



## Introduction

The global conflict environment is experiencing a disruptive transformation today. The democratization and spread of new technologies, in concert with so-called “gray zone” (or hybrid) warfare strategies, has called into question many long-held assumptions and geopolitical norms about warfare around the world. From the South China Sea to the Crimean Peninsula to the North Pole the strategies associated with the gray zone are being used by states and non-state actors alike to achieve strategic ends without

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triggering war, conflict, or an armed international response. As these disparate actions prove successful, an emboldened and incentivized constituency will emerge around the world. These actors will strike in increasingly destructive ways, but endeavor to keep their actions, however destructive, below the threshold of war.

In the present geopolitical construct, state and non-state actors have many reasons to keep their activities below the threshold of war—defined as a formal declaration by a sovereign nation or alliance. For example, when Germany aggressed against its European neighbors during World War II, the global reaction in the form of an organized Allied response nearly collapsed Germany, and resulted in its occupation for years after the conflict’s end.

Notwithstanding, after 100,000 years of human history, neither fear of retaliation nor any other risks have seriously attenuated the drivers that lead to war; war and conflict are as ancient and unchanging as human nature itself. Thus, a pragmatic global community anticipates that actors will continue using blackmail, murder, conflict, and other base human activities and behaviors to impose

wills or “politics by other means,” as Prussian theorist Carl von Clausewitz defined war.

War, and the preparations for it, has enormous influence on the expenditures of states around the world. Between 1985 and 2016, according to the World Bank, the international community spent between two to five percent of its GDP on defense, or approximately five to seven percent of all central government spending on militaries while committing up to 30,000,000 people—or one person for every 100 people in the workforce—to defense-related tasks.<sup>1</sup> If the risks of war were not credible, most states would divert these expenditures to other investments.

Formal military alliances between nations have served to keep the threat of war at bay in many cases and help spread the burden of defense across states, but the durability of alliances can be influenced by the outbreak of peace just as much as war. Since the end of the Cold War, the NATO alliance has been a reliable mechanism to ensure the relative peace and stability of its members. Within this period of relative tranquility, though, many NATO members allowed their focus to shift to internal and domestic affairs, in part, because of the stable security environment that arose after the downfall of the Soviet Union. While this period saw the growth of stronger democracies and stable governments among NATO members, in some cases, it has led to the softening of the militaries defending them. As a result, proportional defense spending across NATO has steadily grown into a contentious topic among the alliances’ members. The United States’ military commitments and defense spending continues to increase, while some NATO members struggle to meet mandated defense-spending requirements.

Regardless of spending, tectonic shifts are altering the security environment in such a way that neither relative military strength

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nor diplomatic and economic power can fully guarantee peace, the status quo, or stability. The sting of this reality is fresh in NATO's consciousness after Russia's hybrid warfare actions allowed its forces to illegally annex the Crimean Peninsula in approximately 28 days (beginning when troops crossed the border and ending with the Russian ratification of the annexation). These and other activities have contributed to a growing consensus among strategists that such gray zone activities could be a minor foreshock to a much more serious crisis along well-established international fault lines. Alarming, if these geopolitical shocks manifest with enough energy the world will be caught off guard when the pressures are released, much like any other unexpected earthquake. To the astonishment of the world, these energies may wind up destroying nations.

### **The Trauma of War**

Today, the more primal human tools of geopolitical statecraft are re-emerging. These include territorial conquest, assassination, genocide, use of weapons deemed illegal under international law, the embrace of totalitarian systems, and others. In fact, many would argue these approaches never went away—but were in a state of dormancy. Today, these acts and approaches are enabled by technologies, and when employed in the gray zone the resultant combinations can easily upset world order. For example, few would have imagined Russia would utilize a bridge over the Sea of Azov to enforce an illegal naval blockade on neighboring Ukraine, as Moscow's forces did in late 2018. Then again, the evolution of strategy is a key attribute of gray zone competition. One

must never use the same strategy twice some would argue. Others may look at the scenario and argue the opposite: do what works—all options should be on the table.

The options afforded to state and non-state actors using the gray zone and new technologies (such as social media campaigns) are persuasive and alluring to those desiring to shift or remake the present world order. By dispensing with the memory of war's pain and trauma, in this age of hybrid warfare, nearly any action can be justified, messaged, and "spun" at least in the actor's mind. For example, Russia's justification for detaining and arresting Ukrainian coast guard personnel during its naval blockade was, in their words, to ensure their security and economic interests in the region. In the aftermath of the event, it became clear this was yet another test of the U.S. and the NATO alliance to see how far the allies' limits can be pushed without triggering a response.

Such experiences are why today's NATO has been dubbed "NATO 3.0"—an alliance adapting a second time after the end of the Cold War to a new threat environment. It remains an alliance rattled by Russia's brazen behavior, which has pushed aside the international system that has long enshrined state sovereignty as the cornerstone of the Westphalian system. NATO knows it must recast itself in order to remain relevant in this changing environment. Nevertheless, in a justifiably chivalric manner the West continues to conduct itself predictably—as a collection of fair, just, and enlightened democracies and arbiters of law and order. Moreover, the West attempts stridently to hold itself accountable to the laws of war.

### **"A Lesson in the Rules of War":**

In the American Revolutionary War period film, *The Patriot*, a colonist and father, played by Mel Gibson, argues with a ruthless British colonel who has ordered his son, a

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marked message carrier, be arrested for spying. Gibson’s character pleads with the colonel claiming that to the effect, under the rules of war, you cannot arrest a marked message carrier. “Would you like a lesson, sir, in the rules of war,” the colonel replies. “Or perhaps your children would?” At this point the colonel shoots one of the father’s younger sons in the back. While this admittedly dramatized scene may be overwrought, it also illustrates the purpose of the rules of war—to provide boundaries on the many human evils that can manifest in periods of competition and conflict. It also illustrates that when these rules are discarded, it is often intentional.

At the heart of the chivalric “rules” of warfare is a requirement for distinction between civilians and military personnel, the need for proportional weapons to limit unnecessary suffering and destruction, and necessity which requires that targets be reasonably linked to military purposes and objectives. While the West may continue to abide by such binding international restraints, it is increasingly clear that in time, the western allies and alliances such as NATO might wind up being the only nations to do so. Since the 1990s, China’s actions in the South China Sea, for example, have demonstrated that the rising Asian power is too willing to set aside certain international laws to further its own interests. From ramming civilian fishing boats to building islands and establishing military bases in areas claimed by other states, China’s activities, in full view, are demonstrably violating longstanding international norms. As a regional power, North Korea has followed in China’s footsteps by provocatively posturing weapons of mass destruction, and fabricating

crisis-driven political dramas to escalate tensions with South Korea and the United States.

As the gray zone between peace and war matures, actors who loosen themselves from international norms and the laws of war will enjoy certain advantages over states whose behavior is predictably constrained by western concepts of morality and fair play. This is a key challenge to the US and NATO’s concept of deterrence, as it is assumed to be maintained by the West’s nuclear and military advantages. Because those advantages are maintained under the bridle of international law, the threshold for their use is extremely high. If a rogue nation were to lash out at a NATO member nation, NATO could respond under Article V of the alliance’s charter (which states an attack on one state is an attack on all). But NATO could only do this if it had a reasonable degree of certainty as to the identity of the provocateur. A NATO retaliation, in the context of certain gray zone actions, would be quickly complicated or even frustrated. This may afford actors further opportunity to snatch the initiative.

Rules only work if they are followed and, if and when broken, there is a likelihood of enforcement. Thus, in many cases, what compels actors—both state and non-state alike—is the fear of retaliation. Examples of enforcement include the Nuremberg and Tokyo Trials after World War II. During these events, many authorities and principalities operating under the Axis Powers were found guilty of war crimes and sentenced to death. This very public display of justice was meant to send an unmistakable message to future tyrants and regimes who might think about going against international norms—justice is inevitable.

If the whole international legal system is called into question, as is possible the more gray zone activities and strategies spread, all deterrence theories may begin to collapse. Without attribution, there could

be no retaliation, no justice, and even no real punishment for bad international actors. The implications of this emerging dynamic on long-standing systems, such as nuclear deterrence, are elemental. In fact, it is reasonable to argue that the deterrence system the U.S. and its allies operate today is incomplete or even failing.

Today, the diffusion of technologies in concert with gray zone activities allows actors to maneuver below traditional thresholds that would lead to open warfare, or other devastating retaliatory responses. For example, if China or North Korea gave a weapon of mass destruction to non-state actors who are ideologically aligned with their sponsor's desired ends, there is at least an opportunity to circumvent the risk of retaliation that would result following an attack against a Western state using such a weapon. The present environment and geopolitical trends point to an increasing likelihood such opportunities might be considered, and even used.

The range of doctrine and strategy literature from China, Russia, North Korea, Iran, and even non-state actors such as ISIS and Al Qaeda frequently discusses the creative use of gray zone weapons and tactics to attack or strike at states. These strategies derive their utility from the premise that certain effects can be delivered using creative strategies to ensure they are un-attributable. The risk-limiting element of these options carries a substantial risk for Western nations. Mainly, an unprovoked first strike, although currently unthinkable, could be very much considered in such an environment as a "knockout" option. In some cases, as with Russia, such first strikes are often considered

part of a defensive strategy. Given this reality, the international community should begin to re-orient thinking, and update the laws of war, to begin building a deterrence strategy for gray zone approaches. While actors that utilize the gray zone may disregard international law, they must be put on notice that if they are discovered conducting such acts, they will be held accountable.

### **Revising International Norms: Outlawing Nation-Killing Acts**

In light of these trends and present realities, the global community of nations should endeavor to make four specific acts illegal under the modern laws of armed conflict:

1. The use of high-altitude electromagnetic pulse (HEMP) attacks.
2. High-altitude nuclear detonation (HAND) of nuclear weapons.
3. The employment of debris-creating anti-satellite weapons (ASATs), or the act of deliberate collision in space resulting in long-term debris on orbit.
4. Any act that contaminates the national water supply of any nation.

With the use of any of these acts or capabilities, any nation's sustainability could be put at risk. If carried out, any of these acts would create widespread and indiscriminate harm to life and property would, in fact, be a crime against humanity and should be treated as such.

For example, the use of a HEMP attack against a nation-state can be arguably equivalent to a genocidal act, directly affecting civilians far out of proportion to any military necessity. Very likely such an attack would also hurt neutral nations on the periphery of the target and those dependent on the targeted nation's economy. For instance, a Congressional study spanning

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18 years found that if a HEMP or series of HEMP detonations were made over the United States, more than 90 percent of the population would be at risk of death.<sup>2</sup> Unlike nuclear weapons that kill through their kinetic and long-lasting radioactive effects, a HEMP attack would create death through privation. By degrading a nation's infrastructure, attackers could ensure that nations would be unable to care for their populations. Neutral nations would very likely be affected as well. HEMP modeling indicates that if the United States were struck, parts of Canada and Mexico would also be adversely affected.

Like a HEMP, the effects of a HAND attack cannot be limited to a single nation, and would threaten the critical space infrastructure of multiple countries—as operational

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satellites would be transformed into uncontrolled projectiles. This effect is most generally realized by a fast-pulse of energy known as an electromagnetic pulse (EMP), similar to a HEMP (an EMP disrupts and cripples

all unprotected electronic micro-circuits where a sufficient field strength occurs). All affected equipment would be disabled and set adrift, leading to the high probability of uncontrolled collisions. Collisions from space debris threatens the critical infrastructure of every nation with assets in space. In some cases, waves of orbital collisions could cause debris to reach speeds of thousands of miles per hour. This debris could penetrate the hulls of manned and unmanned space vehicles, satellites, and potentially jeopardize the viability of entire orbital plains.

Similar to a HAND, anti-satellite weapons (ASATs) may also be used to cause collisions and cascading debris fields. These weapons allow for the immediate defeat or destruction of programs that can take

decades or more to launch or bring online. A chain reaction of collisions in the vacuum of space involving high-velocity debris can last a thousand years or more, since there is no atmospheric friction to slow the momentum of impacted objects of similar mass.

Lastly, in terms of water supplies, water scarcity is a global concern of nearly every nation. Only one percent of the world's water is fresh and only about half of this is accessible outside of polar ice. Some supplies can take thousands of years to replenish. In the United States for instance, one of the largest aquifers, the Ogallala Aquifer overlying the Great Plains, is drawn down at 38 inches per year and is only replenished at about a half inch per year. The aquifer's basin took more than a thousand years to fill after the last Ice Age, when glaciers receded. With all nations dependent on scarce water supplies, any effort to tamper with a national water supply could mean the destruction of their ability to sustain life and their economies. As historic strategies prove, and even as recent as 2014 in the case of the Mosul Dam in Iraq, water can be targeted to provide a range of destructive effects using different methods. In some cases, the effects of disrupting a nation's water supply can be as great as if a weapon of mass destruction were employed.<sup>3</sup> The potential destruction or failure of the Mosul Dam could affect some 1.8 million people directly due to flash flooding, but many more in terms of infrastructure impacts and health concerns. Thus, the international community must take measures to regard water as a "sacred commons," to be safeguarded by all nations, especially during conflict.

## **Conclusion**

The first use of any of these potentially nation-killing capabilities, be it a HEMP, HAND, an ASAT weapon, or the destruction of national water supplies, should be illegal



per the laws of warfare, and open to reprisals and legitimate self-defense—much like the longstanding norms and understandings surrounding the use of nuclear weapons. In one essay on arms control, Brian Chow points to the pioneering work of economist Thomas Schelling and veteran foreign policy and arms control expert Morton Halperin, who wrote in the early 1960s that arms control is meant to:

*... include all the forms on military cooperation between potential enemies in the interest of reducing [1] the likelihood of war, [2] its scope and violence if it occurs, and [3] the political and economic costs of being prepared for it... arms control is essentially a means of supplementing unilateral military strategy by some kind of collaboration with the countries that are potential enemies. The aims of arms control and the aims of a national military strategy should be substantially the same.<sup>4</sup>*

All nations have an interest in reducing the likelihood of war, as well as its scope,

violence, and suffering should war prove unavoidable. The world's nations also need to grasp the political and economic costs of being continually prepared for war. Nowhere is this more critical than the global commons (regardless of domain) where nations share a common environment for their life-sustaining infrastructure.

Because of the extreme difficulty in verification, and similarity between civilian-use devices and weapons which carry out actions in these four categories, the way forward is not an attempt to regulate hardware, but rather to make the employment of this hardware to achieve these aims crimes under the laws of war. This will not necessarily serve to prevent adverse acts, but may, in many ways, help highlight vulnerabilities that can be mitigated, ensure cooperation to prevent such acts, and in some cases, provide a deterrent effect as actors recognize that these acts will undermine their legitimacy and ultimately result in retaliation and/or criminal prosecutorial action. In this regard, the ubiquity of international law can provide an offset to the characteristic ambiguity and lawlessness demonstrated in the gray zone. ★

## Endnotes

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1 “Armed Forces Personnel, Total,” The World Bank Open Data site, [https://data.worldbank.org/indicator/MS.MIL.TOTL.P1?end=2016&name\\_desc=false&start=1985&view=chart&year=1981](https://data.worldbank.org/indicator/MS.MIL.TOTL.P1?end=2016&name_desc=false&start=1985&view=chart&year=1981) (all links accessed March 15, 2019).

2 Authors’ note: For more details on the effects and impact of an EMP attack on the United States, see: Commission to Assess the Threat to the United States from Electromagnetic Pulse (EMP) Attack, *Executive Report of the Commission to Assess the Threat to the United States from Electromagnetic Pulse (EMP) Attack*, (Washington, DC: EMP Commission, 2004), [http://www.firstemp-commission.org/uploads/1/1/9/5/119571849/emp\\_commission\\_vol1\\_summary.pdf](http://www.firstemp-commission.org/uploads/1/1/9/5/119571849/emp_commission_vol1_summary.pdf).

3 David J. Stuckenberg and Anthony L. Contento, “Water Scarcity: The Most Understated Global Security Risk,” *Harvard Law School National Security Journal*, May 18, 2018, <http://harvardnsj.org/2018/05/water-scarcity-the-most-understated-global-security-risk/>.

4 Brian Chow, “Is it Time for ‘Space Arms Control’?,” *The National Interest*, December 9, 2018, <https://nationalinterest.org/blog/buzz/it-time-space-arms-control-38152>.



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