

HIST 30605
Technology and War in US History
Tuesdays and Thursdays 4:30-5:45 p.m.



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Course Description:

War has been a central component of U.S. statecraft from the war of independence through to the present day. This class examines the matter of war with a particular emphasis on the historical relationship between science, technology, and warfare. We will consider not only what weapons were deployed on the battlefield but the scientific discoveries and political decisions that led to the development of those weapons of war, as well as the ways in which technological changes altered the definition of what constituted the battlefield. While this course will begin in the seventeenth century, we will spend most of the class focused on developments in the twentieth century, as well as the emerging trends already playing out in the twenty-first century. Through exploring the relationship between science, technology, and warfare this class will push back on deterministic narratives around technology to highlight the human creators, institutions, users of military technologies, as well as the victims of those technologies. Ultimately this class focuses less on the “what” of war technologies, and more on the why and how.

Required Texts:

You do not need to purchase any books for this class. All assigned readings will be available either as pdfs/links on Brightspace, or are available as ebooks through the Purdue Library website. To find the readings go to the “Content” tab on the Brightspace page for the class, and click on the “Readings” tab. Articles are listed in alphabetical order by the author’s last name. If at any point, for whatever reason, you are having trouble finding/accessing a reading—please let me know.

Learning Outcomes:

By the end of the semester, students will be able to:

1. Explain the connections between war and techno-science, with an understanding of military technology not only in terms of its deployment on battlefields but in terms of its impacts on society more broadly.
2. Discuss the development of technology in a non-deterministic fashion, recognizing historical contingencies as well as the role that people and institutions have played in the history of technological development.
3. Make sense of primary sources in a variety of formats and from a range of time periods, both in terms of how to analyze primary sources, and in terms of understanding how historians make use of primary sources.
4. Analyze historical scholarship and be able to identify arguments, contributions to the field, and the way scholars make use of sources.
5. Understand core concepts from the history of technology (including technological determinism, affordances, technological systems, and others), and recognize the debates around these concepts.
6. Recognize the current state of military technologies while appreciating the historical forces that have undergirded their emergence.

Course Assignments

Primary Source Responses – 20% (four responses, 5% each)

Reading Quizzes – 20% (four quizzes, 5% each)

Midterm – 20%

Final Exam – 25%

Attendance – 10%

Final Response – 5% (due by the end of the semester)

Primary Source Responses – Dates Vary – four responses, 5% each, 5% total

Throughout this course we will be paying attention to primary sources, both in terms of how they are used in the articles we read, and by looking at these sources ourselves. Throughout the syllabus you will find numerous items listed as “primary sources,” while you are expected to read/watch all of these, you are responsible for picking and writing responses to four of them. You get to pick which four; however, at least two of them have to be from before the midterm,

and at least two have to be from after the midterm (any primary sources from the first and/or last week of the semester may not be picked). For each of these, your response should consist of two short paragraphs: in the first paragraph, provide a literal explanation of what this source is based on a close reading of the source itself (When is it from? Who is it by? What does it literally say? What is it?); in the second paragraph, grapple with the source (What does it teach us? What questions does it raise? What other sources would you need to make sense of it? How might a historian use it?). These should be between 250 and 400 words each, and they should be uploaded to Brightspace. Each primary source response is due by the beginning of class on the day that primary source is being discussed.

Reading Quizzes – Dates Vary – four quizzes, 5% each, 20% total

There will be four reading quizzes throughout the semester. These will be at home quizzes, that will ask you to respond to four particular articles we will be reading. While the specific questions will vary slightly from one quiz to the next, the core question will ask you to describe the argument in the article, and to consider what sources the author is utilizing to make their argument. The specific question for each quiz will be posted 48 hours before the quiz is due. The quiz must be uploaded to Brightspace by the beginning of class on the day that article is being discussed.

The quizzes are due on 1/25 (Mindell), 2/6 (Jones), 3/26 (Cloud), 4/9 (Oatsvall).

Midterm – February 20 – 20%

There will be an in-class midterm exam given on February 20. The exam will feature identifications, a primary source response, and a comprehensive essay. The test will be given using bluebooks. More details and instructions will be given in class in the weeks before the test.

Final Exam – Date TBA – 25%

This exam will be given during the final exam period, date and location TBA. The final exam will feature identifications, a primary source response, and a comprehensive essay. The exam will be given using bluebooks. More details and instructions will be given in class in the weeks before the exam.

Attendance – Cumulative – 10%

There is no substitute for coming to class, having done the reading, and being prepared to engage with the topics of the day. While all students will be allowed two unexcused absences, any unexcused absence beyond that will begin to negatively impact your grade, and too many unexcused absences may result in a failing grade. Excused absences are, of course, a different matter—for more details on what constitutes an excused absence please consult the course policies.

Final Response – Due by end of semester – 5%

In at least 250 words, write a short response about the class. What was your favorite reading? Favorite topic? Favorite primary source? What topic did you find most interesting? What topic do you wish we had explored in more detail? I will use these responses to help me refine and improve the class for future semesters.

Grading Scale:

A+ 100-98	B+ 89-88	C+ 79-78	D+ 69-68	F 59-0
A 97-93	B 87-83	C 77-73	D 67-63	
A- 92-90	C- 82-80	C- 72-70	D- 62-60	

Course Policies:

Nondiscrimination Statement: Purdue University has a clear nondiscrimination policy, which reads “Purdue University is committed to maintaining a community that recognizes and values the inherent worth and dignity of every person; fosters tolerance, sensitivity, understanding, and mutual respect among its members; and encourages each individual to strive to reach his or her potential. In pursuit of its goal of academic excellence, the University seeks to develop and nurture diversity. The University believes that diversity among its many members strengthens the institution, stimulates creativity, promotes the exchange of ideas, and enriches campus life.” I recommend that you read Purdue’s full Nondiscrimination Policy Statement which is included in our course Brightspace in the University Policies and Statements section.

Electronic Devices in Class: Ideally, students should come to class with physical copies of the assigned readings and be prepared to take notes by hand. However, I recognize that many students prefer to take notes on a computer, and that many of you will have read the articles digitally. You are adults, and I hope that you can be trusted to use electronic devices in class responsibly. If your electronic devices are distracting you (and distracting other students), this will have a negative impact on your attendance grade in the class. And please note, when a student is distracted by their electronic device it really is quite obvious—I know you’re thinking it isn’t obvious when *you* do it, but (really) it is. I reserve the right to revise this policy if students fail to use their devices responsibly.

Communication: Throughout this course we will be in contact using your Purdue email and Brightspace. I expect you to check both regularly, as these are the ways that I will be contacting you, and the whole class. I encourage you to get in touch with me regarding any questions and concerns you might have. The best way to contact me is by email zloeb@purdue.edu. I will try to always respond promptly, but please bear in mind that I (like you) am a human being, and that I (like you) am trying to do many things, so do not panic if I do not reply to your email within five minutes of you sending it. I will try to respond to all emails within 24 hours, though students should not expect to hear from me on Saturdays.

Attendance: According to Purdue’s policies, excused absences include those for documented illness, grieving, military service, jury duty, religious observance, caring for dependent children, and official university activities. Students who need to miss class for these reasons will not be penalized. While some situations and crises (you woke up feeling sick/a family emergency) are

hard to predict, wherever possible please let me know in advance if you will need to miss class for an excused reason.

Office Hours: My regular office hours are on Mondays and Wednesdays from 1:00 to 2:30 p.m. in Beering 6167. These are “open” office hours, so feel free to just drop by. During periods of increased interest (the week before the Midterm, for example), I will offer additional office hour availability. I also recognize that these days/times may not work for everyone, and I am willing to set up other times to meet in my office or over Zoom.

Classroom Expectations: To get the most out of this course you need to do the reading, come prepared to discuss the reading, and participate in the discussion. This is not primarily a discussion class, but there will still be many moments where I seek the class’s input, and everyone’s experience will be enriched if you come prepared to wrestle with these questions. Being prepared will not only improve your experience, it will improve the experience of your classmates. Class participation involves not only contributing to the discussion but actively listening while others (including me) are speaking. It is inevitable that you will disagree with some of your fellow classmates, but I expect that all class discussions will be kept thoughtful and respectful. Disagreements are okay, insults are not. Lastly, I am here to help (really), please feel free to reach out to me with your concerns—if you fear that you are falling behind or that you are not understanding something please let me know!

Regrading Policy: There is a mandatory 24-hour “sit with it” policy for all posted grades. If, after 24 hours, you are still curious why you received the grade you received you may contact the grader of that assignment for an explanation. If, after that discussion, you are still not satisfied with the grade you received you may follow up with the instructor (note: I, the instructor, may have been the original grader). Asking for a regrade from the instructor is not a guarantee of a higher grade: the instructor may decide you deserved the original grade you were given, or that you deserve a lower grade than what you were originally given. If you find that the grades you are receiving on assignments are not what you desire, I encourage you to come to my office hours so we can discuss strategies for how you can improve your work.

Maintaining Classroom Integrity: In order for all students to feel comfortable participating in discussions it is important for the integrity of the classroom to be protected. Taking pictures, videos, or making recordings—without prior consent of the instructor and every student in our class—is not permitted. Any student who is found to have made or distributed images, videos, or recordings from our class without permission will receive an automatic F for the course and the Dean of Student’s Office will be informed.

Academic Misconduct: Stephen Akers, Executive Associate Dean of Students, writes “Purdue University values intellectual integrity and the highest standards of academic conduct. To be prepared to meet societal needs as leaders and role models, students must be educated in an ethical learning environment that promotes a high standard of honor in scholastic work. Academic dishonesty undermines institutional integrity and threatens the academic fabric of Purdue University. Dishonesty is not an acceptable avenue to success. It diminishes the quality of a Purdue education, which is valued because of Purdue's high academic standards.” Plagiarism and other forms of academic misconduct will not be tolerated, and will be dealt with in

accordance with Purdue's policies. If you are not sure what "academic misconduct" consists of, please familiarize yourself with the relevant policies here:

<https://www.purdue.edu/odos/osrr/academic-integrity/index.html>

AI/Chatbot Policy: Though we will be discussing computers, AI, and robots at various points in the semester, I'm not particularly interested in reading things that were generated by AI. Submitting work that was generated by AI and claiming it as your own is a form of academic misconduct (as noted above), and carries the same consequences. If you are stressed about a particular reading or assignment and are tempted to turn to AI, please come to office hours and speak to me. I'm happy to help you improve your reading/writing strategies.

Accommodations for Disabilities: Purdue University as an institution, and I as an instructor, are committed to ensuring that the classroom is accessible and that students needs are met. If you experience or anticipate experiencing physical or academic barriers related to disability, I encourage you to let me know as soon as possible so we can discuss appropriate options. I also highly encourage you to directly contact the Disability Resource Center at: drc@purdue.edu or call them at 765-494-1247. There is a formal process for requesting accommodations, and if you believe you qualify for accommodations, I encourage you to begin the process at once. For more information, please visit: <https://www.purdue.edu/drc/>

Mental Health Statement: Counseling and Psychological Services (CAPS) at Purdue "has a strong commitment to meeting the needs of diverse people. CAPS is committed to helping students benefit from their college experience. CAPS is committed to helping students achieve personal and academic success. Although CAPS works with students in crisis, our primary goal is to assist students with their concerns before they develop into more serious problems. One way that students can do this is to talk to a therapist or psychologist in a supportive atmosphere to aid self-understanding and the resolution of personal issues." If you are struggling and in need of mental health support, regardless of the source of your struggles, I encourage you to make use of Purdue's CAPS services. You can contact CAPS by calling 765-494-6995, or by going to the CAPS office on the second floor of the Purdue University Student Health Service. For more information, please visit: <https://www.purdue.edu/caps/about/mission.html>

COVID-19 Policies: This is an in-person class, in which you will be in close proximity to other students, if you have any of the symptoms of COVID-19 (or have recently come into close contact with someone infected) I encourage you to get tested immediately. Purdue no longer has a mask mandate, but I support any students who chooses to wear a mask in class. Remember: we keep each other safe.

Basic Needs Security: If you are experiencing challenges securing housing or food and believe that this may affect your course performance, please know that there are resources available to help you at Purdue. Should you find yourself in need of assistance I urge you to contact the Dean of Students for support. No appointment is needed and Student Support Services is ready to assist students 8 a.m.-5 p.m. Monday through Friday.

Major Campus Emergency: While we are all certainly hoping for a smooth semester, as the experience of the pandemic has taught us all, that is not always possible. Should a major campus

emergency occur, deadlines, grading, and course requirements are subject to revision. But let's all hope that isn't necessary.



Course Schedule (subject to minor changes)

Week 1 – Course Overview and Core Themes

January 9

- Syllabus overview, course policies, assignments, how to read for this class.
- READ:
 - Nothing (it's the first day).

January 11

- The History of Technology and the History of War
- READ:
 - David Edgerton. "War." In *The Shock of the Old* (Oxford University Press, 2007): 138-159.
 - *Optional*: Susan Lindee. "Experimental Wounds: Science and Violence in Mid-Century America." *Journal of Law, Medicine & Ethics*, v. 39, n. 1 (Spring): 8-20.
 - *Primary Source*: *SIPRI Yearbook 2023: Armaments, Disarmament and International Security (summary)*. (SIPRI 2023).

Week 2 – Using Guns, Making Guns

January 15

- The Affordances of the Rifle
- READ:
 - Patrick Malone. “Chapter V: Technology, Tactics, and Total Warfare.” In *The Skulking Way of War: Technology and Tactics among the New England Indians*. (Madison Books: 2000): 67-98.
 - *Optional*: Adam Hirsch. “The Collision of Military Cultures in Seventeenth-Century New England.” *The Journal of American History*, v. 74, n. 4 (1988). 1187-1212.
 - *Primary Source(s)*: Baron de Steuben. *Regulations for the Order and Discipline of Troops of the United States*. (1779). Note: read pages 9-16 (“The Manual Exercise”).

January 18

- Industrializing Weapons Production
- READ:
 - Merritt Roe Smith. “John H. Hall, Simeon North, and the Milling Machine: The Nature of Innovation among Antebellum Arms Makers.” In *Technology and Culture*, v. 14, n. 4 (October 1973): 573-591.
 - *Optional*: Robert Howard. “Interchangeable Parts Reexamined: The Private Sector of the American Arms Industry on the Eve of the Civil War.” In *Technology and Culture*, v. 19, n. 4 (October 1978): 633-649.
 - *Optional*: Rosalind Williams. “The Political and Feminist Dimensions of Technological Determinism.” In *Does Technology Drive History? The Dilemma of Technological Determinism*. Merritt Roe Smith and Leo Marx (eds.). (The MIT Press: 1994): 217-235.
 - *Primary Source*: John H. Hall and William Thornton. “Improvement in Fire-Arms.” *United States Patent Office*. May 21, 1811.

Week 3 – The Civil War

January 23

- Infrastructure and Technological Systems
- READ:
 - Anne Kelly Knowles. “Labor, Race, and Technology in the Confederate Iron Industry.” In *Technology and Culture*, v. 42, n. 1 (January 2001): 1-26.
 - *Optional*: Thomas Hughes. “The Evolution of Large Technological Systems.” In *The Social Construction of Technological Systems, Anniversary Edition: New Directions in the Sociology and History of Technology*. Wiebe Bijker, Thomas Hughes, Trevor Pinch, and Deborah Douglas (eds.), (The MIT Press, 2012): 45-76.
 - *Primary Source*: Joseph LeConte. “Instructions for the Manufacture of Saltpetre.” (State Printer, 1862).

January 25

- Clad in Iron

- READ:
 - D.A. Mindell. “‘The Clangor of That Blacksmith’s Fray’: Technology, War, and Experience, Aboard the USS Monitor.” *Technology and Culture*, v. 36, n. 2 (April 1995): 242-270.
 - *Optional*: R.G. Angevine. “Chapter 7: The Civil War and the Beginning of Army-Railroad Cooperation, 1861-1865,” in *Railroads and the State: War, Politics, and Technology in Nineteenth Century America* (Stanford University Press, 2004): 130-164.
- QUIZ:
 - Quiz on Mindell.

Week 4 – The World at War

January 30

- The Breakdown of Scientific Internationalism
- READ:
 - Daniel Kevles. “‘Into Hostile Political Camps’: The Reorganization of International Science in World War I.” *ISIS*, v. 62, n. 1 (Spring, 1971): 47-60.
 - *Optional*: Elisabeth Crawford. “Internationalism in science as a casualty of the First World War: relations between German and Allied scientists as reflected in nominations for the Nobel prizes in physics and chemistry.” *Social Science Information*, v. 27, n. 2 (1988): 163-201.
 - *Optional*: David van Keuren. “Science, Progressivism, and Military Preparedness: The Case of the Naval Research Laboratory, 1915-1923.” In *Technology and Culture*, v. 33, n. 4 (October 1992): 710-736.
 - *Primary Source*: Professors of Germany. “To the Civilized World.” Note: this document is often referred to as the “Manifesto of the Ninety-Three.”

February 1

- The Troglodyte War
- READ:
 - Frederick Todd. “The Knife and Club in Trench Warfare, 1914-1918.” *The Journal of the American Military Foundation*, v. 2, n. 3 (Autumn 1938): 139-153.
 - *Optional*: A.E. Ashworth. “The Sociology of Trench Warfare 1914-18.” *The British Journal of Sociology*, v. 19, n. 4 (Dec. 1968): 407-423.
 - *Primary Source*: Army War College. *Notes on Training for Rifle Fire in Trench Warfare*. (Government Printing Office, 1917).

Week 5 - The Chemists’ War

February 6

- Mobilizing Chemistry, Mobilizing Chemists
- READ:
 - Daniel Jones. “American Chemists and the Geneva Protocol.” *ISIS*, v. 71, n. 3 (Sept., 1980): 426-440.

- *Optional*: Martin Gordon, Barry Sude, and Ruth Ann Overbeck. “Chemical Testing in the Great War: The American University Experiment Station.” *Washington History*, v. 6, n. 1 (Spring/Summer 1995): 28-45.
- *Optional*: Gilbert Whittemore, Jr. “World War I, Poison Gas Research, and the Ideals of American Chemists.” In *Social Studies of Science*, v. 5, n. 2 (May 1975): 135-163.
- QUIZ: Quiz on Jones

February 8

- Was Gas a Failure?
- READ:
 - L.F. Haber. “Chapter 11: Was Gas a Failure?” in *The Poisonous Cloud: Chemical Warfare in the First World War*. (Clarendon Press: 1986): 259-284.
 - *Optional*: Hugh Sloten. “Humane Chemistry or Scientific Barbarism? American Responses to World War I Poison Gas, 1915-1930.” *The Journal of American History*, v. 77, n. 2 (Sept. 1990): 476-498.
 - *Primary Source*: J.B.S. Haldane. *Callinicus: a Defence of Chemical Warfare*. (1925).

Week 6 – Between the Wars

February 13

- Darker Days Ahead
- READ:
 - *Primary Source*: Lewis Mumford. “Drama of the Machines (1930).” In *Interpretations and Forecasts: 1922-1972*. (A Harvest/HBJ Book: New York): 227-258.
 - *Primary Source*: Ernst Jünger. “Total Mobilization.” In *The Heidegger Controversy: A Critical Reader*. Richard Wolin (ed.), (The MIT Press: 1992): 119-139.
 - *Optional*: Jeffrey Herf. “Chapter 1: The Paradox of Reactionary Modernism.” In *Reactionary Modernism: Technology, Culture, and Politics in Weimar and the Third Reich*. (Cambridge University Press, 1984): 1-17.

February 15

- Mobilizing Science (for another war)
- READ:
 - Larry Owens. “The Counterproductive Management of Science in the Second World War: Vannevar Bush and the Office of Scientific Research and Development.” *The Business History Review*, v. 68, n. 4 (Winter 1994): 515-576.
 - *Optional*: Carroll Pursell Jr. “A Preface to Government Support of Research and Development: Research Legislation and the National Bureau of Standards, 1935-41.” *Technology and Culture*. v. 9, n. 2 (April 1968): 145-164.
 - *Primary Source*: American Association for the Advancement of Science. “Resolution of the Council on the Science Mobilization Bill (S.702).” *Science*. (August 6, 1943): 135-137.

Week 7 – Midterm and WWII

February 20

- The Midterm
- Midterm exam, in class

February 22

- Total War
- READ:
 - Tami Davis Biddle. “Chapter 3: The United States in the Interwar Years.” In *Rhetoric and Reality in Air Warfare: The Evolution of British and American Ideas About Strategic Bombing, 1914-1945*. 128-175.
 - *Primary Source*: General Carl Spaatz. “Strategic Air Power: Fulfillment of a Concept.” In *Foreign Affairs*, v. 24, n. 3 (Apr. 1946): 385-396.
 - *Primary Source*: Ethnogeographic Board and the Staff of the Smithsonian Institution. *Survival on Land and Sea*. (Publications Branch, Office of Naval Intelligence, 1944). Note: This is quite long, but at least read the introduction through the section on “abandoning ship,” beyond that this is an interesting document to page through more fully.
<https://www.biodiversitylibrary.org/item/230109#page/1/mode/1up>

Week 8 - The Bomb

February 27

- Making the Bomb
- READ:
 - Kate Brown. “Chapter 3: Labor Shortage,” “Chapter 4: Defending the Nation,” and “Chapter 5: The City Plutonium Built.” In *Plutopia: Nuclear Families, Atomic Cities, and the Great Soviet and American Plutonium Disasters*. (Oxford University Press: 2013): 26-43. (available as an ebook through the library website).
 - *Optional*: Barton Bernstein. “Reconsidering the ‘Atomic General’: Leslie Groves.” *The Journal of Military History*, v. 67, n. 3 (July 2003): 883-920.
 - *Primary Source*: Albert Einstein. “Letter to President Roosevelt (Einstein-Szilard Letter).” August 2, 1939. <https://ahf.nuclearmuseum.org/ahf/key-documents/einstein-szilard-letter/>

February 29

- Using the Bomb
- READ:
 - J. Samuel Walker. “The Decision to Use the Bomb: A Historiographical Update.” In *Hiroshima in History and Memory*, MJ Hogan (ed.) (Cambridge University Press: DATE): 11-37.

- *Optional*: Alex Wellerstein. “The Kyoto Misconception: What Truman Knew, and Didn’t Know, About Hiroshima,” in *The Age of Hiroshima*, Michael Gordin and G. John Kienberry (eds.). (Princeton University Press: 2020): 34-55.
- *Primary Source*: James Franck. “The Franck Report.” (June 1945).
<https://archive.org/details/FranckReport/Franck%20Report%201945%20original/>

Week 9 – One War Ends, Another Begins

March 5

- The Next Bomb(s)
- READ:
 - Peter Galison and Barton Bernstein. “In Any Light: Scientists and the Decision to Build the Superbomb, 1952-1954.” In *Historical Studies in the Physical and Biological Sciences*, v. 19, n. 2 (1989): 267-347.
 - *Optional*: Alex Roland. “Was the Nuclear Arms Race Deterministic?” In *Technology and Culture*, v. 51, n. 2 (April 2010): 444-461.
 - *Primary Source*: Eugene Rabinowitch. “The Narrowing Way.” In *Bulletin of the Atomic Scientists*, v. 9, n. 8 (1953): 294-295, 298.

March 7

- The Military Industrial Complex
- READ:
 - Thomas Lassman. “Putting the Military Back into the History of the Military-Industrial Complex.” *ISIS*, v. 106 (2015): 94-120.
 - *Optional*: Jennifer Light. “Chapter One: Planning for the Atomic Age: Creating a Community of Experts.” In *From Warfare to Welfare*. (Johns Hopkins University Press, 2003): 10-31.
 - *Primary Source*: Vannevar Bush. “Science, The Endless Frontier.” (United States Government Printing Office: 1945). Note: this whole report is pretty short (about 34 pages), you do not need to read the appendices.

Week 10 – Spring Break!

March 12 – Spring Break

- Spring Break! No Class!

March 14 – Spring Break

- Spring Break! No Class!

Week 11 - The Expanding Battlefield

March 19

- Cold War Computing
- READ:
 - Paul Edwards. “Chapter 3: SAGE.” In *The Closed World: Computers and the Politics of Discourse in Cold War America*. (The MIT Press: 1997): 75-112.

- *Optional*: Thomas Smith. “Project Whirlwind: An Unorthodox Development Project.” *Technology and Culture*, v. 17, n. 3 (July 1976): 447-464.
- *Optional*: Janet Abbate. “Chapter 1: White Heat and Cold War: The Origins and Meanings of Packet Switching.” In *Inventing the Internet*. (The MIT Press, 1999): 7-41. (this book is available as an ebook through the library website).
- *Primary Source*: IBM Corporation, Military Products Division. “On Guard! The Story of SAGE.” (1956) <https://archive.org/details/OnGuard1956>
- *Optional Primary Source*: Paul Baran. “On Distributed Communications Networks.” *IEEE Transactions on Communications*. v. 12, n. 1 (1964): 1-9.

March 21

- Above and Below
- READ:
 - Kristian Nielsen, Henry Nielsen, and Janet Martin-Nielsen. “City Under the Ice: The Closed World of Camp Century in Cold War Culture.” *Science as Culture*. v. 3, n. 4 (2014): 443-464.
 - *Optional*: Layne Karafantis. “Sealab II and Skylab: Psychological Fieldwork in Extreme Spaces.” *Historical Studies in the Natural Sciences*, v. 43, n. 5 (Nov. 2013): 551-588.
 - *Primary Source*: United States Army Research and Development. “Progress Report Number Six – Camp Century.” <https://www.campcentury.org/learning/historic-films>

Week 12 – The Battlefield (far) Above Us

March 26

- Space!
- READ:
 - John Cloud. “Imaging the World in a Barrel: CORONA and the Clandestine Convergence of the Earth Sciences.” In *Social Studies of Science*, v. 31, n. 2 (April 2001): 231-251.
 - Michael Neufeld. “Wernher von Braun’s ultimate weapon.” *Bulletin of the Atomic Scientists*. v. 63, n. 4 (2007): 50-78.
 - *Optional*: Monique Laney. “Chapter One: From Enemy Aliens to Valued Citizens.” In *German Rocketeers in the Heart of Dixie: Making Sense of the Nazi Past During the Civil Rights Era*. (Yale University Press, 2015): 23-42.
 - *Primary Source*: Manfred Clynes and Nathan Kline. “Cyborgs and Space.” In *Astronautics* (September 1960): 26-27, 74-76.
- QUIZ:
 - Quiz on Cloud.

March 28

- UFOs (yes, really)!
- READ:
 - Gerald K. Haines. “CIA’s Role in the Study of UFOs, 1947-90: A Die-Hard Issue.” In *Intelligence and National Security*, v. 14, n. 2 (Summer 1999): 26-49.

- *Optional*: Robert P. Horstemeier. “Flying Saucers are Real! The US Navy, unidentified flying objects, and the national security state.” *Socialism and Democracy*, v. 20, n. 3 (2006): 187-216.
- *Primary Source*: House of Representatives. “Unidentified Flying Objects.” Hearing by Committee on Armed Services. (April 5, 1966). Note: This is rather long, but please read the opening testimony/report and first discussion: 5991-6006.

Week 13 – How Do You Feel About the Battlefield?

April 2

- The Mind
- READ:
 - Ian Nicholson. “‘Shocking’ Masculinity: Stanley Milgram, ‘Obedience to Authority,’ and the ‘Crisis of Manhood’ in Cold War America.” *ISIS*, v. 102, n. 2 (June 2011): 238-268.
 - *Optional*: Jessica Wang. “Physics, Emotion, and the Scientific Self: Merle Tuve’s Cold War.” *Historical Studies in the Natural Sciences*, v. 42, n. 5 (November 2012): 341-388.
 - *Primary Source*: The Pennsylvania State University. “Obedience.” <https://www.youtube.com/watch?v=rdrKCilEhC0> Note: this is a long video, you only need to watch from the 22 minute mark to the 40 minute mark.

April 4

- Apocalyptic Anxiety
- READ:
 - Kenneth Rose. “Chapter 5: The Theory and Practice of Armageddon.” In *One Nation Underground: The Fallout Shelter in American Culture*. (NYU Press: 2001): 150-185.
 - *Optional*: Leo Marx. “The Idea of ‘Technology’ and Postmodern Pessimism.” In *Does Technology Drive History? The Dilemma of Technological Determinism*. Merritt Roe Smith and Leo Marx (eds.). (The MIT Press: 1994): 237-257.
 - *Primary Source*: Department of Defense. “Fallout Protection: What to Know and Do About Nuclear Attack.” (Office of Civil Defense: 1961). Note: please read 5-26.

Week 14 – The Field in Battlefield, and Refusing the Battlefield

April 9

- War Against Trees
- READ:
 - Neil Oatsvall. “Trees Versus Lives: Reckoning Military Success and the Ecological Effects of Chemical Defoliation During the Vietnam War.” *Environment and History*, v. 19, n. 4 (November 2013): 427-458.
 - *Optional*: David Zierler. “Chapter 5: Herbicidal Warfare.” In *The Invention of Ecocide*. (University of Georgia Press: 2011): 67-88.

- QUIZ:
 - Quiz on Oatsvall!

April 11

- Scientists Say No
- READ:
 - Kelly Moore. “Organizing Integrity: American Science and the Creation of Public Interest Organizations, 1955-1975.” In *American Journal of Sociology*, v. 101, n. 6 (May 1996): 1592-1627.
 - *Optional*: Matt Wisnioski. “Inside ‘the system’: engineers, scientists, and the boundaries of social protest in the long 1960s.” In *History and Technology*, v. 19, n. 4 (2003): 313-333.
 - *Primary Source*: Interrupt. V. 1, n.5 (March 1969). Note: this is the newsletter of Computer People for Peace.

Week 15 – The Digital Battlefield

April 16

- Cyberwar
- READ:
 - Rebecca Slayton. “What is a Cyber Warrior? The Emergence of U.S. Military Cyber Expertise, 1967-2018.” In *Texas National Security Review*, v. 4, n. 1 (Winter 2020/2021): 62-96.
 - *Optional*: Chris Demchak. “Cybered Ways of Warfare: The Emergent Spectrum of Democratized Predation and the Future Cyber-Westphalia Interstate Topology.” In, Phil Williams, Dighton Fiddner, eds., *Report, Cyberspace: Malevolent Actors, Criminal Opportunities and Strategic Competition*. Strategic Studies Institute, US Army War College (2016): 603-640.
 - *Primary Source*: The White House. “National Cybersecurity Strategy.” March 2023. Note: Read the opening letter, introduction, and implementation sections.

April 18

- Robots and Drones
- READ:
 - P.W. Singer. “Robots at War: The New Battlefield.” In *Wilson Quarterly* v. 33, n. 1 (Autumn 2008/Winter 2009): 30-48.
 - *Optional*: Ashley Dawson. “Drone Executions, Urban Surveillance, and the Imperial Gaze.” In *American Studies Encounters the Middle East*, Alex Lublin and Marwan Kraidy (eds.) (University of North Carolina Press, 2016): 241-262.
 - *Primary Source*: Robert Work. *Principles for the Combat Employment of Weapon Systems with Autonomous Functionalities*. Center for a New American Security (CNAS). April 2021.
 - *Primary Source*: Stop Killer Robots. *Stopping Killer Robots: A Guide for Policy Makers*.

Week 16 – The Last Week

April 23

- The Present of War, the Future of War
- READ:
 - David Nye. "Technological Prediction: A Promethean Problem." In Marita Sturken, Douglas Thomas, and Sandra J. Ball-Rokeach (eds) *Technological Visions: The Hopes and Fears that Shape New Technologies*. Philadelphia: Temple University Press, 2004. 159-176.
 - *Primary Source*: These will be announced a week or two before this class day, my goal will be to find some very current sources (ones that have come out during the course of the semester).

April 25

- Last Class, No Readings
- Closing Thoughts
- Final Review