BPRO 25800, ASTR 2(3)1700, SOCI 2(3)0531, KNOW 2(3)1700

Are We Doomed?
Confronting the End of the World

Thursdays 2-4:50pm
Winter 2024
Classroom: Rosenwald 011

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TAs: Isabella Duan, Oksana Vickers, Zack Rudolph

Class Syllabus

January 4 - Introduction, Doomsday clock, Nuclear Annihilation
Topics: Nuclear dangers, close calls, treaties, destabilization and new arms race

Guest: Rachel Bronson
Readings:
1. 2023 Doomsday Clock statement (including the 4 sidebars on Nuclear Risk, Climate Change, Biological Threats, and Disruptive Technologies)
3. Nowhere To Hide: How a nuclear war would kill you—and almost everyone else, by François Diaz-Maurin
4. Strategic Posture Commission Report Calls For Broad Nuclear Buildup, FAS article by Hans Kristensen, Matt Korda, Eliana Johns, and Mackenzie Knight

Optional readings:
5. Elisabeth Eaves, “Why is America getting a new $100 billion nuclear weapon?”

Movies: Fail Safe, Dr. Strangelove, The Day After, On the Beach, War Games (follow Box link here)
Novels: Selection from here

January 11 - Revolt of the Machines
Topics: Superintelligence, the alignment problem

Guest: Geoffrey Hinton
Readings: (all unlinked readings are on the relevant weekly page).
2. Center for AI Safety, “AI Risks that Could Lead to Catastrophe”
3. Stuart Russell, Many Experts Say We Shouldn't Worry About Superintelligent AI. They're Wrong., IEEE Spectrum, October, 2019. (Summary of HC Chapter 6)

Optional:
4. Intro to LLMs, Andrej Karpathy. (YouTube video, ~1 hour)

Novels: I Robot, R.U.R. (Rossum's Universal Robots), 2001 A Space Odyssey, We are Legion (We are Bob), the Golden Age, Robopocalypse, Daemon, Ancillary Justice, House of Suns, The Lifecycle of Software Objects, All Systems Red, The Diamond Age, Neuromancer, the Moon is a Harsh Mistress, I Have No Mouth and I Must Scream, Excession, Ware Tetralogy, Hyperion, Accelerando

January 18 - Uncertainty & Apocalypse
Topics: Social media, attack on the capitol, stolen election, fake news, post-truth society

Guest: David Wallace-Wells
Readings: (all available in the relevant weekly page)
1. “Cascades” (introduction) and “Ethics at the End of the World” chapters from The Uninhabitable Earth by David Wallace-Wells
2. “Beyond Catastrophe: A New Climate Reality is Coming Into View” by David Wallace-Wells in the New York Times
3. Introduction to Not the End of the World by Hannah Ritchie
4. Three short pieces by Julian Brave Noisecat: CJR, Emergence Magazine, and The Nation

Optional:
5. Introduction to Doom: The Politics of Catastrophe by Niall Ferguson

Films: Rashomon, Metropolis, Battle Royale, Planet of the Apes, Elysium, Snowpiercer, The Platform, The Hunger Games (follow Box link here)

January 25 - Environmental Devastation
Topics: Climate change, human/social consequences

Guest: David Archer
Readings:
1. Climate Change 2023: Synthesis report from the IPCC Sixth Assessment Report (especially the “Summary for Policymakers”)
2. Xu, Kohler, Lenton, & Scheffer, “Future of the human climate niche” PNAS 2020
3. Michael Mann, Our Fragile Moment, Introduction
4. Michael Mann, *Our Fragile Moment*, Chapter 1

Movies: *An Inconvenient Sequel: Truth to Power, The Day After Tomorrow, Soylent Green, Nausicaä of the Valley of the Wind, Wall-E, Akira* (follow Box link [here](#))
Novels: Selection from [here](#)

February 1 - Misinformation & Conflict
*Topics: Information and society, social media, hacking the human*

**NOTE:** Class will START in Rosenwald 011; then we will MIGRATE to KPTC 106 by 3:30 for the Panel and Screening of *Nuclear Now.*

Guest: [Carl Bergstrom](#)
Readings: (all unlinked readings are on the relevant weekly page):

Films: *The Island President, Zero Days, The Circle, Brazil, The Matrix, War Games* (follow Box link [here](#))
Novels: *1984, Parable of the Talents, It Can't Happen Here, The Handmaid's Tale, Fahrenheit 451*

*Nuclear Now* screening 3:30pm (Oliver Stone film)

February 8 - Utopia & Dystopia
*Topics: Philosophy, Art, Literature, Imaginings of future possibilities*

Guest: [Jacqueline Feke](#)
Readings:
  1. E.M Forster, *The Machine Stops*
  2. Selections from *Plato’s Republic*

Movies/Novels: Any from prior weeks (follow Box link [here](#))

February 15 - Policy Responses & Government Action
*Topics: Government, policy, elections, nuclear threat, sole authority*

Guest: [Jerry Brown](#)
Readings: (readings available at [this Canvas page](#))

Films: Any from prior weeks involving government response. ManchurianCandidate (original & remake), Wag the Dog, Vice, The unknown known (follow Box link [here](#))
Novels: 1984, The Dispossessed, Fabreheit 451, The Handmaid’s Tale

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February 22 - Pandemics & Other Biological Threats

**Topics: Deadly pandemics; quarantine and distancing in complex, interdependent societies**

Guest: Asha George
Readings/Viewings:
2. Max Brooks, Germ Warfare: A Very Graphic History, Bipartisan Commission on Biodefense, ([original](#), with video, etc.), January 2020
3. Watch the film “Contagion” (2011) ([available on Box](#)).
4. Nicholas LePan, Visualizing the History of Pandemics, March 2020
5. CDC Community Mitigation Guidance ([original](#)), April 2017

Optional:
6. Nicholas Wade, “The origin of COVID: Did people or nature open Pandora’s box at Wuhan?”, The Bulletin of the Atomic Scientists, May 2021 ([original](#); easier to read)
7. Bipartisan Commission on Biodefense, “Biodefense in Crisis” ([original](#)), March 2021
8. National Biodefense Strategy and Implementation Plan, whitehouse.gov ([original](#)), October 2022

Movies: 12 Monkeys, La Jetee, 28 Days Later, Pandemic, I am Legend, World War Z (follow Box link [here](#))
Novels: Selection from [here](#)

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February 29 - The Future of Existential Threats

**Topics: Framing, Anticipating and Responding to Existential Threats**

**NOTE:** Class is followed by Oppenheimer Panel and Screening.

Guest: Martin Rees

Readings:
1. SJ Beard, Martin Rees, Catherine Richards, and Clarissa Rios Rojas, *The Era of Global Risk: An Introduction to Existential Risk Studies*, “Preface” and “Introduction” ([original](#)), August 2023. You are encouraged to read the entire book, to supplement and deepen what you have learned in this class!
2. Martin Rees, “Buckle up: We are in for a bumpy ride”, Bulletin of the Atomic Scientists, December 2020
3. Martin Rees, “How easy would it be to snuff out humanity?”, The Independent, March 2021

Optional:
4. Martin Rees, If Science is to Save Us (book available through course library reserves), November 2022
5. Martin Rees, On the Future (book available through course library reserves), October 2018

Movies/Novels: Any from prior weeks (follow Box link here)

Oppenheimer screening 3:30pm (Christopher Nolan film)