

Will Emerging Weapons Change the Law of War?

VINCENT J. VITKOWSKY

Review of Jeremy Rabkin and John Yoo, *Striking Power: How Cyber, Robots, and Space Weapons Change the Rules for War* (Encounter Books, 2017)

Jeremy Rabkin and John Yoo are not averse to provocation in international law, and their new book, “Striking Power: How Cyber, Robots, and Space Weapons Change the Rules for War,” is no exception. It’s a book—it may as well be said up front—likely to irritate, if not infuriate, practitioners and scholars of the law of armed conflict (LOAC). This response, however, is seemingly invited by the authors, at least to judge by the book’s polemical tone toward those Rabkin and Yoo refer to as the “specialists” of the international law of war.

Lawfare’s readership includes, of course, many of these same specialists of the law of war—professionals in the international law of war who might be tempted either to issue an angry takedown or simply toss the book aside as unworthy of comment. And without question, there is plenty that LOAC professionals and scholars are

likely to object to—particularly the chapters that give a sharply revisionist history of LOAC. There will be book reviews aplenty that register all those objections to the authors’ characterizations of international law.

This review’s aims are different. Rather than take up the history (revisionist or otherwise) of the international law of war, this review has two purposes. First, it sets out the most radical claims Rabkin and Yoo make regarding the contemporary international law of war as it comes to grip with emerging weapon technologies. Second, it asks—looking beyond the book’s provocations and sometimes sharp language—which questions posed by Rabkin and Yoo about technology and the future of conflict indeed merit sober debate. What crucial issues for the contemporary and future law of war do these new weapon technologies put on the

table?

The book's emerging weapon technologies are cyber, robotics (including both remotely piloted drones and autonomous weapon systems) and space weapons. "Striking Power" argues that these new weapon technologies enable new—and in the hands of combatants, likely irresistible—possibilities in the means and methods of warfare. That includes possibilities that blur the lines between acts of war, uses of force, armed attacks and acts that fall short of the threshold of war or armed conflict. The emerging weapons will likely offer new capabilities that even states that accept prevailing interpretations of LOAC will not be able to ignore, if only because they will have to craft responses to them, both strategic and legal. The opportunities and threats posed by these new weapon technologies, and responses to the technologies, will inevitably alter existing understandings of LOAC—and, in Rabkin and Yoo's view, will reveal some of them to be as anachronistic and unrealistic as bans on submarine warfare or aerial bombardment in World War I and World War II.

At the same time, Rabkin and Yoo argue, these new weapon technologies will provide far greater possibilities than before for limiting the scope and destruction of armed conflict. But enabling the new technologies to be used for limiting war's destructive sweep requires rethinking—and in some important instances, abandoning and replacing—long-held and cherished understandings of LOAC. The ultimate policy objective underlying LOAC, according to Rabkin and Yoo, should be to end conflicts as quickly as possible, with as little destruction as possible. The new weapons can support this objective, they say—but only if policymakers have a full range of options for their use, some of which are currently unavailable under prevailing interpretations of LOAC.

The most important of these options, and probably the book's most radical,

revisionist legal claim is that in order to achieve these ends:

[W]e should prefer an attack on civilian infrastructure instead of an attack on military facilities, if the former required less force and presented less chance of serious death and destruction.

In LOAC language, the above quotation from means direct attack against civilian objects as such. There are, to be sure, controversies in the interpretation of lawful military targets under LOAC, including debates over "dual use" (use by both civilians and combatants) infrastructure. To their credit, Rabkin and Yoo do not try to cram or hide their view of lawful targeting under a mere "interpretation" of what constitutes a lawful dual use target in some particular situation. They argue, rather, that the general normative principle ought to be permission to attack civilian infrastructure if it is likely to cause less destruction than alternatives—and with no legally necessary LOAC requirement of dual use.

Rabkin and Yoo note that they do not argue against *all* limits in their arguments for revising the law of war. It is important to recognize the lines they draw. Their targeting principle refers, for example, to direct targeting of civilian *objects*—which, given the capabilities of emerging weapons, often means infrastructure—and not civilian *persons*. Even so, the revisionist reach of their normative principles is sweeping to say the very least.

That is what the book says in regard to *jus in bello*—the LOAC rules governing the conduct of hostilities. But "Striking Power" also has much to say about these emerging technologies' implications for *jus ad bellum*—the law governing the resort to force. Rabkin and Yoo believe, in this respect, that perhaps the most important use of new weapons may be in

maintaining the stability of the international order. These weapons, they suggest, might “allow nations to communicate their intentions more clearly,” and communicate their seriousness (in other words, “coerce” each other) but without inflicting the same levels of casualties and destruction as conventional warfare and with less risk of unintended escalation. This is because the new weapons will be capable of being more precise, being calibrated to particular circumstances and, in many circumstances, being programmed to cause only temporary disruption. Thus, in their view, the new weapons increase the possibility of a negotiated resolution before a situation becomes an intractable war. For this and other reasons, the new weapons ought to be preferred over “more destructive signaling” or “full great power hostilities.”

According to Rabkin and Yoo, then, contemporary interpretations of the U.N. Charter as requiring an “armed attack” in order to trigger a state’s *ad bellum* right of self-defense improperly reduce a state’s options for “coercing” other nations using means that are intended to fall short of full armed conflict. Sometimes coercion through limited and targeted force might be exactly what’s required, and sometimes, it can and should take place well short of waiting for an adversary’s “armed attack” or “use of force.” The challenges of this century—including terrorism, rogue nations, asymmetric warfare and regional challengers—might well demand more frequent resort to force, but low-intensity force, delivered with precision and at a lower cost.

Robotic weapons, especially armed, remotely-piloted drones, have assumed a prominent role in recent conflicts. The Obama administration’s heavy reliance on drone warfare met considerable criticism, as has the Trump administration’s continued use of armed drones. For Rabkin and Yoo, these criticisms “confuse the legality of an armed conflict—its *jus*

ad bellum—with how it is waged—its *jus in bello*.” Once a nation has decided to resort to force (lawfully or not, under *jus ad bellum*), the weapons used—whether drones, ballistic missiles, commando teams, or anything else—is its choice, subject as a matter of law only to LOAC considerations of distinction, proportionality and military necessity. Although entirely avoiding collateral damage is “a level of perfection unattainable in war,” armed drones can often make it more possible to approach this goal. “[D]estroying the Fuhrer’s bunker,” as they put it, “no longer requires leveling central Berlin.”

“Distinction” as understood in LOAC means not directly attacking civilians or civilian objects as such, and U.S. targeting incorporates these requirements in its uses of armed drones. Looking ahead, however, Rabkin and Yoo would revise these fundamental principles to permit direct attacks on civilian infrastructure or property using armed drones if they were reasonably judged to be the most efficient and least destructive course of action. They believe that in many scenarios, this is likely to be the case.

Looking more broadly, beyond armed drones in isolation, however, they note that states have engaged in attacks on civilian infrastructure in recent decades for various reasons, including humanitarian intervention. A prominent instance was the NATO strikes on power stations, highway bridges,

and broadcasting towers in Kosovo and Serbia in 1999. Rabkin and Yoo observe that “military lawyers have turned somersaults to justify these attacks.” Which is to say, they have turned somersaults in order to claim that these were not *direct* attacks on civilian objects as such. Rather than engage in such questionable, even specious, reasoning, however, “Striking Power” says the better course is for states “honestly admit that their militaries are employing force against civilian targets to pressure their

enemies.”

Dire warnings prevail in some quarters of a “cyber Pearl Harbor”; these worries are vastly overstated, according to Rabkin and Yoo. They write that “fervid imagination seems to have outrun physical possibility.” But the focus of “Striking Power” regarding cyber technologies is less on the technological likelihoods than on the processes by which international law rules for cyberwarfare will develop. As they note, authoritative rules have not thus far been established. There are no specifically applicable treaties. The great powers and states generally have not formally agreed to norms. Since there has never been a declared or acknowledged cyber war, there is little to no acknowledged, actual state practice arising from such a conflict that might even begin to crystalize rules of customary international law. The only point of consensus seems to be that cyberattacks which have widespread kinetic effects on civilians, similar to the effects of “bullets and bombs,” would be subject to LOAC.

But the absence of actual law has not dissuaded “specialists” from announcing its precepts, say Rabkin and Yoo. It is on this point that “Striking Power” is at its most combative—dismissive, even—with respect to the efforts of LOAC practitioners and academics to formulate possibilities for what the structure and content of LOAC applied to cyber ought to be. The most prominent effort has been the Tallinn Manual, which proposes a set of “rules” of cyber warfare—somewhat like “Model Codes” in domestic law—drafted by academics and other experts meeting in Estonia under the aegis of NATO.

Now in its second edition, the Tallinn Manual is advisory in nature. It is not binding on anyone, including NATO members. According to the manual, “[T]he law of armed conflict applies to cyber operations undertaken in the context of armed conflict.” With this premise linking cyber to LOAC, the manual’s legal stance assumes not only this, but also that the

rules of 1977 Additional Protocol I (API) provide the relevant LOAC standards (notwithstanding, among other things, that the United States is not a party to the protocol). API imposes many restrictions in its targeting rules, and many if not all of these rules, according to the Tallinn Manual drafters, constitute customary international law binding on all parties.

Rabkin and Yoo dispute this conclusion about API’s rules of targeting taken as a whole and, moreover, make note that some claims of customary law most relevant to cyberwar are based on almost no state practice or public legal positions in their application to cyber. Yet the unique conditions of cyber conflict (at any level of intensity) might mean that the least destructive and effective response to a cyberattack is to respond proportionately, in kind, against an adversary’s cyber-infrastructure. But Rabkin and Yoo say if this kind of retaliatory response is precluded by API’s rules of targeting under a claim of customary international law, then the drafters of the Tallinn Manual have simply “assume[d] away the most important questions in a field that has just opened.”

Space weapons present their own challenges. Businesses and people rely on satellites for a considerable portion of their daily activities. (The GPS system is a clear example.) For this reason and others, there have been calls for a ban on the “militarization of space.” Yet Rabkin and Yoo argue against adopting any broad prohibition on the use of force in space.

The current legal structure is set by the 1967 Outer Space Treaty—signed and ratified by the U.S., the U.S.S.R. and other major powers. It created a set of restrictions, the most relevant of which are prohibitions against the “establishment of military bases, the testing of any type of weapons and the conduct of military manoeuvres on celestial bodies,” and it prohibited placing

weapons of mass destruction in orbit. It declared that space, the moon and celestial bodies be used “exclusively for peaceful purposes,” though the U.S. construed this provision to permit the use of “space” for self-defense.

To Rabkin and Yoo, the Treaty is significant for what it does *not* prohibit. It does not prohibit ballistic missiles from passing through space, the stationing of reconnaissance satellites, or the basing of conventional weapons in space. It does not prohibit any specific military operations not involving weapons of mass destruction in orbit or outer space. And it does not address the use of orbital weapons against terrestrial targets, or vice versa. Though “Striking Power” adds policy caveats specific to space weapons, it argues that the treaty does not prohibit weapons or uses of space not specifically addressed by it, and as a matter of policy the U.S. should use space weapons in accordance with the same basic principles the book urges for robotic and cyber weapons.

“The absence of human beings in space,” write Rabkin and Yoo, “makes space an even better arena for the use of force than the Earth, as the likelihood of the collateral death of civilians is virtually zero.” Space weapons, like robotic and cyber weapons, could turn out to be a “strategic mechanism to coerce other nations, which will lead to more peaceful resolution of crises,” which in turn promotes the “central goal of the laws of war—protecting innocent civilian life.”

Well, maybe. Leaving to one side disputes over the laws of war and their proper legal understandings and focusing instead on the likely possibilities and limitations of these new weapon technologies, “Striking Power’s” displays a measure of excessive optimism. That’s true with regards to over-estimation of what cyber, robotic, or space weapons will likely be capable of doing as well as under-estimation of their likely limitations.

The central challenge of national security

policy is the impossibility of anticipating even just the most important potential reactions and consequences. The book does not address the profound difficulties of accurately foreseeing the strategic and political effects of these weapons in actual conflicts. That’s not an argument for not developing or using the new weapon technologies, of course. But the book presumes that the greater *tactical* precision that these technologies do indeed offer (certainly by comparison to alternative weapon systems) smoothly translates into similar precision and calibration in the *political effects* of these weapons. One could imagine how the seemingly exquisite calibration of a “coercive” use of these new weapons might backfire. What political and military leaders thought would be merely a restrained exercise in interstate “signaling behavior” might turn into full-on conflict.

The book’s very title, “Striking Power,” emphasizes the increase in the power of the offensive. But it doesn’t seem impossible that the emergence of offense-enhancing new weapon technologies available to a conventionally weaker but technologically sophisticated adversary might turn out to be, not *stabilizing*, but instead *destabilizing*.

Moreover, the consequences likely to befall civilians in some of the attacks on civilian or dual-use infrastructure proposed in “Striking Power” appear to be far greater than the book acknowledges. Even “limited” cyberattacks on infrastructure systems—which the authors describe as likely to cause mere “inconvenience”—seem far more serious than that. An attack disabling a power system almost inevitably will lead to injury and death. Dark traffic lights will cause accidents. Hampered emergency responders will fail to save lives. Hospital patients will be at risk.

As this review is being written, infants in hospital intensive care units in Texas are being evacuated in anticipation of Hurricane Harvey, for fear that power

outages will cause their respirators to fail. The failure of electric air-conditioning could cause great suffering and many deaths in some seasons and places. Shortages of essential goods due to lack of refrigeration could lead to riots and destruction. Attacks even temporarily bringing down important parts of a country's financial and banking systems—to which the book gives short shrift—could easily cause chaos in the larger economy.

The follow-on political effects of any of these supposedly measured and calibrated attacks are equally impossible to foretell. In some cases, the negative effects on civilians might be minor—but in other cases, they could include anything up to unanticipated revolution and civil war. “Inconvenient” is not likely to be the right word.

Despite these omissions, however, “Striking Power” is a fine and serious book, by turns bracing and brusque, provocative and polemical, and sometimes

sharp-elbowed. If the book's chief weakness is an overly-sanguine view of the new weapon technologies and their likely consequences, its chief virtue is that it asks, in the face of technological change, hard questions of the international law of war and it does not hesitate to hand back tough answers.

Vincent J. Vitkowsky is a lawyer in private practice in New York. He chairs the International and National Security Law Practice Group of the Federalist Society and has been an Adjunct Fellow at the Center for Law and Counterterrorism. (The Federalist Society takes no position on any legal and public policy matter; views expressed are those of the author.)

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