

5. Weapons

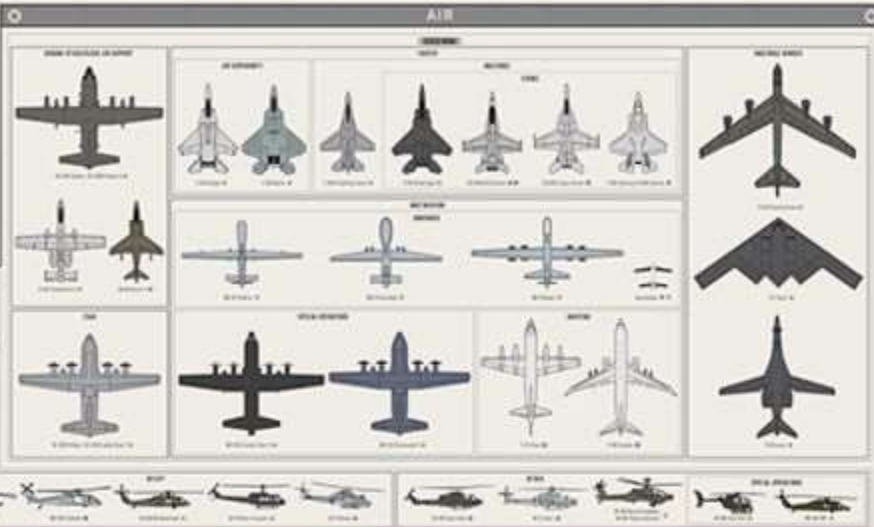
"Armed Robots Fight Alongside Soldiers at National Guard Exercise"¹



BAE Systems is reintroducing an unmanned combat vehicle prototype as the Army pursues "robotic wingman" technology.²



COMBAT VEHICLES OF THE U.S. MILITARY



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Developments Over many years, the trend has been to make weapons more lethal than what we have, just to be sure that the US is always on top.

Hi-tech weapon research and development is carried out by the Defense Advanced Research Projects Agency (and their contractors). DARRPA's advisory board are folks from the major military contractors; previously, they were mostly war scientists from universities.

One goal is to automate all aspects of war, to require the fewest soldiers, and to eliminate human frailties. Thus, troops are equipped with sensors that can see targets a mile away in the dark. Drones have been developed for air, ground, and sea. Robots are being developed to select targets.

DARPA research tries to find ways too modify humans so that they are better designed for warfare, e.g., drugs enabling them to go without food or sleep for days, erase fear or guilt, and to carry on although wounded.

DARPA contracts with science institutes in the US and worldwide to develop artificial intelligence and some are now working on an artificial brain.⁴

It is even proposing electronic implants in soldiers so that errors can be avoided and attacks made on remote, disguised, hidden adversaries. This will also save the time required for transmission from target to computer to human.⁵

The Making of Iron Man | The U.S. military has launched a program to design a new suit for elite forces

EXISTING GEAR	FUTURE IRON MAN SUIT
HELMET Basic helmets provide modest protection from bullets, shrapnel and explosions. Troops often attach night-vision goggles for better visibility on missions.	HELMET Future helmets may include visors, sensors and Google Glass-type interfaces to help U.S. forces spot hidden threats.
BODY ARMOR U.S. troops wear limited amounts of body armor designed to protect vital organs and allow them to move with speed and agility.	COOLING SYSTEM Suits could include a cooling system to help regulate the body temperatures of U.S. troops encased in the the body armor.
LOWER BODY Current uniforms provide limited lower-body protection.	MOTORIZED EXOSKELETON The suit would likely include a motorized exoskeleton to help carry the hundreds of pounds of added weight from the body armor and high-tech components.
GEAR U.S. forces can carry more than 125 pounds of gear, including grenades, knives, radios, ammunition magazines and flashlights.	POWER Future suits might be powered by a small engine.
	BODY ARMOR The full-body suit would provide dramatically increased body-armor protection extending to limbs.

Source: U.S. Special Operations Command; U.S. Army; Revision Military The Wall Street Journal

Nuclear Weapons

Song: **Twenty Tons of TNT** <https://www.youtube.com/watch?v=48waPFTXJvY>



Worldwide arsenal of nuclear weapons⁷

A Treaty on the Prohibition of Nuclear Weapons (TPNW) is now being developed. As of April 14, 36 nations have ratified the treaty, and 81 have signed (intention to ratify). Countries with nukes (UK, China, France, India, Pakistan, Israel, North Korea, US, Russia) have not participated, and the US says it will not sign or ratify.⁸

Every stage in the production of nuclear weapons and their testing is highly toxic. When the H bomb was being developed, some of the scientists said don't do it, but another group that was supported by the Department of Defense and the Atomic Energy Commission prevailed. The 1954 test of hydrogen bomb on Bikini resulted in a mushroom cloud that was 40 miles wide and fallout much wider.⁹

NATO has nuclear weapons in Europe: some 150 nuclear B61 bombs in six bases: Kleine Brogel in Belgium, Büchel in Germany, Aviano and Ghedi-Torre in Italy, Volken in the Netherlands and İncirlik in Turkey.¹⁰ The US has used depleted uranium weapons in Yugoslavia, Iraq and Syria.¹¹

The threat of nuclear war is now high, especially since the US renounced the Intermediate-Range Nuclear Forces (INF) treaty.

Currently, \$28.9 billion has been appropriated for nuclear modernisation, including new delivery systems for submarines, bombers, and missiles.

Some of Our Other Weapons

Gerald Ford nuclear powered aircraft carrier

Length 1,106 ft; Height 250 feet. Thirteen billion and will be years before it is operational.



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Drones

Used for surveillance and assassination.¹³



Predator Drone

F-35 Fighter

It's . . . become the most expensive defense program in world history, at around US\$1.5 trillion before the fighter is phased out in 2070. . . . Pierre Sprey, a cofounding member of the so-called "fighter mafia" at the Pentagon and a co-designer of the F-16, calls the F-35 an "inherently a terrible airplane" that is the product of "an exceptionally dumb piece of Air Force PR spin."¹⁴



It can deliver air-to-air missiles, air-to-surface missiles, and bombs. It can take off conventionally, by short take off and landing, or via aircraft carrier.

It is being assembled by Lockheed, in Texas, with parts from 1500 international suppliers. BAE, in UK, is heavily involved, and other suppliers are in Turkey, Australia, the Netherlands, Italy, Japan, and Norway. Israel (Elbit Corp) is providing a high-tech helmet that has a display on the visor, **to be custom fitted for each pilot**, and costs about \$400,000 each.¹⁵ The US is planning to have 2500 planes, and foreign customers are plentiful. The British ordered 138 of them, Australia 72, Israel 50, the Netherlands, 37. Other customers are Turkey, Italy, Canada, Norway, Japan, South Korea and Denmark.

The Pentagon's own testing department found 873 deficiencies in the plane.¹⁶

Meanwhile, at an Arizona Air Force Base, known as the Boneyard, are decommissioned aircraft. Among these are 50 BAE Harriers, 167 dead F-15s and 467 dead F-16s.¹⁷



Boneyard, Davis-Monthan AFB, Arizona

Weapon Development



Emerging technologies that are being studied or developed by the military include artificial intelligence, lethal autonomous weapons, hypersonic weapons, biotechnology, and quantum technology.¹⁸ (See Congressional Research Service report attached). For image, see “The Science of Lethality,” on my website www.joanroelofs.wordpress.com

Laser weapons

There are now operational directed energy weapons to destroy drones and enemy weapons.¹⁹



Navy laser weapon²⁰

Our military plans to use this on humans. The **Active Denial System (ADS)** is a **non-lethal**, directed-energy weapon developed by the **U.S. military**, designed for area denial, perimeter security and crowd control. . . .The weapon is also called the heat ray since it works by heating the surface of targets, such as the skin of targeted human subjects.

And claims that it is very gentle: The beam produces an intolerable heating sensation, compelling the targeted individual to instinctively move. The sensation immediately ceases when the individual moves out of the beam or when the operator turns off the beam. There is minimal risk of injury due to the shallow energy penetration into the skin at this short wavelength and normal human instinctive reactions.²¹ Many researchers believe the military plans to use these against protestors.



Biological Warfare

In 1953, a North Korean POW, US Marine Colonel Frank Schwable claimed (on Chinese radio) that he had been participating in germ warfare, and gave a lot of details and names. The DOD then said that he and others were “brainwashed” to discredit all such reports.²²

Many diseases have been part of military research, including anthrax, brucellosis, encephalitis, and botulism (in US) and bubonic plague and smallpox (in USSR). German and Japanese war criminals were welcomed as scientists at Fort Detrick, MD, the major US bioweapon lab.

In 1975, the United States signed and ratified the UN treaty prohibiting biological weapons. Now the government claims Fort Detrick is a “biodefense” lab. There, biowarfare pathogens are created to simulate bioweapons attacks.²³ We can find out from a lawsuit that workers have been exposed to *Burkholderia mallei*, a bacteria that causes an infectious disease called glanders.²⁴ In 2015, there was a breach that caused the lab to suspend operations. “At the time, [U.S. Army Medical Research Institute of Infectious Diseases] USAMRIID was conducting work with Ebola and the agents known to cause Tularemia, the plague and Venezuelan equine encephalitis.”²⁵

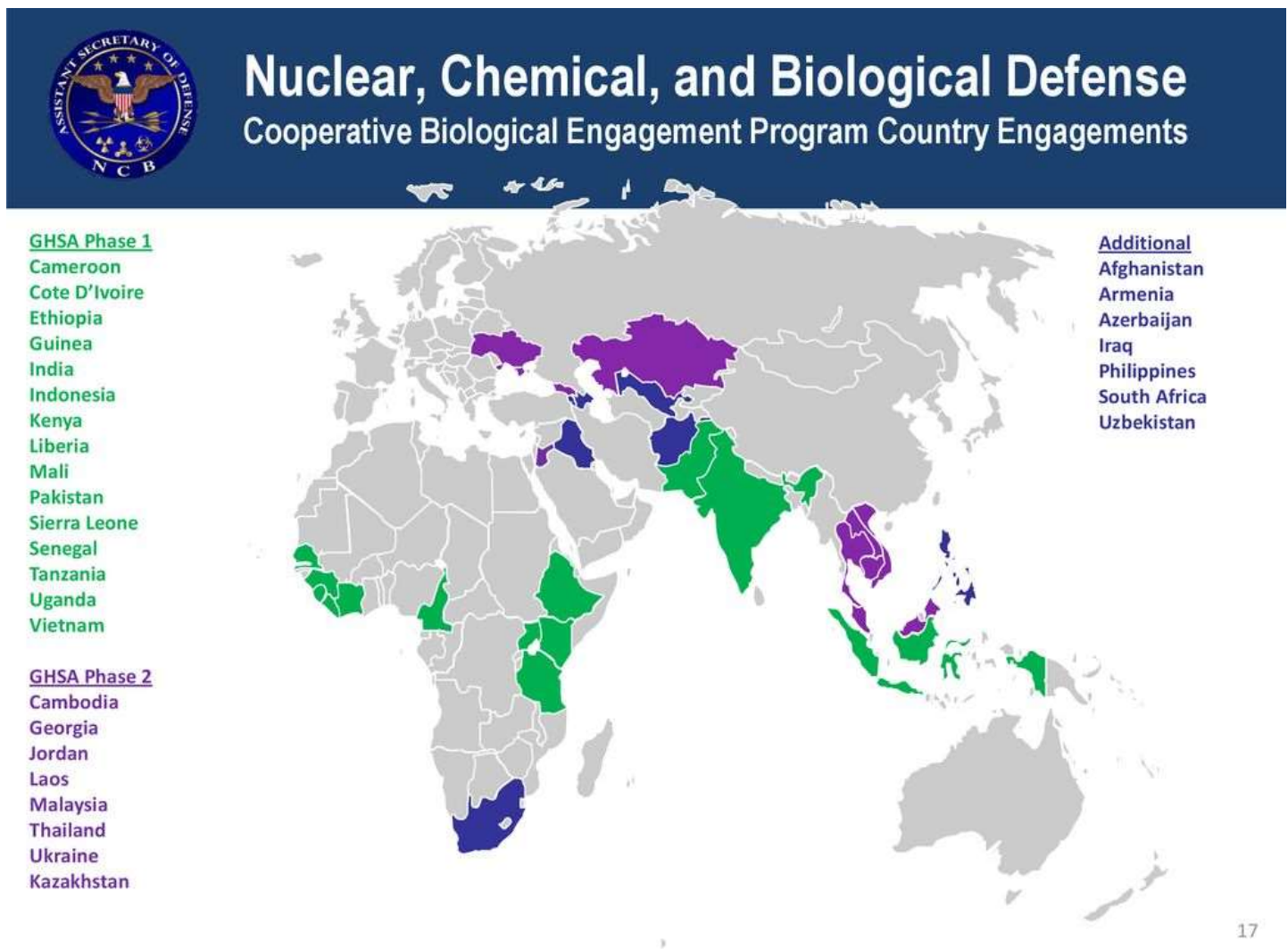
*Gruinard Island, Scotland, site of UK biological weapons experiments in the 1940s.*²⁶



Defense against Biowarfare

The DoD states that it has a program to dismantle biowarfare projects in Russia, Kazakhstan, Uzbekistan, Georgia, Azerbaijan, and Ukraine.²⁷

The U.S. Department of Defense (DoD) Cooperative Threat Reduction (CTR) Cooperative Biological Engagement Program (CBEP) directly addresses global health security threats by working with partner nations to improve biosafety, biosecurity, and disease surveillance for traditional select agents (weapons-usable biological material) and emerging pathogens that may cause public health emergencies of international concern (PHEIC).²⁸



DARPA also has an international program, PREventing EMerging Pathogenic Threats (PREEMPT) program to model viral evolution in animal populations, quantify the probability of human pathogen emergence, and pursue proof-of-concept interventions to prevent viral spread to humans.

International teams, composed of governmental and nongovernmental institutions, are working on a number of projects, including:

The Center for Comparative Medicine and the One Health Institute at the University of California, Davis, under principal investigator Dr. Peter Barry and co-PI [Dr. Brian Bird](#), respectively, lead a team made up of the Leibniz Institute for Experimental Virology; Mount Sinai School of Medicine; Rocky Mountain Laboratories of the National Institutes of Health (NIH), to be funded directly by DARPA; The Vaccine Group, Ltd., a spin-out of University of Plymouth; University of Glasgow; University of Idaho; and University of Western Australia. The team will examine Lassa virus spillover from rodents, and study Ebola virus in rhesus macaques. and

Montana State University, under [principal investigator Dr. Raina Plowright](#), leads a team made up of the Cary Institute of Ecosystem Studies; Colorado State University; Cornell University; Griffith University; Johns Hopkins University; NIH's Rocky Mountain Laboratories, funded directly by DARPA; Pennsylvania State University; Texas Tech University; University of California, Berkeley; University of California, Los Angeles; and University of Cambridge. The team will study henipavirus spillover from bats. The henipavirus genus of viruses contains multiple biothreat agents as categorized by NIH and the Centers for Disease Control and Prevention (CDC).²⁹

My own research on the contract database (usaspending.gov) has indicated DoD contracts for biotechnology and neuroscience in many countries, including institutes and universities in Estonia, Ireland, Israel, Australia, Kenya, Peru, and Thailand. Oxford University has done research on typhus; Dublin City University on botulism R & D.

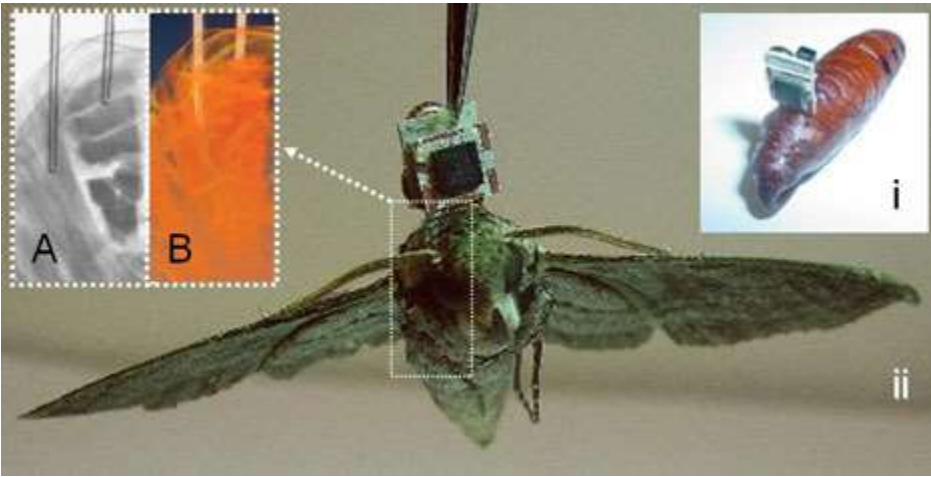
Chemical Weapons

These have also been banned by UN Treaty 1997, and ratified by the US. However, CS or tear gas is a chemical weapon and has been used in the US for riot control.

Napalm was first used in Greece. Our military said don't use Agent Orange in Vietnam but JFK said go ahead.³⁰ White phosphorus weapons have been used by US forces in populated areas of Syria and Iraq.³¹

Psychological warfare, drugs, covert actions, and assassination are the weapons of the Central Intelligence Agency.

DARPA sponsors research in every area of science and technology. These funds are attractive to scientists who like cutting-edge projects, such as the use of insects to collect information, learning stealth from octopi, training animals to perform missions, cyborg moths (MIT works on this), and creating a snowstorm to disorient the enemy.



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Inside [the moth] will be a **computer** chip that was implanted when the creature was still a **pupa**, in the cocoon, meaning that the moth's entire nervous system can be controlled remotely.

The moth will thus be capable of landing in the [enemy] camp without arousing suspicion, all the while beaming video and other information back to its masters via what its **developers** refer to as a 'reliable tissue-machine interface.'

The creation of insects whose flesh grows around computer parts — known from science fiction as **cyborgs** — has been described as one of the most ambitious robotics projects ever conceived by DARPA.³³

Militarization of our police

Local police may obtain grenade launchers, tanks, armored mine-resistant vehicles, weaponized aircraft, rifles, body armor, and other weaponry of war. Combined with war training by such entities as the Department of Homeland Security and the Israeli military (yes, the Israeli military has trained numerous U.S. police departments), these armaments prepare police to attack those they are charged with protecting.³⁴



BEARCAT. Keene NH got one in 2012

¹ The exercise, Northern Strike, took place in 2017 at Camp Grayling Joint Maneuver Training Center in Michigan <http://www.nationaldefensemagazine.org/articles/2017/8/31/tardec-wingman-capability-on-display-at-northern-strike>

² <http://www.nationaldefensemagazine.org/articles/2017/3/14/bae-systems-eyeing-opportunities-for-unmanned-combat-vehicle>

³ <http://www.popularmechanics.com/military/weapons/a21049/all-the-combat-vehicles-of-the-us-military-in-one-giant-poster/>

⁴ Annie Jacobsen. *The Pentagon's Brain: An uncensored history of DARPA*, Little Brown, 2015, p. 420. DARPA's own history, 1958-2018 https://www.darpa.mil/attachments/DARAPA60_publication-no-ads.pdf

⁵ Roelofs, "The Science of Lethality." On my website: www.joanroelofs.wordpress.com

⁶ <http://www.nairaland.com/3054026/exo-skeleton-u-beat-hell-out>

⁷ World Economic Forum <https://www.weforum.org/agenda/2018/06/the-state-of-the-world-s-nuclear-arsenal-in-3-charts/>

⁸ *New York Times*, 7-8-17.

⁹ Annie Jacobsen. *The Pentagon's Brain: An uncensored history of DARPA*, Little Brown, 2015, p. 11.

¹⁰ <https://www.washingtonpost.com/world/2019/07/16/location-us-nuclear-weapons-europe-accidentally-revealed-report-nato-body/>

¹¹ foreignpolicy.com/2017/02/14/the-united-states-used-depleted-uranium-in-syria/

¹² <http://www.cnn.com/2017/07/18/politics/uss-gerald-ford-commissioning-sneak-peek/>

¹³ <https://theintercept.com/drone-papers/>

¹⁴ Michael P. Hughes, "What Went Wrong with the F-35, Lockheed Martin's Joint Strike Fighter?" *Scientific American*, June 14, 2017. <https://www.scientificamerican.com/article/what-went-wrong-with-the-f-35-lockheed-martins-joint-strike-fighter/>

¹⁵ Daniel Soar, "The Most Expensive Weapon Ever Built," *London Review of Books*, March 30, 2017.

¹⁶ <https://nationalinterest.org/blog/buzz/f-35-can-t-fire-its-cannon-without-committing-suicide-122541>

¹⁷ Soar.

¹⁸ Congressional Research Service Report, "Defense Primer: Emerging Technologies," Dec. 19, 2019.

Attached

¹⁹ Peter Rathmel, "Navy successfully tests anti-drone laser weapon," *Navy Times*.

<http://www.navytimes.com/news/your-navy/2017/07/19/navy-successfully-tests-anti-drone-laser-weapon/>

²⁰ <https://defensesystems.com/articles/2016/06/28/navy-150-kilowatt-laser-weapon-test.aspx>

²¹ Active Denial Technology uses radio frequency millimeter waves at a frequency of 95 gigahertz.

Traveling at the speed of light, the millimeter wave directed energy engages the subject, penetrating the skin to a depth of only about 1/64th of an inch, or the equivalent of three sheets of paper. The beam produces an intolerable heating sensation, compelling the targeted individual to instinctively move. The sensation immediately ceases when the individual moves out of the beam or when the operator turns off the beam. There is minimal risk of injury due to the shallow energy penetration into the skin at this short wavelength and normal human instinctive reactions. http://en.wikipedia.org/wiki/Active_Denial_System
<http://jnlwp.defense.gov/Future-Non-Lethal-Weapons/Active-Denial-Technology/>

²² Jacobsen, p. 103

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- ²³ H. Patricia Hynes. "Biological Weapons: Bargaining With the Devil." August 18, 2011
<http://www.truth-out.org/news/item/2693:biological-weapons-bargaining-with-the-devil>
- ²⁴ Sylvia Carignan, News-Post Staff Jan 4, 2015
https://www.fredericknewspost.com/news/health/multiple-researchers-potentially-exposed-to-biological-warfare-agent-at-usamriid/article_ef9aae2a-f8cf-5f6d-aa54-4cbc0edfc1a5.html
- ²⁵ <https://www.military.com/daily-news/2019/11/24/cdc-inspection-findings-reveal-more-about-fort-detrick-research-suspension.html>
- ²⁶ <https://www.ucl.ac.uk/mathematical-physical-sciences/maps-news-publication/maps1521>
- ²⁷ Defense Threat Reduction Agency, DOD <http://www.dtra.mil/Missions/Partnering/CTR-Biological-Threat-Reduction/>
- ²⁸ https://www.dtra.mil/Portals/61/Documents/Missions/CBEP%20Research%20Strategy_FINAL_July%202015.pdf
- ²⁹ <https://www.darpa.mil/news-events/2019-02-19>
- ³⁰ Jacobsen, p. 132.
- ³¹ <http://news.antiwar.com/2017/06/09/us-forces-using-white-phosphorus-in-populated-areas-of-iraq-and-syria/>
- ³² http://spectrum.ieee.org/autamaton/robotics/robotics-software/moth_pupa_mems_chip_remote_controlled_cyborg_insect
- ³³ <http://www.foxnews.com/story/0,2933,276182,00.html>
- ³⁴ <http://rootsaction.org/take-action/1610-de-militarize-the-police>