH-149959.

Woodside, Arch G., and Mark D. Uncles. "How Behavioral Primacy Interacts with Short-Term Marketing Tactics to Influence Subsequent Long-Term Brand Choice." *Journal of Advertising Research* 45, no. 2 (June 2005): 229–40. https://doi.org/10.1017/S0021849905050257.

Woolley, Samuel C., and Philip N. Howard. "Automation, Algorithms, and Politics: Political Communication, Computational Propaganda, and Autonomous Agents." *International Journal of Communication* 10 (October 12, 2016): 9.

Wu, Jia, Zhigang Chen, and Ming Zhao. "An Efficient Data Packet Iteration and Transmission Algorithm in Opportunistic Social Networks." *Journal of Ambient Intelligence and Humanized Computing* 11 (August 1, 2020). https://doi.org/10.1007/s12652-019-01480-2.

Yablokov, Ilya. "Conspiracy Theories as a Russian Public Diplomacy Tool: The Case of *Russia Today* (*RT*)." *Politics* 35, no. 3–4 (November 2015): 301–15. https://doi.org/10.1111/1467-9256.12097.

Yang, Hyeseung, Srividya Ramasubramanian, and Mary Beth Oliver. "Cultivation Effects on Quality of Life Indicators: Exploring the Effects of American Television Consumption on Feelings of Relative Deprivation in South Korea and India." *Journal of Broadcasting & Electronic Media* 52, no. 2 (May 30, 2008): 247–67. https://doi.org/10.1080/08838150801992060.

Yang, Li, Yafeng Qiao, Zhihong Liu, Jianfeng Ma, and Xinghua Li. "Identifying Opinion Leader Nodes in Online Social Networks with a New Closeness Evaluation Algorithm." *Soft Computing* 22, no. 2 (January 1, 2018): 453–64. https://doi.org/10.1007/s00500-016-2335-3.

Yang, Liu, and Huailin Chen. "Framing Terrorist Attacks: A Multi-Proximity Model." *International Communication Gazette* 81, no. 5 (August 1, 2019): 395–417. https://doi.org/10.1177/1748048518802245.

Ye Hee Lee, Michelle. "Trump's False Claim That the Murder Rate Is the 'Highest It's Been in 45 Years.'" *Washington Post*, March 11, 2016. https://www.washingtonpost.com/news/fact-checker/wp/2016/11/03/trumps-false-claim-that-the-murder-rate-is-the-highest-its-been-in-45-years/.

Yoo, Jina H., Matthew W. Kreuter, Choi Lai, and Qiang Fu. "Understanding Narrative Effects: The Role of Discrete Negative Emotions on Message Processing and Attitudes among Low-Income African American Women." *Health Communication* 29, no. 5 (2014): 494–504. https://doi.org/10.1080/10410236.2013.776001.

Zannettou, Savvas, Tristan Caulfield, William Setzer, Michael Sirivianos, Gianluca Stringhini, and Jeremy Blackburn. "Who Let The Trolls Out?: Towards Understanding State-Sponsored Trolls," 353–62, 2019. https://doi.org/10.1145/3292522.3326016.

Zhou, Mi, George H. Chen, Pedro Ferreira, and Michael D. Smith. "Consumer Behavior in the Online Classroom: Using Video Analytics and Machine Learning to Understand the Consumption of Video Courseware." *Journal of Marketing Research* 58, no. 6 (December 1, 2021): 1079–1100. https://doi.org/10.1177/00222437211042013.

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