# ARTICLE

## Collective Cyber Countermeasures?

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Abstract

Countermeasures are an established and instrumental aspect of the international legal system of self-help. Although countermeasures are of long lineage, it was only with the advent of cyber operations that they took center stage in international law discourse among states, as they appeared to offer injured states a legal basis for "hack backs." This article examines the evolution of approaches to collective countermeasures initiated between states and reflected in the work of the International Court of Justice and the International Law Commission. Upon this groundwork, we survey and assess the international security conditions relevant to the issue of collective countermeasures, with particular emphasis on their use in cyberspace. We conclude that, though the issue remains unsettled as a matter of law, collective cyber countermeasures on behalf of injured states, and support for the countermeasures of the injured state, are lawful.

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## *I.* Introduction

In May 2019, during remarks at the annual International Conference on Cyber Conflict, Estonian President Kersti Kaljulaid offered her government's views on a number of key international legal questions relating to cyberspace.[1] Expressing concern at the growing frequency of malicious cyber operations, she announced the following:

> Estonia is furthering the position that states which are not directly injured may apply countermeasures to support the state directly affected by the malicious cyber operation. The countermeasures applied should follow the principle of proportionality and other principles established within the international customary law. . . . It is therefore important that states may respond collectively to unlawful cyber operations where diplomatic action is insufficient, but no lawful recourse to use of force exists. Allies matter also in cyberspace.[2]

Delivered by a vibrant liberal democracy's head of state and an enthusiastic supporter of international law, the Estonian position on collective countermeasures should be taken seriously and at face value. The position bears evidence of careful, if somewhat veiled, deliberation. Such public pronouncements on international law by law-abiding states are not made lightly.

Yet, soon after President Kaljulaid's remarks, the French Armed Forces Ministry published a document summarizing its views on how international law governs cyberspace.[3] Like President Kaljulaid's speech, it highlighted growing security threats in cyberspace from both state and non-state actors.[4] However, the Ministry expressly rejected the option of collective countermeasures as a lawful response to breaches of international law.[5] Rather, it asserted, "Collective countermeasures are not authorised, which rules out the possibility of France taking such measures in response to an infringement of another State's rights."[6]

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[1] *See* Michael N. Schmitt, *Estonia Speaks Out on Key Rules for Cyberspace*, JUST SECURITY (June 10, 2019), https://www.justsecurity.org/64490/estonia-speaks-out-on-key-rules-for-cyberspace/ [https://perma.cc/LJ2R-8BYG].

[2] Kersti Kaljulaid, President of Estonia, Opening at CyCon 2019 (May 29, 2019), https://www.president.ee/en/official-duties/speeches/15241-president-of-the-republic-at-the-opening-of-cycon-2019/index.html [https://perma.cc/9F9M-EUYG].

[3] *See* FRANCE, MINISTRY OF THE ARMIES, INTERNATIONAL LAW APPLIED TO OPERATIONS IN CYBERSPACE (2019), https://www.defense.gouv.fr/content/download/567648/9770527/file/international+law+applied+to+operations+in+cyberspace.pdf [https://perma.cc/WJQ3-XBWT]; *see also* Michael N. Schmitt, *France's Major Statement on International Law and Cyber: An Assessment*, JUST SECURITY (Sept. 16, 2019), https://www.justsecurity.org/66194/frances-major-statement-on-international-law-and-cyber-an-assessment/ [https://perma.cc/K29P-NKXL].

[4] *See generally* FRANCE, MINISTRY OF THE ARMIES, *supra* note 3.

[5] *See id.* ¶ 1.1.3.

[6] *Id.*

States like New Zealand lie between these two positions, dealing cautiously and non-committedly with the matter in announcing:

> Given the collective interest in the observance of international law in cyberspace, and the potential asymmetry between malicious and victim states, New Zealand is open to the proposition that victim states, in limited circumstances, may request assistance from other states in applying proportionate countermeasures to induce compliance by the state acting in breach of international law.[7]

Countermeasures are an established and instrumental aspect of the international legal system of self-help. They comprise non-forcible, but otherwise unlawful, acts undertaken in response to another state's breach of an international law obligation.[8] Available to induce the offending state (the "responsible state") to desist in its unlawful conduct and/or provide any reparations that may be due the victim state (the "injured state"),[9] a countermeasure is grounded in circumstances of "precluding wrongfulness" of a state's actions under the law of state responsibility.[10]

Although the idea of countermeasures has long been a part of international law's system of self-regulation,[11] the potential for their abuse and the risk that they might incite escalatory cycles of retaliation have resulted in strict limits found in the law of state responsibility, some of which are legally ambiguous.[12] The question whether the right to engage in countermeasures is strictly limited to injured states remains a key controversy. By one view, which we label the "bilateral" approach, an injured state may not enlist non-injured states to undertake "collective countermeasures," that is, countermeasures engaged in on behalf of the injured state. Under this approach, non-injured states also may not offer or intervene with countermeasures on their own accord against the responsible state. France advances this legal position.

The shortcomings of the bilateral approach are apparent. The lack of collective responses to international law breaches would render self-help through

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[7] NEW ZEALAND, DEP'T OF FOREIGN AFFS. AND TRADE, THE APPLICATION OF INTERNATIONAL LAW TO STATE ACTIVITY IN CYBERSPACE, ¶ 22 (2020), https://www.mfat.govt.nz/en/media-and-resources/ministry-statements-and-speeches/cyber-il/ [perma.cc/H7HZ-ULML].

[8] *See* Int'l Law Comm'n, *Draft Articles on Responsibility of States for Internationally Wrongful Acts, with Commentaries*, *reprinted in* [2001] 2 Y.B. Int'l L. Comm'n, pt. 2 art. 49(1), U.N. Doc. A/56/10 [hereinafter Articles on State Responsibility].

[9] *See id*. art. 22(1).

[10] *See id.* Other conditions precluding wrongfulness include consent, self-defense, necessity, *force majeure*, and distress. *Id.* pt. 1, ch. V.

[11] *See* JAMES CRAWFORD, BROWNLIE'S PRINCIPLES OF PUBLIC INTERNATIONAL LAW 585 (8th ed. 2012) (characterizing availability of countermeasures as an important distinction between domestic legal systems and the international law).

[12] *See* Articles on State Responsibility, *supra* note 8, pt. 3, ch. II (outlining proposed limits on states' resort to countermeasures including conditions precedent).

countermeasures impossible for many weak states. If forced to respond alone, they would not be able to induce more powerful responsible states to cease unlawful activity. The Estonian case is paradigmatic. As a small NATO member lying on the border of a hostile Russia, it relies on its allies for security. This dependency is not only true with respect to a potential armed attack triggering Article 5 of the North Atlantic Treaty,[13] but also vis-a-vis "below the threshold" unlawful activity, including in cyberspace.[14] This situation leads to the Estonian position, which we shall label the "collectivist" approach, by which a non-injured state may assist an injured state to take countermeasures or engage in countermeasures on its behalf.

These differing perspectives on collective countermeasures reflect competing conceptions of international law—one that sees this body of law as primarily bilateral in character, the other as a normative system relying heavily on collective and cooperative means of self-help. Through the early twentieth century, internationally wrongful conduct was conceived chiefly as a bilateral matter, that is, exclusively between responsible and injured states.[15] That conception would be challenged in the second half of the century as support emerged for a collectivist vision of international law meant to both enhance the prospect of enforcement and better bind the international community together.[16]

The collectivist conception holds that certain international norms, like the prohibition on genocide, are owed to the international community as a whole, or *erga omnes*.[17] In case of breach, injured states include not only those that were directly injured, but also the international community, collectively and severally.[18] International law also began to feature codified collective enforcement mechanisms, such as the United Nations (UN) Security Council's authority to authorize or mandate action, including the use of force, under Chapter VII of the 1945 UN Charter[19] and the right of collective self-defense in Article 51 of that instrument.[20]

Views admitting collective countermeasures soon surfaced in other contexts as well. In 1953, the UN General Assembly requested that the UN-sponsored

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[13] North Atlantic Treaty art. 5, Apr. 4, 1949, 63 Stat. 2241, 34 U.N.T.S. 243.

[14] *See generally* Michael N. Schmitt, *"Below the Threshold" Cyber Operations: The Countermeasures Response Option and International Law*, 54 VA. J. INT'L L. 697 (2013).

[15] *See* DIONISIO ANZILOTTI, COURS DE DROIT INTERNATIONAL 467–68 (Gilbert Gidel trans., Recueil Sirey, 1947) (1929); Martti Koskenniemi, *Solidarity Measures: State Responsibility as a New International Order?*, 72 BRIT. Y.B. INT'L L. 337, 339–340 (2001) (observing until the middle of the 1980s, countermeasures "remained in the bilateralist framework of traditional law . . . .").

[16] *See* CLARK M. EICHELBERGER, UN: THE FIRST TEN YEARS 22-31 (1955) (describing post-Second World War collective security legal measures undertaken through United Nations auspices).

[17] *See generally* Jochen A. Frowein, *Obligations Erga Omnes*, *in* MAX PLANCK ENCYCLOPEDIA OF INTERNATIONAL LAW (2018).

[18] *See* INSTITUT DE DROIT INTERNATIONAL, FIFTH COMM'N RESOLUTION, OBLIGATIONS AND RIGHTS ERGA OMNES IN INTERNATIONAL LAW (Aug. 27, 2005), https://www.idi-iil.org/app/uploads/2017/06/2005kra01en.pdf [https://perma.cc/9F47-TR4U].

[19] U.N. Charter ch. VII.

[20] *Id.* art. 51.

International Law Commission (ILC) codify the "principles of international law governing State responsibility."[21] Despite concerns that the availability of collective countermeasures might undermine the UN system,[22] the ILC, as discussed *infra*, identified no prohibition on a collectivist remedial regime including countermeasures.[23] After all, the UN system itself illustrates the authority of states to address breaches collectively; states drew from the same well of sovereign authority to create a system that, from the collectivist view, can also serve as a basis for collective measures lying outside the UN Charter.

As explained *infra*, although countermeasures have roots in history, the advent of cyber operations brought them to center stage in international law discourse among states, for they appeared to offer a legal basis for "hack backs" by injured states.[24] Indeed, every state has confirmed the specific right to resort to countermeasures in the cyber context, though they sometimes disagree on the precise parameters governing them.[25] This stance accords with the International

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[21] G.A. Res. 799 (VIII), at 52 (Dec. 7, 1953).

[22] *See, e.g.*, Int'l Law Comm'n, Rep. on the Work of Its Fifty-Second Session, U.N. Doc. A/CN.4/513, at 33 (2001) (relating states' concerns that collective countermeasures would conflict with the authority of the United Nations under UN Charter Articles 39 to 41).

[23] *See* Articles on State Responsibility, *supra* note 8, arts. 42, 48, 54.

[24] *See generally* Schmitt, *supra* note 14.

[25] *See e.g.*, *Applicability of International Law to Conflicts in Cyberspace*, *in* DIGEST OF U.S. PRAC. IN INT'L L. 732, 738–39 (2014); FRANCE, MINISTRY OF THE ARMIES, *supra* note 3, ¶ 1.1.3; JEREMY WRIGHT, ATTORNEY GENERAL OF THE U.K., ADDRESS AT CHATHAM HOUSE, CYBER AND INTERNATIONAL LAW IN THE 21ST CENTURY (2018), https://www.chathamhouse.org/event/cyber-and-international-law-21st-century [https://perma.cc/ED6C-NFWE]; NETHERLANDS, MINISTRY OF FOREIGN AFFS., LETTER TO THE PARLIAMENT ON THE INTERNATIONAL LEGAL ORDER IN CYBERSPACE, APPENDIX: INTERNATIONAL LAW IN CYBERSPACE 7 (2019); Michael N. Schmitt, *The Netherlands Releases a Tour de Force on International Law in Cyberspace*, JUST SECURITY (Oct. 14, 2019), https://www.justsecurity.org/66562/the-netherlands-releases-a-tour-de-force-on-international-law-in-cyberspace-analysis/ [https://perma.cc/9VXS-TRVQ]; AUSTRALIA, DEP'T. OF FOREIGN AFFS. AND TRADE, AUSTRALIA'S INTERNATIONAL CYBER ENGAGEMENT STRATEGY: ANNEX A (2017), https://www.dfat.gov.au/publications/international-relations/international-cyber-engagement-strategy/aices/chapters/annexes.html [https://perma.cc/AX57-XMZ6]; NEW ZEALAND, DEP'T OF FOREIGN AFFS. AND TRADE, *supra* note 7, ¶ 21; FINLAND, MINISTRY OF FOREIGN AFFS., INTERNATIONAL LAW AND CYBERSPACE: FINLAND'S NATIONAL POSITIONS 5–6 (2020), https://um.fi/documents/35732/0/KyberkannatPDFEN.pdf/12bbbbde-623b-9f86-b254-07d5af3c6d85?t=1603097522727 [https://perma.cc/2C34-PZ6S]; Roy Schondorf, *Israel's Perspective on Key Legal and Practical Issues Concerning the Application of International Law to Cyber Operations*, EJIL: TALK! (Dec. 17, 2020), https://www.ejiltalk.org/israels-perspective-on-key-legal-and-practical-issues-concerning-the-application-of-international-law-to-cyber-operations/ [https://perma.cc/WJR4-MM3W]; Michael N. Schmitt, *Israel's Cautious Perspective on International Law in Cyberspace: Part I (Methodology and General International Law)*, EJIL: TALK! (Dec. 17, 2020), https://www.ejiltalk.org/israels-cautious-perspective-on-international-law-in-cyberspace-part-i-methodology-and-general-international-law/ [https://perma.cc/XB45-X3RQ]. Interestingly, the 2016-2017 UN Group of Governmental Experts was unable to agree on mentioning a right to respond to internationally wrongful acts, a veiled reference to countermeasures. States that opposed inclusion of the reference did not indicate that opposition was based on the non-existence of a right to engage in countermeasures. Indeed, states in opposition also objected to including the terms self-defense and international humanitarian law, two legal regimes that obviously apply in the cyber context and that they had supported, albeit without use of the terms, in the 2015 GGE Report. *See* Michael N. Schmitt and Liis Vihul, *International Cyber Law*

Court of Justice's (ICJ) insistence that pre-existing international law rules govern nuclear weapons and likely other new technologies.[26] However, on the narrower issue of collective countermeasures, neither the Estonian President's remarks nor the French Ministry of the Armies document included, nor to date have they been followed by, supporting legal elaboration. In fact, the notion of collective countermeasures has never materialized into a coherent, universally agreed doctrine.

This Article examines the merits of the competing bilateral and collective positions, which we see as reflecting a broader tension between bilateralist and collectivist conceptions of international law. After introducing the notion of countermeasures generally, we examine the evolution of approaches to collective countermeasures, most of which is reflected in the work of the ICJ and the ILC. We then survey and assess the international security conditions relevant to the issue of collective countermeasures and emphasize their use in cyberspace. Finally, we conclude that the issue remains unsettled as a matter of law, but that the Estonian position is not only the more reasonable one but also the better of the two when applied to cyber operations.

## *II.* Countermeasures Generally

Originally termed reprisals, countermeasures have been a feature of international law for centuries. Indeed, the eighteenth-century legal publicist Emer de Vattel characterized reprisals as essential to the self-administered system of justice between states.[27] In the past, sovereigns typically engaged in reprisals by seizing private foreign property to satisfy unpaid debts or breached contracts.[28] Over time, however, they shed much of their original restitutional or even

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*Politicized: The UN GGE's Failure to Advance Cyber Norm*s, JUST SECURITY (June 30, 2017), https://www.justsecurity.org/42768/international-cyber-law-politicized-gges-failure-advance-cyber-norms/ [https://perma.cc/ABU2-GJ8Z].

[26] *See* Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, 1996 I.C.J. 226, ¶¶ 39, 86 (July 8); The International Law Commission has similarly noted that new technologies are subject to preexisting obligations, such as due diligence. Prevention of Transboundary Harm from Hazardous Activities, Rep. of the Int'l Law Comm'n to the Gen. Assembly, art. 3 commentary ¶ 11, U.N. Doc A/56/10, GAOR, 56th Sess., Supp. No. 10 (2001), *reprinted in* [2001] 2 Y.B. INT'L L. COMM. 148, U.N. Doc. A/CN.4/SER.A/2001/Add.1 (Part 2) (2001). In the cyber context, participants in the UN's Open-Ended Working Group, which is open to all states, have agreed, "measures to promote responsible State behaviour should remain technology-neutral, underscoring that it is the misuse of such technologies, not the technologies themselves, that is of concern." SECOND "PRE-DRAFT" OF THE REPORT OF THE OEWG ON DEVELOPMENTS IN THE FIELD OF INFORMATION AND TELECOMMUNICATIONS IN THE CONTEXT OF INTERNATIONAL SECURITY, ¶ 21 (2020), https://front.un-arm.org/wp-content/uploads/2020/05/200527-oewg-ict-revised-pre-draft.pdf [https://perma.cc/27CG-FXFN].

[27] *See* EMER DE VATTEL, THE LAW OF NATIONS 460–67 (§§ 342–54) (Béla Kapossy & Richard Whatmore eds., Liberty Fund 2008) (1758) [hereinafter DE VATTEL].

[28] *See id.* at 460 (§342).

remunerative purpose and have evolved into a means of legal coercion intended to influence state conduct.[29]

By the early twentieth century, a widely agreed doctrinal definition of reprisal had emerged. In 1928, as part of the Versailles Treaty settlement of the First World War, a tribunal arbitrated a dispute concerning Germany's resort to violent reprisals against Portuguese colonial fortresses in Africa in response to the murder of three German Army officers.[30] The *Naulilaa* arbitral tribunal described reprisals as "an act of self-help (*Selbsthilfhandlung*) by an injured State, in response – after an unsuccessful demand – to an act contrary to international law by a wrongdoing State. It has the effect of temporarily suspending between the two States observation of one or other rules of international law."[31] That formulation held well into the mid-twentieth century and still informs much of what is understood about self-help under international law between states.[32]

As states began to acknowledge legal limits on their resort to force, a doctrinal distinction between peacetime and armed reprisals emerged, along with distinct terms for each practice.[33] By 1980, both the ICJ and ILC adopted the term "countermeasure" to denote a peacetime response in the form of an otherwise unlawful act by states.[34] While the term reprisal persisted, it was increasingly

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[29] *See* EVELYN SPEYER COLBERT, RETALIATION IN INTERNATIONAL LAW 62 (1948) (identifying distinctly coercive purposes to public reprisals by the nineteenth and twentieth centuries).

[30] Responsibility of Germany for Damage Caused in Portuguese Colonies of South Africa (Naulilaa Case) (Port. v. Ger.) 2 R.I.A.A. 1011 (1928) [hereinafter Naulilaa Arbitration]. *See generally* JAKOB ZOLLMAN, NAULILAA 1914: WORLD WAR I IN ANGOLA AND INTERNATIONAL LAW (2016) (analyzing archival records of historical context surrounding the Naulilaa arbitration).

[31] The tribunal's original French reads, "[U]n acte de propre justice (Selbstilfehandlung) de l'État lésé, acte répondant – *après sommation resté* infructueuse – à un acte contraire au droit des gens de l'État offenseur. Elle a pour effet de suspendre momentanèment, dans les rapports des deux États, l'observations de telle ou tell règle du droit des gens." Naulilaa Arbitration, *supra* note 30, at 1026.

[32] *See* Articles on State Responsibility *supra* note 8, ¶ 2.

[33] A 1934 report by the Institute of International Law identified, separate from armed reprisal, so-called "non-armed retaliation." *See* Institut de Droit International, *Régime des Resprésailles en Temps de Paix*, 38 ANNUAIRE INST. DROIT INT'L 708–10 (1934); A 1957 report to the UN General Assembly on the law of treaties used the term "counter-action" in lieu of reprisal. Gerald Fitzmaurice, *Second Report on the Law of Treaties*, 1957 ILC YEARBOOK Vol. II, at 53 (¶ 121); Later, an influential decision by a 1978 arbitral panel acknowledged that the United States, as an injured State, was entitled to resort to peacetime "counter-measures" to enforce its rights against France. Air Service Agreement of 27 Mar. 1946 (U.S. v. Fr.), 18 R.I.A.A. 417, 443 ¶ 81 (1978); The term "sanction" had also been used but was eventually reserved for measures undertaken by international organizations rather than individual states. Denis Alland, *The Definition of Countermeasures*, *in* THE LAW OF INTERNATIONAL RESPONSIBILITY 1127, 1134–35 (James Crawford, Alain Pellet, Simon Olleson eds., 2010).

[34] *See* United States Diplomatic and Consular Staff in Tehran (U.S. v. Iran), Judgement, 1980 I.C.J. 3, ¶ 53 (May 24) (evaluating "counter-measures" taken by the United States against Iran); Int'l Law Comm'n, Rep. on the Work of Its Thirty-First Session, Official Records of the Gen. Ass'y, Thirty-Fourth Session, Supp. No. 10, U.N. Doc. A/34/10, draft art. 30, at 115 (1979) (addressing "[c]ountermeasures in respect of an internationally wrongful act"). *But see* Willem Riphagen, *Fifth Report on the Content, Forms and Degrees of International Responsibility*, art. 9, *in* 1984 Y.B. INT'L L. COMM'N, Vol. II, pt. 1, 1, 3 (referring to "reprisal" rather than countermeasures). By 1984 Elisabeth Zoller observed in her comprehensive study of countermeasures, "the word [reprisal] is

confined to situations of armed conflict.[35] Use of the terms "belligerent reprisal" or "armed reprisal" further emphasized a distinction from peaceful countermeasures.[36]

In its 2001 final draft of the Articles on State Responsibility, the ILC included countermeasures among the conditions that preclude the wrongfulness of otherwise internationally unlawful acts by states.[37] Yet the final Special Rapporteur of the ILC's work on state responsibility, Professor James Crawford, described countermeasures as "perhaps the most difficult and controversial aspect of the whole regime of State responsibility."[38]

As evidence of its considerable misgivings on the use of countermeasures, the ILC enumerated extensive conditions, procedural and substantive, on states' resort to countermeasures.[39] First, according to the ILC, an injured state may only take countermeasures against a responsible state, which is a state to whom internationally unlawful conduct is attributable.[40] Under the Articles on State Responsibility, third-party states are not legitimate objects of countermeasures, nor may a countermeasure against a responsible state breach an obligation owed to those third-party states.[41] Second, countermeasures must, as far as circumstances permit, involve temporary or reversible measures.[42] Third, the ILC identified a host of inviolable obligations with respect to countermeasures.[43] For example, they may not involve breaches of "peremptory norms of general international law," nor select

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banned from the international legal vocabulary. One refers nowadays to 'self-help measures of protection involving the use of force.'" ELISABETH ZOLLER, PEACETIME UNILATERAL REMEDIES: AN ANALYSIS OF COUNTERMEASURES 40 (1984).

[35] *See, e.g.*, Protocol Additional to the Geneva Conventions of August 12, 1949, and Relating to the Protection of Victims of International Armed Conflicts (Protocol I) art. 20, June 8, 1977, 1125 U.N.T.S. 3 (prohibiting "reprisals" against protected persons).

[36] *See* JEAN-MARIE HENCKAERTS & LOUISE DOSWALD-BECK, CUSTOMARY INTERNATIONAL HUMANITARIAN LAW 513–29 (2005) (outlining limits and prohibitions on "belligerent reprisals"); *see generally* FRITS KALSHOVEN, BELLIGERENT REPRISALS (2d ed. 2005).

[37] *See* Articles on State Responsibility *supra* note 8, art. 22. Other conditions precluding wrongfulness include consent, self-defense, necessity, *force majeure*, and distress. *Id.* pt.1, ch. V.

[38] Int'l Law Comm'n, Rep. on the Work of Its Forty-Eighth Session, 6 May–26 July 1996, Official Records of the Gen. Ass'y, Fifty-First Session, Supp. No. 10, 1996, *in* Y.B. INT'L L. COMM'N, Vol. II, pt. 2, at 66; *see also* Alain Pellet, *The ILC's Articles on State Responsibility for Internationally Wrongful Acts and Related Texts*, *in* THE LAW OF INTERNATIONAL RESPONSIBILITY 75, 86 (James Crawford, Alain Pellet, Simon Olleson & Kate Parlett, eds., 2010) (noting fierce discussions on countermeasures among states); David J. Bederman, *Counterintuiting Countermeasures*, 96 AM. J. INT'L L. 817, 817 (2002) (judging the ILC's work on countermeasures to be "one of the lightning rods of criticism and controversy for the articles.").

[39] *See* Articles on State Responsibility, *supra* note 8, arts. 49–54.

[40] *See id.* art. 49(1). Part I, Chapter II of the ILC's Articles on State Responsibility set forth the bases for state attribution. *Id*. arts. 4–11.

[41] *See* Michael N. Schmitt & M. Christopher Pitts, *Cyber Countermeasures and Effects on Third Parties: The International Legal Regime*, 14 BALTIC Y.B. OF INT'L L. 1, 6 (2014).

[42] *See* Gabčikovo-Nagymaros Project (Hung. v. Slovk.), Judgment, 1997 I.C.J. 7, ¶ 87 (Sept. 25); Articles on State Responsibility, *supra* note 8, art. 49(3).

[43] *See id.* art. 50.

provisions of the international law of diplomacy.[44] Fourth, the ILC indicated that countermeasures must be proportionate to the wrong suffered.[45] The ILC Articles assess proportionality by reference to "the gravity of the internationally wrongful act and the rights in question."[46] Finally, the Articles require an injured state to call upon the responsible state to honor its obligations (*sommation*), notify the responsible state of its intent to undertake countermeasures, and offer to negotiate before undertaking countermeasures.[47]

The extent to which the Articles on State Responsibility, including its provisions on countermeasures, reflect either customary international law or only progressive/aspirational development of the law remains unsettled.[48] States have offered mixed reactions to the ILC's limits on countermeasures. In 2001, for example, the United States submitted extensive comments to a late draft of the Articles.[49] It characterized many of the procedural restraints on countermeasures as unsupported by state practice.[50] Specifically, the United States contested the negotiation requirement, as well as passages limiting states to "provisional and urgent" countermeasures prior to and during negotiations.[51] The United States also argued that the prohibition on breaches of peremptory norms was both unnecessary and intolerably vague,[52] and it disputed the ILC's formulation of proportionality as

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[44] *Id.* art. 50. Article 50 specifically prohibits countermeasures involving the use or threat of force, violations of fundamental human rights, prohibited humanitarian reprisals, breaches of dispute settlement provisions, or violations of protected diplomatic agents, premises, and documents. *Id*.

[45] *See* Gabčíkovo-Nagymaros Judgment, *supra* note 42, ¶¶ 85–87.

[46] *See* Articles on State Responsibility, *supra* note 8, art. 51.

[47] *See id.* art. 52. The commentary to Article 52 acknowledges that a victim state may take urgent countermeasures without notice when circumstances require. *Id.* art. 52(2).

[48] *See, e.g.*, Articles on State Responsibility, *supra* note 8, General Commentary, at 31 ("These articles seek to formulate, by way of codification and progressive development, the basic rules of international law concerning the responsibility of States for their internationally wrongful acts."). *See also* TALLINN MANUAL 2.0 ON THE INTERNATIONAL LAW APPLICABLE TO CYBER OPERATIONS 79 (Michael N. Schmitt gen. ed., 2d ed. 2017) (observing "International Group of Experts acknowledged that certain issues with respect to some Articles [of State Responsibility] remain unsettled and that not all States view them as an authoritative restatement of customary international law.") [hereinafter TALLINN MANUAL 2.0]; Hubert Lesaffre, *Circumstances Precluding Wrongfulness in the ILC Articles on States Responsibility*, *in* Crawford, Pellet, and Olleson, *supra* note 33, at 469-70 (evaluating the Articles's provisions on countermeasures as "progressive development of the law, rather than mere codification of existing principles."); Federica Paddeu, *Countermeasures*, *in* MAX PLANCK ENCYCLOPEDIA OF INTERNATIONAL LAW ¶ 10 (Sep. 2015), (citing Cargill Inc. v. United Mexican States, ICSID Case No. ARB(AF)/05/2, ¶ 381 (Aug. 13, 2009)).

[49] *See generally* U.S. DEP'T OF STATE, DRAFT ARTICLES ON STATE RESPONSIBILITY, COMMENTS OF THE GOVERNMENT OF THE UNITED STATES (2001), https://2009-2017.state.gov/documents/organization/28993.pdf [https://perma.cc/82SM-GZEF] [hereinafter Comments of U.S. Gov't 2001].

[50] *See id.* at 2.

[51] *Id.* at 5–6.

[52] *See id.* at 2–4.

misstated and unclear.[53] Ultimately, the United States urged the ILC to delete the entire section on countermeasures restrictions.[54]

Other states have expressed similar misgivings. Japan asserted that the proportionality limit, as articulated by the ILC, would unduly prejudice weak states' ability to influence the conduct of powerful states.[55] Slovakia worried that the duty to suspend countermeasures during negotiations excessively hampered injured states.[56] And the United Kingdom characterized the ILC's conditions on negotiation as "so fundamentally flawed as to render the provisions on countermeasures, as currently drafted, wholly unacceptable."[57]

Despite these concerns, there is legal common ground. Countermeasures are widely regarded as fundamental to, and even inherent in, the international legal system.[58] They represent an essential distinction between vertical municipal regimes of enforcement and the horizontal international regime of self-help among sovereigns.[59] In this respect, countermeasures are intrinsic to sovereignty.[60] Another defining feature of countermeasures is their resort to otherwise

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[53] *See id.* at 3–4. The United States argued that proportionality involved the kind and degree of measures required to induce a return to compliance rather than an evaluation of whether the breaches undertaken were commensurate or comparable in some sense to the initial breach of the offending state. *Id.* at 4. It contended that, "a degree of response greater than the precipitating wrong may sometimes be required to bring a wrongdoing state into compliance with its obligations . . . ." *Id.* (citing Air Service Agreement, *supra* note 33, at 443–44).

[54] *See* Comments of U.S. Gov't 2001, *supra* note 49, at 2.

[55] *See* Comments and Observations Received from Governments, 86, U.N. Doc. A/CN/4/515 and Add. 1–3 (March 19, April 3, May 1, & June 28, 2001).

[56] *See id.* at 88.

[57] *Id.* at 88.

[58] *See e.g.*, United Kingdom, *id.* at 84 ("It is clearly necessary to refer in general terms to the right to take countermeasures."). The Government of Argentina expressed some reluctance at recognizing countermeasures as a right of States in the Articles. *Id.* at 82. Ultimately, however, Argentina concluded, "there is no doubt that, in the current state of international law, countermeasures represent one of the means of giving effect to international responsibility." *Id.* Japan also expressed reluctance to recognize countermeasures as a secondary rule of responsibility but ultimately conceded, "in a world where there is no central supreme government over States, States are entitled to protect their interests by themselves and countermeasures are permitted under international law." *Id.* at 83. The Government of Mexico, however, expressed regret at the ILC's decision to "confer [sic] general international recognition on [countermeasures]," preferring they be left to serial treatment under specific regimes of international law. *Id.* at 83.

[59] *See* CRAWFORD, BROWNLIE'S PRINCIPLES, *supra* note 11, at 585.

[60] Denis Alland characterizes them as "an institution of general international law" requiring no external conferral of authority. *See* Alland, *supra* note 33, at 1129; In this respect, countermeasures might be contrasted with the separate yet perhaps complementary remedial regime applicable to treaties. Whereas the law of treaties includes explicit and generally applicable rules in cases of breach, countermeasures have not involved similar positive conferrals of authority. Vienna Convention on the Law of Treaties art. 60, *opened for signature* May 23, 1969, 1155 U.N.T.S. 331; Countermeasures have been recognized as distinct from and complementary to the remedies for breach developed in the law of treaties. Difference Between New Zealand and France Concerning the Interpretation or Application of Two Agreements Concluded on 9 July 1986 between the Two States and Which Related to the Problems Arising from the Rainbow Warrior Affair (N.Z. v. Fr.), 20 R.I.A.A. 215, 249–50 (Arb. Trib. 1990); Air Service Agreement, *supra* note 33, at 443.

internationally unlawful conduct.[61] Accordingly, responses that do not constitute breaches of international law need not qualify as countermeasures and thus are not subject to the same limitations. Retorsions are an example of such responses; they involve merely unfriendly, as opposed to inherently unlawful, acts.[62]

Unlike negative reciprocity and suspension of treaty obligations, countermeasures need not involve breach of the precise obligation that occasions their use.[63] An injured state may breach an unrelated legal obligation, so long as that breach is reasonably anticipated to end the unlawful conduct and/or secure any reparations that might be due. A further distinct and widely accepted aspect of countermeasures relates to their admitted purpose. While they often convey a punitive sentiment, countermeasures are instrumental. Injured states use them as tools to induce an offending state to return to compliance with the international obligation that gave rise to the countermeasure.[64]

In sum, countermeasures occupy a vital, albeit less than fully settled, place in international law. Through state practice, they have evolved from blunt tools of retaliation (in both practical and doctrinal senses) into a centerpiece of an international legal system of self-help that is focused on inducing lawful conduct. A significant body of doctrine purports to regulate how states use countermeasures. Nonetheless, questions persist concerning the precise contours of these limits, none more so than the extent to which countermeasures are properly conceived of as purely bilateral or rather collective tools of enforcement.

## *III.* Collective Countermeasures

Like the general doctrine of countermeasures, a settled doctrine for collective countermeasures has proved elusive and contentious.[65] Two approaches have emerged. A somewhat traditional, bilateral regime of enforcement has sought

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[61] *See* Articles on State Responsibility, *supra* note 8, arts. 22, 49(2).

[62] *See* OSCAR SCHACHTER, INTERNATIONAL LAW IN THEORY AND PRACTICE 185 (1991); Thomas Giegerich, *Retorsion*, *in* MAX PLANCK ENCYCLOPEDIA OF PUBLIC INTERNATIONAL LAW (March 2011), https://opil.ouplaw.com/view/10.1093/law:epil/9780199231690/law-9780199231690-e983 [https://perma.cc/W4ZX-5RWW].

[63] *See* 2 GEORG SCHWARZENBERGER, INTERNATIONAL LAW AS APPLIED BY INTERNATIONAL COURTS AND TRIBUNALS: THE LAW OF ARMED CONFLICT 453 (1968) (contrasting negative and positive reciprocity); Francesco Paris & Nita Ghei, *The Role of Reciprocity in International Law*, 36 CORNELL INT'L L.J. 93, 108 n.48 (citing Ernst Fehr & Simon Gächter, *Fairness and Retaliation: The Economics of Reciprocity* 1 (CESifo, Working Paper No. 336, 2000), https://www.cesifo.org/en/publikationen/2000/working-paper/fairness-and-retaliation-economics-reciprocity [https://perma.cc/6MWT-QV9A].

[64] *See* Articles on State Responsibility, *supra* note 8, art. 49(1). *See also* comments of the United Kingdom, *Comments and Observations Received from Governments*, *supra* note *55*, at 55 ("[C]ountermeasures must be . . . limited in their aim to inducing the responsible State to comply with its obligations."); *id.* at 66 ("State responsibility is concerned with the redress of wrongs, not the punishment of misdeeds.").

[65] *See* James Crawford, *Third Report on State Responsibility*, ¶ 397, U.N. Doc. A/CN.4/507 & Add. 1–4, (Mar. 15, June 15, Jul. 10, Jul. 18, Aug. 4, 2000) (relating difficulty drawing clear conclusions respecting collective countermeasures from a survey of State practice).

to prohibit collective countermeasures entirely. This view restricts resort to remedial measures to directly injured states and prohibits non-injured states from invoking responsibility or undertaking measures of redress. By contrast, a collectivist view broadens the notion of injured states, and therefore the availability of countermeasures.[66] It envisions a hierarchy of international law norms wherein the nature and gravity of certain breaches justifies the involvement of states not directly injured and preempts the wrongfulness of collective countermeasures as to all involved in taking them.

Although these views have been showcased by scholars and considered by the ICJ and the ILC, neither has secured doctrinal consensus among states. Moreover, there is little state practice of collective countermeasures from which to draw definitive conclusions as to the primacy of one or the other. Nor have states spoken to the issue with sufficient frequency or specificity to do so. As will become apparent, the status of collective countermeasures therefore remains highly uncertain. In no domain is this more the case than with regard to cyber operations, where no publicly available state practice exists and only the French and Estonian expressions of *opinio juris* apply.

### A. *The Bilateral View*

As noted, through the early twentieth century internationally wrongful conduct was seen primarily as a matter between offending and victim states. Self-help and other legal recourse accordingly were only available to states with direct legal interests in the breach in question.[67] This bilateral approach was considered an important aspect of efforts to better organize international relations and temper international tension. The underlying theory was that by limiting the number of states involved in a dispute, the risk to "international peace and security" was minimized.[68] The sense that a bilateralist approach would most effectively avoid and contain conflict was similarly reflected in other legal developments, including contemporaneous work on limiting the resort to force between states.[69]

However, the history of international relations in the twentieth century, including states' resorts to countermeasures, did not always vindicate that

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[66] In support of collective countermeasures, *see generally* Jeff Kosseff, *Collective Countermeasures in Cyberspace*, 10 Notre Dame J. Int'l Comp. L. 18 (2020).

[67] *See* Jonathan I. Charney, *Third State Remedies in International Law*, 10 MICH. J. INT'L L. 57, 60–61 (1989) (citing IAN BROWNLIE, PRINCIPLES OF INTERNATIONAL LAW 469–72 (1979)).

[68] Institut de Droit International, *supra* note 33, at 708, art. 1 (acknowledging the right of a State that has suffered harm to its prejudice as the result of unlawful conduct to derogate from international law). The term "international peace and security" is drawn from the UN Charter as indicative of the object and purposes underlying the norms governing relations between and among States. U.N. Charter art. 1, ¶ 1.

[69] *See generally* OONA HATHAWAY & SCOTT SHAPIRO, THE INTERNATIONALISTS: HOW A RADICAL PLAN TO OUTLAW WAR REMADE THE WORLD (2018) (relating the development and legacy of the Kellogg-Briand Treaty outlawing war). *See also* League of Nations Covenant art. 12 (Apr. 28, 1919) (prohibiting war prior to resort to arbitration or judicial settlement).

approach.[70] As a general matter, the bilateral view featured primarily in the context of formal dispute settlement mechanisms like litigation and arbitration.[71] Two prominent cases at the ICJ reflected the bilateral view, but their results and the doctrine that emerged from them proved divisive.

In 1966, during widespread campaigns urging decolonization, the ICJ issued its controversial *South West Africa Cases* judgment (2d phase).[72] The case merged separate claims by Ethiopia and Liberia against South Africa arising from the latter's management of South West Africa (later Namibia) under a League of Nations mandate. The Applicants alleged that South Africa had violated the South West Africa Mandate by, *inter alia,* failing to promote the well-being of the people of South West Africa, establishing military bases, and through practices of apartheid.[73] While the court reached a merits judgment, it did not fully adjudicate the parties' claims because of a "question of the Applicants' standing."[74]

In filings, Ethiopia and Liberia had offered their status as former League members, as well as the humanitarian nature of the obligations of the South West Africa Mandate, as the legal bases for standing.[75] The court rejected their argument because neither Ethiopia nor Liberia held an individual or collective legal interest in their claims. The court reasoned that neither state could differentiate itself in this respect from any other former member of the League of Nations.[76] It relied heavily on the peculiar nature and original intent of the League's post-First World War mandate system, rather than international law's general remedial system,[77] to hold that neither state was entitled to any pronouncement or declaration from an international tribunal such as the ICJ.[78] The court similarly rejected the humanitarian character of the Mandate's rules of conduct as a basis for the claims.[79] In terms prescient of forthcoming collectivist notions of international law, the court asserted "All States are interested—have an interest—in such matters. But the existence of an 'interest' does not of itself entail that this interest is specifically juridical in character."[80]

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[70] *See, e.g.*, ELENA KATSELLI PROUKAKI, THE PROBLEM OF ENFORCEMENT IN INTERNATIONAL LAW (2010) (collecting historical examples of non-injured States' resorts to countermeasures).
[71] *See* CHRISTINE CHINKIN, THIRD PARTIES IN INTERNATIONAL LAW 15–16 (1993) (noting the bilateralist conception of injury and standing at the Permanent Court of International Justice; citing Mavromattis Palestine Concessions, (Greece v. U.K.), Judgment, 1924 P.C.I.J. (ser. A) No. 2, at 11 (Aug. 13)).
[72] *See* South West Africa Cases, Second Phase, Judgment, 1966 I.C.J. 6 (July 18).
[73] *See id.* at 10–14. South Africa countered that its obligations under the Mandate had expired with the collapse of the League.
[74] *See id.* ¶ 4.
[75] *See id.* ¶¶ 5, 49.
[76] *See id.* ¶¶ 24–25. In fact, the ICJ determined the Mandate established no legal obligations between South Africa and individual members of the League.
[77] *See id.* ¶¶ 16, 19–21.
[78] *See id.* ¶ 48.
[79] *See id.* ¶ 49–51.
[80] *See id.* ¶ 50.

The *South West Africa Cases* cast a momentary pall over emerging notions of collective remedial action under international law.[81] The court's resort to a purely bilateral understanding seemed to deny the larger international community an important tool for policing grave breaches of international law. It clearly articulated an international justiciability doctrine in litigation before international tribunals. Yet, the extent to which the *South West Africa Cases* judgment reflected the general scheme of collective remedial action outside the context of litigation, including collective countermeasures, was less apparent.

In 1986, the ICJ returned to the issue of responses by non-injured states to breaches of international law in the *Paramilitary Activities* case.[82] As in its *South West Africa Cases* judgment, the court advanced a bilateral view of international law redress, this time reaching the merits of a non-injured state's resort to self-help on behalf of injured states. In doing so, it produced what is often cited as a firm rejection of collective countermeasures. Closer examination counsels a more restrained characterization.

In *Paramilitary Activities*, the ICJ considered alleged U.S. violations of Nicaraguan sovereignty, as well as U.S. actions that allegedly breached the customary law prohibitions on coercive intervention and the use of force.[83] Although the U.S. did not participate fully in the case, in jurisdictional proceedings it argued that, if attributable to the United States, the alleged wrongful conduct was justified as an exercise of collective self-defense or collective countermeasures on behalf of Honduras, Costa Rica, and El Salvador, which, the U.S. argued, had been

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[81] In 1970, the UN Security Council requested ICJ advice on the legal significance of the presence of South Africa in Namibia. *See* S.C. Res. 284 (July 29, 1970); At the conclusion of a mandate for South Africa's presence in Namibia, the Security Council had itself previously condemned the former's presence as illegal. S.C. Res 276 (Jan. 30, 1970); In its *Namibia* advisory opinion, the Court upheld the General Assembly's revocation of South Africa's mandate to oversee Namibia and also held enforceable the Security Council's direction that all States, without respect to injury, deny legal effect to acts of South Africa in Namibia after revocation. Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding S.C. Res. 276, Advisory Opinion, 1971 I.C.J. 16, ¶¶ 118–24 (June 21).

[82] *See* Military and Paramilitary Activities in and against Nicaragua (Nicar. v. U.S.), Judgment, 1986 I.C.J. 14 (June 27) [hereinafter Paramilitary Activities].

[83] *See id.* ¶¶ 15, 23; Although the UN Charter is the primary source of international obligations with respect to the use of force and self-defense, the *Paramilitary Activities* Court did not apply the Charter's provisions as such. The U.S. consent to jurisdiction of the ICJ that partially formed the basis of the Court's jurisdiction precluded resort to treaty law unless all parties to the treaty in question were parties to the litigation. Declaration by the President of the United States, International Court of Justice: United States Recognition of Compulsory Jurisdiction, 2, ¶ c. (Aug. 26, 1946) https://www.loc.gov/law/help/us-treaties/bevans/m-ust000004-0140.pdf [https://perma.cc/GBH2-6CL5]; The U.S. had also consented to the Court's jurisdiction for matters related to a bilateral treaty with Nicaragua. Treaty of Friendship, Commerce and Navigation, Nicar.-U.S., art. XXIV, Jan. 21, 1956, 367 U.N.T.S. 3; In accordance with the former, the Court limited its judgment to consideration of applicable customary international law. Paramilitary Activities, *supra* note 82, ¶182.

victims of Nicaragua's wrongful uses of force.[84] The case did not present the court with the difficulties of justiciability that prevented a merits ruling in the *South West Africa Cases* and, given the U.S. resort to remedies as a non-injured state, seemed a worthy opportunity for the ICJ to address collective countermeasures.

The court accepted Nicaragua's arguments that the U.S. had used unlawful force, intervened in Nicaragua's internal affairs, and violated its sovereignty.[85] However, it also held that Nicaragua had previously made unlawful armed incursions into Honduras and Costa Rica, and through armed rebels in El Salvador.[86] That both parties had engaged in otherwise internationally wrongful conduct raised the question whether the wrongfulness of the former U.S. activities could be precluded as a matter of the law of state responsibility owing to the preceding wrongfulness of Nicaragua's conduct.[87]

The court first addressed preclusion of U.S. wrongfulness under the doctrine of self-defense. It held that although Nicaraguan activities in neighboring states' territories amounted to *prima facie* wrongful conduct, its activities did not rise to the level of armed attack, the customary international law threshold for resort to self-defense.[88] Therefore, the United States could not invoke self-defense as an excuse for its use of force against Nicaragua.[89] The court also noted that the state victims of Nicaragua's activities, Honduras and Costa Rica, had not requested assistance from the United States as a means of self-defense.[90]

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[84] *See* Paramilitary Activities, *supra* note 82, ¶ 24 (noting U.S. arguments in a counter-memorial to jurisdiction that "providing, upon request, proportionate and appropriate assistance to third States" was a matter not properly before the Court).

[85] *See id.* ¶ 80–81 (finding the United States laid mines in Nicaraguan ports and attacked oil facilities by air); *id.* ¶ 98 (finding the U.S. funded paramilitary activities by *contra* rebels against Nicaragua); *id.* ¶ 227 (concluding U.S. mining and attacks amounted to prohibited uses of force); *id.* ¶ 228 (concluding U.S. arming and training of rebels conducting insurrection amounted to prohibited uses of force); *id.* ¶ 242 (concluding U.S. support to *contra* rebels in Nicaragua constituted "a clear breach of the principle of non-intervention"); *id.* ¶ 251 (concluding that U.S. assistance to the *contras* and direct attacks amounted to violations of territorial sovereignty).

[86] *See id.* ¶ 160 (finding Nicaragua delivered arms to opposition forces in El Salvador); *id.* ¶ 164 (finding that Nicaragua conducted cross-border attacks into Honduras and Costa Rica).

[87] *See id.* ¶ 226 (resolving to evaluate preclusions of wrongfulness). The Court did not definitively evaluate Nicaragua's supply of arms as unlawful but observed such conduct, "may well constitute a breach of the principle of the non-use of force and an intervention . . . ." *Id.* ¶ 247.

[88] *See id.* ¶ 246; *id.* ¶ 195, 211 (holding the armed attack threshold is applicable to exercises of collective self-defense); *id.* ¶ 230 (concluding Nicaragua's delivery of arms to rebels in El Salvador did not amount to an armed attack).

[89] *See id.* ¶ 230.

[90] *See id.* ¶¶ 196, 199; The Court held, "[T]he Court finds that in customary international law . . . there is no rule permitting the exercise of collective self-defence in the absence of a request by the State which regards itself as the victim of an armed attack." *Id.* ¶ 199; Although El Salvador requested the U.S. assist in self-defense, the Court determined the request post-dated U.S. uses of force, in some cases by as much as three years. *Id.* ¶¶ 233, 236; Moreover, the Court concluded El Salvador had not suffered an armed attack giving rise to self-defense, also precluding resort to collective self-defense. *Id.* ¶ 230; The Court did not identify any requests for collective self-defense from either Honduras or Costa Rica. *Id.* ¶ 234.

Having determined that the threshold and conditions for collective self-defense had not been met, the court turned its attention to collective countermeasures as a potential justification for the U.S. activities.[91] Addressing its uses of force, the court rejected countermeasures as a justification, observing that countermeasures are limited to peaceful means short of the use of force,[92] a position that is now well-accepted with respect to countermeasures generally,[93] including cyber countermeasures.[94] Importantly, the court did not consider peaceful, but otherwise unlawful, U.S. measures, specifically the financing of rebel activities in violation of the prohibition of intervention and U.S violations of Nicaragua's sovereignty. Nor did it dwell on the fact that the victims of Nicaragua's wrongful acts, Honduras and Costa Rica, had not requested assistance in the form of collective countermeasures. But, as with respect to self-defense, the court held that collective countermeasures cannot be undertaken unilaterally by a non-injured state. The court stated:

> While an armed attack would give rise to an entitlement to collective self-defence, a use of force of a lesser degree of gravity cannot, as the Court has already observed … produce any entitlement to take collective countermeasures involving the use of force. The acts of which Nicaragua is accused, even assuming them to have been established and imputable to that State, could only have justified proportionate counter-measures on the part of the State which had been the victim of these acts, namely El Salvador, Honduras or Costa Rica. They could not justify counter-measures taken by a third

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[91] *See id.* ¶¶ 210, 246.

[92] *See id.* ¶¶ 248, 249; The Court later reiterated the view that use of force is only justified in response to armed attack in the *Oil Platforms* case, over the notable objection of Judge Simma (Separate Opinion of Judge Simma, ¶¶ 12–13). Oil Platforms (Iran v. U.S.), Judgment, 2003 I.C.J. 161, ¶ 57 (Nov. 6); Still, the *Paramilitary Activities* case includes a curious passage addressing collective countermeasures in the form of "intervention short of armed attack." The Court observed, in what was clearly *obiter dictum*, that if a State suffered "acts of intervention possibly involving the use of force" but short of armed attack, a third State "might have been permitted to intervene" against the offending State "in the exercise of some right analogous to the right of collective self-defence." Paramilitary Activities, *supra* note 82, ¶ 210.

[93] *See Oil Platforms* case, *supra* note 92.

[94] *See, e.g.*, United States, Paul C. Ney, Jr., General Counsel, U.S. Dep't of Def., Remarks at U.S. Cyber Command Legal Conference (March 2, 2020) https://www.defense.gov/Newsroom/Speeches/Speech/Article/2099378/dod-generalcounsel-remarks-at-us-cyber-command-legal-conference [https://perma.cc/HVQ3-HYD6]; UNITED KINGDOM, WRIGHT, *supra* note 25; AUSTRALIA, CYBER ENGAGEMENT STRATEGY, *supra* note 25, at 2019 International Law Supplement, https://www.dfat.gov.au/publications/international-relations/international-cyber-engagement-strategy/aices/chapters/2019_international_law_supplement.html [https://perma.cc/8SQ4-NQPC]; FRANCE, MINISTRY OF THE ARMIES, *supra* note 3, ¶ 1.1.3; NETHERLANDS, MINISTRY OF FOREIGN AFFS., *supra* note 25, at 7; FINLAND, MINISTRY OF FOREIGN AFFS., *supra* note 25, at 5; NEW ZEALAND, DEP'T OF FOREIGN AFFS. AND TRADE, *supra* note 7, ¶ 21. For an overview of the topic, *see generally* Gary Corn & Eric Jensen, *The Use of Force and Cyber Countermeasures*, 32 TEMP. INT'L & COMP. L.J. 127 (2018).

> State, the United States, and particularly could not justify intervention involving the use of force.[95]

Read in isolation, the passage stands as strong support for the bilateral approach. However, as is always the case with the aftermath of litigation, care must be exercised in extrapolating this observation from the facts of the case. That the U.S. responses to Nicaragua's activities involved acts amounting to the use of force clearly weighed on the court's evaluation of available justifications; indeed, it considered only the U.S. actions that involved the use of force. The court did not rule whether U.S. measures short of use of force, such as providing funding to rebel groups, would qualify as valid collective countermeasures. Moreover, that no victim state had clearly requested assistance in responding to Nicaragua must also have colored the court's ruling.

The best reading of the judgment restricts the court's observations on collective countermeasures to instances involving the use of force and lacking a request from a victim states; the case did not require the court to evaluate situations in which a non-injured state resorts to peaceful breaches in response to a clear request for assistance by means of countermeasures from an injured state against the responsible state. Therefore, it cannot be read as unequivocally rejecting peaceful countermeasures undertaken by a non-injured state, in support of an injured state and at the clear request of the latter.

While the work of the ICJ offers a measure of support for the bilateral view, it is important not to overstate the reach and import of these rulings for the purpose of evaluating collective countermeasures. In the *South West Africa Cases* judgment, the court expressed a strictly bilateral understanding of international obligations but did so only to evaluate the standing of states in international litigation. As such, it offers little guidance on states' resort to measures of redress outside litigation. And while it is true that its *Paramilitary Activities* judgment rejected, on seeming bilateralist grounds, a state's purported resort to collective countermeasures, the ruling addressed only that state's forcible and unilateral measures.

### B. *The Collectivist View*

Beyond limiting the relevance of conclusions by international tribunals to the narrow context in which they arose, critics also regard strictly bilateralist approaches as an outdated account of the UN Charter's collective system of international peace and security.[96] The *South West Africa Cases* judgment, perhaps the purest embodiment of the bilateralist view, provoked an immediate counter-movement by jurists who sought to better reflect and effectuate the collectivist international legal system. Characterizing select internationally wrongful acts as

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[95] Paramilitary Activities, *supra* note 82, ¶ 249 (internal citation omitted). The Court has not offered a similarly broad or definitive statement on collective countermeasures since its *Paramilitary Activities* judgment.

[96] *See generally, e.g.*, PROUKAKI, *supra* note 70.

owed *erga omnes*, that is, to the entire international community, they sought to both elevate the stature of international law and to improve the prospects of its enforcement, including by means of self-help between states. Academics provided the earliest voices for the approach,[97] but it found its most influential advocates among the judges of the ICJ.

In *Barcelona Traction*, the ICJ rejected claims against Spain that Belgium submitted on behalf of a group of its nationals who transferred control of a holding company incorporated and headquartered in Canada.[98] The court rejected the claims because Belgium was not an injured state.[99] On that matter alone, the legacy of the *Barcelona Traction* case might have been that of an unremarkable case involving failure to allege a cognizable claim.

Yet the case earned a prominent place in international law pedagogy and practice on the basis of a brief observation concerning the nature of claims between states. Immediately after concluding that Belgium had failed to advance cognizable claims, the court urged a distinction between obligations "arising vis-à-vis another State . . ." on one hand and obligations "of a State towards the international community as a whole . . . ." on the other.[100] The latter, the Court contended, were obligations *erga omnes*, such that "all States can be held to have a legal interest in their protection."[101]

The court's observation was a striking exercise in *dictum*, for the case presented no *erga omnes* obligation; no party had alleged such obligations in its submissions.[102] Moreover, the court neither provided citation to authority or a recognized source of international law to support its *dictum*, nor offered clues concerning the obligations it considered. It simply observed that "the importance of the rights involved" gave rise to their *erga omnes* status.[103]

Beyond its status as *dictum*, there are further reasons to treat the *Barcelona Traction* judgment with caution. First, as with the *South West Africa Cases* judgment, the court's treatment was couched in terms of justiciability; it did not reach the question of collective countermeasures undertaken outside litigation. Second, since the *Barcelona Traction* decision, *erga omnes* norms have not featured significantly in the court's judgments. State litigants have not provided the court with opportunities to develop the concept. Finally, the *erga omnes* concept remains notoriously ambiguous. There is no authoritative account of which specific

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[97] *See, e.g.*, MAURIZIO RAGAZZI, THE CONCEPT OF INTERNATIONAL OBLIGATIONS *ERGA OMNES* 7–8 (1997) (citing GEORG SCHWARZENBERGER, INTERNATIONAL LAW AS APPLIED BY INTERNATIONAL COURTS AND TRIBUNALS 459 (1957)).
[98] *See* Barcelona Traction, Light and Power Company, Ltd. (Belg. v. Spain), Judgment, 1970 I.C.J. 3, 7 ¶ 2 (Feb. 5).
[99] *See id.* ¶ 3.
[100] *See id.* ¶ 33.
[101] *See id.*
[102] *See id.* ¶ 35.
[103] *See id.* ¶ 33.

international rules comprise the body of *erga omnes* norms, and the very operation of such norms is often the subject of confusion.[104] Four decades after its dubious emergence, the notion of *erga omnes* remains nascent and highly subjective. All the same, the premise that some international norms transcend bilateral relations has proven an attractive compromise approach to decades of debate concerning collective countermeasures.[105]

In this regard, the ILC has played an important and state-sanctioned role.[106] Although the ILC included the subject of state responsibility in an initial (1949) list of subjects for codification,[107] its work on collective countermeasures did not feature until much later.[108] Inspired by the ICJ's treatment of *erga omnes* norms in the *Barcelona Traction* case, as well as by the Commission's own work on the separate but related subject of peremptory norms under the law of treaties,[109] the ILC began to integrate notions of collectivist enforcement into its Articles on State Responsibility project beginning in the 1970's. Reports issued under Special Rapporteur Robert Ago (who later sat on the ICJ for the *Paramilitary Activities* case) noted both the emergence of a hierarchy of international norms—including obligations owed to the international community as a whole—and a distinctly collectivist enforcement regime to match.[110] Ago's work on the subject eventually (and controversially) included a proposal to recognize so-called "international crimes" by states, as distinct from simple breaches or delicts of international law.[111] His work stopped short, however, of acknowledging countermeasures by a non-

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[104] For instance, see the discussion of the Bragozzi ICJ's treatment of self-determination as an *erga omnes* norm in its Advisory Opinion on the Chagos Islands [Legal Consequences of the Separation of the Chagos Archipelago from Mauritius in 1965, Advisory Opinion, 2019 I.C.J. 95 (Feb. 2019)] in Craig Eggert and Sarah Thin, *Clarification and Conflation: Obligations Erga Omnes in the Chagos Opinion*, EJIL: TALK! (May 21, 2019), https://www.ejiltalk.org/clarification-and-conflation-obligations-erga-omnes-in-the-chagos-opinion [https://perma.cc/B95R-DSVQ].

[105] *See, e.g.*, Przemysław Roguski, *Collective Countermeasures in Cyberspace – Lex Lata, Progressive Development or a Bad Idea?*, *in* 20/20 VISION: THE NEXT DECADE 25 (T. Jančárková, L. Lindström, M. Signoretti, I. Tolga, G. Visky eds., 2020) (identifying that collective countermeasures are permissible, but only in the case of breaches of *erga omnes* rules).

[106] *See* UN Charter art. 13(1); G.A. Res. 36/39, Enlargement of the International Law Commission (Nov. 18, 1981).

[107] Int'l L. Comm'n, Rep. on the Work of Its First Session, ¶ 15, U.N. Doc. A/CN.4/13 & Corr. 1-3, GAOR, 4th Sess., Supp. No. 10 (1949).

[108] Martin Dawidowicz has produced an excellent summary of the ILC's iterative work on collective countermeasures. *See* MARTIN DAWIDOWICZ, THIRD-PARTY COUNTERMEASURES IN INTERNATIONAL LAW 72–110 (2017).

[109] *See* Vienna Convention on the Law of Treaties, *supra* note 60, art. 53 (voiding treaties inconsistent with "peremptory norm[s] of general international law").

[110] *See* Roberto Ago, *Third Report on State Responsibility*, Mar. 5, Apr. 7, Apr. 28 & May 18, 1971, 210–11, ¶¶ 41–43, U.N. Doc. A/CN.4/246 & Add.1–3, *in* 1971 Y.B. INT'L L. COMM'N Vol. II, pt. 1 (noting emergence of a category of norms breach of which gives rise to responsibility to all States and need for a matching regime of responsibility); Roberto Ago, *Fifth Report on State Responsibility*, Mar. 22, Apr. 14 & May 4, 1976, 26–27, ¶¶ 80–83, *in* 1976 Y.B. INT'L L. COMM'N Vol. II, pt. 1 (noting growing departures from the view that a single regime of responsibility applies to all breaches of international law).

[111] *See* Ago, *Fifth Report*, *supra* note 110, ¶ 153.

injured state, culminating instead with arguments in favor of assigning enforcement of international crimes to the United Nations.[112]

By the early 1980's, newly appointed Special Rapporteur Willem Riphagen's reports further evinced the Commission's increasing frustration with a bilateral regime of responsibility and enforcement.[113] The ILC considered proposals to give effect to third-party participation in the enforcement of community norms, especially a broadened scope to the notion of an "injured State" that would have included the international community in the case of Ago's international crimes proposal.[114]

Building on Riphagen's work, Special Rapporteur Gaetano Arangio-Ruiz proposed separate third-party schemes of countermeasures for violations of *erga omnes partes* (multilateral) norms and for international crimes.[115] Both regimes required elaborate prior consultations of the United Nations and judicial bodies, including the ICJ.[116] Yet neither found favor with states, which judged the schemes as unrealistic and so out of step with mainstream views of international law as to be revolutionary.[117] Disheartened by negative reactions, Arangio-Ruiz reportedly resigned as Special Rapporteur. Nevertheless, a drafting committee continued to work on the subject, producing draft articles that recognized international crimes but included no specific enforcement regime, stripping the concept of all but rhetorical significance.[118]

The ILC appointed James Crawford as Special Rapporteur in 1997. Crawford quickly decided the 1996 Draft Articles' concept of international crimes to be unworkable.[119] In his final draft of the Articles, he dropped it entirely in favor of focusing on responses by third-party states to breaches of community norms.[120]

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[112] *See* DAWIDOWICZ, *supra* note 108, at 76 (quoting Roberto Ago, *Eighth Report on State Responsibility*, Jan. 24, Feb. 5 & June 15, 1979, ¶¶ 91–92, *in* 1979 Y.B. INT'L L. COMM'N, Vol. II, pt. 1, 3, 43–44).

[113] *See* Willem Riphagen, *Third Report on State Responsibility*, Mar. 12, Mar. 30 & May 5, 1982, ¶ 92, *in* 1982 Y.B. INT'L L. COMM'N Vol. II, pt. 1, 22, 36–37; *see also* DAWIDOWICZ, *supra* note 108, at 79–85 (describing evolutions of drafts leading to the 1996 Draft Articles on Responsibility of States).

[114] Riphagen, *supra* note 34, at 3 (recognizing the authority of injured States, including "all other States" to resort to "reprisal").

[115] *See* Gaetano Arangio-Ruiz, *Seventh Report on State Responsibility*, May 9, May 24 & May 29, 1995, ¶ 140, UN Doc. A/CN.4/469 & Add.1–2, *in* Y.B. INT'L L. COMM'N, Vol. II, pt. 1, 47–49.

[116] *See* DAWIDOWICZ, *supra* note 108, at 81–83.

[117] *See id.* at 83 (citing Rep. Int'l Comm'n, 47th sess, May 6-July 26, 1996, Topical Summary of Government Comments in the Sixth Committee, Addendum 24–27, ¶¶ 86–97, U.N. Doc. A/CN.4/472/Add.1 (Jan. 10, 1996)).

[118] *See* DAWIDOWICZ, *supra* note 108, at 84–86.

[119] *See* James Crawford, *First Report on State Responsibility*, Apr. 24, May 1, May 5, May 11, May 26, Jul. 22, Jul. 24 & Aug. 12, 1998, 9, ¶ 43, U.N. Doc. A/CN.4/490 ¶ Add. 1–7 (judging the distinction between international crimes and delicts the "single most controversial element in the draft articles on State responsibility").

[120] *See* Articles on State Responsibility, *supra* note 8, commentary to intro, commentary to arts. 41–42.

As for collective countermeasures, Crawford proposed a draft article that afforded non-injured states the right to undertake countermeasures "at the request and on behalf of" an injured State, as well as independently with respect to serious breaches of peremptory norms.[121]

The UN Sixth Committee (Legal) and states could not reach a workable consensus on the draft. States opposed to the Crawford draft cited its destabilizing effects and the danger of pretextual resorts to countermeasures against weak states, while those that supported the draft underscored the need for cooperative self-help in light of the weakness of the UN collective security system.[122] Supportive states further emphasized that an entitlement to resort to peaceful countermeasures might dissuade states from turning to more extreme and threatening forcible measures.[123]

Ultimately, Crawford brokered a compromise approach to collective remedial measures, including countermeasures, that is reflected in three important passages of the current ILC Articles on State Responsibility. The first two address the right of states to invoke the responsibility of an offending state for an internationally wrongful act. In addition to recognizing the right of an injured state to invoke responsibility for obligations owed to it individually,[124] Article 42 acknowledges the same right of an injured state with respect to obligations owed to "the international community as a whole,"[125] a clear nod to the *erga omnes* concept. The ILC's commentary to the Article indicates that invocation of responsibility entails the right to resort to the full regime of redress, including countermeasures against the offending State.[126]

The Articles address invocation of responsibility by a non-injured state separately in Article 48. Like an injured state, "any State other than an injured State" may invoke responsibility for breach of obligations "owed to the international community as a whole," a further nod to the *erga omnes* concept.[127] However, unlike an injured state, a non-injured state may not, it seems, resort to all measures of redress. Article 48(2) appears to limit non-injured states to demanding the responsible state to cease and insisting that it make reparations to "the injured State or of the beneficiaries of the obligation breached."[128] Standing alone, Article 48 seems to preclude non-injured states from resorting to any other means of redress, including countermeasures, against a responsible state.

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[121] *See* Int'l Law Comm'n, Rep. on the Work of Its Fifty-Second Session, May 1–June 9, July 10–Aug. 18, 2000, 70, U.N. Doc. A/55/10 (2000) (addressing at Article 54, "Countermeasures by States other than the injured State") [hereinafter Crawford, Rep. ILC 2000].
[122] *See* DAWIDOWICZ, *supra* note 108, at 100–06; Otto Spijkers, *Bystander Obligations at the Domestic and International Level Compared*, 6 GOETTINGEN J. INT'L L. 47, 74–77 (2014).
[123] *See* DAWIDOWICZ, *supra* note 108, at 102–06.
[124] *See* Articles on State Responsibility, *supra* note 8, art. 42(a).
[125] *See id.* art. 42(b).
[126] *See id.* commentary to art. 42, ¶ 3.
[127] *See id.* art. 48(1)(b).
[128] *See id*. art. 48(2).

Yet a third provision suggests otherwise. Located in the Articles' chapter on countermeasures, Article 54 provides:

> This chapter does not prejudice the right of any State, entitled under article 48, paragraph 1, to invoke the responsibility of another State, to take lawful measures against that State to ensure cessation of the breach and reparation in the interest of the injured State or of the beneficiaries of the obligation breached.[129]

The Article has been helpfully characterized as a "non-prejudice clause" or "saving clause."[130] The clearest reading is that Article 54 preserves the right of non-injured states to resort to countermeasures on behalf, or in the interest, of an injured state in the face of Article 48's otherwise preclusive language. The ILC's commentary to the article appears to confirm this understanding with a brief survey of state practice that includes collective measures undertaken in support of injured states. The measures include not only lawful acts of retorsion like economic sanctions but also breaches of treaty obligations, such as a flight ban that constituted non-performance of bilateral aviation agreements.[131] Such violations could only be lawful as countermeasures. Seemingly not content with the clear implications of Article 54 or with these examples of state practice, the ILC concludes its commentary with the following confusing, penultimate passage:

> As this review demonstrates, the current state of international law on countermeasures taken in the general or collective interest is uncertain. State practice is sparse and involves a limited number of States. At present, there appears to be no clearly recognized entitlement of States referred to in article 48 to take countermeasures in the collective interest.[132]

Evaluating the ILC's work on collective countermeasures is thus challenging. The iterative work of the ILC on collective countermeasures displays a distinctly experimental character.[133] At each stage, and under each rapporteur, the Commission's work seemed less an effort to codify existing rules of custom than a drive to probe the edges of state tolerance for regulation and progressive development. The various drafts and reports swung widely and wildly between restrictive and permissive regimes for collective countermeasures. While

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[129] *Id.* art. 54.

[130] Enrico Milano & Paolo Palchetti, *Questioning the Development of International Law with Regard to Third-Party Countermeasures: Lessons from Libya, Syria, Ukraine and Beyond*, QUESTIONS OF INT'L L. (June 30, 2016), http://www.qil-qdi.org/questioning-development-international-law-regard-third-party-countermeasures-lessons-libya-syria-ukraine-beyond [https://perma.cc/92XW-4N6M].

[131] *See* Articles on State Responsibility, *supra* note 88, commentary to art. 54, ¶¶ 3–4.

[132] *Id.* ¶ 6.

[133] *See* Koskenniemi, *supra* note 15, at 340 (noting the ILC's work on countermeasures took it beyond "codification of the law of State responsibility to 'constructing a system of multilateral public order'") (quoting Crawford, Rep. ILC 2000, *supra* note 121, at 112).

Crawford's final product reined in many of the aspirational aspects of the Articles with respect to third-party countermeasures, it still found consensus on the matter illusive.

In sum, the ICJ and ILC have accepted and implemented the bilateralist and collectivist approaches selectively and fitfully. The dim prospects for redress of grave international wrongs under the bilateralist approach seem to have dissuaded both institutions from fully embracing its formalism and rigor. Meanwhile, the collectivist approach's precarious pedigree and persistent ambiguities have prevented it from serving as a descriptively accurate account of available state responses to wrongful conduct.

Ultimately, the fairest depiction of the legality of collective countermeasures is that the matter is unsettled, with no clear obstacle standing in the way of either view. Relating the process of their development and the debates surrounding the Articles on State Responsibility, Crawford observed, "[I]t could hardly be the case that countermeasures were limited to breaches of obligations of a bilateral character. Accordingly, the ILC agreed . . . [to] leave the resolution of the matter to further developments in international law and practice."[134]

## *IV.* Collective Countermeasures in Cyberspace

Crawford's observation, that resolution of the collective countermeasures issue is to be left "to further developments in international law and practice,"[135] was prudent and prescient. He correctly judged, based on his experience and that of preceding special rapporteurs, that states had not achieved consensus on the legality of collective countermeasures. And he seems to have wisely anticipated that changes in the practices and character of international relations might later inform opinion.

The flipside of Crawford's observation, of course, is that states now face hostile cyber operations of ever-growing frequency and severity without clearly settled international law on the important question of collective enforcement. The unsettled character of the law does not relieve them, however, of the practical need to craft effective responses to such operations. States that seek to operate within the

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[134] James Crawford, *Overview of Part Three of the Articles on State Responsibility*, *supra* note 33, at 931, 939; *see also* David J. Bederman, *Counterintuiting Countermeasures*, 96 AM. J. INT'L L. 817, 828 (2002) ("To articulate a rule for collective countermeasures prematurely would run the risk of "'freez[ing]' an area of law still very much in the process of development." But to say nothing on the subject might have raised the (apparently) false impression that collective countermeasures were barred and that only "injured States," as defined in the articles, were eligible to impose them." The pragmatic compromise-and, indeed, the only possible political solution-was to defer debate to another day and to allow customary international lawmaking processes to elaborate any conditions on the use of collective countermeasures."). Jeff Kosseff notes that Bederman had provided comments to the Commission on the Draft Articles on State Responsibility in his capacity as Chair of the American Society of International Law's Panel on State Responsibility. Kosseff, *supra* note 2, at 25.

[135] Crawford, *supra* note 134.

boundaries of international law must accordingly adopt a position on the permissibility of collective cyber countermeasures and any attendant requirements or restrictions.

### A. *Interpreting the Law of Cyber Countermeasures*

The customary international law framework for countermeasures almost certainly applies in the cyber context. No state has openly contested its applicability, and most states that have commented publicly on how international law governs cyber operations have included a statement confirming the availability of countermeasures.[136] Whether there is a right to take *collective* countermeasures remains, as discussed, unresolved, with reasonable justification existing for both positions. But assuming for the sake of analysis that collective countermeasures are permissible, may a state justifiably take the position that collective *cyber* countermeasures are an available response option?

As a first step in addressing the matter, it is necessary to distinguish between the crystallization of a new customary international law norm and the interpretation of an existing one.[137] The former requires widespread state practice (either engaging in or refraining from specified conduct) over time out of a sense of legal obligation (*opinio juris*).[138]

These dual requirements pose obstacles to the emergence of new customary rules for cyberspace. First, the qualifying state practice must be both extensive and uniform.[139] Yet, most of the state activity in cyberspace takes place in a highly classified realm. Even extensive and uniform cyber operations mounted to terminate unlawful operations attributable to another state cannot qualify as state practice unless they are evident to other states. This is necessary to allow those states to either condemn the actions on legal grounds or offer expressions of support

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[136] *See* statements cited, *supra* note 25.

[137] *See* Jean d'Aspremont, *The Multidimensional Process of Interpretation: Content-Determination and Law-Ascertainment Distinguished, in* INTERPRETATION IN INTERNATIONAL LAW 111 (Andrea Bianchi, Daniel Peat, and Matthew Windsor eds., 2015).

[138] *See* Continental Shelf (Libyan Arab Jamahiriya v. Malta), Judgment, 1985 I.C.J. 13, ¶ 27 (June 3); *see also* North Sea Continental Shelf (F.R.G./Den.; F.R.G./Neth.), Judgment, 1969 I.C.J. 3, ¶¶ 71, 77 (Feb. 20). The Statute of the ICJ describes customary international law as "a general practice accepted as law." Statute of the International Court of Justice art. 38, June 26, 1945, 59 Stat. 1055, 33 U.N.T.S. 993. *See generally* Int'l Law Comm'n, *Draft Conclusions on Identification of Customary International Law, with Commentaries*, U.N., Doc. A/73/10 (2018), https://legal.un.org/ilc/texts/instruments/english/commentaries/1_13_2018.pdf [https://perma.cc/6N3Q-Z8RM].

[139] *See* North Sea Continental Shelf, *supra* note 138, ¶ 74 ("Although the passage of only a short period of time is not necessarily, or of itself, a bar to the formation of a new rule of customary international law on the basis of what was originally a purely conventional rule, an indispensable requirement would be that within the period in question, short though it might be, State practice, including that of States whose interests are specially affected, should have been both extensive and virtually uniform in the sense of the provision invoked; and should moreover have occurred in such a way as to show a general recognition that a rule of law or legal obligation is involved.").

as to its legal basis.[140] Second, there is little *opinio juris* on the matter of collective cyber countermeasures.[141] The two most notable expressions thereof are those of France and Estonia. Not only do they constitute a collection of states that is too small to satisfy the density requirement, but the statements are contradictory. That being so, the issue of collective *cyber* countermeasures can only be addressed as one involving the interpretation of an injured state's right (for the sake of analysis) to take collective countermeasures against a responsible state in order to compel it to desist in its unlawful conduct and/or provide reparations.

When states face a situation in which the content of a legal norm is unclear, it is appropriate for them to engage in auto-interpretation, which refers to the possibility of various parties to an international legal instrument adopting distinct yet equally valid understandings of the meaning of such an instrument.[142] That international law anticipates auto-interpretation is best exemplified by the fact that state practice requires *opinio juris* before a new customary norm becomes crystallized. The requisite practice accompanied by *opinio juris* does not arrive in one fell swoop; it builds over time until sufficient density is achieved.[143] Thus, if auto-interpretation were inappropriate *per se* in the international legal system, there would be no means for the crystallization dynamic to take place.

Auto-interpretation is even more apposite in an interpretive context in which the question is merely how to understand a customary rule that already exists but is ambiguous. In great part, the methodology by which customary law rules are interpreted is itself unsettled, certainly more so than with respect to treaties.[144] Of course, as with crystallization, an interpretation may become binding on all states over time because a critical mass of state practice that is consistent with the

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[140] *See* INT'L LAW ASS'N, FINAL REPORT OF THE COMMITTEE ON THE FORMATION OF CUSTOMARY (GENERAL) INTERNATIONAL LAW, STATEMENT OF PRINCIPLES APPLICABLE TO THE FORMATION OF GENERAL CUSTOMARY INTERNATIONAL LAW, REPORT OF THE SIXTY-NINTH CONFERENCE, LONDON 15 (2000).

[141] *See* Int'l Law Comm'n, *supra* note 138, at 139 ("It is not necessary to establish that all States have recognized (accepted as law) the alleged rule as a rule of customary international law; it is broad and representative acceptance, together with no or little objection, that is required.").

[142] *See* Bin Cheng, *How Should We Study International Law?*, 13 CHINESE (TAIWAN) Y.B. INT'L L. AND AFF. 214, 220–21 (1994); Ingo Venzke, *Authoritative Interpretation*, *in* MAX PLANCK ENCYCLOPEDIA OF INTERNATIONAL LAW ¶ 15 (April 2018), https://opil.ouplaw.com/view/10.1093/law-mpeipro/e3528.013.3528/law-mpeipro-e3528?rskey=9ACwle&result=3&prd=MPIL [https://perma.cc/FP37-MMC5]. See also the discussion, as well as the sources cited therein, in Michael Waibel, *Demystifying the Art of Interpretation*, 22 EUR. J. INT'L L. 571, 578, 583-84 (2011).

[143] The practice must be "general." Statute of the ICJ, *supra* note 138, art. 38(1)(b). For a discussion of the requirement of both general practice and opinio juris, see generally Int'l Law Comm'n, *supra* note 138, Conclusions 2 and 8 and accompanying commentary.

[144] On interpretation of customary international law, see Stefan Talmon, *Determining Customary International Law: The ICJ's Methodology between Induction, Deduction and Assertion*, 26 EUR. J. INT'L L. 417 (2015); *see also* Panos Merkouris, *Interpreting the Customary Rules on Interpretation*, 19 INT'L CMTY. L. REV. 126 (2017); *see generally* THE THEORY, PRACTICE AND INTERPRETATION OF CUSTOMARY INTERNATIONAL LAW (Paros Merkouris, Jörg Kammerhoffer & Noora Arajärvi eds., forthcoming 2021).

interpretation, combined with *opinio juris*, eventually comes to exist.[145] Until that occurs, states enjoy a wide margin of appreciation or even error. In much the same way a state may engage in auto-interpretation to conclude that countermeasures may be collective in nature, in so concluding a state may engage in further auto-interpretation to adopt the position that collective *cyber* actions are an appropriate form of collective countermeasures.

Importantly, the discretion of states to engage in auto-interpretation is not unfettered. They must do so in "good faith," a general principle of international law.[146] To be in good faith, a state's interpretation cannot be inconsistent with the underlying "object and purpose" of the rule in question,[147] a concept found in the law of treaty interpretation,[148] but the logic of which is no less applicable to interpreting extant customary international law rules. When dealing with a situation, especially one involving new technology, that states did not contemplate at the time the customary rule crystallized, the issue is whether its characteristics are such that the proposed interpretation is coherent in light of the rule's underlying object and purpose.[149] If so, the interpretation lies within the state's margin of appreciation; it is reasonable.

### B. *Object and Purpose in Context*

In terms of object and purpose, countermeasures are a mechanism of self-help in a decentralized international system, one that allows states to safeguard their own rights under international law in the face of other states' unlawful conduct.[150] While they directly provide a remedy for injured states, countermeasures also reflect an implied presumption that unlawful behavior is by nature destabilizing for the broader international community. Thus, like much of public international law, they function to maintain stability in the international system by providing a means to ensure that mutually beneficial community norms are maintained. To survive as

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[145] *See* Continental Shelf, *supra* note 138, ¶ 27; Legality of the Threat or Use of Nuclear Weapons, *supra* note 26, ¶ 64.

[146] *See* Venzke, *supra* note 142, ¶ 15; Nuclear Tests (Austl. v. Fr.), Judgment, 1974 I.C.J. 253, ¶ 46 (Dec. 20) ("One of the basic principles governing the creation and performance of legal obligations, whatever their source, is the principle of good faith.").

[147] In the treaty context, *see* Vienna Convention on the Law of Treaties, *supra* note 60, art. 31(1). On object and purpose in the treaty context, *see* MARK E. VILLIGER, COMMENTARY ON THE 1969 VIENNA CONVENTION ON THE LAW OF TREATIES 427–28 (2009); *see also* Jan Klabbers, *Treaties, Object and Purpose*, *in* MAX PLANCK ENCYCLOPEDIA OF PUBLIC INTERNATIONAL LAW (last updated Dec. 2006), https://opil.ouplaw.com/view/10.1093/law:epil/9780199231690/law-9780199231690-e1681?rskey=fnvOHS&result=1&prd=OPIL [https://perma.cc/A5B9-CNGT].

[148] On the comparison between interpretation of customary and treaty rules, *see* Marina Fortuna, *Different Strings of the Same Harp Interpretation of Customary International Law versus Identification of Custom and Treaty Interpretation*, *in* THE THEORY, PRACTICE AND INTERPRETATION OF CUSTOMARY INTERNATIONAL LAW, *supra* note 144.

[149] *See, e.g.*, the application of international humanitarian law to nuclear weapons, and rejection of the argument that pre-existing law does not apply to new weapons, by the ICJ in Legality of the Threat or Use of Nuclear Weapons, *supra* note 26, ¶ 86.

[150] *See* Articles on State Responsibility, *supra* note 8, commentary to Part Three, ch. II, ¶ 1.

a viable interpretation, the notion of collective cyber countermeasures must not contradict this objective.

In this regard, cyberspace is an alluring domain for operations against other states. Cyber operations eliminate many of the obstacles that geography poses to traditional hostile activities. To take a simple example, consider election meddling, which before the advent of cyber operations generally involved covert operations occurring, at least in part, within territory of the target state.[151] Cyber capabilities now enable such operations, many of which are unlawful, to be mounted entirely from within the offending state by means that are readily available to most states, either directly or through the use of non-state proxy actors.[152]

As this example illustrates, states are leveraging the unique characteristics of cyberspace to engage in operations that are cheap, effective, and relatively risk free. The result has been a deluge of hostile cyber operations. By one estimate, thirty-four countries are suspected of conducting hostile cyber operations since 2005 (77% of them by China, Iran, North Korea, and Russia).[153] Many of those operations breached international law rules such as respect for the sovereignty of other states,[154] or the prohibition on coercive intervention into others' internal affairs,[155] thereby opening the door to countermeasures by injured states.

The flip side of this reality is that the capability to conduct effective cyber countermeasures in the face of unlawful cyber operations is limited to a relatively small number of states.[156] In the first place, many states lack the requisite institutional offensive cyber capability to successfully mount operations beyond their borders, especially against responsible states that are themselves highly capable and well-defended in cyberspace. And even if they wield such capabilities in the abstract, injured states wanting to engage in a countermeasure may be unable to execute a particular countermeasure because they are unaware of a vulnerability

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[151] *See, e.g.*, Michael N. Schmitt, *"Virtual" Disenfranchisement: Cyber Election Meddling in the Grey Zones of International Law*, 19 CHI. J. INT'L L. 30, 38 (2018).

[152] *See* Michael N. Schmitt, *Foreign Cyber Interference in Elections: An International Law Primer, Parts I, II, III*, EJIL: TALK! (Oct. 16 & 19, 2020), https://www.ejiltalk.org/author/mschmitt/ [https://perma.cc/83QL-JXEM].

[153] *See Cyber Operations Tracker*, COUNCIL ON FOREIGN RELS., https://www.cfr.org/cyber-operations/ (last visited Feb. 16, 2021) [https://perma.cc/M56V-QQCT].

[154] *See* TALLINN MANUAL 2.0, *supra* note 48, rr. 1-5; *see also* Michael N. Schmitt & Liis Vihul, *Respect for Sovereignty in Cyberspace*, 95 TEXAS L. REV. 1639 (2017).

[155] *See* TALLINN MANUAL 2.0, *supra* note 48, r. 66.

[156] In 2017, Director of National Intelligence James Clapper estimated that over 30 States were developing offensive cyber capabilities. *See Foreign Cyber Threats to the United States*: *Hearing Before the S. Comm. on Armed Services*, 115th Cong. 13 (2017) (statement of James R. Clapper, Director of National Intelligence), https://www.govinfo.gov/content/pkg/CHRG-115shrg33940/html/CHRG-115shrg33940.htm [https://perma.cc/LU6M-K4HD]; While that number has surely grown, even some of these countries lack a robust capability. Julia Voo, Irfan Hemani, Simon Jones, Winnona DeSombre, Dan Cassidy & Anina Schwarzenbach, *National Cyber Power Index 2020*, HARVARD KENNEDY SCH.: BELFER CTR. FOR SCI. AND INT'L AFFS., (Sept. 2020), https://www.belfercenter.org/publication/national-cyber-power-index-2020 [https://perma.cc/8QGH-SL9R].

in the system to be targeted, do not have access to that system, or lack a specific capability necessary to leverage the vulnerability in question.

Of course, since countermeasures need not be in-kind, injured states without the requisite cyber wherewithal would be entitled to respond with non-cyber countermeasures, as in closing its territorial sea to vessels of the responsible state transiting in innocent passage.[157] But cyber responses are the most operationally likely countermeasures to cyber wrongful acts; and in the case of either a cyber or non-cyber countermeasure, a weak state acting alone may be unable to muster sufficient influence to induce a powerful responsible state to cease its wrongful conduct.

In sum, the interpretive context with respect to collective cyber countermeasures is one in which states are increasingly targeted in cyberspace, while their ability to unilaterally respond by cyber means is not consistent with that precarious reality. To deprive these states an opportunity to look to other states for assistance, in responding to unlawful cyber operations that do not rise to the level of an "armed attack" permitting collective defense, would in many cases prevent them from terminating the hostile operations or otherwise compelling the responsible state to desist.[158] It is arguably a situation that will encourage a cyber arms race as states try to acquire offensive cyber and non-cyber capabilities that will empower them to respond unilaterally.[159] Doing so would run counter to the object and purpose of countermeasures.

### C. *Bilateralist and Collectivist Approaches Assessed*

This is not to say that a bilateralist approach barring collective cyber countermeasures, one France has adopted, is without justification. Countermeasures are an exceptional self-help tool in the sense that they allow for what would otherwise be *unlawful* conduct. The fact that countermeasures are subject to significant limitations further augurs against a broad interpretation of the right. Moreover, bilateralists would assert, and reasonably so, that the greater the number of states involved in a contentious situation, the more likely a destabilizing breach of international peace and security is to occur, especially in light of the technical challenges of attribution and the consequent risk of misattribution. They

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[157] *See* TALLINN MANUAL 2.0, *supra* note 48, at 128; Articles on State Responsibility, *supra* note 8, at 129.

[158] In the face of a "grave and imminent peril" to an "essential interest," a State may engage in otherwise unlawful actions to put an end to the peril even if it breaches obligations owed to non-responsible States. *See* Articles on State Responsibility, *supra* note 8, art. 25. However, the harm being suffered must be very serious and it is unclear whether other States may assist the operations of the State being harmed or engage in cyber operations on its behalf pursuant to the so-called "plea of necessity." TALLINN MANUAL 2.0, *supra* note 48, r. 26.

[159] On the correlation between cyber threats and the acquisition of cyber capabilities, see Anthony Craig, *Understanding the Proliferation of Cyber Capabilities*, COUNCIL ON FOREIGN RELS.: NET POL. (Oct. 18, 2018), https://www.cfr.org/blog/understanding-proliferation-cyber-capabilities [https://perma.cc/K9NX-UQXK].

would argue that it is only when the harm the injured state faces is so severe, as to amount to a cyber armed attack under the law of self-defense,[160] that the risk of exacerbating a situation through the involvement of non-injured states is justified. For the bilateralist, a *prohibition* of collective cyber countermeasures and a collective *right* to use cyber and kinetic measures in the face of an armed attack pursuant to the law of self-defense are not inconsistent; they simply reflect different response points along a risk continuum.

A countervailing collectivist response would be that unremedied internationally wrongful behavior represents the greater threat to individual states, the integrity of the international legal system, and broader international peace and security than the risk of escalation. The very fact that the right to countermeasures contemplates *unlawful* behavior by states signifies the importance of avoiding situations in which an injured state is without recourse to compel a responsible state to desist in its unlawful conduct. Equally, it signals the significance that the international community attributes to making the injured state whole by offering a means of enforcing the obligation to provide reparations. And, after all, the authenticity of the threat that the responsible state poses to the injured state and broader stability has already been established by the willingness of the former to act in a destabilizing and unlawful manner in the first place.

For the collectivists, therefore, international law must be interpreted in a manner that affords states a practical remedy when facing clearly unlawful conduct. In the cyber context, that remedy is likely available to many states only through collaboration with others. Moreover, international peace and security is enhanced, in their view, by effective, and therefore deterrent, action; inaction only serves to encourage further wrongful behavior.

For collectivists, all states, including non-injured states, have an interest in preventing and deterring unlawful state behavior by acting decisively to maintain the rule of law among members of the global community. In no domain is this truer than in cyberspace, where an unlawful cyber operation against one state can generate dire consequences in third-party states but not, standing alone, breach a legal obligation owed those states, as was the case with Russia's 2017 NotPetya operations that spread globally from Ukraine.[161] If collective countermeasures are impermissible, the affected states would be limited to responding through acts of retorsion in these situations. Collective countermeasures provide states, willing and able to assist a victim state, with effective response options and also mitigate erosion of respect for international law primary rules more generally.

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[160] *See* TALLINN MANUAL 2.0, *supra* note 48, r. 71.

[161] *See* Andy Greenberg, *The Untold Story of NotPetya, the Most Devastating Cyberattack in History*, WIRED (Aug. 22, 2018), https://www.wired.com/story/notpetya-cyberattack-ukraine-russia-code-crashed-the-world/ [https://perma.cc/VG9E-4UXK]. The mere fact that a State is *affected* by an unlawful cyber operation against another State does not qualify it as an "injured State" such that countermeasures become available in its own right. To so qualify, the consequences of the cyber operation for the affected State must independently breach an obligation it is owed by the State to which the operation is question is attributable.

A limitation on the collective conduct of countermeasures could also encourage states to skew interpretation of international law so as not to leave themselves without viable response options. For instance, Professors Gary Corn and Eric Jensen have perceptively observed:

> [I]n a world of significant technological disparity, the lack of collective cyber options may have the perverse effect of incentivizing victim states to overclassify an incident in an attempt to allow the use of kinetic tools to resolve the conflict. States that are not cyber capable, or that are less cyber capable than the responsible state, may not feel they have adequate means to effectively apply nonkinetic responses that comply with all the countermeasure requirements. In those cases, it is possible that victim states will define the responsible state's unlawful act as an armed attack in order to expand possible responses into an area where the victim state's capability is relatively more robust.[162]

And if collective defense is the purported legal basis for the response, other states, acting in collective defense, may resort to cyber or non-cyber operations at the use of force level in response to the hostile operation. Thus, characterizing the initiating hostile cyber operation as an armed attack, in order to compensate for the state's inability to respond unilaterally by cyber means, would run the risk of escalation both in terms of the nature of the response and its scope.

This dynamic could easily cut the other way. It is only necessary to qualify a response as a countermeasure if it would otherwise be unlawful, for a countermeasure may only be taken in response to an internationally wrongful act. Facing unlawful cyber operations from another state, the injured and assisting states might claim that their collective response is *retorsion*, that it does not rise to the level of a breach of primary rules like sovereignty or intervention. Such a characterization would permit them to respond collectively, but in doing so, they would lose the option of characterizing future hostile cyber operations of the same nature by other states as wrongful.[163]

D. *Trends*

To date, only two states have taken a public stand on the issue of collective cyber countermeasures. France expectedly adopts a bilateralist approach, for it possesses a substantial cyber capability to which it may resort if other states subject

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[162] Corn & Jensen, *supra* note 94, at 130.

[163] *See, e.g.*, the discussion of options available to the United Kingdom in the face of hostile Russian cyber operations following its rejection of sovereignty as a rule of international law. Michael N. Schmitt & Jeffrey Biller, *Un-caging the Bear? A Case Study in Cyber Opinio Juris and Unintended Consequences*, EJIL: TALK! (Oct. 24, 2018), https://www.ejiltalk.org/un-caging-the-bear-a-case-study-in-cyber-opinio-juris-and-unintended-consequences/ [https://perma.cc/6PP8-HGH6].

it to internationally wrongful cyber operations.[164] Estonia's adoption of the collectivist approach was equally predictable given that it was the target of what is perhaps the watershed wakeup call with respect to hostile cyber operations in 2007.[165] Although Estonia punches well above its weight in cyber matters, it does not field a robust institutional capability to conduct offensive cyber operations, and its relations with neighboring Russia, which has demonstrated a willingness to engage in unlawful cyber operations, is fraught.[166] Should Estonia respond with countermeasures to Russian operations, it would likely look to its primary security guarantor, NATO, or to close allies such as the United States or United Kingdom, for assistance.[167] And as Estonian President Kaljulaid pointed out, there is precedent for collective responses consistent with international law: "International security and the rules-based international order have long benefitted from collective efforts to stop the violations. We have seen this practice in the form of collective self-defence against armed attacks. For malicious cyber operations, we are starting to see this in collective diplomatic measures…."[168]

In our estimation, if there is a trend to discern between the two camps, states appear to view collaborative and cooperative responses to instability caused by hostile cyber measures as essential. In fact, the approaches that a number of international organizations have taken reflect the tendency to treat hostile cyber operations as a shared concern. For instance, the European Union has adopted the Cyber Diplomacy Toolbox, which allows for coordinated sanctions across the organization's member states in the face of certain hostile cyber activities emanating at least in part from outside the European space.[169] NATO, consisting of

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[164] *See* FRANCE, MINISTRY OF THE ARMIES, LA CYBERDÉFENSE (Oct. 17, 2018), https://www.defense.gouv.fr/portail/enjeux2/la-cyberdefense/la-cyberdefense/presentation (Fr.). French strategy in this regard is set forth in, POLITIQUE MINISTÉRIELLE DE LUTTE INFORMATIQUE DÉFENSIVE, https://www.defense.gouv.fr/content/download/557388/9657794/Lutte%20informatique%20d%C3%A9fensive%20%28LID%29.PDF (Fr.) (last visited Feb. 17, 2021) [https://perma.cc/UC8C-6FD4].

[165] *See* ENEKEN TIKK, KADRI KASKA & LIIS VIHUL, INTERNATIONAL CYBER INCIDENTS: LEGAL CONSIDERATIONS 14–34 (2010); *see also* Rain Ottis, *Analysis of the 2007 Cyber Attacks Against Estonia from the Information Warfare Perspective*, *in* PROCEEDINGS OF THE 7TH EUROPEAN CONFERENCE ON INFORMATION WARFARE AND SECURITY 163 (Dan Remenyi ed., 2008), https://ccdcoe.org/uploads/2018/10/Ottis2008_AnalysisOf2007FromTheInformationWarfarePerspective.pdf [https://perma.cc/Z5FJ-37YK].

[166] *See* CONG. RSCH. SERV., ESTONIA, LATVIA, AND LITHUANIA: BACKGROUND AND U.S.-BALTIC RELATIONS (Jan. 2, 2020), https://fas.org/sgp/crs/row/R46139.pdf.

[167] *See generally* ESTONIA, MINISTRY OF DEFENCE, NATIONAL SECURITY CONCEPT OF ESTONIA (2017), https://www.kaitseministeerium.ee/sites/default/files/elfinder/article_files/national_security_concept_2017.pdf (Est.) [https://perma.cc/L34G-PXPJ].

[168] *See* Kaljulaid, *supra* note 2.

[169] *See* Samuele De Tomas Colatin, *Si vis Cyber Pacem, para Sanctiones: the EU Cyber Diplomacy Toolbox in Action*, NATO COOPERATIVE CYBER DEFENCE CENTRE OF EXCELLENCE [CCDCOE], https://ccdcoe.org/incyder-articles/si-vis-cyber-pacem-para-sanctiones-the-eu-cyber-diplomacy-toolbox-in-action/.

30 nations, has now issued cyber doctrine,[170] and many international governmental organizations such as the Organization of American States, Association of Southeast Asian Nations, and Organization for Security and Cooperation in Europe are working to craft collaborative mechanisms and procedures for responding to hostile cyber operations.[171]

Similarly, in a 2015 report that the UN General Assembly endorsed, the UN Group of Governmental Experts on information and communications technology recommended that states comply with eleven "voluntary, non-binding norms, rules or principles of responsible behaviour of States" to reduce risks to international peace, security, and stability.[172] The first provides that "[c]onsistent with the purposes of the United Nations, including to maintain international peace and security, States should cooperate in developing and applying measures to increase stability and security in the use of ICTs and to prevent ICT practices that are acknowledged to be harmful or that may pose threats to international peace and security."[173] Others urge states to "consider how best to cooperate to exchange information, assist each other, prosecute terrorist and criminal use of ICTs and implement other cooperative measures to address such threats," and "respond to appropriate requests for assistance by another State whose critical infrastructure is subject to malicious ICT acts."[174]

Cooperative and collaborative approaches to international security also infuse the cyber strategies of key states. Taking the United States as an example, its 2019 Cyber Strategy explains how the United States will "preserve peace and security by strengthening the United States' ability — *in concert with allies and partn*ers — to deter and if necessary punish those who use cyber tools for malicious purposes."[175] One of the measures to achieve that objective is to "strengthen the capacity and interoperability of those allies and partners to improve our ability to optimize our combined skills, resources, capabilities, and perspectives against shared threats. Partners can also help *detect, deter, and defeat* those shared threats in cyberspace."[176]

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[170] *See* NATO, ALLIED JOINT DOCTRINE FOR CYBERSPACE OPERATIONS, AJP-3.20 (ed. A, v.1) (Jan. 2020), https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/899678/doctrine_nato_cyberspace_operations_ajp_3_20_1_.pdf [https://perma.cc/L8RC-N5XK].

[171] *See* CCDCOE, *Organisations: Overview of the Cyber Security Posture of Selected International Organisations*, https://ccdcoe.org/organisations/ [https://perma.cc/3UVD-C7SQ] (last visited Feb. 17, 2021).

[172] Group of Governmental Experts on Developments in the Field of Information and Telecommunications in the Context of International Security, ¶ 13, U.N. Doc. A/70/174 (July 22, 2015) [hereinafter Group of Governmental Experts]; G.A. Res. 70/237, Developments in the Field of Information and Telecommunications in the Context of International Security (Dec. 30, 2015) (endorsing the GGE report).

[173] Group of Governmental Experts, *supra* note 172, ¶ 13(a).

[174] *Id.* ¶¶ 13(d), (h).

[175] WHITE HOUSE, NATIONAL CYBER STRATEGY OF THE UNITED STATES 3 (Sept. 2018) (emphasis added).

[176] *See id.* at 26 (emphasis added).

The Department of Defense's (DOD) subordinate cyber strategy echoes this approach. According to the unclassified summary, the United States will,

> Persistently contest malicious cyber activity in day-to-day competition: The Department will counter cyber campaigns threatening U.S. military advantage by defending forward to intercept and halt cyber threats and by strengthening the cybersecurity of systems and networks that support DoD missions. This includes working with the private sector and our *foreign allies and partners to contest* cyber activity that could threaten Joint Force missions and to counter the exfiltration of sensitive DoD information.[177]

The Defense Department will also, "[o]perationalize international partnerships: Many of the United States' allies and partners possess advanced cyber capabilities that complement our own. The Department will work to strengthen the capacity of these allies and partners and increase DoD's ability to *leverage its partners' unique skills, resources, capabilities*, and perspectives."[178]

The operationalization of these cooperative cyberspace strategies by U.S. Cyber Command is reflected in its published "vision":

> We will prepare, *operate, and collaborate* with combatant commands, services, departments, *allies,* and industry to continuously thwart and contest hostile cyberspace actors wherever found
> …
>
> The Command makes no apologies for defending US interests as directed by the President through the Secretary of Defense in a domain already militarized by our adversaries. To the *maximum extent possible, we will operate in concert with allies and coalition partners*.[179]

"Collaborative" and "cooperative" actions are not necessarily "collective," which in the legal sense refers to taking action based upon the *right* of another state to do so under international law. However, a commitment to collaboration and

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[177] DEP'T OF DEF., SUMMARY, CYBER STRATEGY 4 (2018), https://media.defense.gov/2018/Sep/18/2002041658/-1/-1/1/CYBER_STRATEGY_SUMMARY_FINAL.PDF [https://perma.cc/7CZD-4JXN] (emphasis added).

[178] *Id*. at 5 (emphasis added).

[179] U.S. CYBER COMMAND, ACHIEVE AND MAINTAIN CYBERSPACE SUPERIORITY: COMMAND VISION FOR U.S. CYBER COMMAND 7, 10 (2018) https://www.cybercom.mil/Portals/56/Documents/USCYBERCOM%20Vision%20April%202018.pdf [https://perma.cc/7RM3-TF3S] (emphasis added).

cooperation in cyberspace represents clear acknowledgement of the fact that the nature of cyberspace is particularly susceptible to seeing threats as shared and meriting responses that draw on more than the resources of a single directly affected state.

This perception is also apparent in the general approach that states take to cyber countermeasures, which reflects a sense that cyber operations represent a unique threat, the characteristics of which must be considered in interpreting the legal content of the right to take countermeasures. With the sole exception of France, those that have spoken to the matter tend to resist strictly applying the limitations and requirements on countermeasures that the Articles on State Responsibility reflect. For instance, one important state participant in the so-called "Hague Process," which brought states and intergovernmental organizations together to consider near final drafts of *Tallinn Manual 2.0*, was unwilling to accept the limitation in the Articles on the right to take countermeasures to unlawful cyber operations conducted by or attributable to states.[180] It argued that countermeasures should also be available to respond to qualifying non-state actor cyber operations, even when not attributable to a state.[181] Similarly, a number of states have expressed concern regarding the ILC's requirement to provide notice to the responsible state of an intent to take countermeasures.[182] Although the ILC itself acknowledged the possibility of "urgent countermeasures,"[183] key states have emphasized that in a cyber context the notice requirement must be tempered by the urgency of the situation and the importance of ensuring that their capabilities remain secret.[184] These examples illustrate that states generally want countermeasures to be available as a response option against unlawful cyber operations, and that the characteristics of cyberspace merit flexibility in interpreting the law of countermeasures. This attitude augurs towards growing state acceptance of collective cyber countermeasures over time.

Finally, the *Tallinn Manual 2.0* experts considered the issue of collective cyber countermeasures but could not come to a consensus. A number of them felt it appropriate to interpret the customary law rule on countermeasures as permitting collective cyber countermeasures so long as they are conducted in response to the injured state's request. In part, they looked to the examples of state practice cited

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[180] *See* Michael N. Schmitt, *Tallinn Manual 2.0 on the International Law of Cyber Operations: What It Is and Isn't*, JUST SECURITY (Feb. 9, 2017), https://www.justsecurity.org/37559/tallinn-manual-2-0-international-law-cyber-operations/ [https://perma.cc/X9QH-WKHP]; Articles on State Responsibility, *supra* note 8, art. 2(a).

[181] As the meetings were held according to Chatham House Rules, the state may not be named. However, the experts worked with representatives of that state to correctly capture its view. *See* TALLINN MANUAL 2.0, *supra* note 48, at 113.

[182] *See* Articles on State Responsibility, *supra* note 8, art. 52.

[183] *See id*. art. 52(2), commentary accompanying art. 52, ¶¶ (1), (6).

[184] For discussion on France, *see* MINISTRY OF THE ARMIES, *supra* note 3, at 8; on the Netherlands, MINISTRY OF FOREIGN AFFS., *supra* note 25, at 7; Submission of the United States to the 2014-2015 GGE, *supra* note 25, at 739; on the United Kingdom, Wright, *supra* note 25; on Israel, Schondorf, *supra* note 25; *see also* TALLINN MANUAL 2.0, *supra* note 48, at 120.

in the ILC's Articles on State Responsibility commentary as support.[185] A majority of the experts, however, treated them as unlawful on both the basis of the *Paramilitary Activities* text cited above and the fact that the ILC commentary styled the aforementioned practice as "sparse and involv[ing] a limited number of states."[186]

Interestingly, the experts added a further twist to the challenge of understanding collective cyber countermeasures by distinguishing cyber countermeasures taken *on behalf* of an injured state from those actions that *support* cyber countermeasures by the injured state. For example, the *Paramilitary Activities* case involved the circumstances of the former, when the United States undertook what it claimed were countermeasures against Nicaragua on behalf of, but not involving, Honduras, El Salvador, and Costa Rica.[187] As a simple example of the latter, consider a case in which an injured state fields cyber capability but must turn to another state to identify vulnerabilities in the systems that it intends to target; but for knowledge of those vulnerabilities, the injured state could not conduct its cyber countermeasure. Three views emerged from the experts.[188]

By the first, conducting a countermeasure and providing the assistance necessary for an injured state to do so are indistinguishable. In both cases, a non-injured state is taking action that will lead to breach of a legal obligation owed the responsible state, with no basis for precluding wrongfulness vis-à-vis the state providing the assistance. If the non-injured state conducts the countermeasure, it will be responsible for the consequences of the operation, while if it assists, it will be responsible for that assistance pursuant to the customary rule reflected in Article 16 of the Articles on State Responsibility.[189] Second, some of the experts took the position that assistance is lawful unless the assistance itself would breach a legal obligation that the non-injured state owed to the responsible state. This would be the case, for example, if the non-injured state were inside the responsible state's system and allowed the injured state to use that access to conduct its countermeasure. By contrast, merely providing generalized cyber training to the injured state's personnel would violate no obligation owed by the non-injured state and therefore would be permissible. A third group of experts, which also included those who supported collective cyber countermeasures altogether, were of the view that conducting an operation must be distinguished from merely assisting in a cyber

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[185] *See* TALLINN MANUAL 2.0, *supra* note 48, at 132 (citing Articles on State Responsibility, *supra* note 8, arts. 54(3), (4)).

[186] *Id.*, citing Paramilitary Activities, *supra* note 82, ¶ 249 and Articles on State Responsibility, *supra* note 8, commentary art. 54, ¶ 6.

[187] *See* Paramilitary Activities, *supra* note 82, ¶ 210.

[188] *See* TALLINN MANUAL 2.0, *supra* note 48, at 132.

[189] *See* Articles on State Responsibility, *supra* note 8, arts. 4, 16 ("A State which aids or assists another State in the commission of an internationally wrongful act by the latter is internationally responsible for doing so if: (a) That State does so with knowledge of the circumstances of the internationally wrongful act; and (b) The act would be internationally wrongful if committed by that State.").

operation, and that the latter is acceptable so long as the operation complies with all the requirements of, and limitations on, countermeasures.

Finally, it is important to emphasize that if the response to the responsible state's unlawful operation does not constitute an internationally wrongful act, there is no need to preclude wrongfulness, and states may act collectively. As an example, states may contribute to the activities of entities such as the NATO Rapid Reaction teams[190] and the Asia Pacific Computer Emergency Response Team[191] as long as their actions do not need to qualify as countermeasures under the law of state responsibility because they otherwise would be unlawful.

## *V.* Concluding Thoughts

Countermeasures are clearly available under international law. But whether states may collectively conduct those countermeasures remains unsettled. While both the bilateralist and collectivist interpretations of the rule are reasonable, some of the common justifications underlying the argument against collective countermeasures, such as reliance upon the text of the *Paramilitary Activities* judgment, do not hold up to close scrutiny.

Assuming for the sake of analysis that collective countermeasures are permissible, the further question whether collective *cyber* countermeasures merit different treatment remains. Again, both sides of the debate may proffer cogent arguments. Even if engaging in cyber countermeasures on behalf of another state is unlawful, there is a plausible argument that merely providing assistance to that state's own countermeasures would, in some cases, be permissible.

Our view is that collective cyber countermeasures on behalf of injured states, and by extension support to countermeasures of the injured state, are lawful. We have illustrated that no clear prohibition on collective countermeasures has crystallized to unequivocally preclude a state position, such as the one Estonia took. Instead, the broad vector of international law has been in the direction of the collectivist approach since the last century; there is no reason to suspect that it will change course significantly. Moreover, the unique nature of cyberspace suggests a need for greater tolerance of countermeasures. It appears that states are generally in accord with this premise. Finally, the object and purpose of the rule of countermeasures, when considered in the cyber context, supports an interpretation of countermeasures that allows them to be mounted collectively.

Ultimately, while others reasonably may disagree that this is the sounder approach to the matter, we can say with confidence that states may exercise their

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[190] *See Cyber Defence*, NATO (Sept. 25, 2020), https://www.nato.int/cps/en/natohq/topics_78170.htm [https://perma.cc/6L3S-BVBN].

[191] *See About APCERT*, ASIA PACIFIC COMPUTER EMERGENCY RESPONSE TEAM, https://www.apcert.org/about/index.html (last visited Feb. 19, 2021) [https://perma.cc/8YHJ-VKXW].

discretion to interpret the international law governing countermeasures as allowing for collective countermeasures – and to do so in good faith.