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Cognitive manipulation in the 21st century

Abstract

This article explores the effects that can be generated in modern societies by cognitive manipulation using advanced tools, the media (including the Internet and social networks) and theories of social behaviour and cognitive perception. It also describes how al-Qaeda and the Islamic state have used these techniques as part of their overall strategies.

Keywords

Communication, manipulation, behaviour, social networks, al-Qaeda, IS, Gramsci

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Introduction

This is not a recent development, but it is current in international and domestic politics. Cognitive manipulation, the use of disinformation, of hoaxes (fake news) or the importance “of the story” have generated rivers of ink, not only in academic environments, but also in the mass media. The alleged Russian disinformation campaigns in the Ukrainian war, the election of President Trump, Brexit and COVID-19 are some of the episodes that have made all this very fashionable.

However, despite its topicality, it is not easy to find a satisfactory theoretical framework that defines, frames and explains the phenomenon in a holistic way. This is not surprising because we have to dig into very distant disciplines: military strategy, sociology, psychology, communication, cybernetics and even history.

This article originates from a study carried out at the Escuela de Estado Mayor de las Fuerzas Armadas in Madrid, when the Strategy Department identified the need to investigate the strategic effects that can be generated by cognitive manipulation and why, although nothing new, the tools available in the 21st century make it possible to considerably increase these effects when compared with what just two decades ago.

The analysis of the social, strategic and cognitive framework of the information space suggests that it should be considered a new domain of political-military operation. A domain that must operate in synchrony with classic – land, air, sea – and not so classic – cyberspace – spaces. A space that, in the framework of their strategies, has been used by two of the most relevant players that the West has faced in the last two decades: al-Qaeda and the Islamic State.

Social structure: Marxism and structuralism. Antonio Gramsci and Louis Althusser

Humans have been politically organised animals for thousands of years. All social structures, from the simplest tribes to the most complex states, are organised into pyramidal hierarchies: *roughly* speaking, there is always one or more leaders – s – a ruling class – in privileged positions in the social structure and a dominated class that plays a subordinate role. The structure is explained by the impossibility of managing the large number of relationships generated in a society without hierarchies and the simplification and efficiency provided by hierarchical structures¹.

The three great African primates, which share a common ancestor with humans, have very hierarchical structures; and for some five thousand years humans have gen-

¹ TOULOUSE, G. and BOK, J., 1978. “Principe de moindre difficulté et structures hiérarchiques”. *Revue française de sociologie* [online], vol. 19, no. 3, pp. 391-406. ISSN 00352969. DOI 10.2307/3321051. Available at: <http://www.jstor.org/stable/3321051>

erated political structures that have functioned almost entirely in a hierarchical manner. Philosophical and academic discussions between those who claim that hierarchy is part of human nature – what we might call *Hobbesians* – and those who, like Rousseau, claim that its true nature is egalitarian, have not been resolved²; but we must say in favour of the former that there is no known political experience, since history is such, of a society that has functioned without a hierarchical structure. The structure may have many levels or only a few; it may have a wide base and a narrow cusp – the classic pyramid shape– or perhaps look more like a trapezoid. But whether they are tyrannical or democratic, all structures place their members at different levels.

Marxism promised a classless society. For Karl Marx, classes were created by the relationship with means of production: exploiting classes own these means and exploited classes work for the owners. Marx held that equality is an inherent condition of man, which had deteriorated with the introduction of modern modes of production and the alienation they generated in its nature³. So the fracture and conflicts that this class difference produces could only be eliminated by removing ownership of means of production, which would be common. Marx believed it was a final state that would inevitably be reached, because of the internal contradictions of capitalism, which would lead to its destruction in the medium term^{4 5}.

Antonio Gramsci, founder of the Italian Communist Party, reinterpreted Marx by pointing out that the social class at the tip of the pyramid dominated the rest in a cultural way; it was the imposed cultural hegemony that prevented the dominated from rebelling. A change of system required, first of all, a change of cultural patterns, a change of *cultural hegemony*⁶. Gramsci's approach⁷ was Marxist – exploited and ex-

2 BOEHM, C.,1999. "The Question of Egalitarian Society", in *Hierarchy in the Forest*. Harvard University Press (The Evolution of Egalitarian Behavior), pp. 1-15. doi: 10.2307/j.ctvjf9xr4.4

3 LORD, B.,2014. "Spinoza, equality, and hierarchy", *History of Philosophy Quarterly*. [North American Philosophical Publications, University of Illinois Press], 31(1), pp. 59-77. Available at: <http://www.jstor.org/stable/43488087>

4 SPIEGEL, H. W., 1996. *The development of economic thought*. Omega

5 What is certain is that the position in the structure hierarchical scale causes social fracture similar to ownership of production means. In the former Soviet Union, in theory a classless society, a dominant elite was generated with a clear difference between those who were members of the communist party—who occupied the upper echelons of the pyramid and thus enjoyed the advantages of their position—and those who occupied roles at the base of the pyramid. The contradiction did not go unnoticed, but was avoided by suppressing or limiting sociological studies or blaming their results on anti-revolutionary practices. Zaslavsky, V., 1977. "Sociology in the Contemporary Soviet Union". *Social Research* [online], vol. 44, no. 2. pp. 330-353. ISSN 0037783X. Available at: <http://www.jstor.org/stable/40970288>

6 GRAMSCI, A., 1935. *Cahiers de Prison 1-5*. 1996. Paris: Gallimard. ISBN 9780853152804

7 Gramsci's ideas, which emerged in fascist Italy during the period between World Wars, were collected in notebooks written during his long stay in prison, where he died. His notebooks were published after his death.

exploitative in a capitalist model – but his cultural hegemony change model, as a step prior to political change, can be applied in any kind of social conflict: identity nationalisms, anti-globalisation movements, re-Islamisation, etc.

Louis Althusser and French structuralism took up and extended Gramsci's ideas in the 1960s. For Althusser, ideology represents the imaginary relationship of individuals with the real-life situation; ideologies are circulated by agents (the media) who help to build those ideologies – and therefore the relationship and acceptance by people of their existence – without individuals being aware of it⁸. Other structuralist or post-structuralist authors, such as Noam Chomsky, Michel Foucault or Jacques Derrida, developed and nuanced Althusser's ideas on the social construction of reality⁹, also determined by the history and subjective perception of individuals. Derrida said that language does not limit itself to describing the world, but acts upon it. And Noam Chomsky's phrase is well known:

“But... when you can't control people by force... you have to control what people think. And the standard way to do this is to resort to what in more honest days used to be called propaganda, manufacture of consent, creation of necessary illusion... marginalizing the public or reducing them to apathy in some fashion”¹⁰

Under this prism, communication is therefore a means of domination, because it determines our ideology and our vision and acceptance of the world and its hierarchies. Modern media are excellent vehicles for this generation of consensus, of creating the 'necessary illusion' to which Chomsky refers. Is this something new? And if not, what has changed?

Propaganda and manipulating information

The term propaganda has a religious origin. It was coined in the 17th century by Pope Gregory XV when he structured the propagation of the faith (*propaganda fide*) carried out by missionaries. But propaganda and manipulating information began much earlier: with tales, what we call today 'the story'. They began when the narrators or troubadours of the past sang feats and legends orally, legends were first not only heard but also written down more than four thousand years ago – the first written

8 ALTHUSSER, L., 1971. *Aparatos ideológico del Estado (Ideological apparatus of the State)*. Medellín: Editorial La oveja negra.

9 Term coined by Peter Berger and Thomas Luckmann in his work *The social construction of reality*. Berger, P. and Luckmann, T., 1968. *The social construction of reality*. 2003. Buenos Aires: Amorrurtu. ISBN 950-518-009-8.

10 HERMAN, E. s. and CHOMSKY, N., 1988. *Manufacturing Consent: The Political Economy of the Mass Media*. New York: Pantheon Books. ISBN 0-375-71449-9

tale was probably the Epic of Gilgamesh – and that throughout history have been extended, first with the emergence of the printing press and then, in much more recent times, with radio, cinema and television.

In Spain, to look for nearby examples of negative propaganda, we have suffered the black legend, an expression coined by Julián Juderías¹¹. But there are many and very numerous historical examples. The notorious ‘Boston Massacre’, one of the epic episodes of American independence, which inflamed citizens of the then British provinces in America, was actually the death of eight Boston citizens in a mass riot against British troops. News of the ‘massacre’ spread throughout the British colonies in America thanks to leaflets distributed by Samuel Adams, who is suspected of being the instigator of the mutiny, in which the rebels also fired first, without it ever being clear who did it. Another classic example is William Randolph Hearst’s legendary instructions to his correspondent in Cuba during the 1898 Spanish-American conflict: “You furnish the pictures. I’ll furnish the war”. Manipulating information to achieve political or economic objectives has not been invented in the 21st century.

We will analyse the role of the media in detail later on; Thomas Jefferson said “Nothing can now be believed which is seen in a newspaper. Truth itself becomes suspicious by being put into that polluted vehicle”¹². But there are more methods of communication than the traditional ones that influence public opinion; one of the most important is terrorism.

Terrorism can be defined in many ways. For the Royal Academy of the Spanish language, terrorism is: ‘domination by terror’, or ‘succession of acts of violence to instil terror’. This definition given by Fernando Reinares is more interesting:

“A set of violent actions that generate [...] psychological effects disproportionate to their material consequences and that are intended to condition the attitudes of this social group and guide their behaviour in a certain direction”¹³.

Because Reinares points out two key elements of communication in terrorism: a) generating psychological effects and b) guiding behaviour, something that the definitions of the Royal Academy do not do.

¹¹ Spanish sociologist and historian, 1878-1918. He died of the so-called ‘Spanish flu’, a pandemic that originated in Kansas, but was called Spanish by a *Time Magazine* cover at the time, in what seems like a macabre wink of fate confirming the thesis of Julián Juderías himself.

¹² In a letter to a citizen of Virginia dated 1807. Jefferson, T., 1987. *Autobiografía y otros escritos (Autobiography and other writings)*. 1987. Madrid: Tecnos.

¹³ REINARES, F., 1998. *Terrorismo y Antiterrorismo (Terrorism and Anti-terrorism)*. 1998. Barcelona: PAIDOS. ISBN 9788449306327

As Luis Miguel Sordo points out "terrorism takes advantage of the media and its immediacy"¹⁴. Terrorism is not effective if there is no audience. An audience that has changed over time and with the evolution of communication; for the *hashshashin* (assassins) of Hassan Ibn Sabbah, the old man of the mountain of the 12th century', his audience was the leaders of the region where his hitmen were killing; for ETA, it was Spanish society. And for al-Qaeda, global society. The recipients of the message, of *the story*, change because the political objectives change, but also because different and much wider audiences can be reached: the media today makes it possible to spread the message massively and almost instantaneously to the entire globe.

Twenty years ago practically nobody had heard the term strategic communication; today it is in most of the Security Strategies of Western countries and is considered essential to international Jihad terrorist organisations. The current al-Qaeda leader, al-Zawahiri, pointed out in 2005 in a letter to al-Zarqawi that "more than half of this battle is taking place in the battlefield of the media [...] We are in a media battle in a race for the hearts and minds of our *Ummah*"¹⁵.

Why does information produce effects at strategic level? To create the theoretical framework, it is useful to review, even briefly, the teachings of the great master of modern strategy: Carl Von Clausewitz.

In war, Clausewitz's analysis requires the combined action of three elements: Firstly, the rational, which is usually identified with the government and with the cost-benefit analysis of political objectives; secondly, the creative and random, usually identified with the army and the uncertainties of military campaigns; and thirdly, the passionate element, usually identified with the people¹⁶. Winning a war requires that these elements endure over time with the 'intensity' needed to defeat the enemy. Although there is talk of the end of the Trinitarian wars and the obsolescence of his model in the 21st century, in reality Clausewitz's Trinitarian method can be applied, with slight adjustments, not only to any war, but also to political competition, for which he provides an excellent analysis tool¹⁷.

In the Vietnam War, the United States was defeated because they lost the support of their population¹⁸. The entire campaign in North Vietnam was based on weakening the American voter's popular support for the war, not on attacking the American

14 SORDO ESTELLA, L. M. (2018). "Psicología del terrorismo" (*Psychology of Terrorism*). *Revista Del Instituto Español de Estudios Estratégicos*, (8). Retrieved from <https://revista.ieee.es/article/view/219>

15 STOUT, M. E. *et al.* (2008) *Strategic and Operational Views of Al Qaida and associated movements*. Annapolis: Naval Institute Press

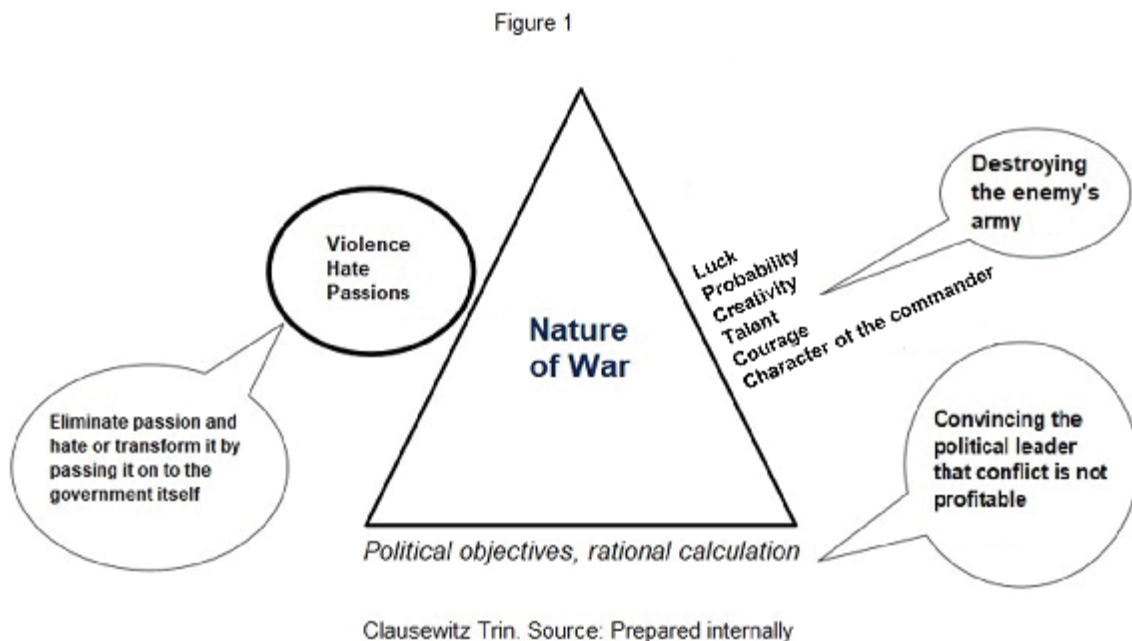
16 CLAUSEWITZ, C. Von (1832) *On War*. 1976.a ed, English. 1976.a. ed. Edited by M. Howard and P. Paret. New Jersey: Princeton University Press.

17 HANDEL, M. I. (1992) *Masters of War: Classical Strategic Thought*. Oxon, OX14 4RN: Frank Cass Publishers.

18 BRODIE, B. (1973) *War and Politics*, p 222. New York: Macmillan Publishing Co., Inc.

Army, which they knew they could not defeat militarily. The famous dialogue that took place in Hanoi between Commander Harry Summers of the US and Colonel Tu of the Vietnamese People's Army, while the two were negotiating the technical details of the Americans' final departure from Vietnam, is highly illustrative. Summers said to Tu, "You know, you never defeated us on the battlefield", to which Tu replied, "That may be so, but it's also irrelevant"¹⁹.

As can be seen in the figure, in order to act on Clausewitz's triad, the enemy government can be convinced that the conflict is no longer profitable, its army can be destroyed or the passions of the enemy population can be acted upon, either by eliminating that passion – necessary for maintaining the conflict – or by transforming it into hatred of its own government.



Cognitive manipulation makes sense in all three elements of the triangle²⁰: convincing the enemy government that war does not compensate or deceiving the military commander of the opposing forces seems in principle simpler and above all less costly than trying to manipulate millions of people. War is a rational political act, so when the effort no longer pays off, it stops²¹. Thus, to return to the example of Indochina, for North Vietnam the conflict meant the death of more than a million of its soldiers; for

19 SPENCER, D. E. (2010) "Reexamining the Relevance of Mao to Post-Modern Insurgency and Terrorism", *American Intelligence Journal*. National Military Intelligence Foundation, 28(1), pp. 146-152. Available at: <http://www.jstor.org.ezproxy.uned.es/stable/44327141>.

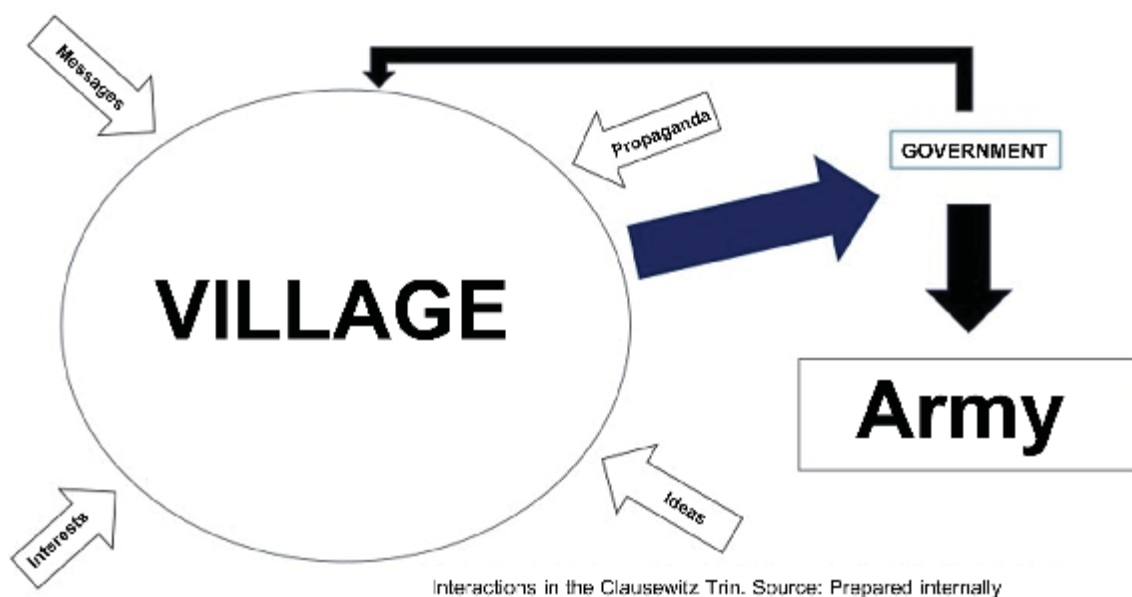
20 This Clausewitz triangle can become a square if we add a side representing the resources that are necessary to sustain a conflict: economic, industrial, technological and human, but the principle remains.

21 This is not always the case because, as Clausewitz points out, there is 'friction'; leaders may not be rational, may not properly assess the situation, or may put their interests ahead of those of the state (Clausewitz, op. cit.)

the USA, a little over fifty thousand. But the stakes for the two sides were different; for the US, it was another piece on the world chessboard – using Brzezinky’s simile – in which the contest between communism and liberalism was played out, whereas for North Vietnam it was to maintain its political system and reunify the country.

The figure shows the relationship between government, people and army in a democracy. Acting on the enemy’s army or government is a direct strategy, which may seem more practicable than manipulating millions of citizens, who are difficult to reach and may be very unreceptive to your messages; as we have just pointed out, it took North Vietnam one million soldiers to change the American people’s opinion of the war. But Vietnam had no choice; it could not beat the US Army or convince its government directly.

Figure 2



Something has changed and changed a lot in recent decades: communication has become instantaneous and nearly four-fifths of humanity carries a personal communication device in their pocket, which keeps them connected in real time. So the people are no longer a group of individuals who are difficult to reach in order to spread a message, a message they passively receive and exchange with their close personal environment. The village is now an extremely complex network, where millions of interactions take place and individuals receive messages not only from traditional media or governments, but from many other elements of the network. The difficulty of acting effectively on that side of the Clausewitz triangle has changed: the network is now much more complex, but it is also easier to access if you have the right tools^{22 23}.

22 SHALLCROSS, N. J. (2017) “Social Media and Information Operations in the 21st Century”, *Journal of Information Warfare*. Peregrine Technical Solutions, 16(1), pp. 1-12. Available at: <https://www.jstor-org.ezproxy.uned.es/stable/26502873>

23 MACNISH, K. and GALLIOTT, J. A. I. (eds.) (2020) *Big Data and Democracy*. Edinburgh University Press. doi: 10.3366/j.ctv1453jcx.

Traditional media and misinformation

If you look at a basic journalism manual you will read that the media's function is to inform, educate and entertain. And that they must "process and transmit information [...] in a regular, timely, accurate and credible manner"²⁴. The media are considered 'the fourth power' and play an essential role in modern democracies. Jefferson said in 1787, "were it left to me to decide whether we should have a government without newspapers, or newspapers without a government, I should not hesitate a moment to prefer the latter"²⁵.

But all journalism manuals also point out the difficulty of objectivity and contamination to which the media are subject, because of the defence of their interests as a company and their affiliation to economic and ideological groups. And, moreover, for certain ideological sectors, the media's story does not correspond to reality. Rather, they create it and define it with their story, following the model of Luis Althusser to which we have referred and from which ideologues and thinkers such as Noam Chomsky, one of the best-known critics of the press in the West, have been influenced.

Traditionally in the West, media codes of ethics make it difficult to lie, because for the vast majority of journalists 'facts are sacred and opinions are free'. However, the media and journalists

- a) ignore the facts that are not convenient (gatekeeping);
- b) provide a biased point of view, relating the fact to the political or social framework of interest (framing);
- c) highlight favourable news in headlines, even if they are anecdotal and give very little relevance to those that harm the interest group of the medium itself.

Baltasar Gracián said in 'the art of discretion':

"Attention when getting information. [...] we exist by faith in others. The ear is the side door of truth but the front door of lies. The truth is generally seen, rarely heard; She seldom comes in elemental purity, especially from afar; there is always some admixture of the moods of those through whom she has passed; the passions tinge her, sometimes favourably, sometimes odiously. She always brings out people's disposition, therefore receive her with caution from him that praises, with more caution from him that

24 MARÍN, C., 1986. *Manual de periodismo (Journalism Handbook)*. MADRID: Grijalbo. ISBN 9786073184151

25 The reader has probably noticed the contradiction: Jefferson wrote this before he became president; as noted, his opinion of the press, twenty years later and in government, was extremely negative. Available at: <https://www.nytimes.com/es/2018/08/16/espanol/opinion/estados-unidos-libertad-de-prensa.html>

blames. Pay attention to the intention of the speaker; you should know beforehand on what footing he comes”²⁶

Gracián warned that we should trust only what our eyes see; and yet, in this century we cannot do so either. The great manipulator of our time is image. That which is presented in the news and documentaries broadcast on television, which can be offered biased, out of context or simply falsified. It is very difficult to resist the power of persuasion presented by an image or video on television. “The truth is generally seen”, stresses Gracián. In the 21ST century this is no longer true either.

The influence of cinema on cognitive manipulation has been little studied; however, culturally its weight is much greater than that of the media. Because it is not necessary to select or edit what is interesting to tell about the truth, the objective narration of the situation; a story is directly elaborated, a tale, in which the film director presents to the public his version of the world, his ‘truth’²⁷. When we see the film *Superman*, we understand that the character who comes from Krypton and flies does not exist; but if we enjoy a film set in the Weimar Republic, we have no doubt that the context shown by that feature film is true. The characters may be fictional, but after that film we ‘know’ what Germany was like between the wars. And what we know for sure is how the director wants us to see this historical period, through a story conceived by him to move us. A story designed to move us, amuse us, scare us... cinema is a factory of emotions²⁸. And as we shall see, emotions play a key role in cognitive manipulation.

The 21ST century is the century of the explosion of alternative media and information channels to the traditional ones: press, radio and television. These new media use the Internet and social networks to distribute their content. Anyone can upload a video to *YouTube*, or comment on Twitter, or *Facebook*, or share a news item on *WhatsApp* or *Telegram*. With competition and the need to respond to the speed demanded by the new situation – practically in real time – traditional media have lost most news quality and verification filters. And they have also lost almost all their legitimacy as a fourth power, as indispensable actors in contemporary democracies²⁹.

26 GRACIÁN, B. (1647) *Oráculo manual y arte de la prudencia (The oracle: A manual of the art of discretion)*. Edition di. Edited by Cervantes Digital. Huesca: Vincencio Juan de Lastanosa. Available at: http://www.cervantesvirtual.com/obra-visor/oraculo-manual-y-arte-de-prudencia--o/html/fedb3724-82b1-11df-acc7-002185ce6064_2.html.

27 DAVIS, G., 2005. “The Ideology of the Visual”. In: M. RAMPLEY (ed.), *Exploring Visual Culture* [online]. S.l.: Edinburgh University Press, Definitions, Concepts, Contexts, pp. 163-178. ISBN 9780748618453. Available at: <http://www.jstor.org/stable/10.3366/j.ctvxcrfsr.17>

28 CARROLL, N., 2003. ‘Film, Emotion, and Genre’. *Engaging the Moving Image* [online]. S.l.: Yale University Press, pp. 59-87. ISBN 9780300091953. Available at: <http://www.jstor.org/stable/j.ctt1nps8x.7>. Gorton, K., 2009. *Theorising Emotion in Film and Television. Media Audiences* [online]. S.l.: Edinburgh University Press, Television, Meaning and Emotion, pp. 72-86. ISBN 9780748624171. Available at: <http://www.jstor.org/stable/10.3366/j.ctt1r26bz.10>.

29 (Dean, 2013) DAVIS, G., 2005. ‘The Ideology of the Visual’. In: M. RAMPLEY (ed.), *Exploring Visual Culture* [online]. S.l.: Edinburgh University Press, Definitions, Concepts, Contexts, pp. 163-178. ISBN 9780748618453. Available at: <http://www.jstor.org/stable/10.3366/j.ctvxcrfsr.17>

For the European Union,³⁰ disinformation is:

- d) invented information with completely false content;
- e) manipulated information, e.g. the distortion of real images;
- f) information from false sources, either non-existent or impersonating a real source;
- g) malicious information, e.g. passing off opinions as facts;
- h) false context: information that is real, but given out of context;
- i) satire and parody, which can be disinformation if it creates doubt as to whether what is said is true.

The Spanish Ambassador for Special Mission for Hybrid Threats and Cybersecurity defines disinformation as:

“the intentional dissemination of non-rigorous information that seeks to undermine public confidence, distort facts, convey a certain way of perceiving reality and exploit vulnerabilities with the aim of destabilising”³¹.

It is a good definition, but incomplete: the objectives of disinformation are multiple. Disrupting is one of the possibilities, but disinformation can be aimed at supporting a political idea, gaining a commercial advantage over a competing company, winning an election, overthrowing a government or winning a war. In short: any objective that depends on public opinion in Western democracies.

Written in the 1950s, Isaac Asimov’s *Foundation Trilogy* described a world in which it was possible to predict long-term social behaviour mathematically. And very shortly before that, in 1948, George Orwell published his novel *1984*, which described a world with an all-seeing, all-hearing ‘Big Brother’. Science fiction...a precursor, as many other times, of what is happening now.

In recent decades human behavioural sciences, statistics and computing have undergone extraordinary development. In addition to this, instant personal data communications are being disseminated around the globe. We are permanently connected to our mobile phones, which tell where we are, what we like, what we are looking for on the internet and what we publish on social networks. The use of this data allows companies to sell us more and better – that is the origin of the collection of such data – but it also allows interest groups to influence the political and social preferences of the population.

30 WARDLE, C., 2017. ‘INFORMATION DISORDER: Toward an interdisciplinary framework for research and policy making’, Council of Europe report.

31 OLMO Y ROMERO, J.A., 2019. “Desinformación: concepto y perspectivas” (Disinformation: concept and perspectives). *ARI. Instituto Elcano* [online], p. 8. Available at:

http://www.realinstitutoelcano.org/wps/portal/rielcano_es/contenido?WCM_GLOBAL_CONTEXT=/elcano/elcano_es/zonas_es/ari41-2019-olmoromero-desinformacion-concepto-y-perspectivas

The works of Amos Tversky and Daniel Kahneman, for which Kahneman won the Nobel Prize for Economics in 2002, are very interesting in this regard.³² They are included in the bestseller *Thinking Fast and Slow*³³. They describe the functioning of the brain and the two alternative thought systems, the unconscious and the conscious, Systems One and Two, as they are currently known in psychology. System one is fast, intuitive, does not hesitate, operates unconsciously on most of the things we do daily, so in certain matters it is easy to make mistakes. System one allows us to conduct or analyse a social environment at a glance when we arrive at a meeting; system two, to solve a complex mathematical problem or to analyse whether it compensates for a change of job and city. System two is slow, conscious, takes effort to use and is usually more reliable in its analyses than system one.

System one decides very quickly with the information it has. Kahneman calls this 'WYSIATI': what you see is all there is. We react and judge with the information available. If we see a ball crossing in front of our car while driving, we will stop, even if we do not see the child. System one reacts in that case and does not consider if there are children nearby, where the ball has come from and if it is really possible to run over someone. It judges and extrapolates from what it sees; it doesn't think twice before stepping on the brakes. It simplifies problems to what it can handle, using simplified mental models and processes (known as heuristics) to solve complex situations that require quick reaction. This is how it has worked over millions of years of evolution and has saved many of our ancestors from being eaten by a lion or stung by a snake. But if someone deliberately throws a ball in front of our vehicle it will make us stop, even if it is not convenient for us.

How to manipulate people? It seems simpler when it is system one that decides than system two. One is intuitive, two is reflective. Manipulation is more difficult if people reflect. So, if we want a driver to stop his car, even though he is late for his appointment, we can try to reason with him, questioning system two... or throwing a ball in front of his vehicle.

There are more factors in the functioning of the human brain that can be used to manipulate it. The main factor is how emotion affects it. We want to see ourselves as entities capable of feeling emotion, but governed by reason. However, in the last few decades neuropsychologists have proven that we generally make decisions emotionally and then rationalise (justify) those decisions. Reason is subsidiary to emotion and not the other way around³⁴. Emotion makes us act, but not always adequately: fear, anger,

³² Kahneman, a psychologist and mathematician, always recognised the importance of his collaboration with Tversky, who died in 1996, and pointed out that he deserved the Nobel Prize as much or more than he did.

³³ KAHNEMAN, D., 2011. *Thinking, Fast and Slow*. Edition for Kindle. Farrar, Strauss and Giroux. ISBN 9780385676519

³⁴ IZARD, C.E., 2007. 'Basic Emotions, Natural Kinds, Emotion Schemes, and a New Paradigm.' *Perspectives on Psychological Science* [online], vol. 2, no. 3, pp. 260-280. ISSN 17456916, 17456924. Available at: <http://www.jstor.org/stable/40212206>

passion, generate behaviours that are often harmful to the individual. The behaviour of someone who is angry and becomes violent because of something absurd – for example, a traffic dispute – is a good example of how emotion often makes it difficult for the individual to reflect on their situation rationally.

To provoke a reaction or introduce an idea in an individual it is necessary to appeal to their emotions, because emotional shocks are processed only by system one; the situation and consequences of the event that has generated that shock are not analysed rationally³⁵. Ideas and beliefs can be introduced directly or indirectly (but deliberately, as we shall see). Once an individual has been convinced of something, it is very difficult to change their mind, because other elements of the human psyche come into play, related to the two systems (one and two) described above: cognitive biases.

Again it was Kahneman who discovered that people, in certain situations, for different reasons, were systematically making wrong decisions judged from the theory of rational choice³⁶; this led to the development of behavioural psychology and the identification and study of cognitive biases. Biases are related to systems one and two already mentioned and to the heuristics that the brain uses to simplify and to be able to react quickly to complex problems.

There are many cognitive biases, but for the purposes of this paper we are mainly interested in those that facilitate manipulation. Of these, the most relevant are those of anchorage, availability, framing, confirmation and dragging. We will describe them briefly: the anchorage bias ‘binds’ us to the magnitude offered to us as a reference. If we are told that a box of aspirin costs six euros in Spain and we are asked the price of an anti-viral treatment, we will give a price that will be in the range of those six euros. We can think of a few hundred euros in the higher range; but very few people will respond that antivirals cost about thirty thousand euros a month, which is the price range for some treatments, because we have ‘anchored’ ourselves to the price of aspirin. This bias is widely used in designing the sales strategies of virtually all companies.

The availability bias has more facets than that of dragging: what is available in our mind – by closeness in time, familiarity, repetition – seems to us more certain and valid than things we know less about. In the framing bias, the way in which the information is presented determines its assessment; in the confirmation bias, what happens is that we give more value to the data that confirm what we already believe than to those that deny it – however overwhelming the latter may be – and, finally, the dragging bias makes us add, without further reflection, to the opinion of the majority.

Our emotional systems are quite simple, as neuropsychologists point out, and emotions can ultimately be reduced to approaching and rejecting, affiliating and dissoci-

³⁵ Kahneman, *Ibidem*.

³⁶ In short, the premise is that we choose rationally when we do so according to our individual personal preferences; if I value my free time more than a good salary, it is not rational to change jobs to earn more money, but to have less time.

ating behaviour³⁷. This allows us to provoke a response to a stimulus –about which a priori and in isolation no reaction would have been generated – if we associate it with a previous one that we know produces a very intense response, whether positive or negative. This is commonly used in marketing. Also in politics:

“Political manipulations of the emotions become potentially problematic when the emotions evoked by a particular stimulus are deliberately used to induce revulsion or attraction toward a second unrelated stimulus.”³⁸

If, for example, a report of a multiple rape states that the perpetrators are from an ethnic minority group, that ethnic group will immediately be associated with the rape. This association is independent of objective data, which may disprove the fact that there are more cases of rape committed by this ethnic group than by the general population. And even if such data is available, the system will usually ignore it³⁹.

Let us see how the use of emotion works in a war, in this struggle to win over public opinion, in a real example that has been slightly modified without altering its essence to prevent the actors from being recognised. Let us imagine that the aggressor, who we will call the *Troublemaker*, fires rockets from camouflaged launchers in a hospital facility, causing hundreds of deaths on the enemy side, called the *Broken*. It responds with an artillery attack that destroys the *Troublemaker* missiles and also causes casualties among hospital patients, including some children. The *Troublemaker* immediately provides the international press with images of the ruined hospital, photos of the dead and injured, and reports a high number of victims (e.g. 300). The emotional impact of the images (whether true or false) is very high, resulting in immediate rejection by those who watch the news. The information is provided in a totally biased frame (*framing*) – probably unintentionally, because it is not known that the missiles have been launched from the hospital, which invalidates its protection under the Geneva Conventions⁴⁰ – and is broadcast and viral on television and social media, making it the information available on that subject. This leads to associating the guilty party with evil, with the death of innocent people; that is why legitimacy in the conflict is immediately granted to the one who is considered to be attacked, who is, paradoxically, the *Troublemaker*. When the *Broken* explains his side of the story and provides another figure for the number of *Troublemaker's* victims (e.g. seven), the biases of

37 EUSTACE, N., 2014. “Emotion and political change”. In: S.J. MATT and P.N. STEARNS (eds.), *Doing Emotions History*. University of Illinois Press, pp. 163-183. ISBN 9780252038051. Available at: <http://www.jstor.org/stable/10.5406/j.ctt3fh5mi.11>

38 (Eustace, op. cit.).

39 MUÑOZ-ARANGUREN, A. (2011) “La influencia de los sesgos cognitivos en las decisiones jurisdiccionales: el factor humano. Una aproximación” (The influence of cognitive biases on jurisdictional decisions: the human factor. An approach), *InDret, Revista para el Análisis del Derecho*. Available at: <https://core.ac.uk/download/pdf/39072274.pdf>

40 In fact, using a hospital or hospital or Red Cross symbols to camouflage or protect weapons or military operations is a violation of international humanitarian law.

anchorage, availability, confirmation and dragging make it very difficult to change the perception of that event: the first impression on hearing the denial or explanation will be to reject it without any analysis (system one does) and any figure that does not resemble 300 will be considered implausible. On the official news channels, the majority of commentators will have already criticised the attack on the hospital, so that the bias of dragging is in play. Everyone agrees on who is guilty. And thanks to the confirmation bias, any news on this matter, which insists on the evil of those who have attacked the hospital, will weigh much more than the overwhelming evidence that the other party could present that it has only defended itself.

In fact, in the many places where the Western press is not present on the ground, there is no need for such an attack; one only has to invent and graphically document a story of good and bad, *which produces emotion*, so that it goes viral and is reproduced by the international media. Many documented examples of these practices can be found in the Syrian conflict⁴¹, a paradigmatic and recent case of the use of disinformation as a tool of war.

And what happens if ‘the truth’ comes out? Confirmation of manipulation does not normally play against the perpetrator if it is discovered later. This is why hoaxes proliferate (fake news). They are extremely profitable; the media are reluctant to acknowledge that they have been misled – even if they are sure that they have been – when this happens because they have not verified the story they have been endorsed. Denials are also much less widespread than the original stories and fight against the biases of availability, confirmation and dragging that we have already referred to⁴².

The target of an information (manipulation) campaign can be the entire population of a country, but it is also possible to segment it by groups and social movements. This allows the message to be adapted to the beliefs and values of the chosen group and to provoke intense emotional shocks that trigger positive feelings or, on the contrary, feelings of outrage and humiliation. The latter, the negatives, spread (‘viralise’) very easily and lead the selected group to develop a mental framework of injustice and to subsequent confrontation with the established order. The theoretical mechanism is relatively simple: the news – the story, the tale – in addition to provoking emotion, must identify those guilty of the injustice; this will cause the group to feel a sense of rejection of those who have perpetrated it and will produce a change in their behaviour as consumers or as voters⁴³.

41 EDWARDS, D., Cromwell, D. and PILGER, J., 2018. ‘Syria: Propaganda Blitz’ [online]. S.I.: Pluto Press, *How the Corporate Media Distort Reality*, pp. 97-123. ISBN 9780745338118. Available at: <http://www.jstor.org/stable/j.ctv69tg4v.10>

42 VASU, N. *et al.* (2018) “Human Fallibility and Cognitive Predispositions”, *FAKE NEWS: S. Rajaratnam School of International Studies*. Available at: <http://www.jstor.org.ezproxy.uned.es/stable/resrep17648.7>.

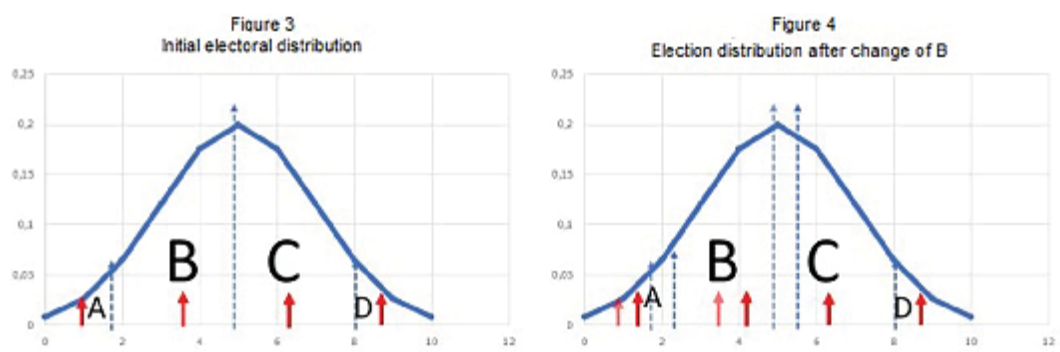
43 YERLIKAYA, T. (2020) “Social Media and Fake News in the Post-Truth Era, Insight Turkey”. SET VAKFI İktisadi İşletmesi, SETA VAKFI, 22(2), pp. 177-196. doi: 10.2307/26918129.

How can we know which population is likely to accept a given message? How is this population identified and how is the desired message disseminated to reach them? How is the message constructed?

This can be done in a very sophisticated way, but simple techniques work too. The key is to have a good story designed to generate emotion and to be processed by system one. The story can be disseminated through own or paid means; if the story is a hoax, it can be disseminated anonymously with the use of bots.

Let's take a case study that shows how it is 'in theory' possible to influence an electoral process. Four parties are competing for votes in a political arc that runs from the extreme left to the extreme right. A is the extreme left party, B the centre left party, C the centre right party and D the extreme right party. The political preferences of voters follow a normal distribution centred around 5, with 0 being the score more to the left and 10 more to the right, as shown in figure 3, in which the blue arrows mark the voting boundaries between parties and the red arrows their declared political positions in the range from zero to ten.

In a classic campaign, political parties compete for voters who are close in ideology. It is not common for a voter who is politically defined as 2 to vote for a party whose average is 6.5. Usually, the change in electoral preference occurs only in contact areas; C can steal voters from B and D, but will hardly do so with A.



Distribution of voters by political groups. The blue arrows indicate the voting borders and the red ones indicate the mean ideological position of each group of voters. Source: self made

If B shifts its position to the centre, as shown in Figure 4, it may steal voters from C, but it will also lose them to A. Until recently, political parties were forced to determine their position and sell it to voters in an attempt to maximise their net electoral gain. What technology now allows is to offer a different position of the same party to different voters without that contradiction having a cost. B does not need to move its position to maximise its number of votes, but to convey one message aimed at capturing voters who are on the BC border and a different one to voters on the AB border, spreading each message through the appropriate channel. It also, paradoxically, allows B to encourage voters from C to move to D, which in proportional representation systems using D'Hondt apportionment can provide B with a significant gain in seats.

To do this, B needs to know the profile of voters in the border areas. How is this done? Using information provided by social networks. The data that *Google* or *Facebook*, for example, store about citizens' tastes, hobbies, purchases, etc., allows them to create profiles that are correlated with their electoral preferences. To illustrate the above with a simple example, it is very unusual for a golf player living in a middle-income neighbourhood to be a voter for A. By combining what they buy, where they live, hobbies, income, etc., with a sample of the voting intentions of the identified profiles, the necessary information will be obtained to determine the political position of each profile, which allows for the elaboration of different emotional stories oriented towards the preferences of each group. These stories are disseminated in the appropriate forums, on social network accounts or even in individual emails.

Segmentation can also be done on a territorial basis; there are electoral districts in which the voting trends provided by surveys indicate that there is little likelihood of altering the distribution of seats and others in which changing a few hundred votes has great influence. Manipulation efforts are focused in these districts.

Do these techniques guarantee that individuals will change their votes? No. The quality of the stories, the technical and human resources available to disseminate them, the accuracy of the profiles and the goodness of the analysis of the electoral map have a significant influence on the success or failure of this type of campaign, which can also be very costly: they require psychologists, sociologists, scriptwriters, statistical experts and companies capable of disseminating and defending their stories on the internet in a convincing and effective manner by combining automatic means (bots) and human means (trolls). What you have to keep in mind is that you cannot know what the behaviour of a particular individual will be, but you can try to infer what the behaviour of the group to which he or she belongs will be. Therefore, and returning again to Clausewitz's triangle, when deciding whether to try to manipulate a government, made up of very few people, or a population, living in a network, one must consider that nowadays it is more likely to succeed when the target is the whole population or segments of it.

If we leave aside the moral assessments about B trying to get D to steal votes from C (or C encouraging votes to pass from B to A) or about political parties having different messages and positions for their different boundaries of potential voters, one can still question the legality of these practices. And the answer is simple: if the data that allow the population to be profiled are obtained legitimately, it is not illegal. The use of hoaxes –which are very effective in dealing with emotional shocks –is legally actionable, but attribution is so complex that it is impossible to do so in practice. If we go back to the moral considerations these practices might merit, we can certainly find grounds for reproach, but the expectations of the voters regarding the fulfilment of electoral promises are so low⁴⁴ that it can also be inferred that the voters, rather than being deceived, seek justifications for allowing themselves to be deceived.

44 KEEFER, P. and VLAICU, R., 2008. "Democracy, Credibility, and Clientelism". *Journal of Law, Economics, & Organization* [online], vol. 24, no. 2. pp. 371-406. ISSN 87566222, 14657341. Available at: <http://www.jstor.org/stable/40058171>

Does cognitive manipulation in social networks respond to a theoretical, but still immature, model that is only beginning to be used? The answer is no. This pattern was used by *Cambridge Analytica* to influence the US presidential election (and those of other countries); they conducted good profiling of voter groups (using *Facebook* information and surveys on voting intention) and launched very accurate and targeted information campaigns in those states where the change of relatively few votes could have a great influence on the final result. There are numerous companies dedicated to these issues, which are not only political but above all commercial and business^{45 46}.

Amendments to the European Union regulation on data protection have been transposed in Spain in Organic Law 3/2018. The law prohibits the indiscriminate use of data and requires the express consent of the user for its transfer, which must be individualised for each activity. Legislation makes it more complex to campaign as accurately as the US presidential election, but it is still viable: there is simply too much data available to prevent profiling and there are more and better tools to process it. The genie cannot be put back in the bottle. In fact, it is easy for any somewhat attentive observer to appreciate in Spain the widespread use of these methods across the political spectrum.

In order to analyse how al-Qaeda and the Islamic State (Daesh⁴⁷) use information, we must first review their long-term strategies. The ultimate goal of global Jihad organisations is to create a caliphate that encompasses the entire *Ummah* and subjects it to the Sharia⁴⁸. For the complex web of political Islam, of which the Jihadist organisations are part, 'Islam is the only and ultimate truth, the only way of life. All sovereignty resides in Allah, who makes the laws that humanity needs'⁴⁹.

The more concrete and realistic objectives of the two organisations have, however, been very different and this has led them to very different information strategies. al-Qaeda has always viewed its struggle in the context of the ideas of Sayyid Qutb, the ideologue of the Muslim Brotherhood, who, like Gramsci, conceived of the need for an avant-garde to spearhead the cultural transformation that would make a change

45 EPSTEIN, R. and ROBERTSON, R. E. (2015) 'The search engine manipulation effect (SEME) and its possible impact on the outcomes of elections', *Proceedings of the National Academy of Sciences of the United States of America*. National Academy of Sciences, 112(33), pp. E4512-E4521. Available at: <https://www-jstor-org.ezproxy.uned.es/stable/26464936>.

46 KORNBLUH, K., GOODMAN, E. P. and WEINER, E. (2020) 'Safeguarding Digital Democracy'. German Marshall Fund of the United States. doi: 10.2307/resrep24545.

47 Dawla al-Islamiya fil Iraq wa al-Sham, Islamic State of Iraq and Levant

48 AL ZAWAHIR, A., 2005. *Letter From Al Zawahiri to Al Zarqawi* [online]. 2005. S.l.: s.n. Available at: https://www.globalsecurity.org/security/library/report/2005/zawahiri-zarqawi-letter_9jul2005.htm.

49 BAKKER, E. and BOER, L., 2007, p 235. *Al-Qaeda's ideology: The evolution of Al-Qaedaism* [online]. S.l.: Clingendael Institute. Ideology, terrorists, and appeal. Available at: <http://www.jstor.org/stable/resrep05450.6>.

of political hegemony possible⁵⁰, a change that for Gramsci was to Marxism and for Qutb to true Islam. Changing a cultural paradigm takes time and is a long-term project, which needs to gain the sympathy of the community. For this reason, al-Qaeda has always been very careful about the use of terror in Muslim countries⁵¹; and for this reason, its most spectacular and media-hyped actions have been carried out in the West, although its primary audience has been more Ummah Muslims than Western citizens⁵².

The situation was different for the Islamic State, which emerged from al-Qaeda in the context of inter-faith violence between Sunnis and Shiites deliberately provoked by al-Zarqawi⁵³. Their needs were not those of an Islamic vanguard planning a struggle that would last generations, but those of a specific state that needed to be consolidated on the ground. For al-Qaeda, communication was strategic and had long-term results; for ISIS it was soon conditioned by its needs as a State or pseudo-State⁵⁴; it had to produce results on the ground in the short and medium-term, so its orientation was operational or tactical⁵⁵.

al-Qaeda's main means of communication have been its spectacular terrorist actions, which at their most prominent moment earned it enormous popularity in the Sunni Muslim world as a whole⁵⁶. al-Qaeda's strategic model, in addition to the speeches of its leaders, can be found in booklets such as *Knights under the Prophet banner*, *The Management of Savagery* or al-Suri's *Call for Global Islamic Resistance*⁵⁷. al-Qaeda believes that attacks in the West force them to intervene in Arab countries, causing military and political tensions that they cannot withstand in the long term and that

50 HAMMING, T.R., 2019. 'Global Jihadism after the Syria War'. *Perspectives on Terrorism* [online], vol. 13, no. 3. pp. 1-16. ISSN 23343745. Available at: <http://www.jstor.org/stable/26681905>

51 BLANCO CASTRO, J. R. "La competencia entre Al Qaeda y el Estado Islámico" (Competition between al-Qaeda and the Islamic State). *Revista del Instituto Español de Estudios Estratégicos*, number 14. 2019. pp. 43-70.

52 GERGES, F.A., 2016, p 235 "ISIS VERSUS AL QAEDA": *ISIS: A History* [online]. REV-Revi. S.I.: Princeton University Press, pp. 222-259. ISBN 9780691175799. Available at: <http://www.jstor.org/stable/j.ctvc77bfb.13>

53 BARDAJÍ, R.L., 2015. "Las Raíces del Estado Islámico" (The Roots of the Islamic State). *Papeles FAES*, vol. 1, no. 182.

54 GERGES, *Ibid.*, 225

55 In conflicts there are three levels: the political-military (or strategic) level, the operational level (which deals with the major battlefields and the design and conduct of campaigns), and the tactical level (which is where the fighting takes place). It is very difficult to succeed in a conflict without adequate coordination on all three levels.

56 PEW RESEARCH CENTRE, 2011. "Muslim-Western Tensions Persist". *Global Attitudes and Trends* [online]. [Consulted: 19 March 2020]. Available at: <https://www.pewresearch.org/global/2011/07/21/muslim-western-tensions-persist>

57 STOUT, M. E. *et al.* (2008) *Strategic and Operational Views of Al Qaida and associated movements*. Annapolis: Naval Institute Press.

al-Qaeda will succeed in capitalising on⁵⁸. It is a coherent and seemingly realistic model, with a long-term project, but it has not been able to exploit the failures of the West. The Arab Spring was the desired situation for the terrorist organisation –one of the stages envisaged in the *Management of Savagery* –and yet it was Daesh who emerged triumphant from this new scenario, though the same reasons that underpinned its success and spectacular rise were ultimately what made its downfall possible. Among other reasons, because both organisations, on different levels, have ignored the necessary balance between their Clausewitz triad and that of their opponent; there is little point in reinforcing the hatred and passion of my population if at the same time I inflame that of my enemy. My actions should not only be aimed at strengthening the elements of my triad, but at weakening those of my antagonist.

We have described how provoking an emotional shock facilitates cognitive manipulation, as only system one is activated. al-Qaeda produced a huge emotional shock on 9/11. It is considered very positive in the Muslim world, but very negative in the West. The result was that al-Qaeda and Bin Laden himself gained enormous popularity and the ideas of political Islam notably increased their legitimacy in the Muslim world; in contrast, in the West Islam lost almost all its prestige and has become associated with violence and terror⁵⁹.

al-Qaeda has been very concerned that its cause should be understood in the Muslim world and many letters and long speeches from Bin Laden and al-Zawahiri have been aimed in this direction. al-Suri, the most capable strategist of the Jihad, points out in his encyclopaedic treatise *The Call for Global Islamic Resistance* how the Jihad should be addressed to the Muslim audience. His analysis, brilliant in other passages of his work, could not be more clumsy in this respect. Although he makes some references to emotion, his doctrine focuses on calls for rationality and the dissemination of the ‘correct doctrine’ among the *Ummah*⁶⁰.

al-Qaeda has used the Internet and the possibilities of social networks, but late and imperfectly. Its magazine *Inspire*, in English, was only published in 2010 and both the themes used and the way it is presented cannot be considered exactly inspiring compared to the magazines of Daesh, Dabiq and *Rumiyah* (or their equivalent in Arabic, *Naba*)⁶¹

58 LARSON, E. V et al. (2011) “Al Qaeda’s Propaganda”, in Jenkins, B. M. and Godges, J. P. (eds.) *The Long Shadow of 9/11*. RAND Corporation (America’s Response to Terrorism), pp. 71-86. Available at: <http://www.jstor.org/stable/10.7249/mg1107rc.13>.

59 PEW RESEARCH CENTER, 2006. “The Great Divide: How Westerners and Muslims View Each Other” [online]. [Consulted: 21 May 2020]. Available at: <https://www.pewresearch.org/global/2006/06/22/the-great-divide-how-westerners-and-muslims-view-each-other>

60 SURI, A.M., 2008. *A Terrorist’s Call to Global Jihad: Deciphering Abu Musab al-Suri’s Islamic Jihad Manifesto*. Annapolis: Naval Institute Press. ISBN 9781591144625

61 GAMBHIR, H.K., 2014. “Dabiq: The Strategic Messaging of the Islamic State”. *Backgrounder* [online], pp. 1-12. Available at: http://www.understandingwar.org/sites/default/files/Dabiq_Backgrounder_Harleen_Final.pdf

We may generally conclude that al-Qaeda designed its communication strategy following the impact of 9/11 to act on system two; it aimed to convince the *Ummah* population of the justice of its cause and therefore of the need to support it.

The seed of the Islamic state was sown by al-Zarqawi, who deliberately used sectarian violence against the Shiites in Iraq to get them to react and attack the Sunnis, which eventually happened⁶². The message of terror in Iraq was effective from Zarqawi's point of view, but not from the viewpoint of al-Qaeda leadership, which was aware of the organisation's loss of popularity as the *Ummah* populations suffered the consequences of the attacks. A good example of the cost in popularity of al-Zarqawi's practices is shown by the attack he carried out on several hotels in Amman, Jordan, in 2006. The many deaths, almost all Jordanian, caused Bin Laden's popularity in the country to drop from 61 to 20 percent⁶³. Bin Laden never regained his popularity in Jordan.

Intra-religious clashes in Iraq and Syria fostered by al-Zarqawi were the catalyst for the Islamic state, a terrorist organisation that used a very different communication strategy from that of al-Qaeda. Daesh's videos are full of violence, success, adventure. They seek to promote emotion: calling on system one. They wanted to spread terror among their close enemies and attract *foreign fighters*. And they did not care about public opinion in the West or in Muslim countries themselves. Their propaganda was aimed at "recruiting new members, intimidating their opponents and promoting their legitimacy as a state"⁶⁴.

The spread of terror on the Internet and the use of social networks as a means of broadcasting its messages has been well exploited by Daesh. In the conquest of Mosul, not only was the diffusion of the film *The Clanging of the swords 4* key, but also the use of an application, *the Dawn of Glad tiding*, which allowed twitter accounts to be controlled and millions of messages with Daesh's propaganda distributed. In June 2014, millions of Arabs who logged into Twitter for the latest news found videos and photos of hundreds of Iraqi soldiers being executed by Daesh, and messages with Daesh's flag flying in Mosul and the threat 'we are coming'⁶⁵. Iraqi troops fled Mosul virtually

62 KFIR, I., 2015. "Social Identity Group and Human (In)Security: The Case of Islamic State in Iraq and the Levant (ISIL)". *Studies in Conflict & Terrorism*, 38(4), pp. 233-252. Available at: <http://10.0.4.56/1057610X.2014.997510>

63 (Pew Research Centre, 2011) PEW RESEARCH CENTER, 2011. Declining Support for bin Laden and Suicide Bombing |. [online]. [Consulted: 19 March 2020]. Available at: <https://www.pewresearch.org/global/2009/09/10/rejection-of-extremism>

64 Author's translation: "IS online strategists knew that specific audiences, especially within younger demographics, would respond with enthusiasm to specific forms of presentation of religiously couched information" WILLIAMS, L., 2016. "Islamic State propaganda and the mainstream media". Lowy Institute for International Policy. Available at: <http://www.jstor.org/stable/resrep10163>.

65 STERN, J. and BERGER, J.M., 2015, p 165. *ISIS: The State of Terror*. First Edit. New York: HarperCollins. ISBN 978-0-06-239554-2

without fighting; the emotional shock received caused their system one to associate the atrocities of the images with the fate that awaited them if they did not flee.

Daesh also segmented the information offered, targeting specific audiences, especially young people, because it knew that they would 'respond with enthusiasm to specific forms of presentation of religious information'⁶⁶. Daesh needed fighters for territorial expansion; its selective online propaganda attracted tens of thousands of young people. It is estimated that more than twenty thousand *foreign fighters* went to Syria to fight for Daesh⁶⁷. An undoubted operational success, because it needed soldiers; but support for the attacks in Europe and the USA did not bring any benefit at all, gaining mass rejection by Western public opinion. And the cruelty shown in its videos, which did prove useful at operational level, deprived it of support from the Muslim population⁶⁸, which was so important to al-Qaeda.

Daesh became a threat that Western public opinion clearly perceived and wanted to defeat. It generated such consensus against it that it finally lost all its territory and its operational capacity is now practically non-existent. Nor is the number of al-Qaeda members very high, who, with no resources and scant military capability, like Daesh, are committed to al-Suri's method, an autonomous Jihad 3.0 of lone wolves and attacks with means of opportunity: trucks, knives, etc⁶⁹.

Daesh's approach to communication has been much more effective than that of al-Qaeda (if we leave aside the huge impact of the New York bombing), because Daesh correctly identified emotion – not reason – as a lever for manipulating the masses. But like al-Qaeda, Daesh forgot that it had to strengthen not only its Clausewitz triad but also weaken that of the enemy; in the end the intervention of Russia, the United States and other Western nations (such as France) in Syria and Iraq was promoted by Daesh itself thanks to media coverage of its brutality.

Social changes made possible by the instantaneous, real-time connectivity of almost the world's entire population are only beginning. Personal terminals will increasingly be integrated with individuals, through augmented reality devices and probably, in the long term, bionic components. This symbiosis will generate problems and cybersecurity scenarios that we are not yet able to assess. But the domain of communication and the world of ideas and convictions is not cyberspace, although they are sometimes

66 BUNT, G.R., 2018. "E-Jihad and Gen-ISIS. Hashtag Islam" [online]. S.I.: University of North Carolina Press, *How Cyber-Islamic Environments Are Transforming Religious Authority*, pp. 123-140. ISBN 9781469643168. Available at: http://www.jstor.org/stable/10.5149/9781469643182_bunt.11

67 GATES, S. and PODDER, S., 2015. "Social Media, Recruitment, Allegiance and the Islamic State", *Perspectives on Terrorism*. Terrorism Research Institute, 9(4), pp. 107-116. Available at: <http://www.jstor.org/stable/26297419>

68 PEW RESEARCH CENTER, 2015 Most dislike ISIS in Muslim countries]. [online]. [Consulted: 4 January 2017]. Available at: <http://www.pewresearch.org/fact-tank/2015/11/17/in-nations-with-significant-muslim-populations-much-disdain-for-isis/>

69 MORA-TEBAS, J.A., 2016. Analysis. *Instituto Español de Estudios Estratégicos*, pp. 60-75

confused; the Internet, social networks and smartphones are only the means that make cognitive manipulation of the masses possible in a massive and almost instantaneous way. This manipulation, until recently limited to marketing, has now leapt to politics and warfare on a path of no return; it is part of hybrid warfare as another element of the battlefield.

Cognitive manipulation, in order to succeed at strategic level, cannot ignore political constraints. Neither can it act at operational level without synchronising with other military domains. Nor can it finally ignore the need to be coherent at different levels of military leadership: strategic, operational and tactical. al-Qaeda and Daesh are two different examples of the use of communication out of sync with the contexts and political-military actions of their organisations. They might have been more likely to achieve their objectives with a comprehensive approach, balancing available means and modes of use, considering communication as part of the overall strategy.

Cognitive manipulation has an offensive side, but also a defensive side at strategic political level. States must be able to counteract the manipulative actions of their adversaries, something, as we have seen, that is extremely difficult. Complex ethical and legal debates are looming over the danger of providing governments with cognitive defence tools, because those tools would in turn allow them to manipulate their own populations; it would be Orwell's 'Big Brother' made real.

But giving up defence can come at a very high cost: society in ten years' time will be much more connected than it is today. And there will be more tools to manipulate it.

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