INTA 2040 Science, Technology, and International Affairs

Fall 2025

Instructional Center 109

Tuesday & Thursday 8:00 – 9:15 AM

Instructor: Sanghyun Han (shhan@gatech.edu)

Office: Habersham G14

Office Hours: TR 9:30 – 10:30 PM or by appointment

This is a Core IMPACTS course that is part of the <u>Social Sciences</u> area.

Core IMPACTS refers to the core curriculum, which provides students with essential knowledge in foundational academic areas. This course will help students master course content, and support students' broad academic and career goals.

This course should direct students toward a broad Orienting Question:

· How do I understand human experiences and connections?

Completion of this course should enable students to meet the following <u>Learning</u> <u>Outcome</u>:

· Students will effectively analyze the complexity of human behavior, and how historical, economic, political, social, or geographic relationships develop, persist, or change.

Course content, activities, and exercises in this course should help students develop the following <u>Career-Ready Competencies</u>:

- · Intercultural Competence
- · Perspective-Taking
- · Persuasion

Course Description

The recent advancements in semiconductor technology, particularly at the nanometer scale, have revolutionized our ability to process vast amounts of data and information within seconds. While such innovations in science and technology represent significant progress, their novelty may diminish over time compared to their initial development period. For example, the railroad in the 1800s, initially considered an "emerging" technology due to its profound impact on the economy, politics, and society, is no longer considered emerging compared to more recent advancements like nanotechnology. However, it still offers valuable lessons on understanding the relationship between science and technology (S&T) and International Relations (IR), the focus of this course.

This course adopts an interdisciplinary approach by integrating various S&T developments with IR. It challenges conventional understandings by placing S&T at the core of IR, which seeks theoretical explanations for international phenomena amidst the complexities of different actors, units, and effects within the realm of Political Science. Specifically, the course delves into the fundamental interplay between S&T and IR, examining how S&T influences IR and vice versa. Through this exploration, students gain insights into the dynamic relationship between these two domains and their implications for global affairs.

Through a comprehensive exploration of these two interconnected components and active learning, students will gain insights into the intricate dynamics of IR and understand the essential role each element plays in shaping global policies and interactions.

Learning Objectives

By the end of this course, students will be able to:

- Identify the relationship and connection between S&T and IR.
- Illustrate the emergence and divergence of S&T and IR across time and space, using an interdisciplinary approach.
- Apply key IR concepts and theories to analyze social and political phenomena relevant to S&T.
- Demonstrate critical thinking, analytical research, and public presentation skills.

Course Materials

Most readings for this course are available online through the Georgia Tech Library or are open access. You can find all course materials on CANVAS. Students are not

required to purchase any materials for this course. Reading must be completed before each class. Students are responsible for all assigned readings, even if the material is not explicitly discussed in class.

Assessment Plan

Your final grade will be assigned as a letter grade according to the following scale:

- A 90-100% B 80-89% C 70-79% D 60-69% F 0-59%
- * <u>Grades Are Earned</u>: Grades reflect the quality of work submitted; they are not based on a default 100-point system with deductions. For example, if you receive a 91, you earned 91 points, not "lost" 9.

Incompletes (I): Students may be assigned an "incomplete" when they were doing satisfactory work, but for nonacademic reasons beyond their control and deemed acceptable by the instructor, the student was unable to meet the full requirements of the course.

Withdrawals (W): Withdrawals from individual courses without penalty will not be permitted after 60 percent of the term has been completed, as specified by the official calendar, except in cases of hardship.

Attendance (10%)

This course expects students to attend an in-person environment and interactions on time unless there is an excuse or emergency noticed to or approved by the instructor. The substantive late attendance will also be marked and not be treated as full attendance.

Participation (10%)

This course contains components of lecture and discussion that require students to read all compulsory readings and materials. It also expects students to actively participate and engage during each lecture by being familiarized with the course materials. When discussed, we are less concerned with "right" or "wrong" answers than we are with thoughtful contributions that follow the discussion and either add to the debate or move it in a new direction.

Weekly Discussion Post (15%)

This assignment asks you to submit your thoughts and questions at the CANVAS discussion posts and leave a comment for a peer. Per week, students should post one discussion post and one comment to a peer's post. Each post and comment must be at least 100 and 50 words in length, respectively.

Option A)

- Leave a discussion post for Tuesday class (Due by 12:00 PM on Monday)
- Leave a comment on a post for Thursday class (Due by 06:00 PM on Wednesday)

Option B)

- Leave a comment on a post for Tuesday class (Due by 06:00 PM on Monday)
- Leave a discussion post for Thursday class (Due by 12:00 PM on Wednesday)

S&T Presentation (20%)

This group presentation will explore one of the selected technologies by applying various IR theories. It will begin with an overview of the historical context of the chosen technology, outlining its expected development trajectory. The focus will then shift to how current developments and anticipated applications of the technology impact international relations. Additionally, the presentation will identify which theoretical frameworks are most useful in explaining the technology's role and influence in global politics, providing well-reasoned justifications for these choices.

Research Project (45%)

One of the primary objectives of this course is to develop students' skills in communicating and crafting their own research. Each student or a group of students is required to present outcomes based on the project and is asked to submit a proposal and progress reports before the final presentation. This assignment aims to foster logical thinking and analytical writing skills as well as communication practices over a relatively long period (an entire semester) on any topic relevant to the course.

- Research Proposal (10%)

The research proposal serves as a foundation for the final outcome, helping students identify their research focus throughout the semester and analyze the phenomenon of interest.

- 3 Research Progress Reports (15%; 5% for each)

The research progress reports help students adhere to the timeline for the final outcome and allow the instructor to gauge their progress. These submissions are automatically graded with comments from the instructor to facilitate the research outcome. The follow-up sessions or emails can be requested to students based on the instructor's decision. Reports should be submitted as written documents via CANVAS on designated dates.

Research Presentation (20%)

The presentation aims to introduce students' research project to their peers and receive feedback. Through this activity, students have the opportunity to practice communicating their research concisely and logically, and to address questions from their peers. The assessment will be based on how well students present their research with logical reasoning (research question, argument, methodology, evidence, and implications) and how they answer questions from the audience. Presentation slides should be uploaded to Canvas before the final presentation.

Note: All written submissions will use Times New Roman 12, double space between sentences, 1" margins all around, and include the page number in the center of the footer. The required reference style is the Chicago Style.

Extra-credit

Upon consultation with and approval from the instructor, students may earn extra credit by participating in public talks. After attending, please write a reflective summary (maximum 500 words) and submit it via email within a week of the talk. *Extra-credit may not exceed four submissions*.

Grade Change Policy

Legitimate requests for grade changes are welcome and encouraged. You should, however, resist the temptation to file a frivolous request just hoping to "get lucky". Approach a grade change request as if arguing a legal case: you should have strong and convincing arguments and evidence to support your request. Be aware that appeals to the practices of other professors do not constitute a good argument or evidence. Note also that grade changes requests can result in re-grades either up or down (or left unchanged). That is, if the greater scrutiny demanded by a grade change request reveals your assignment to deserve a lower grade than previously awarded, and then the lower grade will be assigned.

Policies & Guidelines

Absence / Late

In-person student attendance is mandatory, unless there is a valid excuse or an emergency that is notified to the instructor with appropriate documentation. If necessary, substantial missing of the lecture due to late attendance will be also penalized.

Late Assignments

Late assignments will be penalized initially by one letter grade unless the late assignments are notified to and discussed with the instructor. Please submit your assignments with the provided instructions in a timely manner.

Academic Integrity

Georgia Tech aims to cultivate a community based on trust, academic integrity, and honor. Students are expected to act according to the highest ethical standards. For information Georgia Academic Honor please on Tech's Code, visit http://www.catalog.gatech.edu/policies/honor-code/ or http://www.catalog.gatech.edu/rules/18/. Any student suspected of cheating or plagiarizing on a quiz, exam, or assignment will be reported to the Office of Student Integrity, who will investigate the incident and identify the appropriate penalty for violations.

Course Policy on Large Language Models (i.e., Chat GPT)

Although this course appreciates your creative thinking and novel writing based on your own learning and understanding, students <u>can use LLMs or other AI software</u> to assist, but not to write their work. <u>Please consult with the instructor</u> if you decide to use them for any assignments. This also includes the case of using "Grammarly" unless it is used for its original purpose, checking grammar. If you get approval from the instructor to use these AI assistant tools in your assignments, you must make appropriate indications that you used such tools. This may include appropriate citation(s) on the part(s) that AI software is used in the main body, and <u>an appendix that contains A) a specific name of the tool, B) the prompt that you used, and C) the original outcome that such tool generated</u>. No such indication is considered original and authentic production by students, and using AI tools without complying with this policy (i.e., no citation of such use but indication of using AI tools by an inspection)

will be considered a violation of Georgia Tech's Code of Academic Integrity and severe plagiarism, which may result in a report to the Office of Student Integrity.

Accommodations for Students with Disabilities

If you are a student with learning needs that require special accommodation, contact the Office of Disability Services at 404-894-2563 or http://disabilityservices.gatech.edu/, as soon as possible, to make an appointment to discuss your special needs and to obtain an accommodations letter. Please also e-mail me as soon as possible in order to set up a time to discuss your learning needs.

Mental Health and Wellness Resources

If you or someone you know needs assistance, you are encouraged to contact the Center for Mental Health Care & Resources at 404.894.2575 (or 404.894.2575) or visit https://mentalhealth.gatech.edu. Georgia Tech has several resources for a student seeking mental health services (https://mentalhealth.gatech.edu/about/schedulingappointment) or crisis support (https://mentalhealth.gatech.edu/seeking-help/gethelp-now). Students experiencing an immediate life-threatening emergency on campus, call the Georgia Tech Campus Police at 404.894.2500. For more resources on managing stress, anxiety, relationships, sleep, please etc., https://mentalhealth.gatech.edu/mental-health-resources/self-help for a list of free online resources compiled by the Center for Mental Health Care and Resources.

Student-Faculty Expectations Agreement

At Georgia Tech we believe that it is important to strive for an atmosphere of mutual respect, acknowledgement, and responsibility between faculty members and the student body. See http://www.catalog.gatech.edu/rules/22/ for an articulation of some basic expectation that you can have of me and that I have of you. In the end, simple respect for knowledge, hard work, and cordial interactions will help build the environment we seek. Therefore, I encourage you to remain committed to the ideals of Georgia Tech while in this class.

Course Schedule

♦ = Mandatory | - = Optional

Part I. Introduction

August 19th: Course Introduction

August 21st: Why do we study S&T and IR?

Guest Lecture

August 26th: Thinking About Technology

- ◆ Eugene Skolnikoff. 1993. "1. The Setting." In *The Elusive Transformation: Science, Technology, and the Evolution of International Politics*. Princeton: Princeton University Press, 3-15.
- Geoffrey Herrera. 2006. "Thinking About Technology and International Politics."
 In *Technology and International Transformation*. New York: State University of New York Press, 1-12. (Chapter 1)
- Askar Akaev & Vladimir Pantin. 2014. "Technological Innovations and Future Shifts in International Politics." *International Studies Quarterly*, 58(4): 867–872.
- Richard Samuels. 1994. "The Strategic Relationship of the Military and Civilian Economics." In *"Rich Nation, Strong Army"*. Ithaca: Cornell University Press, 1-32. (Chapter 1)

August 28th: What Is Technology?

- Daniel Drezner. 2019. "Technological Change and International Relations." International Relations, 33(2): 286-303.
- ◆ Jeffrey Ding and Allan Dafoe. 2021. "The Logic of Strategic Assets: From oil to Al." *Security Studies*, 30(2): 182-212.
- Jane Vaynman & Tristan Volpe. 2023. "Dual Use Deception: How Technology Shapes Cooperation in International Relations." *International Organization*, 77(3): 599-612.

Part II. Fundamental Understandings of IR and S&T

Model 1: IR Theories ("-isms") on S&T

September 2nd: Realism

- ◆ Geoffrey Herrera. 2004. "Inventing the Railroad and Rifle Revolution: Information, Military Innovation and the Rise of Germany." *Journal of Strategic Studies*, 27(2): 243–271.
- ◆ Tristan Volpe. 2019. "Dual-Use Distinguishability: How 3D-Printing Shapes the Security Dilemma for Nuclear Programs." *Journal of Strategic Studies*, 42(6):

814-840.

September 4th: Liberalism

- ◆ Edward Mansfield & Nita Rudra. 2021. "Embedded Liberalism in the Digital Era." *International Organization*, 75(2): 558-585.
- ♦ Joscha Abels. 2024. "Private infrastructure in geopolitical conflicts: the case of Starlink and the war in Ukraine." *European Journal of International Relations*, 30(4): 842-866.

September 9th: Constructivism

- ◆ Daniel McCarthy. 2011. "Open Networks and the Open Door: American Foreign Policy and the Narration of the Internet." *Foreign Policy Analysis*, 7(1): 89-111.
- ♦ Bentley Allan. 2017. "Producing the climate: States, scientists, and the constitution of global governance objects." *International Organization*, 71(1): 131-162.

September 11th: Alternative & Wrap-Up

[Research Project Proposal Due by 9/14]

- ◆ Geoffrey Herrera. 2006. "International Systems Theory, Technology, and Transformation." In *Technology and International Transformation*. New York: State University of New York Press, 13–34. (Chapter 2)
- ♦ Stefan Fritsch. 2011. "Technology and Global Affairs." *International Studies Perspectives*, 12(1): 27–45.

Model 2: Micro-approach on S&T

September 16th: Structure

- Mark Talyor. 2016. "Creative Insecurity—Olson's Nemesis." In *The Politics of Innovation*. New York: Oxford University Press, 215-242. (Chapter 8)
- ◆ Helen Milner and Sondre Ulvund Solstad. 2021. "Technological Change and the International System." *World Politics*, 73(3): 545-582.

September 18th: Organization

- ◆ Daniel Drezner. 2001. "State structure, technological leadership and the maintenance of hegemony." *Review of International Studies*, 27(1): 3-25.
- Erica Lonergan. 2024. "Emerging Technology and the Cult of the Offensive." Contemporary Security Policy, 45(3): 459–493.
- Andrew Kennedy. 2015. "Slouching Tiger, Roaring Dragon: Comparing India and China as Late Innovators." Review of International Political Economy, 23(1): 65–92.

- Nadiya Kostyuk. 2025. "Beyond Threats: How Allies and Bureaucratic Competition Shape the Initial Development of Military Cyber Capabilities." *International Interactions*. 1–28.

September 23rd: International Regime

- ◆ Steven Levy. 1975. "INTELSAT: Technology, Politics and the Transformation of a Regime." *International Organization*, 29(3): 655-680.
- ◆ Daniel Drezner. 2004. "The Global Governance of the Internet: Bringing the State Back In." *Political Science Quarterly*, 119(3): 477–498.

September 25th: Standard

- ♦ Walter Mattli & Tim Büthe. 2003. "Setting international standards: technological rationality or primacy of power?." *World Politics*, 56(1): 1-42.
- ♦ Nicholas Zúñiga, Saheli Datta Burton, Filippo Blancato, Madeline Carr. 2024. "The geopolitics of technology standards: historical context for US, EU and Chinese approaches." *International Affairs*, 100(4): 1635–1652.
- Stephen Krasner. 1991. "Global Communications and National Power: Life on the Pareto Frontier." *World Politics*, 43(3): 336-366.

September 30th: Private Sector

- ◆ Swati Srivastava. 2023. "Algorithmic governance and the international politics of Big Tech." *Perspectives on politics*, 21(3): 989-1000.
- ◆ Dennis Broeders, Arun Sukumar, Monica Kello, and Lise Andersen. 2025. "Digital Corporate Autonomy: Geo-Economics and Corporate Agency in Conflict and Competition." Review of International Political Economy, 32(4): 1189–1213.
- Guillaume Beaumier & Abraham Newman. 2024. "When Serving the Public Interest Generates Private Gains: Private Actor Governance and Two-Sided Digital Markets." *Perspectives on Politics*, FirstView: 1-18.
- Cecilia Rikap. 2024. "Varieties of Corporate Innovation Systems and Their Interplay with Global and National Systems: Amazon, Facebook, Google and Microsoft's Strategies to Produce and Appropriate Artificial Intelligence." Review of International Political Economy, 31(6): 1735–1763.
- Ling Chen & Miles Evers. 2023. "Wars without gun smoke': Global supply chains, power transitions, and economic statecraft." *International Security*, 48(2): 164-204.

October 2nd: Interdependence

[Research Progress Report 1 Due by 10/5]

- ♦ Henry Farrell & Abraham Newman. 2019. "Weaponized Interdependence: How Global Economic Networks Shape State Coercion." *International Security*, 44(1): 42–79.
- ♦ Vinícius Rodrigues Vieira. 2023. "The Limits of Weaponised Interdependence

- after the Russian War against Ukraine." *Contemporary Security Policy*, 44(4): 642–660.
- Harry Oppenheimer. 2025. "Digital Interdependence and Power Politics." *British Journal of Political Science*, FirstView.

October 7th: How to Conduct Research (*Asynchronous Lecture)

Please watch the posted video on the CANVAS.

October 9th: Technical Leadership

- ◆ Jeffrey Ding. 2024. "The Rise and Fall of Technological Leadership: General-Purpose Technology Diffusion and Economic Power Transitions." *International Studies Quarterly*, 68(2).
- ◆ Andrew Kennedy & Darren Lim. 2018. "The innovation imperative: technology and US-China rivalry in the twenty-first century." *International Affairs*, 94(3): 553-572.

Part III. Application: Case Study of Technologies

Case 1: Artificial Intelligence

October 14th: Introduction

- ◆ Benjamin Jensen, Christopher Whyte, and Scott Cuomo. 2020. "Algorithms at war: the promise, peril, and limits of artificial intelligence." *International Studies Review*, 22(3): 526-550.
- ♦ Michael Horowitz & Erik Lin-Greenberg. 2022. "Algorithms and Influence Artificial Intelligence and Crisis Decision-Making." *International Studies Quarterly*, 66(4): sqac069.
- Avi Goldfarb & Jon Lindsay. "Prediction and judgment: Why artificial intelligence increases the importance of humans in war." *International Security*, 46(3): 7-50.

October 16th: Data

- ♦ Ben Buchanan & Andrew Imbrie. 2022. "Data." In *The New Fire*. Cambridge: The MIT Press, 13-31. (Chapter 1)
- ♦ Vili Lehdonvirta, Boxi Wu, and Zoe Hawkins. 2025. "Weaponised interdependence in a bipolar world: how economic forces and security interests shape the global reach of US and Chinese cloud data centres." *Review of International Political Economy*. 1-26.
- Aynne Kokas. 2023. "The Data Trafficking Dilemma." In *Trafficking Data: How China Is Winning the Battle for Digital Sovereignty*. New York: Oxford University Press, 1-21. (Chapter 1)

October 21st: Societal Impact

- ♦ Nicole Wu. 2023. "`Restrict foreigners, not robots': Partisan responses to automation threat." *Economics & Politics*, 35(2): 505–528.
- ◆ Lucas Pinheiro. 2025. "Protocols of Production: The Absent Factories of Digital Capitalism." *American Political Science Review*, 119(3): 1085-1098.
- David Autor. 2015. "Why Are There Still So Many Jobs? The History and Future of Workplace Automation." *Journal of Economic Perspective*, 29(3): 3-30.
- Aina Gallego & Thomas Kurer. 2022. "Automation, Digitalization, and Artificial Intelligence in the Workplace: Implications for Political Behavior." *Annual Review of Political Science*, 25: 463–484.

Case 2: Printing Press

October 23rd

[Research Progress Report 2 Due by 10/26]

- ◆ Ronald Deibert. 1997. "Print and the Medieval to Modern World Order Transformation: Distributional Changes." In *Parchment, Printing, and Hypermedia*. New York: Columbia University Press, 67-93. (Chapter 2)
- ◆ Peter Burke. 2000. "Selling Knowledge: The Market and the Press." In *A Social History of Knowledge: From Gutenberg to Diderot*. Cambridge: Polity Press, 149-176. (Chapter 7).

Case 3: Railroad

October 28th

- ◆ Jon Schmid & Jonathan Huang. 2017. "State Adoption of Transformative Technology: Early Railroad Adoption in China and Japan." *International Studies Quarterly*, 61(3): 570-583.
- ◆ Alexandra Cermeño, Kerstin Enflo, and Johannes Lindvall. 2022. "Railroads and Reform: How Trains Strengthened the Nation State." *British Journal of Political Science*, 52. 715-735.

Case 4: Telegraph & Submarine Cable

October 30th

- ◆ Daniel Headrick. 1991. "Crisis at the Turn of the Century, 1895–1901." & "The Great Powers and the Cable Crisis, 1900–1913". In *The Invisible Weapon*. New York: Oxford University Press, Chapters 5 & 6.
- ◆ Christian Bueger & Tobias Liebetrau. 2021. "Protecting hidden infrastructure: The security politics of the global submarine data cable network." *Contemporary Security Policy*, 42(3): 391-413.

Case 5: Nuclear Revolution

November 4th

- ♦ Robert Jervis. 1986. "The Nuclear Revolution and the Common Defense." *Political Science Quarterly*, 101(5): 689-703.
- ◆ Jacquelyn Schneider, Benjamin Schechter, and Rachael Shaffer. 2023. "Hacking Nuclear Stability: Wargaming Technology, Uncertainty, and Escalation." *International Organization*, 77(3): 633–667.
- Robert Jervis. 2020. "Author Response: Reflections on 'The Meaning of the Nuclear Revolution,' 30 Years Later." *Texas National Security Review*.

Case 6: Semiconductor

November 6th

- ◆ Guillaume Beaumier & Madison Cartwright. 2024. "Cross-network weaponization in the semiconductor supply chain." *International Studies Quarterly*, 68(1): sqae003.
- ◆ Anton Malkin & Tian He. 2024. "The geoeconomics of global semiconductor value chains: extraterritoriality and the US-China technology rivalry." *Review of International Political Economy*, 31(2): 674-699.

Case 7: Cyber & Internet

November 11th: Introduction

- ◆ Brandon Valeriano & Ryan Maness. 2018. "International relations theory and cyber security." *The Oxford Handbook of International Political Theory*.
- ♦ Jason Healey. 2024. "Cyber Effects in Warfare: Categorizing the Where, What, and Why." *Texas National Security Review*, 7(4).
- Myriam Dunn Cavelty & Andreas Wenger. 2020. "Cyber security meets security politics: Complex technology, fragmented politics, and networked science." *Contemporary Security Policy*, 41(1): 5-32.

November 13th: State Influence in Cyberspace

- ◆ Loqman Salamatian, Frédérick Douzet, Kavé Salamatian and Kévin Limonier. 2021. "The geopolitics behind the routes data travel: a case study of Iran." Journal of Cybersecurity, 7(1).
- ♦ William Hobbs & Margaret Roberts. 2018. "How Sudden Censorship Can Increase Access to Information." *American Political Science Review*, 112(3): 621–636.

- Daniëlle Flonk. 2021. "Emerging illiberal norms: Russia and China as promoters of internet content control." *International Affairs*, 97(6): 1925-1944.
- Fan Liang, Vishnupriya Das, Nadiya Kostyuk, and Muzammil Hussain. 2018. "Constructing a data-driven society: China's social credit system as a state surveillance infrastructure." *Policy & Internet*, 10(4): 415-453.
- Meicen Sun. 2024. "Damocles's Switchboard: Information Externalities and the Autocratic Logic of Internet Control." *International Organization*, 78(3): 427-459.

November 18th: Cyberattack

[Research Progress Report 3 Due by 11/16]

- ◆ Sarah Kreps & Jacquelyn Schneider. 2019. "Escalation firebreaks in the cyber, conventional, and nuclear domains: moving beyond effects-based logics." *Journal of Cybersecurity*, 5(1): tyz007.
- ◆ Ryan Shandler & Miguel Alberto Gomez. 2022. "The Hidden Threat of Cyber-Attacks Undermining Public Confidence in Government." Journal of Information Technology & Politics, 20(4): 359–74.
- Ryan Shandler. 2025. "Cyber Conflict & Domestic Audience Costs." *International Interactions*, 1–25.
- Rachel Hulvey & Beth Simmons. 2025. "Borders in Cyberspace: Digital Sovereignty Through a Bordering Lens," *International Studies Quarterly*, 69(3): sqaf047.

Case 8: Autonomous Weapon System (Drone & Killer Robot)

November 20th

- ♦ Jacquelyn Schneider & Julia Macdonald. 2023. "Looking Back to Look Forward: Autonomous Systems, Military Revolutions, and the Importance of Cost." *Journal of Strategic Studies*, 47(2): 162–84.
- ◆ Erik Gartzke. 2019. "Blood and Robots: How Remotely Piloted Vehicles and Related Technologies Affect the Politics of Violence." *Journal of Strategic Studies*, 44(7): 983–1013.
- Erik Lin-Greenberg. 2023. "Evaluating escalation: Conceptualizing escalation in an era of emerging military technologies." *The Journal of Politics*, 85(3): 1151-1155.
- Michael Horowitz. 2016. "Public Opinion and the Politics of the Killer Robots Debate." *Research and Politics*, 3(1).

Case 9: Satellite Communication

November 25th: Space

- Phillip Lipscy. 2017. "International Telecommunications Satellite Organization."
 In Renegotiating the World Order: Institutional Change in International Relations. Cambridge: Cambridge University Press, 156-183. (Chapter 6)
- ◆ Aaron Bateman. 2024. "The Weakest Link: The Vulnerability of U.S. and Allied Global Information Networks in the Nuclear Age." *Journal of Strategic Studies*, 48(1): 156–85.
- Aaron Bateman. 2023. "Information Security in the Space Age: Britain's Skynet Satellite Communications Program and the Evolution of Modern Command and Control Networks." *Journal of Strategic Studies*, 47(1): 5–28.

Part IV. Conclusion

November 25th: Future?

- ♦ Mark Milley & Eric Schmidt. 2024, "America Isn't Ready for the Wars of the Future." *Foreign Affairs*, September/October.
- Andrea Gilli &Mauro Gilli. 2018. "Why China has not caught up yet: militarytechnological superiority and the limits of imitation, reverse engineering, and cyber espionage." *International Security*, 43(3): 149-170.
- ◆ Eugene Gholz & Harvey Sapolsky. 2021. "The defense innovation machine: Why the US will remain on the cutting edge." *Journal of Strategic Studies*, 44(6): 854-872.

November 27th: THANKSGIVING BREAK

[Presentation Slide Due by 12/1]

December 2nd: Research Project Presentation (1)

December 4th: Research Project Presentation (2)