The Use of Psychology as Strategy in Hybrid Warfare

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1. INTRODCTION: FROM SUN TZU TO MAO: THE GUERRILLA WAR

An elderly gentleman asked his personal doctor, who descended from an ancient family of healers, who, among them, was the best in the medical art. The famous doctor, whose name was synonymous of the Chinese medical science, replied:

> the firstborn sees the spirit of the disease and removes it before it takes shape, so his name does not cross the confines of his house. The second son cures the disease when it is still in its infancy, so his name is not known beyond the neighborhood. As for me, I practice acupuncture, I prescribe potions and massage the body; so sometimes my name reaches the ears of the powerfuls.

Just as the Eastern medical art neutralizes the disease before it can harm the body, also according to Sun Tzu the pinnacle of understanding and of war strategy is to make the conflict useless. Defeating the enemy without a fight is the greatest skill. In the *Art of War*, Sun Tzu proposes different levels of warrior skills, indicating as the best the one who manages to frustrate the enemy's plans even before starting the conflict. By virtue of the *Suntzuist* philosophy it is also possible to rethink about the period of the Cold War: on one hand the threat to use nuclear weapons would have frozen the conflict since on one hand it was not convenient even for the winner and on the other hand the mutual arms race could have caused the destruction of both contenders, helping to make a generalized, impossible and improbable conflict.

After the conclusion of the Second World War, hopes were kindled for a new era of peace and justice, even if the growing tensions between the ideological blocs of the United States and the Soviet Union provided little reasons to be assured. The term *Cold War* was popularized by Lippmann in his book *The Cold War*, but it had also previously been used by George Orwell in one of his unpublished article (George Orwell, 1945) where he described the possibility of some super-states possessing a weapon capable of wiping out millions of men in a few moments, dividing the world into two enemy parts.

Despite a war was still possible, it could be avoided thanks to «a tacit agreement never to use the bomb against each other». The threat about the use of this device would have produced a new form of absolute power among the states.

The era of large-scale wars was in the twilight (L. Freedman, 2013) while a horrible stability unfolded, and a peace that was not a real peace.

The culture of the atomic bomb amplified existing fears and technological aspirations. The bomb became paradigm of the state power, the American hegemony, technology and death.

The threat to use nuclear weapons made them prefer to resort the strategy of an unconventional war, stimulating the use of tactics such as guerilla warfare.

The ideological and unorthodox wars of Mao, General Giap and Che Guevara, were the forerunners of the new forms for irregular warfares, whose protagonists, looking out from the fissures of modern conflicts, would have laid to the foundations of a new type of hybrid threat.

The fall of Berlin wall, which symbolically represented the end of the Cold War, produced a watershed inside the international politics giving life to a new conception of conflict characterized by technique (F. Coticchia, 2015).

2. THE FIRST UKRAINIAN CONFLICT

On the night between 22 and 23 February 2014 the «satrap» Yanukovich, deposed and put to flight, was replaced thanks to German, French and Polish pressure, by the «passional» Julija Tymosenko, who returned to power (E. Di Rienzo , 2015, p.18). After the expulsion of Yanukovych, on March 18, 2014, Russia, following the referendum[1], annexed Crimea[2]. In the previous weeks, Moscow had put its military apparatus on alert (E. Di Rienzo, 2015, p. 40) by deploying troops along the Russian-Ukrainian borders, sending special and armored units to Sevastopol. In order to achieve his goal, Putin did not resort to a blatant «open conflict» as in the Georgian case, but he rather opted for a direct and indirect support operations of the breakaway eastern provinces of Ukraine, and at the same time used a more traditional strategy than in Crimea. While on the Crimean peninsula Putin used hybrid tools such as covert operations, information warfare and eventually a conventional invasion to take control, in the eastern regions he used a mix of political warfare, support from paramilitary groups and conventional forces. (Treverton, Thvedt, Chen, Lee, & McCue, 2018, pp. 13-14).

On the night between 21 and 22 November 2013 in Kiev's Independence Square (Maidan Nezalezhnosti), young university students animated a spontaneous and colorful protest against the suspension of the agreements between Ukraine and the European Union. The pro-European street protests, better known as «Euromaidan» had initially taken a peaceful dimension. But due to the square's demands for the resignation of the president and the consequent government responses, the demonstrations became increasingly violent.[3]

The Russian fear was that the United States would extend its geopolitical influence even further east by transforming Ukraine into a satellite state, pushing it towards NATO and preparing the ground for the ultimate disintegration of Russia (E Di Rienzo, 2015, p .7).

Ukraine has always been strategic for Moscow and it would be unthinkable that it could become a foreign or even adverse country. In the past Ukraine was part of Russia and for centuries their stories intertwined, so Putin didn't wait long to claim his leadership and influence over Kiev. Moscow will never allow Ukraine to join NATO – as argued by Kissinger in March 2014 - nor could have tolerated that its prerogatives over Crimea were not guaranteed or fulfilled. Odessa and Sevastopol[4] are two very important military and commercial ports for Moscow. Putin would never have renounced the use of these two strategic outposts with outlets on the Black Sea and indirectly on the Mediterranean, fundamental for Russian economy (A Ferrari, G. Cella, 2014, pp. 153-155).

The Kremlin implemented a two-headed strategy by organizing two different campaigns simultaneously and distinctly: one in Crimea and the other in Donbass[5], easily adapting to contingent events. In each case, the tools and goals pursued by Russia in the war on Ukraine have been very different from each other, but nevertheless useful to understand the new type of «hybrid» threat brought into play.

In Crimea, Russian military operations were brilliant. In fact in just under a month, without bloodshed and firing a shot, Russia managed to conquer all the military bases of the peninsula. The new premier of Crimea, Sergei Aksenov, on March 1st set the date for the referendum to decide about the secession of the Republic of Crimea from Ukraine on March 16. Russia in Crimea resorted to non-military and paramilitary elements in order to confuse the conflict zone, also special forces and other infiltrated elements were

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1   «Dear friends, we are gathered here today by virtue of a question of vital and historical importance for all of us. On 16 March a referendum was held in Crimea in full compliance with the democratic mechanisms and international norms. More than 82% of those entitled took part in the vote. Of these, over 96% spoke in favor the reunification with Russia. These numbers speak for themselves».Cf. excerpt from President Vladimir Putin's speech, at http://www.limesonline.com/cartaceo/la-crimea-e-russia.

2   «The Black Sea peninsula had belonged to Russia since January 1792, according to what was established by the Treaty of Iasi, signed by the Tsarist and Ottoman Empire. It was wickedly devolved to the Ukrainian Soviet Socialist Republic by Nikita Khrushchev, against the will of its inhabitants in 1954. It took place on the occasion of the 300th anniversary of the Treaty of Perejaslav of 1654», cf, E Di Rienzo, The Russian-Ukrainian Conflict, op. cit., p.40

3   «At about four o'clock in the morning on Saturday 30 November 2013, the berkut, the "golden eagles", special anti-terrorism units of the Ministry of the Interior set up on the model of the Russians Omon, were hurled at the demonstrators. Security groups trained and never reformed, with a Soviet conception of public order and the rule of law. The berkuts hit the demonstrators as hard as they

could with batons and kicks, smashing the head even of a Reuters videographer». Cf. http://www.limesonline.com/cartaceo/cronaca-di-una-rivoluzione-improbabile

4   Sevastopol naval base, home of the Russian Black Sea fleet, was another thorny issue of the Ukrainian crisis. In 1997, with the Treaty of Splitting the Black Sea Fleet, the Russian and Ukrainian governments established two independent national fleets in the base in Sevastopol and in other places in Crimea; Kiev also granted the lease of the base to Russia until 2017. Subsequently, with the Kharkiv treaty dated 2010, the lease of the naval base was extended until 2042, in exchange for trade and gas. Sevastopol base had military and above all commercial importance for Moscow, as about 30% of total Russian exports would pass through the ports of Odessa and Sevastopol.

5   Cf. Kathy Lally, William Booth and Will Englund, "Russian forces seize Crimea; Ukraine's interim president decries 'aggression, "cf. «The Washington Post », March 1, 2014, https://www.washingtonpost.com/world/a-deeply-concerned-obama-warns-russia-against-action- incrimea.

used, giving the impression of being supported by both militias and local security.[6] Russian troops initially began to exert psychological and propaganda pressure to provoke defections in Ukrainian soldiers. Furthermore Crimea was isolated by cutting off communications and electricity in some military bases. The goal was to consolidate the Russian presence until the total evacuation of the Ukrainian forces. The outcome of the referendum was overwhelming in favor of annexing the peninsula to Russia, although some European and American election officials contested the results. While the Russian troops were conducting operations in Crimea, the Kremlin launched a media campaign on the Russian population of Crimea, with multiple goals: the first was to discredit the government in Kiev by making it appear illegitimate and «fascist», besides the propaganda machine conveyed the message that ethnic Russians could be in danger. The control of the national media[7] by Russia would have allowed the Kremlin to orient Russian opinion on the events in Crimea, also thanks to the fact that the vast majority of citizens of eastern Ukraine and Crimea used as their main source of information the Russian TV channels, preferring them to the Ukrainian-speaking ones.

The final control over the media by Moscow came on 9th March when the military interrupted the television programming, leaving the Russian channels as the only alternative. Moscow had also managed to infiltrate the pro-Russian popular movement born in opposition to the «Euromaidan» square, called «Stop Maidan». Although the pro-Russian protesters have always denied any connection, instead there were several links[8]. In addition to targeted messaging and propaganda, Russia also allegedly aimed cyber attacks against the pro-Maidan movement[9] and Kiev

government.

In addition to targeted messaging and propaganda, Russia also allegedly aimed cyber attacks against the pro-Maidan movement and Kiev government. Between 2013 and 2017 Kiev suffered at least five cyber attacks, as well as the electoral system which was penetrated in October 2014. As consequence the dissemination of the electoral results was delayed.

During the Russian-Ukrainian conflict both political and economic pressures were exerted on Ukraine. Moscow's predatory political campaign had begun long before the military one. Already in 2013 Putin had «lent a hand» to the now President Yanukovych, trying to exploit Ukraine's financial instability and vulnerability by offering $15 billion and significant discounts on natural gas imports, with the aim of bringing Ukraine back into the orbit of Russian influence.

Russia had also managed to capitalize on the transitional period during which Kiev was without a government. After the expulsion of Yanukovych due to the inexperience of the Ukrainian administration and the slow response to the events in Crimea, all this allowed Russia to consolidate control over the peninsula.

On the Ukrainian eastern front, Putin encouraged the rise of an anti-government movement, launching a campaign of political war rather than sending special troops. His goal was to destabilize the southeastern territories of Ukraine by increasing control over the region and trying to persuade local authorities to accept a federal regime. After the initial deployment of a massive military force on the Ukrainian border made up of about 40,000 men, tanks, heavy artillery and aerial reconnaissance[10], on April 28th, 2014 Mos-

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6 Russian intelligence allegedly organized self-defense units made up of local militias, Cossacks and former members of the special police as well as Russian troops who began wearing police uniforms to disguise themselves as part of the local security forces. Among the volunteers there were army veterans, boxers and members of the biker gang called the «Night Wolves».

7 In 2013, «RIA Novosti e Voice of Russia», two state-owned media agencies, were replaced by «Russia Today», further implementing the government's propaganda machine. Cf. Stephen Ennis, «Putin's RIA Novosti Revamp Prompts Propaganda Fears», BBC Monitoring, December 9, 2013.

8 Cf. Robert Coalson, «Pro-Russian Separatism Rises in Crimea as Ukraine's Crisis Unfolds, Radio Free Europe Radio Liberty, 18 February 2014, https://www.rferl.org/a/ukraine-crimearisingseparatism/25268303.html. Other Anti-Maidan protesters reported being paid or pushed to take part in the protests, cf. Allison Quinn, Why Moscow's anti-Maidan protesters are putting on an elaborate pretence, «The Guardian», February 26th, 2015, https://www.theguardian.com/world/2015/feb/26/russia-anti-maidan-protest-moscow».

9 The Pro-Maidan pages about the two largest social media platforms in Ukraine, VKontakte and Odnoklassniki, were

blocked as they were hosted on Russian servers. Cf. Michael Kofman and others, Lessons from Russia's Operations in Crimea and Eastern Ukraine, RAND Corporation, 2017, https://www.rand.org/pubs/research_reports/RR1498.html.

10 On November 18, the commander of the Ukrainian security services (Sbu) Valentyn Nalyvajčenko accused Russia of having set up training camps for separatists in the Ukrainian south-east and of arming pro-Russian militiamen with weapons and ammunition that arrived in Donbass on board trucks of two "humanitarian convoys" of the six that had crossed the border in the recent months. The general secretary of the Atlantic Alliance, Jens Stoltenberg, announced on November 18, on the basis of gathered information, of the increase of the military forces of Moscow both inside Ukraine and on the Russian side of the border. OSCE observers also reported a large number of Russian columns and armored vehicles, including T-72 tanks, which had entered eastern Ukraine since early November, reinforcing the perception that new military operations are in preparation. The strengthening of the separatists seems to correspond to an equal strengthening of the lines held by the forces of Kiev with the dispatch of new units of recent constitution to the front, announced on November 4 by President Petro Poroshenko "to protect citizens from pro-Russian separatists. Ctr, G. Gaiani, The Mosaic of the

cow withdrew the force by negotiating an agreement with the Ukrainian authorities (G. Gaiani, 2017 , p.78).

The withdrawal of the Russian troops was functional to the fact that the Kiev government should not have turned its armed forces against the Russophile population of those regions. The commitment was not honored by Kiev, which with retaliatory actions launched itself against non-belligerent women, children and civilians.[11]

The Kremlin, in order to buffer this humanitarian emergency, continued to send small but qualified contingents of military intelligence and special forces belonging to the Spetsnaz in the Oblast' of Charkiv, Doneck, Luhans'k and Dnipropetrovs'k, including veterans of the Russian army. The Russians also resorted to a dense and uneven network of politicians, businessmen, criminal elements and powerful oligarchs to oppose the new Ukrainian government. The Ukrainian government inadvertently escalated the conflict by arresting the protest leaders, thus sparking a separatist insurrection. The escalation continued until the protest movement swerved into an irregular war with Russia sending conventional reinforcements in support of the separatists. Combined with the annexation of Crimea, the situation in Donbass became a powder keg. The pro-Russian protesters[12] did not limit themselves to demanding federalism pushed in such a way as to avert the threat of Ukraine's entry into NATO, but they also advanced the desire to reunite the Luhans'k region with Russia (E Di Rienzo, 2015, p. 44).

The leaders of the protest movements initially proclaimed themselves governors and mayors of the Eastern Oblasts as they appeared thus disappeared. Some of them were arrested by the Ukrainians, while the other was replaced[13] with local leaders who could legitimately support the independence cause. In mid-April 2014, the Kiev government tried to launch an attack on the separatists who were gaining ground,

but the Ukrainian army was ineffective. This is because part of the 130,000 soldiers in Kiev refused to fight against the separatists; many infantry, artillery and air force regiments passed through the Russian ranks, surrendering without fighting. Defections were frequent and the Russians' tactic was to try and bribe or defect Ukrainian soldiers. Many Ukrainian army commanders spoke Russian and were hesitant to order the attack of other soldiers who spoke their own language. Ukrainian soldiers were subjected to a barrage of spam messages which content was this warning: «Your battalion commander has withdrawn. Take care of you» and others like, «you will not regain the Donbass. Further bloodshed is useless» and again, «Ukrainian soldier, it is better to retire alive than to stay here and die». The tactic was very effective and the whole 25th division surrendered to the pro-Russians (G. Gaiani, 2014, p. 79).

Moscow's support to the separatists from June to August 2014 was considerable. It provided ammunition, armaments, mechanized equipment and medium-sized air defense, but despite heavy losses to the Ukrainian Air Force, Kiev army had managed to recapture part of the disputed territory (Treverton, Thvedt, Chen, Lee, & McCue, 2018, pp. 23-24). The Russian strategy was failing, forcing Moscow between 14 and 24 August 2014 in a conventional war operation sending humanitarian convoys, armored vehicles, tanks, anti-aircraft weapons systems and some contingents of militants already trained on Russian territory. The concentration of thousands of Russian soldiers forced the armies of Kiev to withdraw from the Luhans'k territories, allowing the rebels to reclaim Novoazovsk and proceed with the offensive towards Mariupol. The purpose of this operation was to open a new southeastern front in the Sea of Azov, where the famous «Azov battalion» operated. With the military success of the regular troops and their supporters, Putin on August 31st began negotiations to create an independent state in the Ukrainian south-east. In this way the «Tsar» had opened a «war wound» on the eastern front of Ukraine in order to prevent any attempt to escape to NATO.

3. THE HYBRID WARFARE OR POLITICAL WAR.

The intervention in Ukraine showed a range of war tools not owned by Russia, among which: information warfare, cyber warfare, economic warfare, guerrilla warfare with the relative use of militias and contractors. All these tools go beyond the previous concepts of unorthodox warfare and limited asymmetrical warfare. In fact from the beginning of the Ukrainian war

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Vanquished: Journey into the Donbass War, Limes, n. XII, 2014, p.78.

[11] Prime Minister Jacenjuk had unleashed a massacre of civilians, the atrocities of which did not arouse particular reactions from the European and American chancelleries.

[12] Formerly marginalized political organizations on both the right and the left have mobilized, calling themselves «mayors of the people» and «governors of the people». Protests erupted in eastern Ukraine in response to the success of the Maidan movement in Kiev and the uncertainty surrounding Ukraine's political future. Although Russian intelligence probably played a role in inciting and organizing the protests, the public agitation and protests would be genuine. However, Russia was also accused of paying the Russians to protest.

[13] Moscow initially provided many of its officers and military intelligence officials (G.R.U.) to the cause of the separatists, then began in August 2014 to replace them with local leaders. See, http://www.limesonline.com/cartaceo/il-mosaico-dei-vinti-viaggio-nella-guerra-del-donbas

and the capture of Crimea in March 2014, the concept of *hybrid warfare* began to be conveyed in all international security circles as a new concept to define the contemporary conflict.

Contrary to what is often said, war is not the continuation of politics by other means, but it is politics that continues in any case, also using military tools (C. Jean, 2016, p. 87). The term *political warfare* had been used in the past by both Clausewitz and Kennan, intended as the use of all means at the disposal of a state and a «non-state» to destabilize its opponent.

In 1997, General Charles Krulak commander of the US Marine Corps coined the term *Three Block War* to indicate the special requirement in the modern battlefield.

> First our soldiers - reports the general - will feed and provide clothes to the displaced refugees. They will later keep two warring tribes apart, conducting pacification operations, and finally they will fight highly lethal medium-intensity battles, all that on the same day.[14]

In 2005, General James Mattis and Lieutenant Colonel Frank Hoffman described the *four-block war* as the additional block that dealt with the psychological and operational aspect of information. They were simply describing the hybrid warfare.

The peculiarity of political warfare (L. Freedman, 2018, p. 223) or hybrid, is that of using a certain type of violence and its external implications, which would remain below the threshold beyond which a ferocious reaction would be unleashed. Hybrid warfare was defined by General Breedlove[15] as a «new» form of conflict where the narration and the related means of communication are even more decisive than military means, because they would be able to further blur the boundary between war and peace. The security of the Russian Federation has always been of vital importance for the Kremlin and the decisive document that identifies the possible threats, defines the strategies to counter and contain them is the military doctrine. It claims that the world has become more dangerous and with it military and non-military threats. We have gone from a virtual global war (*the Cold War*) to real local and regional network conflicts. The new Russian military doctrine presented in January 2013 by the Chief of Staff of the Russian Armed Forces, General Valery Gerasimov at the Russian Academy of Military

Sciences, represents an important document to understand Russian strategy in the 21st century. Gerasimov in his long article increasingly emphasized the use of non-military tools in contemporary conflicts, explaining how new technologies, internet and social media, can be used for psychological operations and to destabilize another state, with the goal to create a permanent situation of internal conflict.

General Gerasimov's document has had different interpretations by the West. Some believed that the article describes the Russian perception of the threat, while some NATO countries thought the so-called «Grasimov doctrine» in addition to having descriptive purposes, has above all prescriptive purposes, or better said, it indicates what actions Russia should take against other states and against the West. Some former members of the Warsaw Pact have declared that the use of non-military tools such as cyber attacks, propaganda and the exhortation to political instability in the countries of the alliance could be considered as precursors for a military attack.[16]

In fact, even the Russians have interpreted some Western attitudes towards them as actions of a *hybrid warfare*, such as the orange or rose revolutions. Russian politicians would see these «colorful demonstrations» as tools for importing exotic values, imposing them under the pretext of «exporting democracy».

They are strategic mirroring attitudes where from one side the Russian General Staff accuses the West of manipulating the media, individuals, institutions and states, using unconventional tools, while NATO takes the same opinion towards the «new forms of Russian war», citing the examples of Crimea and Ukraine. Returning to the doctrine, it gives ample emphasis to the technological aspects of future conflicts and the globality of the strategy, the potential of *information warfare*, cyber warfare and drones is declined, the need to prepare for the volatility of the economy and of the company that would be implemented only during the course of a conflict and not before, as happened in the past.

Hybrid warfare is defined as the combined and synergistic use of different tools of power available to a state or a non-state, to achieve a single political-strategic purpose. These tools can be military, non-military, diplomatic, political, technological, intelligence, economic, media, psychological, direct and indirect, and serve to influence or destabilize the adversary or competing country. The idea is to use a multitude of tools simultaneously and strategically to maximize their effect. The typical form of political warfare is

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[14] Cf. Lawrence Freedman, The future of war, Penguin Books, Canada, Ireland, Australia,2018, p. 223
[15] Philip Mark Breedlove, born September 21, 1955, is a retired US Air Force general who headed the US European Command, and was NATO's 17th Supreme European Allied Commander - SAUCER.

[16] Cf. W. Park, NATO and Russia: Managing the Relationship, Conference Report, 21-23/10/2015

precisely that one which aims to sharpen the divisions and socio-political polarization within a state, trying to feed the distrust of a population towards institutions and to weaken the opposing state and its international alliances.

Even the manipulation of electoral processes is one of the tools used by *Hybrid warfare,* as is the use of political corruption, organized crime used to destabilize the opponent, and as the last, the possible use of biochemical and biogenetic warfare tools. In hybrid conflicts the dividing line between military activities of defensive nature and aggressive actions fades into vague even disappearing. It is still increasingly difficult to discern the differences between a state of war and one of peace.

4.   THE PSYCHOLOGICAL CONDITIONING OF RUSSIAN PROPAGANDA.

At the beginning of 2007, due to the request of the Estonian nationalist front to remove the statue of the «Soviet soldier» from the park in Tallinn, old tensions had re-emerged between Russia and Estonia (Marta Federica Ottaviani, 2022, p. 75). A few months later, oddities began to happen in Estonia.

At the end of April Tallinn was hit by a wave of violence, the report was of 150 injured, around 1000 people arrested and a demonstrator of Russian origin lost his life. Later, towards the end of May, the whole country was paralyzed by a cyber attack. The blockade and the riots had been supported by the Kremlin, although this was not possible to ascertain precisely due to the complexity of the network. In 2007, for the first time, Russia used cyber attacks to hit another country.

In 2008 it was Georgia's turn to be attacked. On that occasion, Russia used not only hacker attacks, but also armored vehicles; while in 2014 - as already mentioned - the target of the Russians was Ukraine.

Do not forget, however, that the main antagonist of the Russians has always been the United States, in fact in 2016 the Soviet cyber attacks were used to condition the primary and the American vote. The American political figure most damaged inits credibility by the Russian cyber campaign - as claimed by special prosecutor Robert Mueller - was undoubtedly Hillary Clinton who lost the race for the US presidency against the Republican candidate Donald Trump.

Attorney Mueller's 2019 report found that hackers in March-April 2016 had penetrated the electoral computer network of some 500,000 Georgia, Iowa and Arizona voters. They also managed, thanks to a malware, to exfiltrate sensitive data and e-mail documents of the Democratic candidate for the presidency of the United States.

Thanks to a 2003 research carried out by Anna Polyaskaya, Andreij Kirov and Ivan Lomko it emerged that between 1998 and 1999 almost 80% of the interventions on the Russian web had a liberal and democratic orientation. Only four years later xenophobic, racist, homophobic comments would have appeared and a real incitement to violence are more and more prevalent. This coincided with President Putin's first period in power. While General Gerasimov can be considered the one who laid the foundations in the military sphere of the Infowar, Vladislav Jur'erevich Surkov could be considered the one who did it in the field of information and the manipulation of consciences.

Surkov worked by manipulating the Russian information machine in order to standardize the thinking of public opinion, polluting the truth through a scientific use of social media and a considerable use of trolls.

Since 2013 Russian trolls and hackers have started their disinformation campaign also in international social networks, in fact the first pro-Putin comments appeared in some forums of the main online newspapers in Poland. The goal was to convey a positive image of Russia and justify its aggressive policy towards Ukraine.

In Finland, again in 2013, thanks to the investigative work of the journalist Jessikka Aro, it emerged that Russian trolls had begun to attack the country's social networks and forums. The Kremlin trolls - explained Jessikka Aro wisely - were working to condition Finnish public opinion with an extremely calibrated disinformation campaign to reach different social and cultural groups.

During the conflict against Ukraine, attacks by Russian hackers and trolls on the network served to change the narrative in favor of Russia. The war against Kiev was the first complete example of a non-linear warfare.

Between 2016 and 2017 some Ukrainian hackers managed to get hold of over 4,000 emails probably belonging to Surkov and his entourage, and others owned by Alla Aleksandrova, leader of the Communist Party of Kharkiv, paid by Moscow to support and encourage separatist actions from Kiev in the region. The emails describe all the active measures taken by Russia to destabilize Ukrainian democracy: use of regular special forces without the use of badges, financing the guerrilla, bribing local politicians to support the Russian cause, demonstrations by the secret services to foment actions of separatists in the Donbass making them appear as a spontaneous will to sepa-

rate from Kiev and get closer to Moscow. Russia tried in every way to interfere in the Ukrainian elections by financing and supporting a campaign that envisaged a «soft federalization of the country», and where its supporters most of the time were paid people. Thanks to this, Moscow managed to create the illusion of a spontaneous support by a part of the local population and also deceived a part of the Western public opinion. From the emails stolen by Ukrainian hackers it became clear that Moscow's goal was to enter the minds of Ukrainians in different ways, as well as to make international opinion believe that in the south-eastern part of Ukraine most of the population nourished a sincere and spontaneous will to reunify with Russia. The Kremlin worked on this type of operation for months long before hostilities with Kiev began.

Russia proceeded step by step, first of all a careful analysis of Ukrainian society was made, identifying those who were ideologically pro-Russian. Then other categories were identified such as those with which it was possible to initiate total interactions, and others with which interactions could be partial.

The most intense work of the Russian trolls, aimed at mystifying reality, took place during the massing of military vehicles on the Ukrainian borders. Moscow was not supposed to have any responsibility for the violence perpetrated, especially those against civilians.

The number of posts, tweets and profiles used by the Russians to falsify the narrative was staggering during the period leading up to the invasion of Ukraine. No doubt those actions were a structured attempt at psychological warfare, where there is an attacked subject and an invisible enemy (Saran V. 2016).

5.   THE THREAT OF BIOTERRORISM AS A TOOL OF HYBRID WARFARE

Among the tools used in hybrid warfare, as seen, it is certainly possible to include terrorism which is also a form of warfare conducted in an «asymmetrical» manner, between two or more enemy parties, which do not comply with the same rules.

Terrorism can also be understood as the systematic use of violence to influence companies or governments in their choices. «Bioterrorism» is nothing more than a form of terrorism exercised through the use or threat of biological agents or biological weapons.

The international community of the United Nations is bound by international treaties that prohibit the use of biological and chemical weapons, while terrorists believe they can use them deliberately and without constraints.

In the last twenty years, bioterrorism has increasingly represented a distressing problem for public health, and a challenge for the health systems of the most advanced countries (C. Orlando, R. Silvia, C. Mariachiara, D. Fabrizio, 2013, pp. 111-129).

The spread of infectious diseases, which consequently explains the affirmation of bioterrorism in the last decade, has led to a great interest on the part of the mass media, increasing both public interest and further fears. Through the psychological lever, a multiplicative factor of the negative effects of bioterrorism is constituted. The media sounding board of the fear generated by a possible bio-terrorist attack is one of the main objectives of terrorist groups that intend to target a particular society. This instrument of struggle would be part of the most evident asymmetries with respect to the traditional concept of *regular* warfare.

All this is further aggravated by the progress of biotechnologies and their possible *double use* which can give rise to new threats deriving from new agents obtainable with genetic modifications of pre-existing biological agents, to be used as new biological weapons.

Any roughly equipped microbiology laboratory would be able to produce large quantities of pathogens.

Other reasons are the considerable complexity and difficulty in the detection and identification procedures, a circumstance that makes the biological weapon particularly dangerous and easily usable in sabotage actions. Again, the opportunity to carry out a destructive action that essentially affects living beings, leaving infrastructure and materials intact. To be added is the flexibility of use, with the possibility of contaminating big areas if contagious biological aggressive agents are used, or of hitting specific targets if non-contagious biological aggressive agents are used, disseminated on specific substrates; and also to be able to choose or create (through the innovative techniques of genetic engineering) diseases with biological and technical requirements suitable for the specific purpose of use.

It should be remembered that following the anthrax letters sent to America in 2001, beyond the small number of victims, the most relevant finding was that FBI took eight years to close the investigation, with however scarce and shaky evidence. The bacteriological attacks have exposed the great vulnerability of the population and, more importantly, the difficulties of institutions to find those responsible.

The threat posed by traditional biological agents has been increasing since the beginning of the 20th century but presumably will not grow further thanks to

advances in medicine and pharmacology. Conversely, in case of genetically modified organisms the threat is increasing, and its growth is proportional to the developments and advances in biotechnologies able to produce new threats.

The consequences of a biological threat are disastrous. Just remind the Spanish flu of 1918-1919 which caused about 50 million deaths, equal to those of the Second World War and 5 times those of the «Great War» of 1914-1918. A pandemic due to a new avian influenza virus such as H5N1 modified in the laboratory by just 5 mutations could cause the deaths of hundreds of millions of people.

A genetically modified viral agent such as the H5N1 virus (bird flu) is certainly a threat and a potential biological weapon. Its genetic mutations were discovered making it potentially capable of causing a much worse pandemic than the Spanish flu of 1918.

Scientific branches such as molecular biology and genetic engineering, which study the possibility of building new DNA molecules to give new characteristics to organisms thus modified, have revolutionized the concept of *biological weapon*. It is no longer a weapon consisting of natural biological agents, but aggressive biological agents designed and built according to operational needs. Current technical-scientific knowledge, already used in the biomedical, agronomic and veterinary fields, could be used for war purposes to increase the virulence of pathogens already naturally present in the environment.

Furthermore, it is conceivable to obtain biological aggressors with such a highly specific pathogenic power that they can only affect a specific breed within the same species (Black, J.L, 2003, pp. 864-871).

The flue is certainly very different from other biological agents used in terrorism such as smallpox. It is readily available and, being a fairly common disease, a cluster of cases would not prompt the authorities to initiate a more in-depth investigation. Influenza is also more difficult to eradicate, having various reservoirs: sheep, pigs, mice, and avians. Finally, it poses a greater threat to world leaders, because they are older and more susceptible to disease and its cardiovascular complications than other pathogens against which they are immunized and often frequent public and crowded places.

Do not forget that even a natural flu epidemic can be enough to undermine the health system and make society more vulnerable to terrorist attacks of all kinds.[17]

The global struggle to tackle the COVID-19 pandemic has exposed societies' vulnerability to natural and man-made biological threats thus prompting experts to warn of a potential increase in the use of biological weapons, such as viruses or bacteria, in a post-world. coronavirus. The European Council's Counter-Terrorism Committee (CDCT) was one of the first to warn that the coronavirus pandemic could increase the use of biological weapons by terrorists. The committee said in May 2020 in a statement that: «the COVID-19 pandemic has brought to light how vulnerable modern society is to viral infections and their destructive potential» and added that «the deliberate use of agents pathogens as an act of terrorism «could prove to be extremely incisive». All countries are exposed to bioterrorism, and the damage associated with it is rapid and potentially global, said a spokesman for the European Council.

According to a report published on May 5, 2020 by *Pool Re* (an insurance company against terrorism that collaborates with the British government) and written by Andrew Silke professor at Cranfield University, the Covid-19 pandemic is having a significant impact on global terrorism. the real concern - said Silke - is that Covid-19 could redirect terrorists towards the use of chemical, biological, radioactive and nuclear weapons.[18]

Silke writes that some terrorist movements would have been interested in bioterrorism by planning a few attacks, but which have been successful thanks to the use of these weapons. The Pool Re report states that the enormous impact of Covid-19 «could rekindle some interest in biological weapons [precisely because] the pandemic will leave governments and security resources severely damaged.»[19]

The twentieth century was that of physics, where scientists learned about atomic fission, and in this way created weapons so powerful as to destroy entire civilizations - said the American political scientist Walter Russell Mead - who adds:

> *now the perspective has changed because: the twenty-first century seems to be the era of biology, where the ability to unleash genetic engineering diseases towards the enemy will give to some nations enormous advantages.*[20]

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[17] Cf. Giammarco Troiano, Guerra batteriologica e bioterrorismo: ancora una sfida per la sanità pubblica, Working paper of Public Healt 1/2016, www.ospedale.al.it/wp-content/uploads/2016/11/Working_Paper-01_2016.pdf

[18] Cf. https://www.poolre.co.uk/reports/covid-19-and-terrorism-report

[19] Idem

[20] Cf. https://www.wsj.com/articles/the-century-of-bioweapons-11588025901

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