


2019

How I Learned to Stop Worrying and Love the Bots, and How I Learned to Start Worrying About Democracy Instead

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Recommended Citation

Antonio F. Perez, *How I Learned to Stop Worrying and Love the Bots, and How I Learned to Start Worrying About Democracy Instead*, 27 *Cath. U. J. L. & Tech* 129 (2019).
Available at: <https://scholarship.law.edu/jlt/vol27/iss2/6>

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HOW I LEARNED TO STOP WORRYING AND LOVE THE BOTS, AND HOW I LEARNED TO START WORRYING ABOUT DEMOCRACY INSTEAD: A REVIEW ESSAY ON *STRIKING POWER*: HOW CYBER, ROBOTS, AND SPACE WEAPONS CHANGE THE RULES OF WAR¹

Antonio F. Perez*

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The title of this article hearkens back to Stanley Kubrick's brilliant 1964 film, *Dr. Strangelove or: How I Learned to Stop Worrying and Love the Bomb*,² released in the aftermath of the Cuban Missile Crisis and in the context of that period's great debate on Mutually Assured Destruction—or so-called “MAD” doctrine—as the roadmap to deterrence and peace in the nuclear age. The MAD theory posits that the first use of nuclear weapons will result in massive retaliation by the other side leading to the destruction of both sides; hence game or strategic theory would predict that no first use will ever be launched.³ Well,

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¹ Jeremy Rabkin and John Yoo, *STRIKING POWER: HOW CYBER, ROBOTS, AND SPACE WEAPONS CHANGE THE RULES FOR WAR* (Encounter Books (2017)) [*Striking Power*].

² See PETER GEORGE, *DR. STRANGELOVE OR: HOW I LEARNED TO STOP WORRYING AND LOVE THE BOMB* (1964), summarized in *Dr. Strangelove or: How I Learned to Stop Worrying and Love the Bomb* (1964), IMDB, <https://www.imdb.com/title/tt0057012> (last visited Apr. 7, 2019).

³ See John Lewis Gaddis, *The Cold War: A New History* 80 (The Penguin Press 2005)

for those familiar with the film—and for others, a “spoiler alert”—Kubrick’s film points out that the theory did not account for the messiness and irrationality of human life. On one hand, the film depicts a stark-raving mad Air Force General who viewed “fluoridation of water” for dental health as a covert Communist plot to reduce the testosterone levels of American males and who has been delegated the authority to launch a nuclear attack. On the other, there is a Soviet Premier’s predilection for surprise announcements, including the construction of a Soviet “Doomsday device” that, in the logical culmination of the MAD theory, would indeed assure the destruction of the whole planet’s surface through a robotic and irreversible response to any nuclear denotation in Soviet territory. The combination of these two potentially foreseeable human and non-human actors, one with too much freedom and the other with too little, lead to tragically inhumane results.

The title turns on one of three characters played by the great British actor, Peter Sellers, in a *tour de force* performance. Dr. Strangelove is the hyper-rational advisor to the U.S. president, clearly of German origin and impliedly a former advisor to Fuhrer Hitler, who does not seem to feel one way or another about the situation except to deal with its consequences. Meanwhile the other characters include a rather confused and dimwitted president, obsessed with his own honor and place in history, and a disabled and frightened British air force officer seconded to the staff of the American General responsible for this mess. The three characters combine three motivators—rational self-interest, honor, and fear—that classical troika thinkers, such as Thucydides, believed could give rise to tragedy in human affairs.⁴ Together, the characters reveal the limits of the human condition and dangers of hubris that do not take into account those limits.

(Kennedy Administration Secretary of Defense, Robert McNamara believed that sheer terror prevented war during the Cuban Missile Crisis. Making a virtue of apparent necessity, McNamara proclaimed Mutually Assured Destruction as the new national security strategy. According to preeminent Cold War historian John Lewis Gaddis, “its acronym, with wicked appropriateness, was MAD. The assumption behind it was that if no one could be sure of surviving a nuclear war there would not be one”); See Henry Kissinger, *Diplomacy 750* (Simon & Shuster 1994) (Writing decades later reflecting on the initial criticism of MAD, Henry Kissinger judged that the threat of national suicide was never a credible basis for national security strategy. No adversary threatening U.S. interests and allies would consider such a threat credible. Hence, MAD was bound to “undermine morale and destroy existing alliances.” In Kissinger’s view, developing technology would eventually enable nuclear powers to develop strategic defenses to nuclear attack, thus deterring aggression and maintaining alliances).

⁴ See Robert Strassler, *The Landmark Thucydides*, THE LATIN LIBRARY, <http://www.thelatinlibrary.com/imperialism/readings/thucydides1.html> (last visited Apr. 7, 2019) (explaining Athens rise to power, the consequent threat that posed to Greek stability, and ultimately the outbreak of the Peloponnesian wars at the fruit of self-interest, honor and fear).

What does this have to do with *Striking Power*⁵ by Professors John Yoo,⁶ an academic lawyer present at the creation of the Global War on Terror in the wake of the 9/11 attacks, and Jeremy Rabkin,⁷ a former political scientist turned law school professor teaching international law? Briefly, what I will argue here is that *Striking Power* admittedly builds a powerful case for heightened reliance on increasingly autonomous weapons and weapons systems that reduce the level of human intervention as much as is humanly possible—whether through aerial drones, cyberattacks, or space weapons. That case, however, turns on merely plausible and decidedly contestable assumptions concerning U.S. grand strategy, the relatively limited constraints imposed by international law on the developments and use of such weapons, and their likely capacity to operate with appropriate limits (both in their initial targeting and freedom from uncontrolled escalation). However, in questioning these assumptions, this article does not seek to come to a final conclusion but only to suggest that *Striking Power*'s argument should not yet form the basis for policy. Many serious experts with more specific knowledge about weapons system and robotics, and other scholars of grand strategy, would challenge each of *Striking Power*'s explicit or implicit premises. More importantly, the rise of autonomous technology in war-fighting must be considered to have a role in increasing the dominance of economy and politics by technological elites. Indeed, the rise of the robots (and technology generally) could, as many now argue, have deleterious effects on the need for elites to engage the support of the larger populace to sustain the economy and enables elites to more effectively manipulate mass public opinion required for mass mobilization. If so, the rise of autonomous weapons will increasingly undermine an American way of war that was built on mass mobilization, morally-accountable and well-trained citizen soldiers, benefiting from broad-based political support for the use of force, and support of the construction of international coalitions advancing a common global good. In short, if *Striking Power* is right, it cannot help but have implications for the kind of constitutional order best adapted to the rise of bots in war—a kind of government we do not now imagine and may not find attractive if we could. So, I merely seek to counter Rabkin and Yoo's Pangloss with a warning from Cassandra.⁸

⁵ JEREMY RABKIN & JOHN YOO, *STRIKING POWER: HOW CYBER, ROBOTS, AND SPACE WEAPONS CHANGE THE RULES FOR WAR* (2017).

⁶ *John Yoo Biography*, U.C. BERKELEY SCH. L., <https://www.law.berkeley.edu/our-faculty/faculty-profiles/john-yoo/> (last visited Jan. 25, 2019).

⁷ See *Jeremy A. Rabkin*, GEO. MASON U.: ANTONIN SCALIA L. SCH. (Jan. 21, 2019), https://www.law.gmu.edu/faculty/directory/fulltime/rabkin_jeremy.

⁸ *The Myth of Cassandra*, GREEK MYTHS AND GREEK MYTHOLOGY (Jan. 21, 2019), <https://www.greekmyths-greekmythology.com/the-myth-of-cassandra> (stating Cassandra was a princess of Troy and blessed with the gift of foreseeing the future; “Her curse was that no one believed her.” This fact significantly influenced the destruction of Troy during the Trojan War).

I. *STRIKING POWER'S* DEBATABLE PREMISES

Let me consider the premises of *Striking Power* before considering its constitutional implications. Because technology appears to drive its analysis, one should first examine *Striking Power's* love affair with the asserted virtues of autonomous weapons, a passion that is not free from plausible critique. Next, we can locate *Striking Power's* willingness to engage in this alliance with the bots in its intense animus for international law, or at least a particular view of international law, that would plausibly constrain at least some of the most attractive applications of remote and/or autonomous weapons. Finally, it is arguable that these two premises—learning to love the bots and fear of international law—flow from a deeper strategic premise. This seemingly implicit, but rather contestable, assumption may be the goal of pursuing a less active role in world affairs to preserve American honor from the messiness of engagement and cooperation in a multi-polar world dominated by authoritarian regimes.

A. Technology—The Rise of the Bots

Yoo and Rabkin's relative lack of technical expertise on the reliability of the bots may spawn the weakest premise of their argument. At the risk of caricature, they seem to treat theoretical possibilities as morally certain outcomes. Thus, they observe and then posit:

The United States now fields thousands of UAVs both for reconnaissance and attack. Armed with stealth technology these robots gather intelligence around the clock and launch immediate attacks in trouble spots around the world. In the future, the most advanced ground and sea-based armed forces will employ remote-controlled units, such as sentries, light armor, and littoral naval vessels. Advances in missile technology and precision targeting will allow the United States to field a conventional global-strike capability that can hit any target in the world within an hour. Some experts even predict that autonomous weapons systems will soon be able to act free of direct human control.⁹

By contrast, Paul Scharre, former Army Ranger Sniper Team Commander in Afghanistan, expert at the Office of the Secretary of Defense, and currently a Senior Fellow and Director of the Technology and National Security Program at the Center for A New American Security, who has spent a better part of the last decade studying autonomous weapons, offers a significantly more measured

⁹ RABKIN & YOO, *supra* note 4, at 5.

view.¹⁰ Indeed, his central contribution to the study of the new technologies is to locate them in a moral context that flows from his experience as an American soldier.¹¹ Scharre is not alone in examining the technical, legal and moral debates concerning drones and their like in a balanced way.¹² But his technical presentation for lawyers and political scientists also provides insight to two critical factual dimensions otherwise missing in so much discussion of the technological revolution of military affairs. First, Scharre draws upon the operational military perspective from his experience as a soldier and bureaucrat to inform the use of partially and fully autonomous weapons. Second, he provides insight into recent developments in computer science, such as the emergence of deep-neural networks, ranging from human programmed DeepBlue's dominance over human chess players¹³ to DeepMind's self-taught strategy that defeated the best human player in the infinitely more complex Chinese game of Go.¹⁴

Indeed, focusing on the human interface with military expertise and computer science, Scharre begins his recent book, *Army of None*,¹⁵ with an account of a nuclear near-miss in 1983. At the height of political tensions between the U.S. and U.S.S.R., a single Soviet Lieutenant Colonel Stanislav Petrov's decision to disregard protocol prevented a Soviet nuclear launch in response to a computer glitch's erroneously perceived U.S. nuclear first-strike.¹⁶

Scharre usefully locates the study of autonomous weapons systems in several larger contexts, to include broad military decision making, specific machine applications based on environments, and the coordination of all complex systems.¹⁷ To begin with, the concept of autonomy is unpacked in the context of the overall military decision heuristic of the observe-orient-decide-act

¹⁰ Paul Scharre, CTR. NEW AM. SECURITY (Jan. 21, 2019), <https://www.cnas.org/people/paul-scharre> ("From 2008-2013, Mr. Scharre worked in the Office of the Secretary of Defense (OSD) where he played a leading role in establishing policies on unmanned and autonomous systems and emerging weapons technologies. Mr. Scharre led the DoD working group that drafted DoD Directive 3000.09, establishing the Department's policies on autonomy in weapon systems.").

¹¹ *Id.*

¹² See, e.g., KEN ANDERSON & MATTHEW WAXMAN, DEBATING AUTONOMOUS WEAPON SYSTEMS, THEIR ETHICS, AND THEIR REGULATION UNDER INTERNATIONAL LAW, IN THE OXFORD HANDBOOK OF LAW, REGULATION, AND TECHNOLOGY, chap. 45 (2017) (rejecting a categorical ban on autonomous weapons and calling for a more nuanced debate).

¹³ Larry Greenemeier, *20 Years after Deep Blue: AI Has Advanced Since Conquering Chess*, SCI. AMERICAN (June 2, 2017), <https://www.scientificamerican.com/article/20-years-after-deep-blue-how-ai-has-advanced-since-conquering-chess>.

¹⁴ See PAUL SCHARRE, *ARMY OF NONE: AUTONOMOUS WEAPONS AND THE FUTURE OF WAR* 125 (2018).

¹⁵ *Id.*

¹⁶ *Id.*

¹⁷ See *id.*

(“OODA”) loop. OODA is a loop because after-action observation then feeds into an iterative process.¹⁸ In short, useful discussions of autonomy require focus on the particular phase of information processing selected.¹⁹ It follows that the capacity of machines to perform such tasks varies with the complexity of the environment. Hence, automaticity must be programed in terms of decision variables—ranging from single-variable, simple threshold based programs, such as a thermometer’s role in an automated air-conditioning system; complex, rule-based approaches processing multiple variables; and finally goal-oriented programs, such as for a fully autonomous car, that would entrust the machine to make all decisions relevant to achieving a specified goal.²⁰

Finally, Scharre highlights the critical question of coordination among various weapons system, identifying a range of approaches that turn on the level of automaticity delegated to non-human decision-making. These approaches range from centralized coordination, with “swarm elements coordinating with a centralized planner”; hierarchical coordination, with “swarm elements controlled by ‘squad’ level agents, who are in turn controlled by higher-level agents”; coordination by consensus, in which “all swarm elements communicate with one another and then use ‘voting’ or auction-based methods to converge on a solutions; and emergent coordination, in which “coordination arises naturally with individual swarm elements reaction with one another, like animal swarm.”²¹ Scharre even locates the whole question of autonomy in weapons systems in the larger context of the ongoing debate over the risk of delegated decision-making in all human activities, ranging from thermostats to launching an ICBM.²²

In *Autonomous Weapons and Operational Risk: Ethical Autonomy Project*, an article published prior to *Army of None*, Scharre recalls the image of a mythical half-man, half-beast known as the Centaur, to imagine the use of autonomous and semi-autonomous weapons as “Centaur Warfighting.”²³ In other words, depending on the details that will emerge from experience, analysis and good practical judgment, there will always be a role for humans in concert with machines. Humans as “essential operators” without which military engagements cannot succeed; as “moral agents,” who will judge whether or not

¹⁸ See, e.g., *id.* at 22-23.

¹⁹ See *id.* at 43-45.

²⁰ See *id.* at 31-32.

²¹ See *id.* at 20-21.

²² See *id.* at 192 (“Fire-and-forget missiles cannot be recalled once launched, but their freedom to search for targets in space and time is limited.”).

²³ PAUL SCHARRE, CENTER FOR A NEW AMERICAN SECURITY, AUTONOMOUS WEAPONS AND OPERATIONAL RISK 41 (2016), <https://www.cnas.org/publications/reports/autonomous-weapons-and-operational-risk>.

military necessity outweighs the potential for collateral damage; and as “fail-safe,” with the ability to intervene if circumstances change so that an operation is no longer appropriate.²⁴ In sum, unlike *Striking Power*, Scharre’s multiple layers of normative and factual analysis enable him to raise important questions that facilitate a sophisticated appreciation of autonomy’s risks, benefits, and qualifiers that call into question the promise of military effectiveness and collateral harm reduction. Perhaps this is because Scharre is not simply in pursuit of a larger legal and strategic agenda.

It is striking that Machiavelli, known as the father of a dogmatic version of modern political realism, the tradition in which *Striking Power* is best located, is perhaps better understood as a more synthetic, idealistic thinker.²⁵ Like Scharre, Machiavelli employed the image of the Centaur as the metaphor through which he explained to the Prince the relation of war to law:

You should know, then, that there are two ways of fighting: one with law, the other with force: the first way is peculiar to man, the other to beasts: but since the first in many instances is not enough, it becomes necessary to resort to the second. Therefore, a prince must know how to make use of the beast and the man. This role was taught to princes indirectly by the ancient writers, who wrote how Achilles and many other ancient princes were given to Chiron the Centaur to be brought up and trained under his direction. This can only mean, as they had for a teacher a half-beast and half-man, that prince ought to know how to make use of both natures and the one without the other cannot endure.²⁶

Perhaps by invoking the image of the Centaur, Scharre locates *Army of None* in a tradition that gives equal weight to military necessity or advantage and to the international law of war understood as a set of moral imperatives. Here too his agenda may depart from Rabkin and Yoo’s goals in *Striking Power*.

²⁴ *Id.* at 45 (explaining even in “fail-safe” mode, in the event of communication loss, rules of engagement would still need to consider whether or not autonomous systems will be allowed to engage only previously authorized targets (“fail-safe”), further authorized to engage targets in self-defense (“fail-dangerous”), and perhaps even emergent targets of opportunity not specifically pre-authorized (“fail-deadly”).

²⁵ See PHILIP BOBBITT, *THE ART OF CREATING POWER: FREEDMAN ON STRATEGY* 284 (Benedict Wilkinson & James Gow eds. Oxford University Press 2018) (discussing Machiavelli’s political idealism in terms of the ethical responsibilities of a political leader to serve the creation of an Italian republic); see also PHILIP BOBBITT, *THE GARMENTS OF COURT AND PALACE: MACHIAVELLI AND THE WORLD THAT HE MADE* 6-7 (Daedalus Books 2013).

²⁶ NICCOLÓ MACHIAVELLI, *MACHIAVELLI’S THE PRINCE: A BILINGUAL EDITION*, 145 (Daedalus Books 2013).

B. International Law—Realism and Its Alternatives

International law concerning the use of force can be divided into two categories. First, the *jus ad bellum* concerns whether or not a use of force is lawful and legitimate, which is now largely based on Articles 2(4) and 51 of the UN Charter.²⁷ Second, the *jus in bello* concerns whether or not a particular use of force comports with rules and principles designed to regulate the manner in which force is used, specially the humanitarian law establishing the principles of necessity (requiring a definite military advantage), discrimination (avoidance of targeting civilians) and principles of humanity such as the avoidance of unnecessary suffering in the conduct of war.²⁸ It is worth noting that Rabkin and Yoo engage in a sustained attack on certain interpretations of these principles that some have relied upon to criticize U.S. conduct on the Global War on Terror. They argue that international *jus in bello* should instead accommodate itself to the possibilities for increased discrimination and the avoidance of unnecessary suffering made possible by the emerging technologies.²⁹ But, for present purposes in detailing the more expansive use of emerging technology of autonomous weapons as the defining element of U.S. grand strategy, it is more revealing to focus instead on their views concerning the *jus ad bellum*, specifically the UN Charter prohibition on the use of force, except in response to an armed attack or as authorized by the UN Security Council.³⁰

Rabkin and Yoo acknowledge that U.S. drone strikes are consistent with the UN Charter:

only if we expand the concept of self-defense to include the anticipation of an attack, even one that may not be imminent. In other words, the United States might claim that anticipatory self-defense allows preemptive strikes when the probability of an attack is small, but the potential for destruction is high. Or the United States and its allies must admit that they are engaging in preventive war designed to nip challenges to international security in the bud, even when there is no immediate claim to self-defense.³¹

²⁷ U.N. Charter art. 2, ¶ 4, art. 51.

²⁸ See generally GARY D. SOLIS, *THE LAW OF ARMED CONFLICT: INTERNATIONAL HUMANITARIAN LAW IN WAR* 14 (2nd ed., Cambridge University Press 2013).

²⁹ RABKIN & YOO, *supra* note 4, at 13 (“Yet many scholarly commentators and government officials still tend to view the law of war in quite formalist ways. They rely on textual provisions of AP I [the 1977 Additional Protocol to the 1949 Conventions on the Law of War], U.M. resolutions, and even dicta found in ICJ ruling and advisory opinions.”).

³⁰ Matthew C. Waxman, *Regulating Resort to Force: Form and Substance of the UN Charter Regime*, 24 *ELIJ* 151, 151 (2013).

³¹ RABKIN & YOO, *supra* note 4, at 27.

The implicit premise here is either that the UN Charter conception of the international law concerning the use of force is more elastic and responsive to changing technology than others may believe or that, if the UN Charter is not amenable to flexible interpretation, it ought to be disregarded when it does not conform to a single nation's appreciation of its national interest or its subjective judgment of the global interest. As suggested by historian Isabel Hull's discussion of the British and German response to the legal challenges presented by the revolution in military affairs concerning aerial bombardment and the emergence of the submarine in *A Scrap of Paper: Breaking and Making International Law During the Great War*,³² Yoo and Rabkin's methodological claims are more akin to the overall standpoint of German lawyers during World War I than to those of their British counterparts. Here, I want only to explain how these methodological premises revealed in Anglo-German debate, given their timeliness at the centenary of the end of the Great War, are again at issue in the premises of Yoo and Rabkin's argument. In short, their view of international law would ally the U.S. now with the approach of Germany whereas our traditional views are of Anglo-American jurisprudence.

The German position, in brief, considered international law to be an incomplete system in which specific accommodations had been reached to address particular issues.³³ It followed that there were gaps in the law, so-called *non liquets*; and one principal form of gap was the emergence of new technologies in warfare, including the submarine. It followed that the rules would not govern attacks on vessels, including civilian and even neutral commerce that had been developed in a world of cruisers. Cruisers could effectively capture contraband without unnecessary loss of life and without significant risk to the capturing vessel. The rules governing these attacks were simply ill-adapted to submarines, which could not capture vessels engaging in unpermitted commerce without civilian casualties or undue risk to the submarine itself or its crew.³⁴ Moreover, even if the international law governing cruisers did apply to the activities of submarines, the use of submarines would nonetheless be justified by political considerations.³⁵ Indeed, the humane path was a maximum use of force in order to bring unnecessary suffering to an end,

³² See ISABEL V. HULL, *A SCRAP OF PAPER: BREAKING AND MAKING INTERNATIONAL LAW DURING THE GREAT WAR 174-175* (Cornell University 2014) [*A Scrap of Paper*].

³³ Anne-Charlotte Martineau, *The Rhetoric of Fragmentation: Fear and Faith in International Law*, 22 LEIDEN J INT'L L. 1, 1-2 (2009) (discussing the general European view on international law); see Bruno Simma, *Universality of International Law from the Perspective of a Practitioner*, 20 EUROPEAN J. INT'L L. 265, 270 (2009) (discussing fragmentation of international law from the German practitioner's perspective).

³⁴ See HULL, *supra* note 31, at 197; see also Antonio F. Perez, *The Passive Virtues and the World Court*, 18 MICH. J. INT'L L. 399, 429-34 (1997) (discussing non-liquet in the context of its application of the ICJ Nuclear Weapons Advisory Opinion).

³⁵ See HULL, *supra* note 31, at 221.

since “a quick war is the most human.”³⁶

The British, by contrast, argued against discontinuities in international law, such as *non-liquets* brought about by a revolution in military technology. This perhaps reflected the difference between Anglo-American common law reasoning and civilian approaches based on statutory solutions. In the German view, there had not been new international legislation or even bilateral contracts regarding the new weapons. By contract, the British generally believed that “customs, state practices, and Prize Court decisions”—which implemented the law concerning neutrals rights to be free from capture when engaging in neutral commerce before a neutral adjudicator—were “the kinds of precedents that indicated law.”³⁷ Hence, Britain argued that “all vessels were subject to the rules of humanity that dictated saving passengers and crew before sinking merchant ships.”³⁸ Thus, the British view treated international law, not as a set of conditional commitments based on particular balances of advantage, but rather an underlying set of moral imperatives of a community of states. According to Hull, it could be described as Britain’s:

self-conception as a law-abiding state, its domestic government, its sense of international law as a product of a society of states to which Britain belonged and aspired to lead, its consequent recognition of other states as their interests as formative of law, its understanding that its own interests varied over time, and circumstance (as a neutral trader or as a belligerent), its awareness of its independence of the Prize Court and the Privy council as appeals court, and its concern for the often different views of its own allies.³⁹

The difference between these British and German views arguably corresponds to the modern divide between the so-called “realist” and “constructivist” understandings of international law, a debate which shows no sign of abating, at least in academic circles.⁴⁰ For it reflects a debate on the priority of law over politics, or politics over law, as much as it also reflects distinct views on both politics and on the nature of international law, such as through the legislation of the UN Security Council or treaty-making by states, rather than found or natural

³⁶ *Id.* at 230.

³⁷ *Id.* at 195.

³⁸ *Id.* at 197.

³⁹ *Id.* at 206-07.

⁴⁰ Compare JACK GOLDSMITH & ERIC POSNER, *THE LIMITS OF INTERNATIONAL LAW* 171 (Oxford University Press 2005) (advancing the realist view that takes interests as givens and defined largely by material circumstances); with OONA A. HATHAWAY & SCOTT J. SHAPIRO, *THE INTERNATIONALISTS: HOW A RADICAL PLAN TO OUTLAW WAR REMADE THE WORLD* 27 (Simon & Schuster 2017) (the constructivist perspective that defines interests as emerging out ideals).

law or *jus cogens*. Neither of these extremes, however, reflects the received grand strategy of U.S. foreign policy, which arguably mediated both during and after the Cold War between interests and ideals.

C. Grand Strategy—The Challenge to Democratic Enlargement

Striking Power's promise is that:

Robotics, cyber, and space weapons can reduce the size of ground forces needed to wage war. They can withdraw human soldiers from the battlefield while making attacks more precise and deadly. They can allow nations to coerce each other without inflicting the same level of casualties and destruction as in the past. They can reach far beyond borders to pick out terrorists or selectively destroy WMD sites. They can reduce the costs that discourage western nations from stopping humanitarian disasters or civil wars. While armed conflict will continue as a feature of the human condition, it might come at lower cost, for a shorter time, and with less violence.⁴¹

But one might argue that this is grand strategy on the cheap, one that responds only to extreme problems with minimal footprint and is geared toward premature exit strategies that would leave behind the root causes of the problems that caused the instabilities that first prompted intervention. It is a strategy that reverses the lessons of World War I, after which the U.S. turned isolationist, lessons that were learned well enough to warrant U.S. deployments in Europe, South Korea and Japan now for three-quarters of a century after the end of the conflicts that initially brought them there. The established U.S. strategy in the post-Cold War environment is best summarized in the Clinton Administration's so-called strategy of democratic enlargement⁴² and President Bush's Second Inaugural Address,⁴³ both of which were premised on the idea that the internal structure of other states as democratic polities was a necessary condition of U.S. national security. The question Rabkin and Yoo pose is whether or not the spread of democracy through U.S. engagement remains essential to the maintenance of world order in which the U.S. has thrived since the end of World War II, or whether the U.S. would be even better off through a different national grand strategy.⁴⁴

⁴¹ RABKIN & YOO, *supra* note 4, at 3.

⁴² THE WHITE HOUSE, A NATIONAL SECURITY STRATEGY OF ENGAGEMENT AND ENLARGEMENTS 2 (1996).

⁴³ George W. Bush, President of The U.S., Second Inaugural Address (Jan. 20, 2005) (transcript available in The Avalon Project at Yale Law School).

⁴⁴ See JAMES M. LINDSAY & IVO H. DAALDER, THE EMPTY THRONE: AMERICA'S ABDICATION OF GLOBAL LEADERSHIP 1-3 (2018) (providing a balanced appraisal of the

Of course, grand strategy is largely about the relationship between available means and the ends that best fit those means.⁴⁵ According to one perceptive observer, the massive retaliation strategy in the event of any nuclear first use was constructed primarily to relate U.S. military strategy to the Eisenhower administration's judgment that preservation of the status quo in Europe, meaning deterrence of Soviet invasion, could not be achieved solely by conventional forces.⁴⁶ Rather, the threat of use of nuclear weapons would be necessary for deterrence. Moreover, a politically-unsustainable burden on the U.S. economy is avoidable by reducing the costs of conventional defense.⁴⁷ This strategic shift appears to be the premise driving *Striking Power's* resistance to theories of international law that are based on consensual and incremental change, what it describes as "frozen law in a changing world."⁴⁸ Thus one wonders whether or not Rabkin and Yoo's technological optimism and restrictive theory of international law, like the Eisenhower administrations flirtation with MAD, are necessary corollaries of their preferred grand strategy.

Recently, at least one military strategist has offered a contrary view. Michael O'Hanlon, a former advisor to the CIA, adjunct professor at both Princeton and Columbia University, and currently a Senior Fellow at the Brookings Institution,⁴⁹ contends that for the foreseeable future the U.S. will require large-scale army and marine units to achieve its national security objectives.⁵⁰ O'Hanlon writes:

The goal is not to undertake a number of imminent large-scale missions; we have learned from Iraq and Afghanistan about the limits, challenges, and the costs of such operations. But . . . deterrence of other great powers as well as smaller powers such as North Korea, and of being able to help stabilize key trouble spots that may be afflicted with various forms of civil warfare, terrorism, natural disaster, or other maladies, require substantial American

Trump administration's strategic shift from engagement in the direction of isolationism).

⁴⁵ See generally JOHN LEWIS GADDIS, ON GRAND STRATEGY 21-22 (Penguin Press 2018) (explaining that all of humanity has been using relationships to garner an advantage as a strategy); see generally JOHN LEWIS GADDIS, STRATEGIES OF CONTAINMENT: A CRITICAL APPRAISAL OF POSTWAR AMERICAN NATIONAL SECURITY POLICY (Oxford 1982).

⁴⁶ See JOHN LEWIS GADDIS, ON GRAND STRATEGY 59, 267, 304 (Penguin Press 2018); JOHN LEWIS GADDIS, STRATEGIES OF CONTAINMENT 145-49, 187-88, 204-05 (Oxford 1982).

⁴⁷ See JOHN LEWIS GADDIS, ON GRAND STRATEGY 59, 267, 304 (Penguin Press 2018) (explaining that the Cold War never became a real 'hot' war because of the nuclear weapon deterrence and containment strategies used to maintain the status quo); JOHN LEWIS GADDIS, STRATEGIES OF CONTAINMENT 145-49, 187-88, 204-05 (Oxford 1982).

⁴⁸ See RABKIN & YOO, supra note 4, at 9-14.

⁴⁹ See Michael E. O'Hanlon Biography, BROOKINGS INSTIT., <https://www.brookings.edu/experts/michael-e-ohanlon/> (last visited Apr. 7, 2019).

⁵⁰ MICHEL E. O'HANLON, THE FUTURE OF LAND WARFARE, xii-xiii (2015).

ground forces. Drones, cyberwarfare, and special forces cannot do it all; pretending that we can turn our backs on insurgency simply because Iraq and Afghanistan proved so hard is not viable either.⁵¹

O'Hanlon thus refers to the "so-called revolution in military affairs,"⁵² and maintains that "robotics and advanced computing" are yet "redefining warfare in a radical way."⁵³ In short, O'Hanlon's alternative universe is premised on the need for continued and expensive deployments performing missions for which the bots cannot substitute.

In sum, *Striking Power* imagines a world of low technological risks, low legal constraint, and limited U.S. global engagement. Scharre, Hull and O'Hanlon would undoubtedly each disagree with at least one of these premises (and perhaps all three). But it is equally fair to consider the possibility that Rabkin and Yoo are correct, that these premises describe the world as it is and will be as this iteration of the ongoing revolution in military affairs proceeds. But even if that is the world we are entering, it will not be without risks for the very constitutional order Rabkin and Yoo, as scholars of American constitutional law and history, would almost certainly wish to preserve.

II. WHY *STRIKING POWER*'S BEST FORM OF GOVERNMENT MAY NOT BE OUR FORM OF GOVERNMENT

Athenian democracy, in the words of Philip Bobbitt, commenced an "epochal" war—meaning a war whose resolution signaled a discontinuity in the form of the state, one that ultimately culminated in the defeat of Greek city-states by Macedonian Monarchy.⁵⁴ But for our purposes, the rise of Athenian democratic power, and the plausibility of its claim to superiority over Spartan autocracy and even Persian Monarchy, rested on the Greek citizen-sailor.⁵⁵ As Victor Davis Hanson observes, it was the expertise of Athenian sailors, developed over years of commitment to their craft, that assured Athenian maritime superiority, and thus the basis for Athens's power and strategy.⁵⁶ And what assured this commitment? It was that,

[a]t least at the start of the war, at Athens the rowers were for the most part all free voting citizens in a manner not true of the Peloponnesian fleet, suggesting that there unique élan at sea was a

⁵¹ *Id.*

⁵² *Id.* at 15.

⁵³ *Id.* at 166.

⁵⁴ See PHILIP BOBBITT, *THE SHIELD OF ACHILLES: WAR, PEACE, AND THE COURSE OF HISTORY* 21-23 (2002).

⁵⁵ See VICTOR DAVIS HANSON, *A WAR LIKE NO OTHER: HOW THE ATHENIANS AND SPARTANS FOUGHT THE PELOPONNESIAN WAR* 251 (Random House 2005).

⁵⁶ *Id.* at 251-52.

reflection that oarsmen felt that they had a state in the very society they rowed to defend.⁵⁷

Will that be true for the U.S. military in the age of the robots? Will the irrelevance of mass forces make mass voters irrelevant too? Increasingly the Congress fails to discharge its responsibility to police the Executive Branch's use of force.

Already commentators perceive the risk that in our economy and society vast numbers are being left behind and becoming unnecessary to the production of the intellectual property that now comprises the largest portion of American wealth.⁵⁸ With Orwellian overtones, another commentator observes that the robotics revolution insofar as it increases military capacity to confront urban insurgency has important implications for domestic liberty and privacy.⁵⁹ Antitrust scholars point to the increasing concentration of economic power in fewer hands, as the computing revolution of the last quarter century appears to have spawned higher concentration ratios in virtually all U.S. industries, not only those in the computer sector.⁶⁰ This concentration of power and freedom from dependence on the U.S. government has reportedly now enabled at least one U.S. corporation, presumably Google, to refuse to do business with the Defense Department, subordinating the national interest to that elite corporation's other agendas.⁶¹

In short, dominance of the commanding heights of U.S. technology by a fortunate few, coupled with a grand strategy that diminishes the need for broad-based support for a largely citizen-military and a diminution of a once "decent

⁵⁷ *Id.* at 253.

⁵⁸ See Yuval Noah Harari, *Why Technology Favors Tyranny*, THE ATLANTIC (Oct. 2018), <https://www.theatlantic.com/magazine/archive/2018/10/yuval-noah-harari-technology-tyranny/568330/>.

⁵⁹ See Chris Meserole, *Wars of None: AI, Big Data, and the Future of Insurgency*, LAWFARE (July 1, 2018), <https://www.lawfareblog.com/wars-none-ai-big-data-and-future-insurgency>.

⁶⁰ See JAMES BESSEN, THE POLICY CHALLENGE OF ARTIFICIAL INTELLIGENCE, B.U. SCH. L.: L. & ECON. at 2 (Research Paper) (July 2018).

⁶¹ See, e.g., Rob Gillies, *US military chief says tech giants should work with Pentagon*, FOX NEWS (Nov. 17, 2018), <https://www.foxnews.com/us/us-military-chief-says-tech-giants-should-work-with-pentagon> (identifying Google as the company that refused to develop AI for use in weapons); Heather Wilson, *Air Force Secretary: The Law of War and the Power of Computing*, THE NAT'L INT. (Sept. 4, 2018), <https://nationalinterest.org/feature/air-force-secretary-law-war-and-power-computing-30057> ("[W]hen a handful of large companies control the power of Artificial Intelligence, it raises questions about that entities will make decision about its application and its impact on our lives in the United States and around the world. We may be living in a time when power is shifting again, not toward popes or feudal lords, but to companies who control tools that learn and act in ways that we are only beginning to understand.").

respect to the opinions of mankind,”⁶² may have truly terrifying implications for the survival of the U.S. form of government. This is, of course, a Cassandra’s tale. But the trends are disturbing. And if epochal war is to come, it may well be that the country that best marries human technical ingenuity and humanity’s commitment to law and morality, the Centaur in short, will be the one most likely to survive. Dr. Strangelove ends with such a warning; for, as the bombs fall and the Domsday Machine is automatically triggered, the U.S. President’s military and political advisors begin to calculate how to survive in mine shafts to be constructed for the chosen few during decades of planetary inhabitability, leaving their fellow citizens and the mores of their culture behind.⁶³ One can be forgiven for hoping that *Striking Power*’s aim is less than true.

⁶² See THE DECLARATION OF INDEPENDENCE para. 1 (U.S. 1776).

⁶³ PETER GEORGE, DR. STRANGELOVE OR: HOW I LEARNED TO STOP WORRYING AND LOVE THE BOMB 138-141 (1964); *Dr. Strangelove or: How I Learned to Stop Worrying and Love the Bomb*, IMDB, <https://www.imdb.com/title/tt0057012> (last visited Jan. 27, 2019).

