

Emerging Technology and the Changing Global Order

POLS XXXX

Semester	Colleen Larkin
Meeting Times	Email
Meeting Location	Office Hours: Days and Times, Location

Course Description

In just the last ten years, we have seen rapid technological changes, such as advanced weapons, the proliferation of social media, increasingly sophisticated machine learning and artificial intelligence, and more. At the same time, the international order has experienced significant upheaval: China's continued rise as a global superpower, new conflicts around the world, lapsing arms control agreements, the rise of authoritarianism, challenges to long-standing global institutions, and more. In what ways are these developments connected? How has technology changed the conduct of global affairs, and how does it affect the stability of international order?

In this course, we will examine various emerging technologies—artificial intelligence, autonomous weapons, cyber tools, quantum computing, semiconductors, and more—and how they affect global politics. Do they increase or undermine security? After surveying existing theories of continuity and change in international orders, we move to the present to examine technology's effect on international order today. We will examine the relationships between technology and war, economic security, democracy, and international norms. We will also analyze the key actors in these technological races: how have the US and China used technology for great power competition? How should we think about “Big Tech” as an actor in international politics? Bringing these pieces together, we will try to understand the complex relationship between new technology and the future of global crisis or global stability.

Prerequisites

This is an advanced undergraduate course. You must have taken the introductory International Relations course (POLSXXX).

Learning Objectives

Throughout this course, students will:

- Understand IR theories of international order, identifying sources of order continuity and change in historical perspective

- Analyze the politics of specific technologies and their role in global competition and cooperation
- Synthesize theories and evidence to assess how emerging technologies may change international politics in the future
- Develop strong written communication skills, arguing clearly and persuasively for various audiences

Requirements

At a glance:

- Participation 20%
- Memos 20%
- Analysis Paper 25%
- Final Review 35%

Participation. (20%) Participation is an essential component of this course. Quality participation includes: coming to the class meeting prepared to discuss the readings, actively listening to your peers, asking questions, and responding to others' comments and questions.

Memos. (20%) Students will complete two one-page memos during the course, responding to the week's reading material, to be posted on the course discussion board. You might focus on one specific reading or analyze the conversation between the readings for that week. You will sign up for weeks at the beginning of the semester.

Analysis Paper. (25%) Midway through the semester, you will be asked to analyze the relationship between technology and global order, selecting one from a list of questions. The essay should present a clear argument and provide evidence synthesizing the course readings thus far. These essays should be approximately 1500 words.

Final Review. (35%) The politics of emerging technology is a new but saturated field, with an explosion of books on the subject. Book reviews are an important way for broader audiences to assess a book's contributions. In your final project, you will review a recent book on an emerging technology, using your knowledge of international relations theories to critically analyze its claims. This review should provide an overview of the arguments, evidence, and methodologies used, and place the book in the context of existing debates. You should then examine the book's claims--are they persuasive?

What do we know now that we didn't before? What questions remain? In addition to the review, you will give a brief presentation during the last class periods.

You will select one book from a list (to be finalized later), which may include books such as those listed below. I will select books based on availability as e-books on the library website. If you have identified another book you want to review, let me know.

- Bruno Macaes, *World Builders: Technology and the New Geopolitics*
- Karen Hao, *Empire of AI*
- Bleddyn Bowen, *Original Sin: Power, Technology, and War in Outer Space*
- Dirk A. Zetzsche et al, *FinTech: Finance, Technology, and Regulation*
- Raj M. Shah and Christopher Kirchhoff, *Unit X: How the Pentagon and Silicon Valley are Transforming the Future of War*
- Ray Kurzweil, *The Singularity is Nearer: When We Merge with AI*

Course Readings

There are no required textbooks to purchase for this course. All readings for each class will be available through the course website. I expect students to come to class having done the readings listed on the syllabus for that day. As these are often more complex readings, I encourage you to plan ahead (i.e. not read everything the night before). You will be expected to analyze and evaluate the readings in class discussions and written assignments, not just summarize them.

Current Events

This is a course focused on rapidly evolving technologies, and some of these developments will have bearing on course content. As such, I encourage you to stay up to date on current events (especially technology news) by reading a major daily newspaper, such as the *New York Times*, *Washington Post*, etc. Websites such as *Wired* and the *MIT Technology Review* are also useful resources for technology-related news. I reserve the right to circulate a short news article to be discussed at the start of the next class.

Course Policies

- **Course Website.** Available at (link). This includes an electronic form of this syllabus, links to all readings, and discussion forums for posting current events articles.
- **Email.** I can be reached at [email]. I try to respond to emails within 24 hours during the work week, but may be slower responding to emails sent late at night or on weekends.

- **Technology.** Please keep laptop and tablet use to a minimum. They should only be used to take notes or reference readings online. I expect everyone to stay engaged in the class discussion. Please silence your cell phone and do not take it out during class.
- **Late Assignments.** A half letter grade will be deducted for each day an assignment is late. I will not grant extensions except in case of emergencies.
- **Accommodations.** Any student with a disability that may affect their academic or personal well-being should reach out to me as soon as possible to discuss accommodations. You should also reach out to the Office of Disability Services ([link](#))
- **Honor Code.** Please do not plagiarize, and please abide by the university's honor code ([link](#)). When in doubt, cite your sources!

SCHEDULE

Introduction

- Podcast: The New Tech World Order, Council on Foreign Relations (2024),
<https://www.cfr.org/podcasts/new-tech-world-order>
- Belfer Center, Critical and Emerging Technologies Index (2025),
<https://www.belfercenter.org/critical-emerging-tech-index>. Explore the various charts on the dashboard.

I. Understanding International Order

What is International Order?

- Adam Tooze, "Everything You Know About Global Order is Wrong," *Foreign Policy* (2019),
<https://foreignpolicy.com/2019/01/30/everything-you-know-about-global-order-is-wrong/>
- Amitav Acharya, *Constructing Global Order* (2018), Introduction.
- John Ikenberry, *After Victory* (2001), Ch. 6.

Sources of International Order Stability

- Francine McKenzie, *Rebuilding the Postwar Order: Peace, Security and the UN System* (2023), Ch. 2.
- John Lewis Gaddis, "The Long Peace: Elements of Stability in the Postwar International System," *International Security* 10 no. 4 (1986): 99-142.

Sources of International Order Change

- Robert Gilpin, *War and Change in World Politics* (1986), Ch. 1.
- Stacie Goddard, “Embedded Revisionism: Networks, Institutions, and Challenges to World Order,” *International Organization* 72 no. 4 (2018), 763-97.
- Alister Miskimmon, Ben O’Loughlin, and Laura Roselle, *Forging the World: Strategic Narratives and International Relations* (2017), Ch. 11: Understanding International Order and Power Transition.

II. Emerging Technology and Its Effects

What is an emerging technology?

- Daniele Rotolo et al., “What is an emerging technology?” *Research Policy* 44 no. 10 (2015), 1827-1843.
- Eugene B. Skolnikoff, *The Elusive Transformation: Science, Technology, and the Evolution of International Politics* (1993), Chs. 1, 2, 6.

Innovation and International Politics

- Emily O. Goldman and Richard B. Andres, “Systemic effects of military innovation and diffusion,” *Security Studies* 8 no. 4 (1999), 79-125.
- Robert D. Atkinson, Understanding the US National Innovation System, *ITIF* (2020), <https://itif.org/publications/2020/11/02/understanding-us-national-innovation-system-2020>
- Eric Schmidt, “Innovation Power: Why Technology Will Define the Future of Geopolitics,” *Foreign Affairs* (2023), <https://www.foreignaffairs.com/united-states/eric-schmidt-innovation-power-technology-geopolitics>

Emerging Technology and War

- Stephen Peter Rosen, *Winning the Next War: Innovation and the Modern Military* (1991), Ch. 8
- Jacquelyn Schneider, “The capability/vulnerability paradox and military revolutions: Implications for computing, cyber, and the onset of war,” *Journal of Strategic Studies* 42 no. 6 (2019), 841-863.
- Vipin Narang and Heather Williams, “Thermonuclear Twitter?” in *The Fragile Balance of Terror* (2023), Pgs. 63-89.

Emerging Technology and Economic Orders

- Edward D. Mansfield and Nita Rudra, “Embedded Liberalism in the Digital Era,” *International Organization* 75 no. 2 (2021): 558-585.

- Henry Farrell and Abraham Newman, "The Weaponized World Economy," *Foreign Affairs* (2025), <https://www.foreignaffairs.com/united-states/weaponized-world-economy-farrell-newman>
- Pinelopi K. Goldberg and Tristan Reed, "Is the Global Economy Deglobalizing? If so, why? And what is next?" *Brookings Papers on Economic Activity* (2023), 347-393.

Technology and Democracy: Social Media and Global Order

- Karen Hao, "How Facebook got addicted to spreading misinformation," *MIT Technology Review* (2021), <https://www.technologyreview.com/2021/03/11/1020600/facebook-responsible-ai-misinformation/>
- Samantha Bradshaw and Philip N. Howard, *The Global Disinformation Order* (2019), <https://demtech.ox.ac.uk/wp-content/uploads/sites/12/2019/09/CyberTroop-Report19.pdf>
- Guy Schleffer and Benjamin Miller, "The Political Effects of Social Media Platforms on Different Regime Types," *Texas National Security Review* (Summer 2021), 77-103.
- Ludwig Siegeler, "Can Technology Plan Economies and Destroy Democracy?," *The Economist* (2019), <https://www.economist.com/christmas-specials/2019/12/18/can-technology-plan-economies-and-destroy-democracy>.

Emerging Technology and International Norms

- Global Digital Compact, United Nations (2023), <https://www.un.org/sites/un2.un.org/files/our-common-agenda-policy-brief-gobal-digi-compact-en.pdf>
- Carlos Correa et al., "The Global Digital Compact: Opportunities and Challenges for Developing Countries in a Fragmented Digital Space," South Centre (2023), <https://www.econstor.eu/bitstream/10419/283482/1/1876514086.pdf>
- Jeffrey S. Lantis, *Arms and Influence: US Technology Innovations and the Evolution of International Security Norms* (2016), Ch. 5.
- Gil Baram and Harel Menashri, "Why can't we be friends? Challenges to international cyberwarfare cooperation efforts and the way ahead," *Comparative Strategy* 38 no. 2 (2019), 88-97.

Ethics of Emerging Technologies

- P.W. Singer, "The Ethics of Killer Applications: Why is it so hard to talk about morality when it comes to new military technology?" *Journal of Military Ethics* 9 no. 4 (2010), 299-312.

- Nnenna Ifeanyi- Ajufo, “Technology Dependence and Racial Inequality,” Harvard Kennedy School (2023), <https://www.hks.harvard.edu/centers/carr/publications/technology-dependence-racial-inequality>
- Ash Carter, “The Moral Dimension of AI-Assisted Decision-Making: Some Practical Perspectives from the Front Lines,” *Daedalus* 151 no. 2 (2022), 299-308.

III. Emerging Technology Today

Artificial Intelligence I: Competition

- Michael C. Horowitz, “Artificial Intelligence, International Competition, and the Balance of Power,” *Texas National Security Review* 1 no. 3 (2018). 36-57.
- Matan Chorov and Joel Predd, “America Should Assume the Worst About AI,” *Foreign Affairs* (2025), <https://www.foreignaffairs.com/united-states/artificial-intelligence-geopolitics-worst-about-ai>.
- Remco Zwetsloot, Helen Toner, and Jeffrey Ding, “Beyond the AI Arms Race: America, China, and the Dangers of Zero-Sum Thinking,” *Foreign Affairs* (2018), <https://www.foreignaffairs.com/reviews/review-essay/2018-11-16/beyond-ai-arms-race>.

Artificial Intelligence II: The Future of Governance

- Amelia Lester, “What are AI’s Rules of the Road?” *Foreign Policy* (2024), <https://foreignpolicy.com/2024/12/25/ai-artificial-intelligence-regulation-technology-eu-us-government-geopolitics/>
- Julien Crockett, “How to Raise Your Artificial Intelligence: A Conversation with Alison Gopnik and Melanie Mitchell,” *Los Angeles Review of Books* (2024), <https://lareviewofbooks.org/article/how-to-raise-your-artificial-intelligence-a-conversation-with-alison-gopnik-and-melanie-mitchell/>
- Emma Klein and Stewart Patrick, “Envisioning a global regime complex to govern artificial intelligence,” Carnegie Endowment for International Peace (2024), <https://carnegieendowment.org/research/2024/03/envisioning-a-global-regime-complex-to-govern-artificial-intelligence?lang=en>.
- Ian Bremmer and Mustafa Suleyman, “The AI Power Paradox,” *Foreign Affairs* (2023), <https://www.foreignaffairs.com/world/artificial-intelligence-power-paradox>

Semiconductors: Driving Future Innovation

- Chris Miller, *Chip Wars: The Fight for the World's Most Critical Technology* (2022), Pgs. 3-11; 163-176; 269-344.
- Isabel Hilton, “Taiwan Makes the Majority of the World’s Computer Chips. Now It’s Running Out of Electricity,” Wired (2024), <https://www.wired.com/story/taiwan-makes-the-majority-of-the-worlds-computer-chips-now-its-running-out-of-electricity/>

Killer Robots? Drones, Hypersonics, and Disruptive Military Technology

- Paul Scharre, *Army of None: Autonomous Weapons and the Future of War* (2019), Ch. 1, 3, 16.
- Heather Venable and Clarence Abercrombie, “Muting the Hype Over Hypersonics: The Offense-Defense Balance in Historical Perspective,” War on the Rocks (2019), <https://warontherocks.com/2019/05/muting-the-hype-over-hypersonics-the-offense-defense-balance-in-historical-perspective/>.
- Antonio Calcara et al, “Why Drones Have Not Revolutionized War: The Enduring Hider-Finder Competition in Air Warfare,” *International Security* 46 no. 4 (2022), 130-171 (Focus on the Syria case).

Defining Cyber Security Today

- Erica D. Lonergan and Shawn W. Lonergan, *Escalation Dynamics in Cyberspace* (2023), Ch 1, 7.
- Brian M. Mazanec, “Why International Order in Cyberspace is Not Inevitable,” *Strategic Studies Quarterly* 9 no. 2 (2015), 78-98.
- Lucas Kello, *The Virtual Weapon and International Order* (2017), 195-228.

Quantum Technology: New Threat or Nothing New?

- Jon R. Lindsay, “Demystifying the Quantum Threat: Institutions, Infrastructure, and the Intelligence Advantage,” *Security Studies* 20 no. 2 (2020), 335-361.
- Frank L. Smith, “Quantum technology hype and national security,” *Security Dialogue* 51 no. 5 (2020), 499-516.
- Martin Makaryan, “Security in the coming age of quantum,” Inkstick Media (2025), <https://inkstickmedia.com/security-in-the-coming-age-of-quantum/>.

IV. Key Actors in Emerging Technologies

China and the Information Economy

- Anu Bradford, *Digital Empires: The Global Battle to Regulate Technology* (2023), Ch. 2, 8.
- Eddie Yang and Margaret E. Roberts, “The Authoritarian Data Problem,” *Journal of Democracy* 34 no. 4 (2023), 141-150.
- Justin Sherman, “Reframing the US-China AI Arms Race,” *New America* (2019), <https://www.newamerica.org/cybersecurity-initiative/reports/essay-reframing-the-us-china-ai-arms-race/>

India, Brazil, and Rising Challengers

- Eugenio V. Garcia, “Technology for whom and what? A Global South view of tech diplomacy,” *Global Policy* (2025), 1-9.
- Prashanth Parameswaran, “Rising Global South Discontent Amid Strategic Competition in the Indo-Pacific and Beyond,” Wilson Center (2024), <https://www.wilsoncenter.org/article/rising-global-south-discontent-amid-strategic-competition-indo-pacific-and-beyond>.
- Saeme Kim, “Roles and Limitations of Middle Powers in Shaping Global Cyber Governance,” *Italian Journal of International Affairs* 57 no. 3 (2022), 31-47.

Europe and the Future of Digital Regulation

- Tom Wheeler, “Crossing the regulatory Rubicon: The future of digital regulation is being defined in Europe,” Brookings (2024), <https://www.brookings.edu/articles/crossing-the-regulatory-rubicon-the-future-of-digital-regulation-is-being-defined-in-europe/>.
- Thibault Langer et al, “Inside the EU’s divisions on how to go after Big Tech,” Politico (2020), <https://www.politico.eu/article/margrethe-vestager-thierry-breton-europe-big-tech-regulation-digital-services-markets-act/>.
- Anu Bradford, *Digital Empires* (2023), Ch. 3, 9.

“Big Tech” and the Future of International Order

- Yuval Noah Harari, “Why Technology Favors Tyranny,” The Atlantic (2018), <https://www.theatlantic.com/magazine/archive/2018/10/yuval-noah-harari-technology-tyranny/568330/>.

- Joseph Jarnecki and Gareth Mott, "With Great Power Comes Great Responsibility: How to Make Big Tech Accountable for Its Global Influence," War on the Rocks (2025),
<https://warontherocks.com/2025/02/with-great-power-comes-great-responsibility-how-to-make-big-tech-accountable-for-its-global-influence/>.
- Swati Srivastava, "Algorithmic Governance and the International Politics of Big Tech," *Perspectives on Politics* 21 no. 3 (2023), 989-1000.