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<b>Class</b>	<b>Office</b>
Tu 6:10-9:00 Vollum 228 <a href="https://moodle.reed.edu/course/view.php?id=529">https://moodle.reed.edu/course/view.php?id=529</a>	Tu 1:30-3:30 or by appointment Vollum 241 <a href="http://alexmontgomery.com">http://alexmontgomery.com</a>

## Course Description and Goals

Full course for one semester. This course investigates the politics of global risks—challenges, some created by humans and others by nature—that have the potential to drastically alter human civilization, the planet, or life itself. Such “apocalyptic” risks include extreme climate change, ecological catastrophes, global pandemics, nuclear war, artificial intelligence, and asteroid impacts. The course will analyze these nascent Armageddons using a variety of theoretical perspectives including the precautionary principle, the social construction of risk, normal accidents theory, and concepts of high-reliability operations. Prerequisites: junior standing and Political Science 240, or consent of the instructor. Conference.

## Requirements

### *Class Participation*

Students are required to actively participate in the class; they will have the opportunity to do so both during and outside of classroom hours. Beginning the third week of class, each student will be assigned to three days during the semester in which they will author a short reaction memo (300-400 words) expressing an opinion about that day’s readings. These are NOT summaries; rather, they should attempt to agree or disagree with or compare and contrast the readings. Both should be posted in the forums on the course website by 8 PM the day before the readings are to be discussed. Students are required to read the memos and be prepared to respond to them the next day in class. Students are encouraged to respond to the postings online as part of their participation. If you miss a day of class for any reason whatsoever, you may make it up by posting a summary of each of the readings to Moodle. In order to make up missed days from the first half of the semester, these must be posted before the first day of classes after the break; from the second half, by the end of reading period.

### *Readings*

Readings for the course are primarily books and E-Readings, which can be downloaded directly from the links on Moodle. These are best used in conjunction with [Endnote](#) or [Zotero](#), both of which are supported by the library. Students are expected to bring a copy of the readings to class every day for reference. Readings marked “Further” on the syllabus are other relevant articles or books; they are not required for class. Students who have a particular interest in the topics in question are encouraged to read these pieces and to incorporate them into their assignments.

### *Course Website*

Discussion and collaboration is available to you through the website; supplemental and core readings will be made available there; and assignments will be turned in electronically using the site.

### *Assignments*

There are two assignments for this course. The first is to turn in an initial proposal and outline for your final paper, due October 16 at 11:59 PM. The second is a lengthy (3750-5000 word) essay analyzing anything related to the course; it is due Monday, December 14 at 5 PM.

### *Citation and Plagiarism*

A major goal of this course is to encourage good reading, research, and citation habits. Good research requires good documentation of sources and the ability to put one’s own analysis and thoughts into a paper rather than relying on others. When in doubt as to whether you should cite something, always do it. Citations are required for ideas as well as facts, and are imperative even if you are not directly quoting authors. Make sure that you provide as specific a citation as possible; if an author discusses an idea in one section or one page, cite the specific section or page instead of the full article or book. I usually recommend that students use in-text author-date citation with full Chicago Manual of Style citations; see their Citation Quick Guide:

<[http://www.chicagomanualofstyle.org/tools\\_citationguide.html](http://www.chicagomanualofstyle.org/tools_citationguide.html)>.

However, style is less important than the cites being present. If you use an idea or a fact without attribution, you are plagiarizing someone else’s work. Plagiarism and cheating are violations of academic integrity and thus violations of Reed’s Honor Principle. As specified by Reed’s academic conduct policy, such violations will result in disciplinary actions, including suspension or permanent dismissal from the College. Plagiarism is submitting a piece of work which in part or in whole is not entirely the student’s own work without attributing those same portions to their correct source. For examples of plagiarism and how to avoid it, see

<<http://www.csub.edu/ssric-trd/howto/plagiarism.htm>>. If nothing else, you should avoid “sinister buttocks” syndrome. For more information on Reed’s policies see: <[http://www.reed.edu/academic/gbook/comm\\_pol/acad\\_conduct.html](http://www.reed.edu/academic/gbook/comm_pol/acad_conduct.html)>.

Plagiarism often comes as the result of a student being up against a deadline without being able to meet it. If you are having trouble meeting a deadline for whatever reason, please contact me. Because every assignment is a paper that will be handed out well in advance, I have no problem giving extensions. It is always better to ask for more time than to plagiarize. When you ask for an extension, you should a) explain what events are causing you to miss the deadline and b) request an amount of time proportional to the interfering events. You may ask for an extension up to, but not exceeding, the amount of time remaining for the assignment, except for cases of emergencies.

#### *Accommodations*

If you’d like to request academic accommodations due to a disability, please contact Disability Support Services. If you have a letter from Student Services, please let me know so we can discuss those accommodations.

### **1-Sep: 01.1. Theories of International Politics and Zombies (166 Pages)**

- Daniel W. Drezner (2015) Do Experts and the Public Think Differently about the Apocalypse? *The Washington Post*. March 13 <<http://www.washingtonpost.com/posteverything/wp/2015/03/13/do-experts-and-the-public-think-differently-about-the-apocalypse/>> – visited on 2015-04-01, ISSN 0190–8286
- Daniel W Drezner (2015) *Theories of International Politics and Zombies*. Princeton, NJ: Princeton University Press <<http://www.worldcat.org/oclc/875884346>>, 145, ISBN 9780691163703
- Dennis Pamlin and Stuart Armstrong (2015) *Global Challenges: 12 Risks that Threaten Human Civilisation – the Case for a New Category of Risks*. February Global Challenges Foundation. Read Executive Summary only <<http://globalchallenges.org/publications/globalrisks/about-the-project/>> – visited on 2015-04-01

### **8-Sep: 02.1. Normal Accidents (411 Pages)**

- Charles Perrow (1999) *Normal Accidents: Living with High-Risk Technologies*. New York, NY: Basic Books, 411, ISBN 046505143X

### **15-Sep: 03.1. Mission Improbable (171 Pages)**

- Lee Clarke (1999) *Mission Improbable: using fantasy documents to tame disaster*. Chicago, IL: University of Chicago Press, 171, ISBN 0226109410

### **15-Sep: 03.2. Worst Cases (185 Pages)**

- Lee Ben Clarke (2006) *Worst Cases Terror and Catastrophe in the Popular Imagination*. Chicago: University of Chicago Press <<http://www.worldcat.org/oclc/721907469>>, 185, ISBN 9780226108599

### **9/16/15: 03.2.1. 7–8:30 PM, Vollum Lecture Hall: Rebecca Hersman, “Chemical Weapons Attacks in Syria: How Did We Get Here and Where Do We Go?”**

### **22-Sep: 04.1. Trapped in the Net (218 Pages)**

- Gene I. Rochlin (1998) *Trapped in the Net*. Princeton, NJ: Princeton University Press, 218, ISBN 0691002479

### **22-Sep: 04.2. High-Reliability Operations (171 Pages)**

- Karl E. Weick (1987) Organizational Culture As a Source of High-Reliability. *California Management Review*. 29(2)Winter, 112–127
- Gene I. Rochlin (1993) Defining “High Reliability” Organizations in Practice: A Taxonomic Prologue. In Karlene H. Roberts, editor *New Challenges to Understanding Organizations*. New York, NY: Macmillan, ISBN 0024020524. chapter 2, 11–32
- Paul R. Schulman (1993) The Negotiated Order of Organizational Reliability. *Administration and Society*. 25(3)November, 353–372 <<http://dx.doi.org/10.1177/009539979302500305>>
- Paul E. Bierly, III and J. C. Spender (1995) Culture and high reliability organizations. *Journal of Management*. 21(4), 639–656 <<http://dx.doi.org/10.1177/014920639502100403>>
- Gene I. Rochlin et al. (1996) Berkeley ‘High-Reliability Organizations’ Special Issue. *Journal of Contingencies and Crisis Management*. 4(2)June, 55–112 <<http://dx.doi.org/10.1111/j.1468-5973.1996.tb00077.x>>, ISSN 0966–0879, 1468–5973
- Nick Pidgeon (1997) The Limits to Safety? Culture, Politics, Learning and Man-Made Disasters. *Journal of Contingencies and Crisis Management*. 5(1), 1–14 <<http://dx.doi.org/10.1111/1468-5973.00032>>, ISSN 09660879
- Paul Schulman et al. (2004) High Reliability and the Management of Critical Infrastructures. *Journal of Contingencies and Crisis Management*. 12(1), 14–28 <<http://dx.doi.org/10.1111/j.0966-0879.2004.01201003.x>>, ISSN 1468–5973
- Paul R. Schulman and Emery Roe (2007) Designing Infrastructures: Dilemmas of Design and the Reliability of Critical Infrastructures. *Journal of Contingencies and Crisis Management*. 15(1), 42–49 <<http://dx.doi.org/10.1111/j.1468-5973.2007.00503.x>>, ISSN 1468–5973

## Further

- Mathilde Bourrier (1996) Organizing Maintenance Work at Two American Nuclear Power Plants. *Journal of Contingencies and Crisis Management*. 4(2)June, 104–112 <<http://dx.doi.org/10.1111/j.1468-5973.1996.tb00082.x>>, ISSN 1468–5973
- Chris C. Demchak (1996) Tailored Precision Armies in Fully Networked Battlespace: High Reliability Organizational Dilemmas in the ‘Information Age’. *Journal of Contingencies and Crisis Management*. 4(2)June, 93–103 <<http://dx.doi.org/10.1111/j.1468-5973.1996.tb00081.x>>, ISSN 1468–5973
- Todd R. La Porte (1996) High Reliability Organizations: Unlikely, Demanding and at Risk. *Journal of Contingencies & Crisis Management*. 4(2)June, 60–71 <<http://dx.doi.org/10.1111/j.1468-5973.1996.tb00078.x>>, ISSN 09660879
- Todd R. La Porte and Paula M. Consolini (1991) Working in Practice but Not in Theory: Theoretical Challenges of “High-Reliability Organizations”. *Journal of Public Administration Research and Theory*. 1(1)January, 19–48 <<http://www.jstor.org/stable/1181764>>
- Thomas Mannarelli, Karlene H. Roberts, and Robert G. Bea (1996) Learning How Organizations Mitigate Risk. *Journal of Contingencies and Crisis Management*. 4(2)June, 83–92 <<http://dx.doi.org/10.1111/j.1468-5973.1996.tb00080.x>>, ISSN 1468–5973
- Gene I. Rochlin (1996) Reliable Organizations: Present Research and Future Directions. *Journal of Contingencies and Crisis Management*. 4(2)June, 55–59 <<http://dx.doi.org/10.1111/j.1468-5973.1996.tb00077.x>>, ISSN 0966–0879, 1468–5973
- Gene I. Rochlin (1999) Safe operation as a social construct. *Ergonomics*. 42(11)November, 1549–1560 <<http://dx.doi.org/10.1080/001401399184884>>
- Paul R. Schulman (1996) Heroes, Organizations, and High Reliability. *Journal of Contingencies and Crisis Management*. 4(2)June, 72–82 <<http://dx.doi.org/10.1111/j.1468-5973.1996.tb00079.x>>

## 29-Sep: 05.1. Autonomous Weapons (138 Pages)

- Ronald C. Arkin (2010) The Case for Ethical Autonomy in Unmanned Systems. *Journal of Military Ethics*. 9(4)December, 332–341 <<http://dx.doi.org/10.1080/15027570.2010.536402>>, ISSN 1502–7570, 1502–7589
- Ian Kerr and Katie Szilagyi (2012) Asleep at the Switch. *How Lethal Autonomous Robots Become a Force Multiplier of Military Necessity*. Miami: University of Miami School of Law., 39
- Kenneth Anderson and Matthew C. Waxman (2013) *Law and Ethics for Autonomous Weapon Systems: Why a Ban Won’t Work and How the Laws of War Can*. Rochester, NY: Social Science Research Network SSRN Scholarly Paper ID 2250126, 33 pages <<http://papers.ssrn.com/abstract=2250126>> – visited on 2015-08-24
- Heather M. Roff (2014) The Strategic Robot Problem: Lethal Autonomous Weapons in War. *Journal of Military Ethics*. 13(3), 211–227 <<http://dx.doi.org/10.1080/15027570.2014.975010>>, ISSN 1502–7570
- Michael Horowitz and Paul Scharre (2015) *An Introduction to Autonomy in Weapon Systems*. February 13 <<http://www.cnas.org/intro-to-autonomy-in-weapon-systems>> – visited on 2015-08-24
- Heather M. Roff (2015) *Autonomous or ‘Semi’ Autonomous Weapons? A Distinction Without Difference*. January 16 Huffington Post <[http://www.huffingtonpost.com/heather-roff/autonomous-or-semi-autono\\_b.6487268.html](http://www.huffingtonpost.com/heather-roff/autonomous-or-semi-autono_b.6487268.html)> – visited on 2015-08-25
- Heather M. Roff (2015) *The International-Relations Argument Against Killer Robots*. August 19 Defense One <<http://www.defenseone.com/ideas/2015/08/international-relations-argument-against-killer-robots/119275/>> – visited on 2015-08-25
- Heather M. Roff (2015) Lethal Autonomous Weapons and Jus Ad Bellum Proportionality. *Case Western Reserve Journal of International Law*. 47(1)April, 37–52 <<http://scholarlycommons.law.case.edu/jil/vol47/iss1/7>>, ISSN 0008–7254

## 29-Sep: 05.2. Cyber War (139 Pages)

- Dana A. Shea (2004) *Critical Infrastructure: Control Systems and the Terrorist Threat*. Congressional Research Service CRS Report RL31534, 23 pages
- Kamal T. Jabbour and E. Paul Ratazzi (2013) Deterrence in Cyberspace. In Adam Lowther, editor *Thinking about Deterrence: Enduring Questions in a Time of Rising Powers, Rogue Regimes, and Terrorism*. Maxwell Air Force Base, AL: Air University Press, ISBN 9781585662272. chapter 3, 37–47
- Richard Danzig (2014) *Surviving on a Diet of Poisoned Fruit: Reducing the National Security Risks of America’s Cyber Dependencies*. July Center for a New American Security <<http://www.cnas.org/surviving-diet-poisoned-fruit>> – visited on 2014-08-11
- Peter W. Singer and Allan Friedman (2014) Cult of the Cyber Offensive. *Foreign Policy*. January 15, 11 <<https://foreignpolicy.com/2014/01/15/cult-of-the-cyber-offensive/>> – visited on 2015-07-24
- Heather M. Roff (2015) *It’s the Biggest National Threat and We Can’t Help You*. April 27 Duck of Minerva <<http://duckofminerva.com/2015/04/its-the-biggest-national-threat-and-we-cant-help-you.html>> – visited on 2015-08-30

- Heather M. Roff (2015) *Deterrence in Cyberspace and the OPM Hack*. June 24 Duck of Minerva <<http://duckofminerva.com/2015/06/deterrence-in-cyberspace-and-the-opm-hack.html>> – visited on 2015-08-30
- U.S. Department of Defense (2015) *The (DOD) Cyber Strategy*. April DoD Website <[http://www.defense.gov/home/features/2015/0415\\_cyber-strategy/](http://www.defense.gov/home/features/2015/0415_cyber-strategy/)> – visited on 2015-05-13
- James A. Winnefeld Jr., Christopher Kirchhoff, and David M. Upton (2015) Cybersecurity’s Human Factor: Lessons from the Pentagon. *Harvard Business Review*. August 13, 18 <<https://hbr.org/2015/09/cybersecuritys-human-factor-lessons-from-the-pentagon>> – visited on 2015-08-13

*Further*

- Richard A Clarke and Robert K Knake (2010) *Cyber War: The Next Threat to National Security and What to Do about it*. New York: Ecco <<http://www.worldcat.org/oclc/506247862>>, ISBN 9780061962233
- Cordula Droegge (2012) Get off My Cloud: Cyber Warfare, International Humanitarian Law, and the Protection of Civilians. *International Review of the Red Cross*. 94(886), 533–578 <<http://dx.doi.org/10.1017/S1816383113000246>>
- Dan Goodin (2014) *Hack Said to Cause Fiery Pipeline Blast Could Rewrite History of Cyberwar*. December 10 Ars Technica <<http://arstechnica.com/security/2014/12/hack-said-to-cause-fiery-pipeline-blast-could-rewrite-history-of-cyberwar/>> – visited on 2014-12-11
- Lucas Kello (2013) The Meaning of the Cyber Revolution: Perils to Theory and Statecraft. *International Security*. 38(2)October, 7–40 <[http://dx.doi.org/10.1162/ISEC\\_a.00138](http://dx.doi.org/10.1162/ISEC_a.00138)>, ISSN 0162–2889
- Jon R. Lindsay (2013) Stuxnet and the Limits of Cyber Warfare. *Security Studies*. 22(3), 365–404 <<http://dx.doi.org/10.1080/09636412.2013.816122>>, ISSN 0963–6412

**9/28/15: 05.1.1. 7–8:30 PM, Vollum Lecture Hall: Heather Roff, “Gendering a Warbot: Potential Policy Fallout from Gendering Autonomous Weapons”**

**6-Oct: 06.1. Nuclear Weapons (363 Pages)**

- Richard Pipes (1977) Why the Soviet-Union Thinks It Could Fight and Win a Nuclear War. *Commentary*. 64, 21–34
- Lee Clarke (1993) Drs. Pangloss and Strangelove Meet Organizational Theory: High Reliability Organizations and Nuclear Weapons Accidents. *Sociological Forum*. 8(4)December, 675–689 <<http://dx.doi.org/10.1007/BF01115218>>, ISSN 08848971
- Scott D. Sagan (1993) *The Limits of Safety: Organizations, Accidents, and Nuclear Weapons*. Princeton, NJ: Princeton University Press <<http://www.worldcat.org/oclc/27429286>>, 279, ISBN 0691021015
- Todd R. La Porte et al. (1994) Systems, Organizations and the Limits of Safety: a Symposium. *Journal of Contingencies and Crisis Management*. 2(4)December, 205–240 <<http://dx.doi.org/10.1111/j.1468-5973.1994.tb00044.x>>
- Alex Wellerstein (2012) *In Search of a Bigger Boom*. September 12 Restricted Data: The Nuclear Secrecy Blog <<http://blog.nuclearsecrecy.com/2012/09/12/in-search-of-a-bigger-boom/>> – visited on 2015-08-13

**13-Oct: 07.1. Biological Weapons (326 Pages)**

- Gregory D. Koblenz (2009) *Living Weapons: Biological Warfare and International Security*. Ithaca: Cornell University Press <<http://www.worldcat.org/oclc/304386783>>, 244, ISBN 0801447682
- Richard Danzig et al. (2011) *Aum Shinrikyo: Insights into How Terrorists Develop Biological and Chemical Weapons*. July Center for a New American Security <[http://www.cnas.org/files/documents/publications/CNAS\\_AumShinrikyo\\_Danzig\\_0.pdf](http://www.cnas.org/files/documents/publications/CNAS_AumShinrikyo_Danzig_0.pdf)> – visited on 2014-05-15
- Bruce W. Bennett (2013) *The Challenge of North Korean Biological Weapons*. RAND RAND Report CT-401, 18 pages <<http://www.rand.org/pubs/testimonies/CT401.html>> – visited on 2015-08-29
- Department of Defense (2014) *Department of Defense Strategy for Countering Weapons of Mass Destruction*. June Office of the Deputy Assistant Secretary of Defense for Countering Weapons of Mass Destruction <[http://archive.defense.gov/pubs/DoD\\_Strategy\\_for\\_Countering\\_Weapons\\_of\\_Mass\\_Destruction\\_dated\\_June\\_2014.pdf](http://archive.defense.gov/pubs/DoD_Strategy_for_Countering_Weapons_of_Mass_Destruction_dated_June_2014.pdf)>
- Robert J. Peters (2015) *The WMD Challenges Posed by a Collapse of North Korea*. April 14 38 North: Informed Analysis of North Korea <<http://38north.org/2015/04/rpeters041415/>> – visited on 2015-04-19

*Further*

- Jeanne Guillemin (2005) *Biological Weapons: From the Invention of State-Sponsored Programs to Contemporary Bioterrorism*. New York: Columbia University Press, 205, ISBN 0231129424 9780231129428 0231509170 9780231509176 0231129432 9780231129435



### **13-Oct: 07.2. and Zombies (63 Pages)**

- Commander, United States Central Command (2009) *Zombie Attack Response Plan*. United States Central Command Headquarters OPLAN 1210.1-09 Annex Z, 7 pages
- Commander, United States Strategic Command (2011) *Counter-Zombie Dominance*. United States Strategic Command Headquarters CONPLAN 8888-11, 31 pages
- Daniel W. Drezner (2014) Metaphor of the Living Dead: Or, the Effect of the Zombie Apocalypse on Public Policy Discourse. *Social Research: An International Quarterly*. 81(4)Winter, 825–849  
<[https://muse.jhu.edu/journals/social\\_research/v081/81.4.drezner.html](https://muse.jhu.edu/journals/social_research/v081/81.4.drezner.html)> – visited on 2015-02-13, ISSN 1944–768X

### **20-Oct: 08.1. Fall break: No Class**

### **27-Oct: 09.1. Collapse (525 Pages)**

- Jared M Diamond (2005) *Collapse: How Societies Choose to Fail or Succeed*. New York: Viking  
<<http://www.worldcat.org/oclc/56367771>>, 525, ISBN 9780670033379

### **3-Nov: 10.1. Plan B 4.0 (268 Pages)**

- Lester Russell Brown (2009) *Plan B 4.0: Mobilizing to Save Civilization*. New York: W. W. Norton  
<<http://www.earth-policy.org/books/pb4>>, 268, ISBN 9780393337198

### **11/4/15: 10.2.1. 7–8:30 PM, Vollum Lecture Hall: Martina Morris '80, “Zero Grazing: What Uganda Can Teach Us about HIV Prevention”**

### **10-Nov: 11.1. Next Catastrophe (325 Pages)**

- Charles Perrow (2007) *The Next Catastrophe: Reducing Our Vulnerabilities to Natural, Industrial, and Terrorist Disasters*. Princeton, NJ: Princeton University Press <<http://www.worldcat.org/oclc/76820658>>, 325, ISBN 0691129975

### **17-Nov: 12.1. Deus Ex Machina (552 Pages)**

- Jeffrey G. Lewis (2013) Armageddon 2. *Foreign Policy*. September 24, 13  
<<https://foreignpolicy.com/2013/09/24/armageddon-2/>> – visited on 2015-07-18
- Economist (2015) Taking the Hit. *Economist*. August 9, 10  
<<http://worldif.economist.com/article/12/what-if-an-asteroid-heads-for-earth-taking-the-hit>> – visited on 2015-08-09
- Matthew Francis (2015) *A Gentle Nudge with a Nuke: Deflecting Earth-Bound Asteroids*. April 26  
<<http://arstechnica.com/science/2015/04/a-gentle-nudge-with-a-nuke-deflecting-earth-bound-asteroids/>> – visited on 2015-07-18
- Neal Stephenson (2015) *Seveneves: A Novel*. New York, NY: William Morrow, 9–533, ISBN 978–0–06–219037–6

### **24-Nov: 13.1. Contagion (60 Pages)**

- Edwin Dennis Kilbourne (2011) Plagues and Pandemics: Past, Present, and Future. In Bostrom and Ćirković *Global Catastrophic Risks*. chapter 14, 287–307
- Ali Nouri and Christopher F. Chyba (2011) Biotechnology and Biosecurity. In Bostrom and Ćirković *Global Catastrophic Risks*. chapter 20, 450–480
- Martina Morris and Mirjam Kretzschmar (1997) Concurrent Partnerships and the Spread of HIV. *AIDS*. 11(5), 641–648

### **1-Dec: 14.1. States of Exception (96 Pages)**

- Carl Schmitt (2005) Chap. 1-2 in *Political Theology: Four Chapters on the Concept of Sovereignty*. Chicago: University of Chicago Press, 1–35, ISBN 9780226738895
- Carl Schmitt (2008) *The Concept of the Political: Expanded Edition*. University of Chicago Press, 19–79

### **12/6/2015, 12–3:00 PM: 15.1. War, Aliens, and Society (286 Pages)**

- Robert A Heinlein (1987) *Starship Troopers*. New York: Ace Books <<http://www.worldcat.org/oclc/44125626>>, 263, ISBN 9780441783588
- Charles Tilly (1999) War Making and State Making as Organized Crime. In Theda Skocpol, Peter Evans and Dietrich Rueschemeyer, editors *Bringing the State Back in*. Cambridge. chapter 5, 169–191