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**This House opposes delegating lethal military decisions to artificial intelligence.**

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**Artificial Intelligence**

Encyclopedia Britannica, by BJ Copeland, January 23, 2026

artificial intelligence (AI), the ability of a digital computer or computer-controlled robot to perform tasks commonly associated with intelligent beings. The term is frequently applied to the project of developing systems endowed with the intellectual processes characteristic of humans, such as the ability to reason, discover meaning, generalize, or learn from past experience. Since their development in the 1940s, digital computers have been programmed to carry out very complex tasks—such as discovering proofs for mathematical theorems or playing chess—with great proficiency. Despite continuing advances in computer processing speed and memory capacity, there are as yet no programs that can match full human flexibility over wider domains or in tasks requiring much everyday knowledge.

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**Defense Primer: U.S. Policy on Lethal Autonomous Weapon Systems**

Congress.gov, by Kelley Sayler 01/02/2025

Lethal autonomous weapon systems (LAWS) are a special class of weapon systems that use sensor suites and computer algorithms to independently identify a target and employ an onboard weapon system to engage and destroy the target without manual human control of the system. Although these systems are not yet in widespread development, it is believed they would enable military operations in communications-degraded or -denied environments in which traditional systems may not be able to operate.

Contrary to a number of news reports, U.S. policy does not prohibit the development or employment of LAWS. Although the United States is not known to currently have LAWS in its inventory, some senior military and defense leaders have stated that the United States may be compelled to develop LAWS if U.S. competitors choose to do so. At the same time, a growing number of states and nongovernmental organizations are appealing to the international community for regulation of or a ban on LAWS due to ethical concerns.

Developments in both autonomous weapons technology and international discussions of LAWS could hold implications for congressional oversight, defense investments, military concepts of operations, treaty-making, and the future of war.

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## **In Ukraine, a new Arsenal of Killer A.I. Drones is Being Born**

New York Times Magazine, By C.J. Chivers December 31, 2025

*NOTE: This is an excerpt from a longer piece*

This story was reported over the course of 18 months and multiple trips to Ukraine.

On a warm morning a few months ago, Lipa, a Ukrainian drone pilot, flew a small gray quadcopter over the ravaged fields near Borysivka, a tiny occupied village abutting the Russian border. A surveillance drone had spotted signs that an enemy drone team had moved into abandoned warehouses at the village's edge. Lipa and his navigator, Bober, intended to kill the team or drive it off.

Another pilot had twice tried hitting the place with standard kamikaze quadcopters, which are susceptible to radio-wave jamming that can disrupt the communication link between pilot and drone, causing weapons to crash. Russian jammers stopped them. Lipa had been assigned the third try but this time with a Bumblebee, an unusual drone provided by a secretive venture led by Eric Schmidt, the former chief executive of Google and one of the world's wealthiest men.

Bober sat beside Lipa as he oriented for an attack run. From high over Borysivka, one of the Bumblebee's two airborne cameras focused on a particular building's eastern side. Bober checked the imagery, then a digital map, and agreed: They had found the target. "Locked in," Lipa said.

With his right hand, Lipa toggled a switch, unleashing the drone from human control. Powered by artificial intelligence, the Bumblebee swept down without further external guidance. As it descended, it lost signal connection with Lipa and Bober. This did not matter: It continued its attack free of their command. Its sensors and software remained focused on the building and adjusted heading and speed independently.

Another drone livestreamed the result: The Bumblebee smacked into an exterior wall and exploded. Whether Russian soldiers were harmed was unclear, but a semiautonomous drone had hit where human-piloted drones missed, rendering the position untenable. "They will change their location now," Lipa said. (Per Ukrainian security rules, soldiers are referred to by their first name or call sign.)

Throughout 2025 in the war between Russia and Ukraine, in largely unseen and unheralded moments like the warehouse strike in Borysivka, the era of killer robots has begun to take shape on the battlefield. Across the roughly 800-mile front and over the airspace of both nations, drones with newly developed autonomous features are now in daily combat use. By last spring, Bumblebees launched from Ukrainian positions had carried out more than 1,000 combat flights against Russian targets, according to a manufacturer's pamphlet extolling the weapon's capabilities. Pilots say they have flown thousands more since.

Bumblebee's introduction raised immediate alarms in the Kremlin's military circles, according to two Russian technical intelligence reports. One, based on dissection of a damaged Bumblebee collected along the front, described a mystery drone with chipsets and a motherboard "of the highest quality, matching the level of the world's leading microelectronics manufacturers." The report noted the sort of deficiencies expected of a prototype but ended with an ominous forecast: "Despite current limitations," it declared, "the technology will demonstrate its effectiveness" and its range of uses "will continue to expand."

That conclusion was prescient but understated, for the simple reason that Bumblebees hardly fly alone. Under the pressures of invasion, Ukraine has become a fast-feedback, live-fire test range in which arms manufacturers, governments, venture capitalists, frontline units and coders and engineers from around the West collaborate to produce weapons that automate parts of the conventional military kill chain. Equipped with onboard proprietary software trained on large data sets, and often run on off-the-shelf microcomputers like Raspberry Pi, drones with autonomous capabilities are now part of the war's bloody and destructive routine.

In repeated visits to arms manufacturers, test ranges and frontline units over 18 months, I observed their development firsthand. Functions now performed autonomously include: pilotless takeoff or hovering, geolocation, navigation to areas of attack, as well as target recognition, tracking and pursuit — up to and including terminal strike, the lethal endpoint of the journey. Software designers have also networked multiple drones into a shared app that allows for flight control to be passed between human pilots or for drones to be organized into tightly sequenced attacks — a step toward computer-managed swarms. Weapons with these capabilities are in the hands of ground brigades as well as air defense, intelligence and deep-strike units.

Drones under full human control remain far more abundant than their semiautonomous siblings. They cause most battlefield wounds. But unmanned weapons are crossing into a new frontier. And while no publicly known drone in the war automates all steps of a combat mission into a single weapon, some designers have put sequential steps

under the control of artificial intelligence. “Any tactical equation that has a person in it could have A.I.,” said the founder of X-Drone, a Ukrainian company that has trained software for drones to hunt for and identify a stationary target, like an oil-storage tank, and then hit it without a pilot at the controls. (The founder asked that his name be withheld for security reasons.)

The Kremlin’s forces are also adopting A.I.-enhanced weapons, according to examinations of downed Russian drones by Conflict Armament Research, a private arms-investigation firm. With both sides investing, Mykhailo Fedorov, Ukraine’s first deputy prime minister, said A.I.-powered drones are at the center of a new arms race. Ukraine’s defenders must field them in large numbers quickly, he said, or risk defeat. “We are trying to stimulate development of every stage of autonomy,” he said. “We need to develop and buy more autonomous drones.” To be sure, the familiar weapons of modern battlefields, all under human control, have caused immeasurable harm to generations of soldiers and civilians. Even weapons celebrated by generals and pundits as astonishingly precise, like GPS-guided missiles or laser-guided bombs, have often struck the wrong places, killing innocents, often without accountability. No golden age is being left behind. Rather, semiautonomous drones compound existing perils and present new threats. Peter Asaro, vice chair of the Stop Killer Robots Campaign and a philosopher and an associate professor at the New School, warned of rising dangers as weapons enter unmapped practical and ethical terrain. “The development of increasing autonomy in drones raises serious questions about human rights and the protection of civilians in armed conflict,” he said. “The capacity to autonomously select targets is a moral line that should not be crossed.”

The concept of a killer robot is vague and prone to hype, invoking T-800 of “The Terminator,” an adaptive mobile killing machine deployed by an artificial superintelligence, Skynet, that perceives humanity as a threat. Nothing close exists in Ukraine. “Everybody thinks, Oh, you are making Skynet,” said a captain responsible for integrating new technology into the 13th Khartia Brigade of Ukraine’s National Guard, one of the country’s most sophisticated units, in which Lipa and Bober serve. “No, the technology is interesting. But it’s a first step and there are many more steps.”

The captain and other technicians working with A.I.-enhanced weapons said they tend to be brittle, limited in function and less accurate than weapons under skilled human control. Many have a short battery life and brief flight times. Autonomous weapons with sustained endurance, high flexibility and the ability to discern, identify, rank and pursue multiple categories of targets independent of human action have yet to appear, and they would require, the captain said, “a waterfall of money” plus much imagination and time. “It’s like the staircase of the Empire State Building,” he said. “That’s how many steps there are, and we are inside the building but only on the first floor.” As a safeguard against A.I.-powered weapons slipping the leash, humanitarians and many technologists have long advocated keeping “humans in the loop,” shorthand for preventing weapons from making homicidal decisions alone. By this thinking, a trained human must assess and approve all targets, as Lipa and Bober did, ideally with the power to abort an individual strike and a kill switch to shut an entire system down. Strong guardrails, the argument goes, are necessary for accountability, compliance with laws of armed conflict, legitimacy around military action and, ultimately, for human security.

Schmidt has emphasized the necessity of human oversight. But at the end of a flight, some semiautonomous weapons in Ukraine can already identify targets without human involvement, and many Ukrainian-made systems with human override are inexpensive and could be copied and modified by talented coders anywhere. Some of those designing A.I.-enhanced weapons, who consider their development necessary for Ukraine’s defense, confess to unease about the technology that they themselves conjure to form. “I think we created the monster,” said Nazar Bigun, a young physicist writing terminal-attack software. “And I’m not sure where it’s going to go.”

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## **The ethics issue: Should we give robots the right to kill?**

New Scientist, by Douglas Heaven July 5, 2017

Robot soldiers that follow orders, unclouded by human emotions, might reduce casualties in conflicts. But who will take responsibility for their actions?

Maximise human safety vs Keep technology under control

Hot-headed, irrational and swayed by emotion – who’d want a human in control? If we could build machines capable of making tough choices for us, surely we should. That’s the line taken by people like roboticist Ron Arkin at the Georgia Institute of Technology in Atlanta. For Arkin, autonomous weapons – or killer robots – that remain rational under fire and behave exactly as they were trained to would be more humane than human soldiers in a war situation, and would save lives. We therefore have a moral imperative to create them.

The same reasoning can be applied to many scenarios where human nature may stop us doing the right thing, from driving to making life-or-death decisions in hospitals to criminal sentencing. Computers are already moving into all these areas, and in many cases surpass humans where it counts. But how much autonomy should we give them?

The problem with fully autonomous machines from a moral point of view is that they cannot take responsibility for their actions. Human ethics is built on the assumption that actions are done by agents with the capacity to make a call between right and wrong. If we offload those actions on to machines, who do we blame when something goes wrong?

Filippo Santoni de Sio, a philosopher and ethicist at the Delft University of Technology in the Netherlands, calls ... this the “responsibility gap”. For him, it is crucial that a human always takes responsibility. This might be the machine’s designers or a designated human handler, much as a parent takes responsibility for their child or an owner for their pit bull. “It is morally wrong to give autonomy to machines because they cannot perform moral thinking,” says Santoni de Sio.

Arkin and others have suggested that at some point in the distant future machines capable of moral reasoning could be built. But even in such a case, many will still feel it is wrong to delegate such decisions to a machine. With people, we don’t just want them to do the right thing; we also have a need to understand why they act the way they do.

Blame is as much about explanation as it is compensation or retribution, says Santoni de Sio. “This is the main idea behind moral responsibility – we want to blame people not necessarily because we want to punish them, but because we want to understand. We want to see the person’s face, we want to ask questions.”

So where do we go from here? Where the stakes are highest, many are calling for an outright ban. Campaigners are pushing the UN to draw up a treaty curbing development of autonomous weapons, for example. Legislation is on its way for autonomous vehicles too. Germany has proposed a highway code for driverless cars, laying down guidelines for who is ultimately responsible in an accident. And similar regulations will be drawn up for medical robots.

Attitudes may change as we work through the moral maze surrounding autonomous machines. But for now, at least, we will be keeping them on very short reins.

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## **Bring on the unstoppable rise of thinking war machines**

Breaking Defense, by Clayton Swope, December 16, 2024

The war in Ukraine has demonstrated, once and for all, that drones are here to stay — but it has also underlined that battlefield communications are fragile and easily disrupted, leaving drones unable to receive their orders from their operators. The US military is developing ways to defeat pervasive signal jamming, but it should recognize there will be no silver bullet, and that there will be times when the jammers win.

The solution: The military will eventually need more machines that can think like human soldiers, deciding autonomously what to destroy and who to kill in ambiguous battlefield conditions. And to secure future battlefields, the Pentagon, and the public, will need to get over its “Terminator” fears and embrace reality.

The Pentagon is working to mitigate the effectiveness of Russian signal jammers in Ukraine, trying to enhance the jam resistance of weapons systems provided to the Ukrainian military. As another method to defeat jamming, Ukrainian forces seem to be targeting electronic warfare systems themselves, using munitions that aim for equipment emitting jamming signals. The architecture of proliferated satellite constellations has offered some protection against jamming, but Russia is increasingly successful at degrading Starlink service and has consistently been able to disrupt many other signals — like GPS and drone command and control links. For navigation, military officials are also looking at GPS alternatives that do not use signals, like image-aided and laser scanner navigation technologies.

This is a cat-and-mouse game between the jammers and the jammed, with both sides racing to develop technologies that defeat each other’s latest and greatest capabilities. What works one week might be obsolete the next. And that means that human control — differentiating between enemy and friendly soldiers and civilians, enemy and friendly aircraft and civilian airplanes, among other battlefield variables in various weather conditions and during daytime and nighttime — can never be assured, even mission to mission.

Hence, the need to limit direct operator control. Broadly speaking, automated decision-making for identifying and engaging targets is not a new concept. Existing weapons such as heat-seeking missiles, mines, torpedoes, as well as systems like the Phalanx radar-guided gun and Israel’s Harpy drone, make lethal decisions autonomously, albeit following a very tight script that probably falls short of being considered artificial intelligence. Though a magnetic underwater mine detonating is an automatic reaction to it coming near a metallic warship hull, the action — the “decision” made — looks more like the instincts of a closing Venus flytrap than like human decision-making.

For years, the United States has looked at ways to incorporate AI into weapon systems, but has shown hesitancy towards AI-enabled autonomous weapons making lethal decisions without a human in the loop. Improved electronic warfare techniques should create an added sense of urgency and a reason for US policymakers and military leaders to reassess that reluctance.

Unlike the United States, neither Russia nor China appear to be circumspect about AI-enabled lethal autonomous weapons. Moreover, they are already collaborating on AI-powered weapon systems. Along with other weapons, Russia has been testing a tank-like robot which could conceivably one day operate autonomously, potentially making real-time decisions on the battlefield about what to shoot. China is developing a myriad of warfighting systems, like submarines and aircraft, that are designed to make decisions autonomously without a human in the loop. Other countries are taking a similar approach. For example, Ukraine is working to deploy swarms of automated drones that do not require communications with operators to identify and attack their targets. The Pentagon lags behind, despite the fact there are no laws [PDF] that prohibit the development or use of AI-enabled lethal autonomous weapon systems. Perhaps the best example is the Bullfrog counter-drone system, which would become the first publicly known AI-enabled autonomous lethal weapon used by the US military. This system is a leap beyond legacy ones like Phalanx, Harpy, or underwater mine because it's not just reacting to one input—like a radar signature, radio emission, or magnetic signature—but rather using sensors to comprehensively understand its environment, identify hostile drones, and make decisions based on its human-trained algorithms. But Bullfrog is the exception, unfortunately, and not the norm. The US military should focus more on AI-enabled autonomous lethal weapons, particularly ones focused on drones, developing the technology so that it meets military requirements and addresses ethical concerns. Like Bullfrog, such systems can be designed for two modes—one allowing a human in the loop and another with full autonomy—so that fully automated capabilities are only used when and where appropriate to battlefield conditions.

It must be acknowledged that lethal autonomous weapons will make mistakes. But humans also make mistakes. And civilians, or simply the wrong targets, fall into the crosshairs of today's weapons systems that are guided by humans. Whereas humans may be susceptible to emotions, such as revenge, in the heat of battle, a weapon system trained using machine learning would not. Arguably, this means that machines might even make more predictable and rational decisions than people on the battlefield. They will also have to operate “alongside” human soldiers, so work will be needed to examine and optimize the human-robot battlefield relationship. And if the US develops these systems now, AI-enabled lethal autonomous weapon systems elsewhere are more likely to reflect American and allied respect and adherence to the law of war, not ceding first mover advantage to Russia and China. During a future war in which the US military may not be able to consistently access parts of the radio spectrum, it will still need to offensively use uncrewed drones and defend against them, probably in very complex and fluid environments. Possession of AI-enabled lethal autonomous weapons will probably make Russia and China more eager and willing to jam as much radio spectrum as possible, because they will not need it for the tactical fight on the battlefield.

If human soldiers find themselves cut off from communications with commanders, they can survive and win. If remotely operated machines are cut off, they do not work.

The United States should focus on developing AI-enabled machines, particularly aerial drones and counter-drone systems, that can think, fight, and destroy without human direction. There is no reason to delay efforts to design and build algorithms and autonomous lethal warfighting systems that meet military needs and adhere to US values and principles. Otherwise, the United States cedes a huge battlefield advantage to Russia and China.

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## **The Killer Robots Are Here. It's Time to Be Worried.**

The Nation, by Michael T. Klare, February 23, 2024

*(Note: This article has been abridged for concision.)*

Yes, it's already time to be worried—very worried. As the wars in Ukraine and Gaza have shown, the earliest drone equivalents of “killer robots” have made it onto the battlefield and proved to be devastating weapons. But at least they remain largely under human control. Imagine, for a moment, a world of war in which those aerial drones (or their ground and sea equivalents) controlled us, rather than vice versa. Then we would be on a destructively different planet in a fashion that might seem almost unimaginable today. Sadly, though, it's anything but unimaginable, given the work on artificial intelligence (AI) and robot weaponry that the major powers have already begun...

By combining AI with advanced robotics, the US military and those of other advanced powers are already hard at work creating an array of self-guided “autonomous” weapons systems—combat drones that can employ lethal force independently of any human officers meant to command them. Called “killer robots” by critics, such devices include a variety of uncrewed or “unmanned” planes, tanks, ships, and submarines capable of autonomous operation...

The imminent appearance of those killing machines has generated concern and controversy globally, with some countries already seeking a total ban on them and others, including the United States, planning to authorize their use only under human-supervised conditions. In Geneva, a group of states has even sought to prohibit the deployment and use of fully autonomous weapons, citing a 1980 UN treaty, the Convention on Certain Conventional Weapons,

that aims to curb or outlaw non-nuclear munitions believed to be especially harmful to civilians. Meanwhile, in New York, the UN General Assembly held its first discussion of autonomous weapons last October...

For the most part, debate over the battlefield use of such devices hinges on whether they will be empowered to take human lives without human oversight. Many religious and civil society organizations argue that such systems will be unable to distinguish between combatants and civilians on the battlefield and so should be banned in order to protect noncombatants from death or injury, as is required by international humanitarian law. American officials, on the other hand, contend that such weaponry can be designed to operate perfectly well within legal constraints. However, neither side in this debate has addressed the most potentially unnerving aspect of using them in battle: the likelihood that, sooner or later, they'll be able to communicate with each other without human intervention and, being "intelligent," will be able to come up with their own unscripted tactics for defeating an enemy—or something else entirely. Such computer-driven groupthink, labeled "emergent behavior" by computer scientists, opens up a host of dangers not yet being considered by officials in Geneva, Washington, or at the UN.

For the time being, most of the autonomous weaponry being developed by the American military will be unmanned (or, as they sometimes say, "uninhabited") versions of existing combat platforms and will be designed to operate in conjunction with their crewed counterparts. While they might also have some capacity to communicate with each other, they'll be part of a "networked" combat team whose mission will be dictated and overseen by human commanders...

### **The Appeal of Robot "Swarms"**

However, some American strategists have championed an alternative approach to the use of autonomous weapons on future battlefields in which they would serve not as junior colleagues in human-led teams but as coequal members of self-directed robot swarms. Such formations would consist of scores or even hundreds of AI-enabled UAVs, USVs, or UGVs—all able to communicate with one another, share data on changing battlefield conditions, and collectively alter their combat tactics as the group-mind deems necessary.

"Emerging robotic technologies will allow tomorrow's forces to fight as a swarm, with greater mass, coordination, intelligence and speed than today's networked forces," predicted Paul Scharre, an early enthusiast of the concept, in a 2014 report for the Center for a New American Security (CNAS)...

### **When Swarms Choose Their Own Path**

In other words, it's only a matter of time before the US military (and presumably China's, Russia's, and perhaps those of a few other powers) will be able to deploy swarms of autonomous weapons systems equipped with algorithms that allow them to communicate with each other and jointly choose novel, unpredictable combat maneuvers while in motion. Any participating robotic member of such swarms would be given a mission objective ("seek out and destroy all enemy radars and anti-aircraft missile batteries located within these [specified] geographical coordinates") but not be given precise instructions on how to do so. That would allow them to select their own battle tactics in consultation with one another. If the limited test data we have is anything to go by, this could mean employing highly unconventional tactics never conceived for (and impossible to replicate by) human pilots and commanders.

The propensity for such interconnected AI systems to engage in novel, unplanned outcomes is what computer experts call "emergent behavior." As ScienceDirect, a digest of scientific journals, explains it, "An emergent behavior can be described as a process whereby larger patterns arise through interactions among smaller or simpler entities that themselves do not exhibit such properties." In military terms, this means that a swarm of autonomous weapons might jointly elect to adopt combat tactics none of the individual devices were programmed to perform—possibly achieving astounding results on the battlefield, but also conceivably engaging in escalatory acts unintended and unforeseen by their human commanders, including the destruction of critical civilian infrastructure or communications facilities used for nuclear as well as conventional operations.

At this point, of course, it's almost impossible to predict what an alien group-mind might choose to do if armed with multiple weapons and cut off from human oversight. Supposedly, such systems would be outfitted with failsafe mechanisms requiring that they return to base if communications with their human supervisors were lost, whether due to enemy jamming or for any other reason. Who knows, however, how such thinking machines would function in demanding real-world conditions...

What then? Might they choose to keep fighting beyond their preprogrammed limits, provoking unintended escalation—even, conceivably, of a nuclear kind? Or would they choose to stop their attacks on enemy forces and instead interfere with the operations of friendly ones...

Top US military and diplomatic officials insist that AI can indeed be used without incurring such future risks and that this country will only employ devices that incorporate thoroughly adequate safeguards against any future dangerous misbehavior. That is, in fact, the essential point made in the "Political Declaration on Responsible Military Use of Artificial Intelligence and Autonomy" issued by the State Department in February 2023. Many

prominent security and technology officials are, however, all too aware of the potential risks of emergent behavior in future robotic weaponry and continue to issue warnings against the rapid utilization of AI in warfare.

Of particular note is the final report that the National Security Commission on Artificial Intelligence issued in February 2021. Cochaired by Robert Work (back at CNAS after his stint at the Pentagon) and Eric Schmidt, former CEO of Google, the commission recommended the rapid utilization of AI by the US military to ensure victory in any future conflict with China and/or Russia. However, it also voiced concern about the potential dangers of robot-saturated battlefields.

“The unchecked global use of such systems potentially risks unintended conflict escalation and crisis instability,” the report noted. This could occur for a number of reasons, including “because of challenging and untested complexities of interaction between AI-enabled and autonomous weapon systems [that is, emergent behaviors] on the battlefield.” Given that danger, it concluded, “countries must take actions which focus on reducing risks associated with AI-enabled and autonomous weapon systems.”

When the leading advocates of autonomous weaponry tell us to be concerned about the unintended dangers posed by their use in battle, the rest of us should be worried indeed. Even if we lack the mathematical skills to understand emergent behavior in AI, it should be obvious that humanity could face a significant risk to its existence, should killing machines acquire the ability to think on their own...

If so, there could be no one around to put an RIP on humanity’s gravestone.

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## **Stop the “Stop the Killer Robot” Debate: Why We Need Artificial Intelligence in Future Battlefields**

Council on Foreign Relations, by Hitoshi Nasu and Colonel Christopher Korpela, June 21, 2022

For nearly a decade, the “Stop the Killer Robots” debate has dominated public conversation about military applications of artificial intelligence (AI). However, as Marine Corps Lieutenant General Michael Groen pointed out on May 25, the role that artificial intelligence is expected to play in the defense industry is much more diverse and less dramatic than many people envision in calling for an international ban on lethal autonomous weapons systems.

Although their efforts out of humanitarian concerns are laudable, many of these arguments are based on erroneous assumptions and speculations that are devoid of practical and operational considerations. Governmental experts are scheduled to meet again in July to continue this debate at the United Nations, while the U.S. Department of Defense is planning to update their autonomous weapons guidance. It is time to re-consider the value of the “Stop the Killer Robot” campaign because the ban will not only be ineffective but will also adversely impact law-abiding nations, depriving their ability to defend themselves from rogue nations and malicious actors, and worse of all, will actually be inhumane.

Those advocating for a ban on lethal autonomous weapons systems commonly raise concerns about predictability and reliability. The Human Rights Watch, for example, doubts that fully autonomous weapons would be capable of meeting international humanitarian law standards, such as the principles of distinction and proportionality. However, these are technological challenges, to which technological solutions must be found, rather than the reasons for curtailing technological development by imposing a ban.

There is an existing body of international law that addresses those concerns. An autonomous weapons system is already prohibited if it behaves unpredictably or its intended performance is unreliable. It is even a war crime to use such a weapon, knowing that it cannot reliably be directed against lawful military targets in a discriminatory manner. Likewise, existing laws already prohibit the use of autonomous systems that are designed to exterminate a group of people based on their race, gender, nationality, or any other grounds. A new treaty will add nothing to existing laws if it is simply concerned about indiscriminate or egregious use of autonomous systems.

Some commentators are appealing to moral imperatives against the dehumanization of warfare, asserting that autonomous systems are incapable of making complex ethical choices in the battlefield. However, there are a wide array of weapons systems, such as surface-to-air missiles and loitering munitions, that can operate without any human in the loop once activated. None of these weapons are prohibited notwithstanding their inability to make complex ethical choices before detecting and engaging targets.

Furthermore, it is important to understand that autonomous functions alone do not cause any harm. It is the weapons payloads carried on autonomous systems that enable them to cause lethal effects. And whether these systems are equipped with lethal payloads and with what kind of ammunition is necessarily a human decision. There is no accountability gap created as a result of developing autonomous systems because through this human decision-making by commanders and weapons operators, each State remains accountable in authorizing and directing the use of weapons with autonomous capabilities, how they use these weapons, and in what operational environment.

The call for an international ban on lethal autonomous weapons systems also fails to take account of geopolitical reality that is currently prevailing in international relations. International weapons regulation is feasible only when

there is a shared political interest among states. The current geopolitical climate is not conducive to any inter-government agreement that constrains each state's ability to exploit the potential that autonomous systems will bring to their strategic and operational advantage.

Even in the event where a treaty is adopted to ban lethal autonomous weapons systems, such an instrument will be either so ambiguous that it does not have any meaningful impact in regulating state behavior or, worse, stifles technological developments that bring many humanitarian benefits to future battlefields. Its effectiveness will also be limited because many states investing heavily in this technology are unlikely to agree with such a ban.

It is plausible that civil society groups call on some states to adopt a treaty ban, but it will not be legally binding on those that are not party to it. For those states that agree to the ban or adopt self-restraint as a matter of policy, it means that they will be deprived of opportunities to access this technology, which could be decisive in a future conflict where the speed and accuracy of warfighting is critical.

#### Humanitarian Benefits

Although the debates around lethal autonomous weapons systems are often framed as humanitarian issues, we should not lose sight of the significant humanitarian benefits that these systems are expected to bring to the battlefield. Indeed, AI-enabled weapon system autonomy has the great potential to mitigate the risk of human error as an additional oversight tool to assist targeting operations.

For example, on-board sensors feeding real-time images and information-sharing in swarms will provide additional technological means to verify military targets. This could enable autonomous systems to suspend the attack maneuver when those sensors detected the presence of civilians or mismatch of target information.

Further, their close combat capabilities reduce the need to use high explosives as the means of delivering lethal effects. Compared to conventional munitions, autonomous systems will enable more accurate and surgical attacks with significantly reduced concern about collateral damage. A ban on lethal autonomous weapons systems will prevent the development of these technological means to reduce incidental civilian casualties.

In our view, it is these humanitarian benefits that should be emphasized in promoting the application of artificial intelligence in various ways to enhance the accuracy of weapons systems and reduce civilian casualties caused. And these technological means to minimize human casualties will become even more important as the speed of warfighting accelerates due to technological advances.

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## **North Korea's Kim Jong Un oversees tests of new AI-equipped suicide drones**

Al Jazeera, March 27, 2025

North Korean leader Kim Jong Un has personally supervised his country's testing of new AI-equipped suicide and reconnaissance drones and called for unmanned aircraft and artificial intelligence to be prioritised in military modernisation plans.

State-run Korean Central News Agency (KCNA) said on Thursday that Kim oversaw the testing of "various kinds of reconnaissance and suicide drones" produced by North Korea's Unmanned Aerial Technology Complex.

The new North Korean drones are capable of "tracking and monitoring different strategic targets and enemy troop activities on the ground and the sea", while the attack drones will "be used for various tactical attack missions", KCNA said, noting that both drone systems have been equipped with "new artificial intelligence".

Kim agreed to expand the production capacity of "unmanned equipment and artificial intelligence" and emphasised the importance of creating a long-term plan for North Korea to promote "the rapid development" of "intelligent drones", which is "the trend of modern warfare".

Pictures from the tests, which took place on Tuesday and Wednesday, were said to show attack drones successfully striking ground targets, including military vehicles.

Kim was pictured walking with aides near a newly developed unmanned aerial reconnaissance aircraft, which appeared to be larger than a fighter jet, and was seen boarding an airborne early warning and control (AEW) aircraft, according to pictures released by KCNA.

The photos mark the first time such an aircraft was unveiled by the North, which was equipped with a radar dome on the fuselage, similar to the Boeing-manufactured Peace Eye operated by the South Korean air force.

North Korea's efforts to create an early warning aircraft were previously reported by analysts who had used commercial satellite imagery to discover Pyongyang was converting a Russian-made Il-76 cargo aircraft into an early-warning role.

The London-based International Institute for Strategic Studies (IISS) said in a report last year that an AEW aircraft would help augment North Korea's existing land-based radar systems, though just one aircraft would not be enough. During his visit to the test site, Kim was also briefed on intelligence-gathering capabilities as well as electronic jamming and attack systems newly developed by the country's electronic warfare group, KCNA said.

The government of South Korea and analysts have repeatedly warned about the potential transfer of sensitive Russian military technology to North Korea in return for Kim's provision of thousands of North Korean troops and weapons to support Russia's war with Ukraine.

Seoul's military said on Thursday that North Korea has so far this year supplied Russia with an additional 3,000 troops as well as missiles and other ammunition.

"It is estimated that an additional 3,000 troops were sent between January and February as reinforcements," South Korea's Joint Chiefs of Staff (JCS) said, adding that of the initial 11,000 North Korean soldiers dispatched to Russia in 2024, 4,000 are believed to have been killed or wounded.

"In addition to manpower, North Korea continues to supply missiles, artillery equipment, and ammunition," according to a report by the JCS.

"So far, it is assessed that North Korea has provided a significant quantity of short-range ballistic missiles [SRBMs], as well as about 220 units of 170mm self-propelled guns and 240mm multiple rocket launchers," it said.

The JCS also warned that "these numbers could increase depending on the situation on the battlefield".

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## **Google Lifts a Ban on Using Its AI for Weapons and Surveillance**

Wired, by Paresh Dave and Caroline Haskins, February 4, 2025

*(Note: This article has been abridged for concision.)*

Google announced Tuesday that it is overhauling the principles governing how it uses artificial intelligence and other advanced technology. The company removed language promising not to pursue "technologies that cause or are likely to cause overall harm," "weapons or other technologies whose principal purpose or implementation is to cause or directly facilitate injury to people," "technologies that gather or use information for surveillance violating internationally accepted norms," and "technologies whose purpose contravenes widely accepted principles of international law and human rights."

The changes were disclosed in a note appended to the top of a 2018 blog post unveiling the guidelines. "We've made updates to our AI Principles. Visit AI.Google for the latest," the note reads.

In a blog post on Tuesday, a pair of Google executives cited the increasingly widespread use of AI, evolving standards, and geopolitical battles over AI as the "backdrop" to why Google's principles needed to be overhauled. Google first published the principles in 2018 as it moved to quell internal protests over the company's decision to work on a US military drone program. In response, it declined to renew the government contract and also announced a set of principles to guide future uses of its advanced technologies, such as artificial intelligence. Among other measures, the principles stated Google would not develop weapons, certain surveillance systems, or technologies that undermine human rights.

But in an announcement on Tuesday, Google did away with those commitments. The new webpage no longer lists a set of banned uses for Google's AI initiatives. Instead, the revised document offers Google more room to pursue potentially sensitive use cases. It states Google will implement "appropriate human oversight, due diligence, and feedback mechanisms to align with user goals, social responsibility, and widely accepted principles of international law and human rights." Google also now says it will work to "mitigate unintended or harmful outcomes."

"We believe democracies should lead in AI development, guided by core values like freedom, equality, and respect for human rights," wrote James Manyika, Google senior vice president for research, technology, and society, and Demis Hassabis, CEO of Google DeepMind, the company's esteemed AI research lab. "And we believe that companies, governments, and organizations sharing these values should work together to create AI that protects people, promotes global growth, and supports national security."

They added that Google will continue to focus on AI projects "that align with our mission, our scientific focus, and our areas of expertise, and stay consistent with widely accepted principles of international law and human rights."

Multiple Google employees expressed concern about the changes in conversations with WIRED. "It's deeply concerning to see Google drop its commitment to the ethical use of AI technology without input from its employees or the broader public, despite long-standing employee sentiment that the company should not be in the business of war," says Parul Koul, a Google software engineer and president of the Alphabet Union Workers-CWA...

Google still has language about preventing harm in its official Cloud Platform Acceptable Use Policy, which includes various AI-driven products. The policy forbids violating "the legal rights of others" and engaging in or promoting illegal activity, such as "terrorism or violence that can cause death, serious harm, or injury to individuals or groups of individuals."

However, when pressed about how this policy squares with Project Nimbus—a cloud computing contract with the Israeli government, which has benefited the country's military — Google has said that the agreement "is not directed at highly sensitive, classified, or military workloads relevant to weapons or intelligence services."

“The Nimbus contract is for workloads running on our commercial cloud by Israeli government ministries, who agree to comply with our Terms of Service and Acceptable Use Policy,” Google spokesperson Anna Kowalczyk told WIRED in July.

Google Cloud’s Terms of Service similarly forbid any applications that violate the law or “lead to death or serious physical harm to an individual.” Rules for some of Google’s consumer-focused AI services also ban illegal uses and some potentially harmful or offensive uses.

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## **‘Politically unacceptable, morally repugnant’: UN chief calls for global ban on 'killer robots'**

United Nations News May 14, 2025

“There is no place for lethal autonomous weapon systems in our world,” Mr. Guterres said on Monday, during an informal UN meeting in New York focused on the use and impact of such weapons.

“Machines that have the power and discretion to take human lives without human control should be prohibited by international law.”

The two-day meeting in New York brought together Member States, academic experts and civil society representatives to examine the humanitarian and human rights risks posed by these systems.

The goal: to lay the groundwork for a legally binding agreement to regulate and ban their use.

Human control is vital

While there is no internationally accepted definition of autonomous weapon systems, they broadly refer to weapons such as advanced drones which select targets and apply force without human instruction.

The Secretary-General said in his message to the meeting that any regulations and prohibitions must make people accountable.

“Human control over the use of force is essential,” Mr. Guterres said. “We cannot delegate life-or-death decisions to machines.”

There are substantial concerns that autonomous weapon systems violate international humanitarian and human rights laws by removing human judgement from warfare.

The UN chief has called for Member States to set clear regulations and prohibitions on such systems by 2026.

Approaching a legally binding agreement

UN Member States have considered regulations for autonomous weapons systems since 2014 under the Convention on Certain Conventional Weapons (CCW) which deals with weapons that may violate humanitarian law.

Most recently, the Pact for the Future, adopted in September last year, included a call to avoid the weaponization and misuse of constantly evolving weapons technologies.

Stop Killer Robots – a coalition of approximately 270 civil society organizations – was one of the organizations speaking out during this week’s meeting.

Executive Director Nicole van Rooijen told UN News that consensus was beginning to emerge around a few key issues, something which she said was a “huge improvement.”

Specifically, there is consensus on what is known as a “two-tiered” approach, meaning that there should be both prohibitions on certain types of autonomous weapon systems and regulations on others.

However, there are still other sticking points. For example, it remains unclear what precisely characterizes an autonomous weapon system and what it would look like to legislate “meaningful human control.”

Talks so far have been consultations only and “we are not yet negotiating,” Ms. Rooijen told UN News: “That is a problem.”

The Secretary-General has repeatedly called for a ban on autonomous weapon systems, saying that the fate of humanity cannot be left to a “black box.”

Recently, however, there has been increased urgency around this issue, in part due to the quickly evolving nature of artificial intelligence, algorithms and, therefore, autonomous systems overall.

“The cost of our inaction will be greater the longer we wait,” Ms. Rooijen told us.

Ms. Rooijen also noted that systems are becoming less expensive to develop, something which raises concerns about proliferation among both State and non-state actors.

The Secretary-General, in his comments Monday also underlined the “need for urgency” in establishing regulations around autonomous weapon systems.

“Time is running out to take preventative action,” Mr. Guterres said.

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