THE US STRATEGY FOR SHORT-TERM MILITARY ARTIFICIAL INTELLIGENCE DEVELOPMENT (2020-2030)

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Introduction

Artificial intelligence (AI) is already transforming the modern economy, being silently present in several sectors, with emphasis on banks and finance, energy networks, and commerce, among others. A simple act like the use of a smartphone intertwines the user in an intricate infrastructure of artificially intelligent devices, which form a support network for applications such as urban mobility, for example: the correction of typing errors, as well as the targeting of content on social networks, also involve algorithms operating under a machine learning regime (Webb 2019). Despite the greater volume of innovations in the field of AI today being by commercial developments in the civilian sector (but subject to dual-use), the US armed forces have already been able to test sufficiently on the battlefields of Iraq and Syria artificial intelligence systems using remote target identification, and data transmission to weapon platforms (Hoadley and Lucas 2018).

In the perception of the North American Department of Defense (DoD), the United States is currently being pressed by its international competitors, notably China and Russia, in the dispute for leadership in the development of artificial intelligence for military purposes. In 2017, the Chinese government announced an ambitious plan from which it aims to achieve global leadership in AI development in the year 2030, even though their goals and definitions are vague (Fischer 2018). Nevertheless, the disclosure of such a plan by the

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Chinese Communist Party generated shock waves among strategy makers in the great powers of the interstate system, so that if artificial intelligence gains high priority for China, it could not be possible. Expect less willingness on the part of opponents of Chinese expansionism.

In the same year that the Chinese government released its plan for the development of AI (2017), a statement by President Vladimir Putin suggests a Russian perception about the this strategical category of technologies: “Artificial intelligence mechanisms enable rapid decision-making in real time based on the analysis of large amounts of information, which gives enormous advantages in terms of quality and effectiveness” (Daws 2019). Continuing his reasoning, Putin states that “[...] if someone has a monopoly in the field of artificial intelligence, the consequences will be clear to us: they will dominate the world” (Idem). In this sense, like the Chinese government, the Russian government understands artificial intelligence as a technology that may have a disruptive effect on power relations in the international system in the near future, such that, on February 27, 2019, orders the preparation of a national strategy for the development of capacities in this field (Tass 2019).

In 2018, the United States Department of Defense moved to counter the Russian-Chinese initiative by publicizing its artificial intelligence development strategy, published in February 2019 in the document entitled Summary of the 2018 Department of Defense Artificial Intelligence Strategy: harnessing AI to advance our security and prosperity (United States of America 2018). It defines a methodology for accelerating military developments in the use of AI, covering operations, training, support, protection of forces, recruitment, health, among others. The need to elaborate and disseminate this strategy is attributed to the Sino-Russian threat: “Other countries, particularly China and Russia, are making significant investments in AI for military purposes. Such investments threaten to erode our technological and operational advantages in addition to destabilizing the international order” (United States of America 2018, 5).

Strategy, in terms of international politics, is understood as a plan defined by a national state to achieve systemic and long-term objectives. The main source we used to compare the DoD document under analysis was the National Security Strategy contemporary to it (United States of America 2017). It is an official document of the American government dealing with the “grand strategy” of the country, which defines: “worldwide interests, goals, and objectives of the United States that are vital to the national security of the United States” (Snider 1995, 1). According to Christopher Layne, since the early 1940s the United States’ main strategy has been to expand its power and maintain its hegemonic position in the interstate system, with a long-term
character:

America’s actual grand strategy behavior is something else [...]. The United States consistently has sought to expand its power and attain a position of hegemony in the international system - not only after 1989 but from the early 1940s and throughout the cold war as well (Layne 2006, 25).

Based on the thought of Carl von Clausewitz (1832), while the strategy has a systemic and long-term character - it is intended to achieve victory in the war as a whole - the tactic has a short-term character because it is related to the specific battles that together make up the war. That is, different tactics are used to achieve the objectives defined by a single strategy. Adapting this concept to International Policy, a State uses different tactics in the short or medium-term to achieve the long-term goals defined in its strategy.

As a methodological guideline, the research employs qualitative analysis of primary and secondary sources. We proceeded to examine the official document based on the premise that it can only make sense from a critical analysis, as occurs in historiographical activity. According to Carr (1987, 18):

No document can tell us more than what the author thought - what he thought, or even just what he wanted others to think that he thought, or even what he himself thought to think. None of this means anything, until the historian works on this material and decipher it.

The objective of this paper is, therefore, to analyze the United States strategy for artificial intelligence, having as object the aforementioned document published by the Department of Defense in 2019, together with secondary sources that relate the themes of artificial intelligence, strategy, and defense. The article then intends to address the concept of artificial intelligence according to the perception of some experts in the field, the perspectives and methodologies for the application of AI in the North American military sector and their ethical questions, about the effective capacities of China and Russia to constitute a threat, the US technological leadership in the field of artificial intelligence, and how competition in this area is related to Sino-Russian growth in technological and geopolitical terms. We will start with the Sino-Russian challenge, an apparent driving agent that sets in motion the formalization of an American strategy.
The Sino-Russian Challenge

In 2017, Daniel Coats, National Intelligence Director of the United States, in a text submitted to the United States Senate with the theme “global threats”, recognized that artificial intelligence is one of the technologies considered as emerging and disruptive and that investments by other nations in this area are expanding, putting US national security at risk. Coats further states that “the implications of our opponents’ skills in using AI are potentially profound and wide-ranging” (Coats 2017, 4), and he does seem to have cause for concern. According to Hoadley and Lucas (2018), China is the main competitor in the international artificial intelligence market and has the potential to achieve the goal defined in its strategic plan, to lead globally in terms of investment in the development of artificial intelligence, considering their recent achievements in the area. In 2015, the main Chinese company in the industry, Baidu, created language recognition software with a higher speed than that reached by human brains, a year before the American company Microsoft achieved the same feat. Chinese teams had the best placement in the international Large Scale Visual Recognition Challenge competition, related to computer visual perception systems, in the years 2016 and 2017, facts that, among others, suggest to the analysts of the present that the Chinese effort has been achieving surprising results, and that, for this reason, need to be faced (Hoadley and Lucas 2018).

These results are in addition to the disclosure, by the Chinese government, in mid-2017, of a development plan for AI, which values applications of this technology in the Chinese economy and society in general, including, for example, industry, the judiciary system, and public security, in addition to the military sector. At the end of the same year, the Ministry of Industry and Information Technology launched its action plan to boost the development of artificial intelligence between the years 2018 to 2020, as recommended by the general national strategy, defining objective goals for the creation of products, such as networked vehicles, intelligent robots and video identification systems (Fischer 2018).

According to Kania (2017), the Chinese military sector has also been influenced by American strategic plans for innovation in artificial intelligence, so that the dynamics between the major players in the contemporary capitalist interstate system ends up generating a feedback loop, in which the expectation of advances on the part of one competitor accelerates investments and decision-making in another. The author also affirms that the guiding principle of the Chinese strategy in the application of this type of technology to war is the search for increments in terms of situational awareness on the battlefield.
(situation awareness), based on computers equipped with algorithms capable of undertaking the analyze large amounts of information (big data) quickly and efficiently. In short, the Chinese government understands that based on developments in the field of artificial intelligence applied to the civilian commercial sector, gains in scale will be achieved, with unequivocal impacts on the production of artifacts and software aimed at military action, thus capable of expanding the power of the Chinese armed forces in terms of C4ISR (command, control, communications, computers, intelligence, surveillance, reconnaissance).\(^4\) Both the notion of “dual-use” and the relationship between AI and situational awareness make up the short-term strategic horizon that has been sought to a certain extent by the four great powers, each with different degrees of priority. Thus, the perception of this technological horizon by the Chinese government reveals, above all, a game played together by the great powers, and that, in this way, the American strategy responds, then, to a state of things influenced by the decisions from Beijing, but not exactly determined by them.

Russia is seen by Washington as another major rival in the field of future technologies for military use (including AI), despite its lower investment capacity compared to the United States and China. In 2016, the “Foundation for Advanced Studies” was created by the Russian government, which consists of a research agency focused on developments in the field of defense, with a focus on robotics and artificial intelligence, and which organizes in the form of “psycho-information deterrent” (One of several facets of Russian soft power) an annual conference entitled “Robotization of the Armed Forces of the Russian Federation”, a clear signal to the other players that Moscow intends to fight for space intensely on that front. The declassified information to which we have access indicates that Russian research seems, first of all, to seek rapid gains in the production of unmanned vehicles with a mild degree of AI (Bendett 2017), which can be inferred from the successful test with the drone ground vehicle Nerehta, which carries a 7.62 mm machine gun and can be used in both combat and logistical and intelligence situations, and Soratnik, a vehicle produced by Kalashnikov (Hoadley and Lucas 2018). Understanding, however, the propagandistic dimension of the official communication efforts of the Russian government, it draws our attention

\(^4\) However, one should not lose sight of the fact that China, India, Russia and the United States have been investing in the design and development of autonomous, land, air and sea vehicles, endowed, therefore, with some degree of “soft” artificial intelligence, in addition to use of drone swarms tactics, which consists of “swarms” of unmanned aerial vehicles that work together coordinated by AI (Scharre 2014). The maturation of these developments, in keeping with the current trend, should take longer, so that the use of artificial intelligence in tasks of expanding situational awareness should precede it.
to the fact that developments in the area of remotely controlled and semi-autonomous lethal weapons gain greater prominence, which hypothetically leads us to the Russian dissuasive disposition by suggesting greater advances in a field of slower maturation compared to the use of artificial intelligence for situational awareness. Developments in semi-autonomous and autonomous lethal weaponry have been undertaken to the same degree by the other powers, without making it clear, as a discursive strategy, the notion that they are the “front line” in the use of military artificial intelligence.

Given the above, the question arises: do Chinese and Russian investments represent a challenge to the position of technological leadership in the artificial intelligence sector? It is known that Russia has lower investment capacity to develop a technological industry capable of competing with the American and Chinese technology giants, in addition to the fact that its defense budget has been consistently reduced in the years 2017 and 2018 (Hoadley and Lucas 2018). This fact must not go unnoticed: the game of ultra technological warfare does not allow for minimal setbacks, considering that the process of technological change depends on crossing “techno-paradigmatic thresholds” based on constant thought and research (Pavelec 2012), a process in which losses in capacities due to investment contraction are asymmetric compared to the gains obtained by each unit of expenditure. Perhaps we should not be deceived by the propagandistic impact of Russian hypersonic missiles, which, despite the threat they pose in the short term, should not change the paradigm of future war. But despite this, it is certainly too early to diagnose any “critical flaws” in the Russian journey towards the mastery of disruptive military technologies.

China, due to its higher investment capacity, is approaching the level of AI development already present in the American commercial sector. According to Webb (2019), of the nine largest companies in the technology sector today, six are American - Apple, IBM, Microsoft, Amazon, Google, and Facebook - and three are Chinese - Baidu, Alibaba and, Tencent. Thus, interstate competition in the field of AI, in addition to being the result of Chinese and, to a lesser extent, Russian technological advances, is a reflection of China’s significant economic growth, its geopolitical projection, and the recovery of Russia as a regional power.

In the 2000s, Russia recovered from the economic crisis it went through in the 1990s, taking advantage of the rise in commodity prices and the change in strategy since Vladimir Putin’s accession to the presidency, once again projecting itself geopolitically around it. Several episodes can be cited in this regard: in response to the “colorful revolution” that occurred in Ukraine in 2004, the Russian government used the cut off of gas supplies
as a geopolitical instrument to pressure the neighboring country (Pautasso 2014); in 2008, it went to war with Georgia, which tried to retake the regions of South Ossetia and Abkhazia to get closer to NATO (King 2008); in 2014, Russia annexed Crimea and supported the insurgent provinces of the Donbass region, as a countermeasure to the United States-supported coup that overthrew the Yanukovitch government, which had been approaching Moscow and moving away from the agreement with the European Union (Flag 2016); in 2015 he entered the Syrian war supporting Bashar Al Assad against the United States; and in the 2016 American elections, it emerged as the pivot of a federal investigation into electronic interference in public opinion, which has not yet been concluded. Since the Crimean crisis in 2014, the United States has been applying economic sanctions to Russia, but without the desired effect.

China, due to its extraordinary economic growth, is being perceived by the United States as the main threat to its hegemonic position. In a projection made by the HSBC bank, in the year 2030, the Chinese GDP will surpass the American (O Globo 2018). Amid economic growth, the country developed technologically and modernized its armed forces, projecting power in the Indo-Pacific region, creating bases to ensure control of the South China Sea, where it disputes territories with the Philippines, Vietnam, and Singapore (Rolf and Agnew 2016). On the other hand, it projects its influence through the One Belt One Road project (OBOR), the “new silk route”, for the regions of Central Asia and Southeast Asia (Chan 2017). Currently, the Donald Trump administration has been waging a trade war against China, increasing tariffs for the entry of its products into the U.S., and suffering a reciprocal reaction. Since 2001, the Shanghai Cooperation Organization (OCX) has been in operation, being initially formed by China, Russia, and Central Asian countries, except Turkmenistan, currently with India and Pakistan. OCX’s main focus is the security area, but it also deals with issues of economic and cultural cooperation. This Sino-Russian approach is also observed in the OBOR initiative, based on the accommodation of mutual interests through the integration of Russia into new markets through the infrastructure created in Central Asia by Chinese investments, and the insertion of the Eurasian Economic Union into the Chinese project. Thus, although the Central Asian region has historically been a space of Russian influence, and the New Silk Road project significantly increases the Chinese presence in the region, it is believed that Chinese investments may end up being positive in the containment strategies against the American power for both powers (Makarov and Sokolova 2016).

Thus, it is in this context of “return of geopolitics” in the second
decade of the 21st century, of willingness on the part of revisionist powers
to conquer disruptive technologies related to the future of the war, and of
potential long-term strategic articulation between Moscow and Beijing, that
we should understand the American initiative for the development of military
artificial intelligence from 2018.

What is Understood by Artificial Intelligence?

Before discussing the Department of Defense’s strategy to accelerate
the deployment of AI in the military sector, it is important to define what
artificial intelligence is. According to experts in the field, there is no consensual
meaning for the term. For Webb (2019), artificial intelligence consists of an
autonomous system of decision making and carrying out tasks that replicate
or imitate intelligent human actions, such as recognition of sounds and
objects, problem-solving, language recognition, and use of logical procedures
to achieve predefined goals. Most current artificial intelligence systems
conform to a “soft” profile, capable of guiding machines in making simple
decisions and performing predetermined tasks based on the interpretation of
information obtained in the environment.

Hoadley and Lucas (2018) advance the definition, incorporating
the idea that artificially intelligent systems can perform tasks in varied and
unpredictable environmental circumstances, with varying degrees of human
supervision, in addition to being able to “learn from experience” and to optimize
your performance. Hoadley and Lucas look beyond short-term developments
and understand that the horizon of developments in artificial intelligence
lies beyond the so-called narrow AI, in levels of sophistication that equate
computerized cognition to human intelligence. However, the difficulties
related to the development of a general AI are recognized by the Technology
Committee of the North American National Science and Technology Council
(NSTC), and the lion’s share of public and private investments is, at present,
focused on development restricted forms of computerized cognition, which,
as we shall see, has an immediate impact on the short-term strategy of
developing military AI.

Cummings (2017) understands the decisive character of military
artificial intelligence in the short term based on the ability of robotic systems
to develop sophisticated forms of sensory perception (especially, but not
exclusively, visual) and to be able to correctly discern targets, although this
should not be the case. it also involves the ability to formulate circumstantial
hypotheses about the threat posed by the identified target, nor any “ethical
calculation” about the attack decision (aspects that would configure a military asset such as a LAWS - Lethal Autonomous Weapon System). UAVs (unmanned aerial vehicles) would today be at the forefront of the union between restricted artificial intelligence and armed platforms, insofar as certain models are already able to select and attack targets while maintaining the human decision on the loop (ie, making appropriate ethical decisions). Cummings establishes that a military artificial intelligence model in the short term must function in an unsophisticated way based on a perception – cognition – action sequence, that is: a) instruments that perceive the environment; b) that process information obtained using pre-defined non-polymorphic algorithms; c) to offer a response regarding the threat to the human controller, who in turn decides to act. It is quite true that weapon systems such as cruisers with AEGIS technology today can engage unidentified targets that approach the vessel’s defense perimeter automatically (Scharre 2014), but we must note that this technology is still based on “simple” algorithms, which cannot make ethical decisions about whether or not to attack the enemy based on a vast and unpredictable set of circumstances.

Still, in the field of definitions, Ilachinski (2017) proposes that an artificially intelligent system must be equipped with a two-way communication interface between machine and human being (through a human language, not necessarily verbal, which must be understood and interpreted by the system); capacity for organizing, categorizing and coding information (generating “knowledge”); some ability to decide on courses of action based on inputs from the environment (although these decisions do not necessarily result in autonomous actions, without human interference); and some power to learn from experience, to detect information patterns, and to adapt to new circumstances (machine learning). But, to the extent that mere machine learning processes do not seem to be able to generate sentient artificial intelligence and autonomous lethal weapons (without humans in or on the loop), Horowitz (2018) emphasizes that “electronic brains” dedicated to war, in the short term, they will tend to behave as so-called “facilitating” technologies, and not bellicose in a strict sense, as the combustion engine and electricity were (and continue to be): they are not weapons technologies themselves, but they are enabling tactics and strategies determinants in modern warfare, in addition to expressing this fundamental condition that is dual-use.

Thus, as a facilitating technology, the type of employment most available in the short term for AI in military matters is that of expanding C4ISR capabilities: processing and interpreting information, using algorithms for massive image recognition and interpretation, reducing cognitive stress imposed on human beings in the rear command structure, analysis, and
suggestion of optimal military solutions to problems reported by human
collection, among others. In short, in this short-term horizon, it is a matter of
recruiting capacity in artificial intelligence to increase efficiency and speed in
the performance of cognitive tasks regularly undertaken by humans, without
this implying the replacement of humans themselves as agents of war. It is
this trend that we see in the Summary of the 2018 Department of Defense
Artificial Intelligence Strategy, which we will analyze below.

The US Short-Term Strategy in the Use of Military AI

The definition of artificial intelligence adopted by the Department of
Defense converges in general lines with the one we saw above:

AI refers to the ability of machines to perform tasks that normally require
human intelligence - for example, pattern recognition, learning from
experience, drawing conclusions, making predictions and taking action
- either digitally or through an intelligent program behind a physical
autonomous system (United States of America 2018, 5).

It is clear that the United States Department of Defense understands
the imminent transformation of the industrial economic paradigm based on
developments in automation and machine learning, with inevitable overflows
on the military area in competitors such as Russia and China, predicting
that the costs of failure to implement an aggressive strategy to guarantee US
technological advantage in these fields would be too serious in maintaining
the supremacy of the United States in the interstate system, increasing
unsustainably weaknesses in terms of national defense and innovation. The
strategy explicitly mentions the need to accelerate the military use of AI, beyond
the levels that have been practiced since the beginning of the second decade of
the 21st century. According to Hoadley and Lucas (2018), intelligent systems
have been used successfully in operations in Iraq and Syria, with algorithms
aimed at automatic target recognition, and this is an experience that should
support DoD’s efforts to expand the use of AI for general functions linked to
the C4ISR structure, in addition to offensive operations in cyberspace and
remote coordination of military assets.

Therefore, the expansion of situational awareness on the battlefield and
activities supporting military operations are highlighted in the short horizon
of future developments, with little mention being made of specific prototyping
of autonomous vehicles or armaments. In this sense, the document says: “AI
applied to perception tasks such as image analysis enables the extraction
of useful information from raw data and provides team leaders with better situational awareness” (United States of America 2018, 11), or even: “AI has the potential to increase the safety of aircraft, ships and vehicles in operation, in situations that can change quickly, by alerting its operators about possible risks” (Idem). In the same tone, DoD strategists say: “We will use AI to predict equipment failures, automate diagnostics and plan maintenance based on data about equipment conditions” (Idem); “AI will be used in order to reduce time spent on highly repetitive, manual and frequent tasks” (Idem), allowing humans to perform only the supervision of these tasks, reducing economic costs and errors in execution.

To accelerate the adoption of military artificial intelligence, the Department of Defense created the Joint Artificial Intelligence Center (JAIC) - working in collaboration with other laboratories related to the defense sector, with DARPA (Defense Advanced Research Projects Agency) and other entities dedicated to the development of disruptive techniques and technologies. Among its objectives would be the establishment of a common basis for research and use of AI in the scope of the organs linked to the North American national defense, facilitating planning and coordination, as well as the attraction and training of international experts in this field.

This last initiative must be understood against the backdrop of a relevant controversy involving the alleged inefficiency of the US Department of Defense in attracting and retaining human capital necessary for the development of disruptive military technological solutions, which would arise from a bureaucratic paradigm considered obsolete. We do not know whether cooperation between JAIC and other defense sector bodies will result in a dynamic policy of attracting talent in the hire and hoard style and decentralized and meritocratic forms of creative work organization - generating friction with the military hierarchy as a side effect. - as advocated by Michael Nayak (Nayak 2018), but the mention of the recruitment problem is an indication that the personnel policy in the North American defense sector may be being impacted by the awareness that the “Cold War standard” does not could be continued in the future war.

The focus of JAIC’s activities should then be the identification of priority missions for the delivery of prototypes for testing by different associated agencies, and the selection of partners from the academic and commercial sector interested in the standardization of technologies and procedures in the areas of data, tests, evaluation, and cybersecurity. From such initial experiences, the JAIC should use the lessons learned to repeat them in other projects, to disseminate AI in the Department of Defense. The methodology contained in the strategy for such experiments proposes the
dissolution of the traditional division between research and operation (learn by doing), putting technologies in the testing phase directly in use to face the advances of the opponent as soon as possible. The argument used to support such a methodology is that, despite the errors and fragility of systems under development, advances can be accelerated through the feedback given by users.

Does the Defense of the Ethical Use of Military AI Hide the Impossibility of LAWS in the Short Term?

The defense of research and the use of artificial intelligence within determined ethical parameters is an element highlighted in the strategy of the United States Department of Defense. The document communicates an idea of concern with humanitarian values and the ethics of war, as opposed to what the Russian and Chinese guidelines in this field are supposed to be: both are criticized for advocating technological investments that “raise questions regarding international standards and human rights” (United States of America 2018, 5).

This stance disagrees with the significant abandonment of the search for “ethical and cultural hegemony” by the Washington government in the National Security Strategy of the United States of America 2017 (United States of America 2017), when recognizing that American values are neither self-evident nor universal, and that, therefore, the position of the United States in the interstate system will be one of confrontation (including the use of force) to guarantee its national interests. At the same time that they abandon their position as champions of the interstate system, says Fiori, the United States “proposes to retake world leadership in the process of technological innovation in all fields of knowledge and, in particular, in the field of war atomic armaments” (Fiori 2018, 399). It is at this intersection between the refusal to assume the role of ethical hegemon, the search for technological supremacy, and the denunciation of ethical violations in the development of disruptive military technologies by its opponents in the system, that we must understand the narrative constructed by the Department of Defense.

The North American “ethical concern” is fundamentally mentioned when it comes to the development and use of LAWS (autonomous lethal weapon systems) and other semi-autonomous devices, which we see through the mention of the DoD Directive 3000.09, which:

[... sets out principles to minimize the likelihood and consequences of]
failures in autonomous and semi-autonomous weapon systems that can lead to unintended engagement. The Directive provides for autonomous and semi-autonomous weapon systems to be built to allow commanders and operators to exercise appropriate levels of human judgment on the use of force (United States of America 2018, 15).

Ayoub and Payne (2018) echo American ‘ethical concerns’, wondering how an autonomous lethal weapon might be able to choose between the value of different human lives and under what circumstances should AI sacrifice certain lives in favor of others, pointing out the subjective nature of several combat situations that cannot be translated directly through protocols or rules of engagement for intelligent systems. A similar discussion is taking place in the civil sector concerning autonomous vehicles, which in accident situations may have a choice between preserving one life at the expense of another.

Horowitz (2018) wonders how many “ethical deviations” and collateral damage would be caused in a war fought at “machine speed”, while Cummings (2017) defends the relevance of fail-safe mechanisms that keep humans in the loop decision-making of an autonomous system although, in this case, the combatant who would remove such security mechanisms would inevitably gain an advantage, increasing the speed of response of his autonomous weapons even if at the expense of humanitarian values.

In short, without minimizing the importance of discussion on this topic in civil society, the defense of an “ethics of robotic warfare” by the United States Department of Defense at the end of the second decade of the 21st century should be understood at the same time in light of the following evidence: 1) the United States does not currently master any autonomous weapons technology that is operational on the battlefield; 2) so far, none of the powers of the future war seem to dominate this technology; 3) the Russian government verbally insists that lethal autonomous armaments are a priority in its strategy of developing military artificial intelligence.

Thus, while the United States does not have control over the “high points” in this field of battle, and Russia seems to run out of time, it is not surprising that the US government invokes a whole ethical-moral instrument in an attempt to contain its opponents, even if it is by directing international opinion against the “abuses” that can be committed by the revisionist powers. In other times this was the role of “international legal regimes”, of which the space race, for example, is replete: while the dominance of orbital space armament technologies was prohibitive for all competitors, diplomas such as the Outer Space Treaty abounded (1967), establishing extraterrestrial space as a “sanctuary of humanity”, and the Moon Treaty (1979) in which the Earth’s
natural satellite was treated as a “province of humanity”. In the 21st century, when these space armament technologies became viable, says Dolman:

[…] The United States must declare that it is withdrawing from the current space regime and announce that it will establish a principle of free-market sovereignty in space […] the United States must once and for all conquer the orbit by military control the Earth’s low orbit. From this vantage point, laser or kinetic weapons disposed in space should prevent any other state from having assets in orbit, and can effectively engage and destroy enemy antisatellite installations on the planetary surface (Dolman 2002, 154).

The same logic applies to the development of military artificial intelligence today. The inability to control autonomous military platform technologies engenders American “ethical-legalist impulses”, which will fall apart as soon as the ability to establish supremacy is achieved. However, the possibility of establishing an international regime of non-proliferation of software is not very feasible:

The Software is more diffuse and advances faster than the hardware. Software, in practical terms, has no cost of replication and transmission, making it easily copied, stolen and produced on a large scale. Slowing down the spread of hardware like missiles and drones is difficult, but stopping the proliferation of software is practically impossible (Ewers et al. 2017, 14).

Therefore, because of the difficulties in enforcing international law instruments to prevent the development and dissemination of artificial intelligence algorithms, and given the impossibility of banning the supercomputers necessary for their development - in the circumstances of their dual-use -, the DoD calls for tools that, in the current American national strategy, seem anachronistic, if the main objective of the initiative was not precisely to guarantee the technological supremacy of the United States. To do so, provisionally resorting to the old universalist rhetoric of “democratic and humanitarian values” certainly comes in handy, especially if it lends itself to its antithesis, the defense of North American supremacist interests in a scenario of a clear global “return of geopolitics”. We must expect that, once autonomous weapons technology has been mastered by the United States, all of this ethical-humanitarian recitation about artificial intelligence will be exclusive to academics, nonconformed leaders of civil society, or the chancelleries of peripheral governments.
Final Remarks

The artificial intelligence strategy formalized in 2018 by the United States Department of Defense is undoubtedly a normative and operational response, but equally discursive, guided by the perceived threat posed by Sino-Russian initiatives in this technological field. The short-term horizon, by pointing to the greater feasibility of employing intelligent systems in command, control, communications, intelligence, reconnaissance, and surveillance (C4ISR) functions to the detriment of non-lethal autonomous weapons (LAWS) drives the North American strategy to undertake efforts in this regard, while supporting a portion of the international opinion of experts and activists who understand the ethical and humanitarian dangers of producing “killer robots”.

It is clear, however, that research and testing with lethal autonomous platforms in the United States continues at an accelerated pace, considering that its main Russian-Chinese competitors also do (Scharre 2014). China and Russia are defined in the national security strategy released by the current Donald Trump administration as revisionist powers, eager to “shape the world” in a way that is contrary to American interests (United States of America 2017). The DoD strategy for the military use of artificial intelligence is discursively and programmatically inserted in this perspective of geopolitical competition against China and Russia. In it, the US government, while continuing to uphold its role as the “moral compass” of the capitalist interstate system, aims unequivocally to maintain American technological leadership in all the fields of disruptive technologies aimed at the future war, and that guarantee the main objective to be reached from the general strategic reorientation of the Trump Era, which is the guarantee of US national interests in a geopolitical scenario of extreme competition, regardless of any “globalist” or pro-systemic considerations.

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ABSTRACT
This article analyses the US Department of Defense initiative formalized in the Summary of the 2018 Department of Defense Artificial Intelligence Strategy. The conclusion is that the US emphasis on the use of artificial intelligence to expand C4ISR capabilities (command, control, communications, computers, intelligence, reconnaissance and surveillance) and the denunciation of “ethical risks” involving Lethal Autonomous Weapon Systems (LAWS) are narrative strategies aimed at dealing in the short term with the inability of the US technology agencies to master autonomous military platform technologies and with the Russian resolve on the development of these lethal autonomous military platforms.

KEYWORDS
Artificial Intelligence; War; Strategy.

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