

Autonomous Weapons Systems: An Incoherent Category

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MILITARY AI OPEN LETTER

- “We therefore believe that a military AI arms race would not be beneficial for humanity. There are many ways in which AI can make battlefields safer for humans, especially civilians, without creating new tools for killing people.”
- “In summary, we believe that AI has great potential to benefit humanity in many ways, and that the goal of the field should be to do so. Starting a military AI arms race is a bad idea, and should be prevented by a ban on offensive autonomous weapons beyond meaningful human control.”
- Letter sponsored by Future of Life Institute, begun July 28, 2015, and signed by over 20,000 people (mainly Western AI and robotics researchers).

Issues

- “Military” is no longer a coherent domain.
- “AI” is undefined and ambiguous. So is “autonomous”. So is the idea of “human on/in the loop.”
- “Military AI” is not the same as “lethal autonomous robots.”
- Complexity and response time mean that, however well it is meant, there can’t be humans in the loop. We are too slow and unable to process enough information.
- Every state seeking great power status knows it must be dominant in AI. So does every major tech company – Baidu, Tencent, Amazon, Google, Facebook, Alibaba.

Russia and AI Leadership

- “Artificial intelligence is the future, not only for Russia, but for all humankind. It comes with colossal opportunities, but also threats that are difficult to predict. Whoever becomes the leader in this sphere will become the ruler of the world.” (speaking to students September 1, 2017, reported by RT).

WOLF-2



Russian Position on Autonomous Military Robots

- November 2017, UN meeting to ban lethal autonomous robots, “hopes for even a small first step toward restricting ‘killer robots’ were dashed as the meeting unfolded. Russia announced that it would adhere to no international ban, moratorium or regulation on such weapons.”

P. Tucker, November 21, 2017, *Defense One*,
<https://www.defenseone.com/technology/2017/11/russia-united-nations-dont-try-stop-us-building-killer-robots/142734/>.

China and AI Leadership

“Facing a new situation and new demands, we must take the initiative to pursue and adapt to change, firmly seize the major historic opportunity for the development of AI, stick closely to development, study and evaluate the general trends, take the initiative to plan, grasp the direction, seize the opportunity, lead the world in new trends in the development of AI, serve economic and social development, and support national security, promoting the overall elevation of the nation’s competitiveness and leapfrog development.”



China State Council Notice on the Issuance of the Next Generation Artificial Intelligence Development Plan, released July 2017, translation available at <https://chinacopyrightandmedia.wordpress.com/2017/07/20/a-next-generation-artificial-intelligence-development-plan/>. See New America commentary, <https://www.newamerica.org/cybersecurity-initiative/blog/chinas-plan-lead-ai-purpose-prospects-and-problems/>.

Russia and Hybrid War: Invasion of Crimea/Ukraine

“The very ‘rules of war’ have changed. The role of nonmilitary means of achieving political and strategic goals has grown, and, in many cases, they have exceeded the power of force of weapons in their effectiveness.”



Russian General Gerasimov, Chief of the General Staff of the Armed Forces of Russia, Valery Gerasimov, “The Value of Science in Prediction,” Rob Coalson, ed. and trans., *In Moscow’s Shadows* (July 6, 2014) (originally published in *Military-Industrial Kurier* [Feb. 27, 2013]), available online: inmoscowsshadows.wordpress.com/2014/07/06/the-gerasimov-doctrine-and-russian-non-linear-war/.

Hybrid and Unrestricted Warfare

- Russia: Invasion through narrative: Novorossiya . . .
- “The focus of applied methods of conflict has altered in the direction of the broad use of political, economic, informational, humanitarian, and other nonmilitary measures – applied in coordination with the protest potential of the population. All this is supplemented by military means of a concealed character, including carrying out actions of information conflict and the actions of special-operations forces. The open use of forces – often under the guise of peacekeeping and crisis regulation – is resorted to only at a certain stage, primarily for the achievement of final success in the conflict.”

Hybrid and Unrestricted Warfare

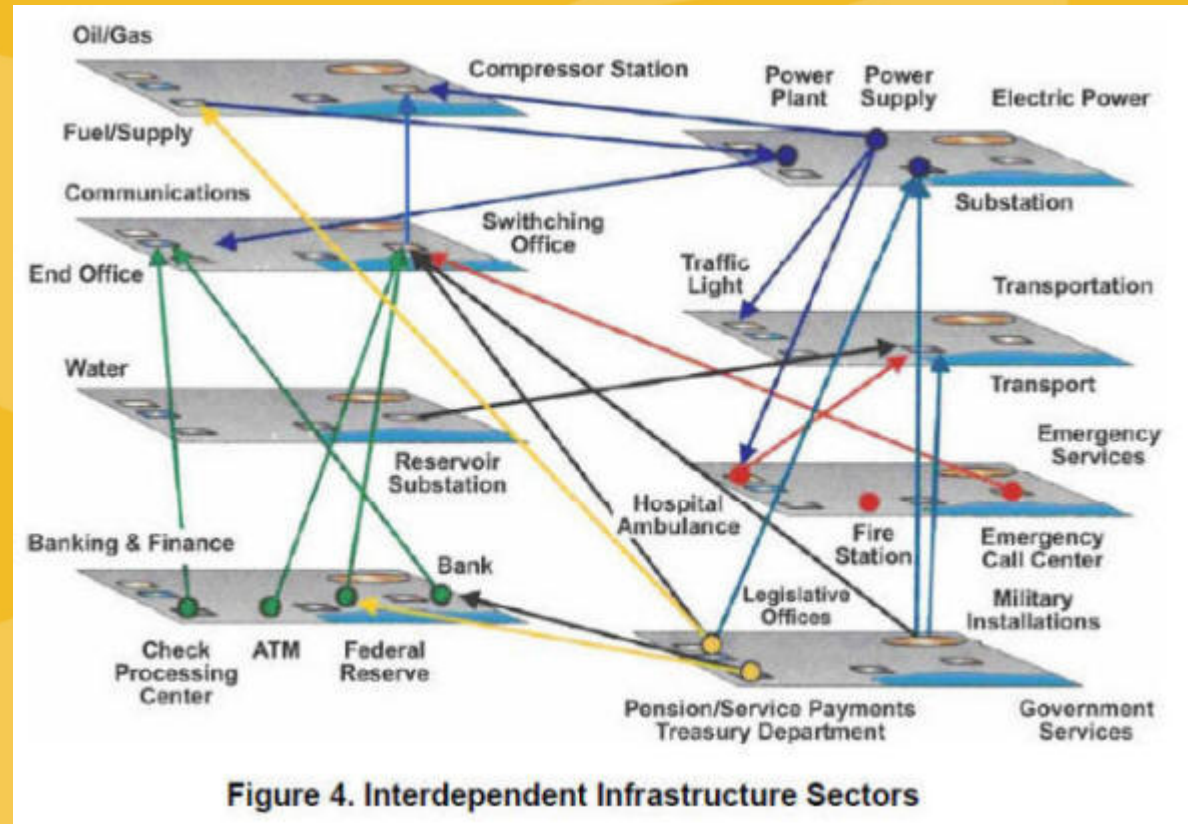
- Chinese Unrestricted Warfare: “it is no longer possible to rely on military forces and weapons alone to achieve national security in the larger strategic sense Obviously, warfare is in the process of transcending the domains of soldiers, military units, and military affairs, and is increasingly becoming a matter for politicians, scientists and even bankers. . . . financial war has become a ‘hyperstrategic’ weapon that is attracting the attention of the world. This is because financial war is easily manipulated and allows for concealed actions, and is also highly destructive.”

Tools of the Trade

Experts believed such a targeted software weapon was at least a decade away.

Until it launched.

Stuxnet (2010): a malicious computer worm that attacked Iranian nuclear centrifuges.



Russian and Chinese Military Strategy is Heavy on AI, but Not “Military AI”

- Russian and Chinese national security doctrine and strategy both relegate conventional military activities to a secondary role. Sophisticated information and Internet technologies and techniques to a large extent replace conventional military force.
- The unintentional effect of the call for restrictions on military AI, therefore, is to favor asymmetric powers – such as China and Russia – over the US.