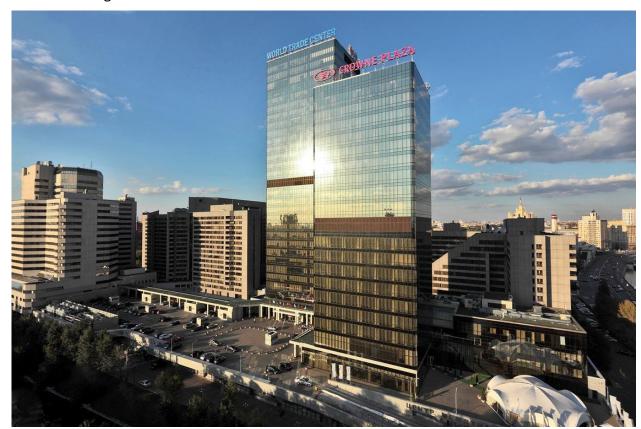**Prof. Evgeny Pashentsev on How to Stop Terrorist Psychological Operations, Enhanced by Artificial Intelligence. The paper submitted at the 2nd International Conference "Countering Illicit Trafficking in Arms in the Context of Fighting International Terrorism", Moscow. September 5-6. 2019**

The World Trade Center (WTC) Moscow on September 5-6 2019 hosted the 2nd International Conference "Countering Illicit Trafficking in Arms in the Context of Fighting International Terrorism". The conference was held under the chairmanship of Russian Deputy Foreign Minister Oleg Syromolotov". The consolidation of the efforts of states to prevent weapons from reaching the hands of terrorists, the problems of export control and non-proliferation of weapons of mass destruction, as well as law enforcement aspects of international counter-terrorism activities were discussed. The conference was attended by representatives of more than 30 countries and international organizations.

In Sergey Lavrov's address, read at the conference, by his deputy Oleg Syromolotov, the Minister of Foreign Affairs recalled that Russia supports the formation of a global anti-terrorist front with the coordinating role of the UN and respect for the principles of international law. According to Sergey Lavrov, today there are all prerequisites for the collective fight against terrorism. Despite this, the world community has not yet been able to unite efforts and coordinate activities. The minister highlighted such issues as geopolitical ambitions, hidden agendas and double standards, which do not allow to achieve desired effects. The problem is becoming more urgent with the development of the situation in the Middle East and North Africa.

The second day of the conference started by the panel "International practice of countering illicit trafficking in arms and further measures to consolidate relevant international cooperation" moderated by Vladimir Tarabrin, director of the Department on New Challenges and Threats, MFA. Prof. Evgeny Pashentsev, the leading researcher of the Institute of Contemporary Studies at the Diplomatic Academy of the Ministry of Foreign Affairs of the Russian Federation, Coordinator of the European-Russian Communication Management Network (EU-RU-CM Network) and the Russian – Latin American Strategic Studies Association (RLASSA), presented at this panel his paper "Terrorist Psychological Operations Enhanced by Artificial Intelligence (AI) Technologies and Their Neutralization".

Prof. Pashentsev emphasized that the capabilities of artificial intelligence (AI) and machine learning are growing at an unprecedented rate. These technologies can be used in many areas for public benefit, ranging from machine translations to medical diagnostics. The next few years and decades will bring immeasurably more opportunities for that. Investment in AI in the next two decades may reach trillions of dollars. According to a PricewaterhouseCoopers Middle East (PwC) report released at the World Government Summit in Dubai, 14 percent of economic growth in the world (U.S. $15.7 trillion) will be due to the use of AI. PwC believes that the greatest gain from AI for economic growth will be in China (up to 26 percent of the country's economic growth rate). Researchers in various countries and leading international organizations pay a great deal of attention to these positive aspects of using AI. The artificial intelligence market accounted for more $4 billion in 2016, and is expected to reach $169 billion by 2025 (Allied Market Research). China published its "Next Generation Artificial Intelligence Development Plan", which laid out plans to become the world leader in artificial intelligence, with a domestic AI industry worth almost US$150 billion. The USA and China are leaders in total equity funding of AI start-ups (more than 70% for both countries), Russia – less 1%. Vlaimir Putin May 30 2019 at the Meeting on the development of artificial intelligence technologies repeated his words that "who can establish a monopoly in artificial intelligence – we are aware of the consequences – will rule the world". The Russian Direct Investment Fund (RDIF) has raised $2 billion from foreign investors to support domestic companies developing Artificial Intelligence (AI) solutions, the Vedomosti business daily reported, citing a report the RDIF has prepared for a meeting with President Vladimir Putin on AI advancement in Russia. But Russia by its own has serious competitive edge:

one of the world's highest penetration rates for mobile communications and internet access, as well as for the development of electronic services. The cost of internet service in Russia is one of the lowest internationally. Russia also relies on traditionally strong scientific and education schools in mathematics and physics and a competitive system of training IT specialists. Incidentally, Russian students have won the International Programming Contest for the eighth year in a row. In 2019, it was a team from Moscow State University. The Government of the Russian Federation in the coming days will submit to the President of the Russian Federation a draft decree on the approval of the National Strategy for the Development of Artificial Intelligence in Russia. The strategy was developed by Minsvyaz and Sberbank together with the expert business community.

With all respect and attention to the great positive aspects of AI progress, however there has been much less research into the malicious use of artificial intelligence (MUAI), which deserves special attention due to possible global catastrophic effects of MUAI in particular, because of the activities of terrorist organizations. MUAI is acquiring great importance in the targeted psychological destabilization of political systems and the system of international relations. This factor sets new requirements for ensuring international psychological security (IPS). Simultaneously, the role of advanced technologies is growing, too. Among dual-use technologies, AI systems pose a special threat to international security in general and IPS in particular. Prof. Pashentsev defines IPS as protection of the system of international relations from negative psychological influences associated with various factors of social development. Among other factors he highlighted the danger of targeted efforts by various state, non-state and supranational actors to achieve partial/complete, local/global, short-term/long-term, and latent/open destabilization of the international situation in order to gain competitive advantages, even through the physical elimination of the enemy.

Today strategic psychological warfare (SPW) is conducted with different degree of professionalism, by various state and non-state actors. Very often one can notice that various traditional influence campaigns neutralize each other which is resulting in decrease of the efficiency of SPW tools in destabilization or stabilization efforts of UDSE. The role of AI in overcoming this problem is great, because it radically increases the ability of the human mind to calculate not only the options for social development, but increasingly makes it possible to foresee the specific parameters of individual events, allows you to identify the effectiveness of influence operations much faster and more effectively. Thus, AI is one of the leaders among other means and methods of conducting offensive HTSPW, as, however, creates new and adequate capabilities of defensive HTSP, which is typical for all dynamic unstable balance between offensive and defensive weapons. No doubt terrorists do not pass by the possible advantages of using AI in asymmetric warfare with the authorities in this or that country.

Prof Pashentsev presumes that, insufficient attention is being paid to the comprehensive analysis of the issues of the unstable dynamic social equilibrium (UDSE). The humane civilization transforms in UDSE because of fundamental technologic, economic, social and geopolitical changes. Not all regions and countries do that simultaneously but all of them sooner or later come to be UDSE. But random and targeted negative impacts on UDSE in the process of strategic psychological warfare (SPW) are much more dangerous than for stable dynamic social equilibrium (SDSE). SPW is aimed at long-term disorientation of the real or potential enemy on the most important issues, and this is impossible without measures to reduce its ability to strategic thinking, and to make appropriate decision-making. Thus ISIS, al-Qaeda and other at least leading terrorist organizations try and will try more to use Big Data, prognostic weapons and AI as efficient instruments in their asymmetric warfare efforts through Internet.

The contributor of the paper proposed the following <u>MUAI classification</u> according to the degree of implementability:

• current MUAI practices;

• existing MUAI capabilities that have not been used in practice yet (this probability is associated with a wide range of new rapidly developing AI capabilities — not all of them are immediately included in the range of implemented MUAI capabilities);

• future MUAI capabilities based on current developments and future research (assessments should be given for the short, medium and long term);

• unidentified risks, also known as "the unknown in the unknown." Not all AI developments can be accurately assessed. Readiness to meet unexpected hidden risks is crucial.

Counteraction to illicit trafficking by AI enhanced psychological weapons may include but not limited by the following measures:

• evaluation of AI dual technologies applicable for AI enhanced psychological operations;

• listing current and prospective MUAI-based threats to IPS from terrorists (the new quality of fake audios and videos, the formation of a public agenda, etc.) ;

• study the practice of application of AI for the direct or indirect destabilizing effects on the political, corporate, civil society systems and neutralize or minimize such effects;

• identification of predictive analytics and prognostic weapons capabilities using AI.

For each targeted psychological operation of terrorists enhanced by AI define:

• scope of attack

• target audience(s);

• methods of attack;

• potential damage;

• which countries, companies are the big players on the market for this or that AI technology;

• more integrated methods, programs of defense of the IPS from MUAI etc.

Foundation of the international center of studies of current and promising threats of MUAI to IPS is essential.

Today, the priority of the few reports and articles on MUAI is to address the issues of damage caused by the use of AI in various spheres of public life (economic, political, etc.), as well as direct threats of physical impact on people and critical infrastructure. Without disputing the justification of this approach, Prof. Pashentsev offers to prioritize MUAI-threatening IPS. The drone attack, an attack on infrastructure, market manipulation, use of bots to damage reputation or win elections at any cost, use of technologies of 'fake faces', deep fakes, prognostic weapons, etc. MUAI in any field invariably has the effect of destructive psychological influence on people, which may be the main purpose of the combined high-tech terrorist attacks in the near future. That is why according to Prof. Pashentsev close cooperation of state bodies, experts and the public to stop possible terrorist psychological campaigns, enhanced by AI, is an urgent task.

Next Prof. Pashentsev characterized the first steps in studies of MUAI by terrorists in the context of defense of IPS. Keeping in mind the complex of possible consequences of the usage of AI in psychological warfare for international security as a whole and psychological security in

particular a group of researchers from Moscow and Saint-Petersburg started in 2018 a big long-term grant project "Innovative Methodologies of Information Security". Seven more grant applications were submitted in 2018 and more in 2019. Among them: "Artificial Intelligence in the Context of Psychological Security of Russia", "Linguistic and Political Aspects of the Information Security of the Russian Federation (on the Example of the Problem of the Countering Extremism" etc. The researchers from St Petersburg University, Diplomatic Academy, Presidential Academy, Plekhanov Russian University of Economics, Moscow Physical Technical University, Lomonosov Moscow State University and the institutes of Russian Academy of Sciences study the AI risks and solutions in the sphere of national and international psychological security including the measures in the <u>sphere of antiterrorist activities</u>.

An international group of specialists on MUAI research in the field of IPS has been formed, which successfully cooperates in joint research and conducting international conferences and scientific seminars. So the group members formed a panel <u>"Malicious use of artificial intelligence and international psychological security"</u> at the II International Conference "Tangible and Intangible Impact of Information and Communication in the Digital Age". The conference was held within the framework of the <u>UNESCO Intergovernmental Information for All Programme (IFAP)</u> and <u>XI International IT Forum with the participation of BRICS and SCO</u> countries in Khanty-Mansiysk on June 9-12, 2019. The final document of the conference took into account the most important results of the panel activities.

Discussion of the problems of malicious use of AI continued on June 14 at the research seminar "Artificial Intelligence and Challenges to International Psychological Security". The seminar was organized by the <u>Centre for Euro Atlantic Studies and International Security</u> at the <u>Diplomatic Academy</u> of the MFA of Russia and <u>International Centre for Social and Political Studies and Consulting</u> with the academic support of the European-Russian Communication Management Network and the <u>Department of International Security and Foreign Policy of Russia, Russian Presidential Academy of National Economy and Public Administration</u>. The participants of the seminar adopted the final document <u>"For Cooperation between Countries, Expert Communities and Civil Society Organizations against the Malicious Use of Artificial Intelligence and the Destabilization of the International Psychological Security and Democratic Institutions"</u>

In early October 2019, the discussion of MUAI problems in the context of AI development in Latin America will be continued at the Ibero-American Forum in the framework of two panels: <u>"Artificial Intelligence New Opportunities and Social, Political and Psychological Challenges in Latin America" and "Psychological Warfare in Contemporary World and Latin America".</u>

Later October 31-November 1 2019 at the "European Conference on the Impact of AI and Robotics" in Oxford the discussion will be continued at the mini-track **"<u>The Malicious Use of Artificial Intelligence: New Challenges for Democratic Institutions and Political Stability</u>."**

Books are being prepared for publication in international publishing houses, in which the topic of AI development, MUAI and IPS is one of the main ones. In the monograph "<u>Strategic Communication in EU – Russia Relations: Tensions, Challenges and Opportunities</u>" (Palgrave Macmillan) the general risks of AI developments are analyzed. In the book "Terrorism and Advanced Technologies in Psychological Warfare: New Risks, New Opportunities to Counter the Terrorist Threat" (Nova Science Publishers) the whole section is devoted to proper AI-enhanced psychological threats coming from terrorists and methods of their neutralization. At the end of 2020 is scheduled to present a landmark monograph on "Artificial Intelligence and Threats to International Psychological Security".

The project of the international research center "Artificial intelligence and problems of international information and psychological security" has been prepared, its implementation will be difficult, primarily for financial reasons. But it would be sad to receive funding only when potential threats will result in real damage and losses.

Summarizing the paper done by Prof. Pashentsev we should emphasize that to counter the threats to IPS as a result of MUAI requires innovative approaches, balanced use of modern technologies to strike at terrorists, not to harm the institutions of civil society, which terrorists want to crush. And it is easy to observe the threats of using AI in the psychological warfare between state and non-state actors pursuing their selfish goals. This is one of the challenges of modern society, which is in the process of fundamental social transformations.

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