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Where, If Anywhere, Can Effective International Norms be Developed for Emerging Technologies?

BRIEF BY:

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The Boston Tech Hub Faculty Working Group, hosted by former Secretary of Defense and Harvard Kennedy School Belfer Center Director **Ash Carter** and Harvard SEAS Dean **Frank Doyle**, will convene its fourth and final session of the spring semester. This session will explore current efforts to establish norms for emerging technologies, and how these efforts might be informed by previously established global norms in human rights, arms control, and biotechnology.

Context:

- **Historical Precedents:** There are several examples of previously established international norms or agreements that might inform our discussion of similar efforts for emerging technologies. One of the most well-known international norms is the UN Universal Declaration of Human Rights. Written by a commission following the atrocities of WWII, the declaration includes 30 articles that affirm a variety of rights. The rights detailed in the Declaration were not legally binding, but they have been elaborated in subsequent treaties, national constitutions, economic transfers, etc. The process of developing the Declaration ultimately served as the foundation for the International Covenant on Economic, Social and Cultural Rights and the International Covenant on Civil and Political Rights, multilateral treaties adopted by the UN General Assembly in 1966 (in force from 1976). Each of these treaties is monitored by a committee at the UN and give legal status to most of the Declaration of Human Rights.

  While the Declaration of Human Rights was reactive to conditions in WWII, the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) was a more proactive effort by the global community. There have been numerous treaties and regimes relating to disarmament, arms control, and nonproliferation of weapons of mass destruction, more countries have adhered to NPT than any other arms limitation or disarmament agreement. NPT was initially pursued because nuclear weapons technology was reaching the point where it could become widespread: the science behind building nuclear weapons was in publicly available literature, nuclear technology was beginning to be pursued by private companies, and materials like plutonium were becoming more accessible. Even so, after this kind of agreement was initially proposed, it took four years before countries entered negotiations in earnest, and another two years of negotiations before they developed an agreement that non-nuclear powers were willing to sign. The treaty is reviewed every five years and has been strengthened over time through measures such as export controls and enhanced verification measures.

  An often-cited agreement by people thinking about norms for emerging technologies is the Asilomar

Conference on Recombinant DNA. This norms-creation effort was led by the scientists doing work in this field as opposed to state actors. Named for the conference center in California where scientists, lawyers, journalists, and officials met in 1975, Asilomar set safety guidelines for those using recombinant DNA technology. These research guidelines eventually formed the basis for official government policy on the subject. Many argue that the conference was such a success because organizers intentionally limited the questions being discussed to safety: they grounded discussions in risk assessments and how to mitigate this risk.

- **Current Discussions about Norms for Emerging Technologies:** Cyber norms are the closest parallel to traditional arms limitation or disarmament agreements. Countries have had some success in establishing a norm against commercial cyber espionage during the past few years—this was an important push for the Obama administration—but there has been uneven adherence to these agreements.
  In late 2017, the private sector took a leading role in working on cyber norms when Microsoft proposed the Cybersecurity Tech Accord, an industry effort—there are now more than 70 tech company signatories to the agreement—to get companies to support certain principles, particularly around protecting customers and users from cyberattacks.[1] The Digital Geneva Convention, initially championed by Microsoft, was a call for a global treaty to protect the public from nation-state threats in cyberspace. This evolved into the Paris Call for Trust and Security in Cyberspace, an effort promoted by France starting in 2018, that is now supported by states, companies (including the Cybersecurity Tech Accord), civil society, etc.[2]

  More recently, artificial intelligence (AI) has become a focus of global norms creation. Movements at the national level have spurred global efforts. In the U.S., Congress recently introduced legislation—the Algorithmic Accountability Act—that seeks to regulate AI. Under this law, tech companies would be held accountable for their algorithms and would be required to audit their AI systems for bias, etc. and correct any issues they find. The UK, France, Australia, and other countries have also recently drafted or passed similar legislation. Building on this national-level momentum, the Organisation for Economic Co-operation and Development (OECD) is preparing to release recommendations about how to develop ethical AI. The OECD seeks to increase dialogue and engagement around these issues, as well as identify and establish best practices.

  In reaction to He Jiankui's November 2018 announcement that he had created the world's first gene-edited babies, experts and researchers are increasingly calling for international guidelines or a regulatory framework for human germline editing, although there is still significant disagreement about where boundaries should be established. Much like the Asilomar agreement from the 1970s, a group of leading researchers have called for a time-limited global moratorium on all clinical uses of

1 Kilovaty, Ido. "Are Tech Companies Becoming the Primary Legislators in International Cyberspace?" *Lawfare*, March 28, 2019. Accessible online.

2 "Cybersecurity: Paris Call of 12 November 2018 for Trust and Security in Cyberspace," *France Diplomatie*, 2018. Accessible online.

human germline editing while an international framework can be developed. Some researchers note that not only are norms and standards needed to set limits, but there is also need for a mechanism for scientists to raise concerns about research that might not be conforming to accepted norms or standards. National and international institutions are also getting involved in efforts to establish norms for human germline editing. The National Institutes of Health (NIH) has called for a moratorium on editing heritable genes. The World Health Organization (WHO) has an expert advisory committee that is currently working to develop recommendations about a possible global regulatory framework or other governance mechanisms for gene editing under the WHO.

Human rights norms in the technology sector have also emerged from non-governmental initiatives. The Global Network Initiative, formed in 2008 by technology companies, civil society organizations, and investors, sets standards for how companies can respond to government requests and demands for user data or censorship in ways that are consistent with international human rights law.

- **Tech Norms Built from Sub-Global Action or Policy:** There have been efforts at the regional level around emerging technologies that some speculate could ultimately set international standards and norms. The European Union's General Data Protection Regulation (GDPR), for example, is a landmark privacy bill that governs the management of personal data of EU citizens. Because international companies had to widely adapt to and adopt these new standards, many suggest that GDPR will serve as the de facto baseline for international privacy standards moving forward. (Similar arguments have been made about the impact of California's Consumer Privacy Act.)

  In early April, the EU published a set of principles with the goal of making AI more ethical. Although the EU is not home to any of the major players in AI—all nine of the major companies are based in either the U.S. or China—the EU has repeatedly stated that they want to be a leader in ethical AI, and these principles have been perceived as a significant step in that direction. Importantly, these AI guidelines are not legally binding, so it remains to be seen if they will be adopted by technology companies and the rest of the international community.

  At an even more local level, U.S. state policy has influenced broader regulations and norms. California is considered a norm-setter for emissions standards. The Clear Air Act includes an exemption for California to set their own more rigorous standards, so the state has regularly pushed to reduce vehicle emissions by even more stringent standards than the rest of the country. Not only has this pushed federal regulators to strengthen emissions standards over time, but other states can and have opted to follow California's emission regulations. (Twelve states and Washington, DC, have adopted California's current more stringent standards.) Another example is Arizona introducing autonomous vehicle testing more rapidly than the rest of the U.S. This has accelerated broader discussions

about regulation, expectations, and norms for autonomous vehicles. Some argue that testing in Arizona will expedite the adoption of autonomous vehicles in other cities as well.

- **Challenges to Establishing Global Norms for Emerging Technologies:** There are numerous challenges to establishing global norms for emerging technologies. For some technologies, there are already global bodies in place with established and trusted processes for engaging new issues. Gene editing, for instance, is being addressed by groups like the World Health Organization. For other technologies, however, there are no global institutions with a clear mandate for addressing them. Policy on digital platforms currently faces this challenge. (And this is not only a problem at the international level. Individual countries often do not have agencies or entities with clear jurisdiction for emerging technologies, which complicates international coordination.) The complex and rapid pace of emerging technologies exacerbates the challenges posed by unclear jurisdiction and institutional coordination. Often, government officials lack the technical knowledge to craft effective, sophisticated policy. This has become a notable issue recently for government officials trying to develop policies for AI.

  Widely varying values among major global players also complicates establishing norms for emerging technologies. Countries—especially the U.S. and China—have significantly different views about the importance and role of privacy, free speech, data ownership, etc. Additionally, a handful of private companies have market capture and power comparable to a large country for numerous technology issues. For instance, there are nine companies globally that dominate AI. However, these companies do not have the same obligations to citizens as a national government does. This can further complicate and frustrate efforts to form global agreements.

Discussion Questions:

- What lessons can be drawn from past historical agreements that apply to today's technologies? Will most norms need to be reactive (like the Declaration of Human Rights) or are there some emerging technologies where there is impetus for the global community to be more proactive (like NPT)?

- Can and should the global community establish collective norms that govern countries with vastly different cultural, social, and economic values? How do we preserve national sovereignty over issues like political rights and civil liberties within technologies that transcend borders?

- Are norms rigorous enough to shape the direction of technological development? Or are binding agreements with corresponding enforcement mechanisms needed? Which entities would be best suited to monitor and enforce—global institutions, superpower countries, the private sector, etc.?

- How should the global community involve private sector companies in discussion of norms? Do different governance structures impact this? (For instance, the U.S. takes a hands-off approach to industry while China imposes policy decisions and shapes the direction of many of its companies.)

Readings:

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