

The History of Predicting the Future (and Getting it Wrong)
SAS Interdisciplinary Honors Seminar | Spring 2018

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Mon/Thurs 9:50-11:10 A.M.

Honors College, Room S124, College Ave Campus

Prof. Jamie Pietruska

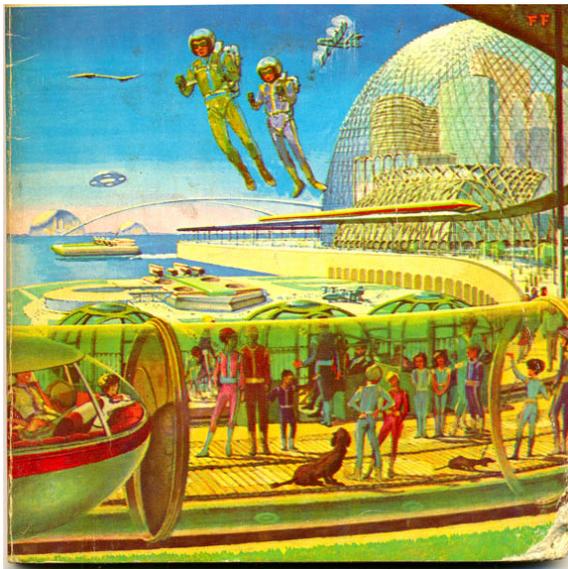
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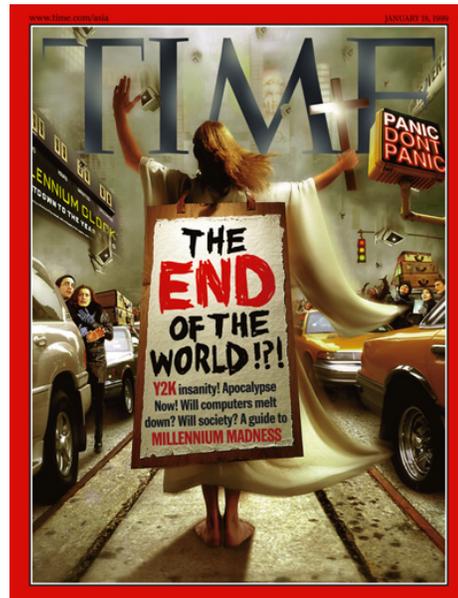
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Office hours: Mon 1-2 P.M., Thurs 1-3 P.M., or by appt.

This syllabus and all course material will be posted on Sakai:
<https://sakai.rutgers.edu/portal>



**Fred Freeman, Cover of *Reader's Digest*
New Reading Skill Builder (1966)**



January 18, 1999

Course Description

In this seminar we will examine the history of human attempts to predict the future ranging from antiquity to the present, with an emphasis on the United States in the nineteenth and twentieth centuries. The course begins from two basic premises, the first of which is that predicting the future is not a timeless human activity. Rather, ideas about prediction and methods of forecasting have changed over time in response to major changes in political economy, society, and culture. The second premise is that visions of the future have often exerted influence on the present. Decision-making in a particular historical moment is shaped

by what human actors anticipate will come next, as well as by their illusions of control over an unpredictable future.

Our approach will be historical, but we will engage with topics and concepts from disciplines including meteorology, economics, statistics, computer science, behavioral economics, psychology, and literature. We will spend the semester reading and discussing a combination of primary and secondary sources that will illuminate five key questions: At which historical moments has forecasting been the most consequential, the most controversial, and why? How and why have some forecasters become recognized as experts while others have not? How have forecasters claimed authority for their visions of the future? How have forecasters reckoned with and communicated the uncertainty inherent in predicting the future? How have failed predictions affected public trust in experts and in the nature of forecasting itself?

Course Format

This course is a small seminar designed to foster intensive discussion and intellectual collaboration. Each session will be devoted to discussion of primary and/or secondary sources. I will occasionally show a few slides or video clips to contextualize our readings, but I will not give formal lectures. The success of our course will depend on your sustained scholarly engagement with the course material and each other, so please come to each session having completed all the reading and prepared to share your ideas, comments, and questions with each other. Reading assignments should be completed for the date on which they are listed. **Please always bring your readings with you to class in hard copy or digital format as we will often refer to specific passages during discussion. It is essential to take notes in some way as you read (e.g., underlining, highlighting, annotating, writing notes on a text's main arguments and themes, writing down questions you would like to discuss, noting any confusing or seemingly contradictory aspects of the reading, etc.)**

SAS Core Learning Goals

WCd (Writing in the Disciplines)

T. Communicate effectively in modes appropriate to a discipline or area of inquiry; evaluate and critically assess sources and use the conventions of attribution and citation correctly; and analyze and synthesize information and ideas from multiple sources to generate new insights

Course Learning Goals

1. Understand the historical relationship between ideas about the future and attempts to predict the future
2. Analyze how the concept of *the future* has changed over time
3. Examine how political and economic institutions, as well as social practices, have shaped the production of knowledge about the future
4. Examine how cultural meanings of the future have been produced in literary and visual art, exhibitions, and advertising
5. Analyze how ideologies of race, class, and gender have shaped and restricted visions of the future
6. Analyze and evaluate arguments in secondary sources
7. Lead class discussion by introducing the assigned reading and posing questions to the class

8. Conduct original historical research based in primary sources
9. Write a formal analytical essay based on original historical research

Required Books

Walter A. Friedman, *Fortune Tellers: The Story of America's First Economic Forecasters* (Princeton University Press, 2016). Paperback ISBN: 978-0691169194

Nate Silver, *The Signal and the Noise: Why So Many Predictions Fail--but Some Don't* (Penguin, 2015). Paperback ISBN: 978-0143125082

Books are available for purchase at the Rutgers University Barnes & Noble Bookstore and online. Books are also on reserve at the Alexander Library. **Additional readings will be posted on Sakai.**

Assessment

20% Citizenship and class participation (including leading class discussion twice, in pairs)

40% Short writing assignments related to research project (research question/statement of topic; annotated bibliography; one best source paragraph; introduction and outline; draft of at least first 5 pages of research paper) [Assignment descriptions will be posted on Sakai.]

40% 10-page research paper on a topic of your choosing (e.g., a forecaster, a specific mode of prediction, a famously inaccurate forecast, an unforeseen event, artistic representations of the future, etc.). Topics must date from **before** the 21st century (although predictions of Y2K is a fine topic). [Assignment description will be posted on Sakai.]

Course Policies

Attendance

Students are expected to attend all sessions and to be active and thoughtful participants in class discussion. **More than three (3) unexcused absences (i.e., other than a documented illness, documented emergency, religious observance, or university-approved absence) will have an adverse effect on your grade. For each unexcused absence beyond the 3 allowed, your final course grade will be lowered by 2 percentage points.** For example, if you accumulate 5 unexcused absences during the semester and have a grade of 83%, your grade will be lowered to 79%. Please note that an excused absence means that you provide a note from a doctor, dean, or coach that explains your absence. **All absences, whether excused or unexcused, should be entered into the Rutgers University absence reporting website <https://sims.rutgers.edu/ssra/> , where you will indicate the date and reason for your absence.** I will receive an automatic email from this system, so there is no need to send me a separate email regarding your attendance.

Citizenship

The Department of History's "Policy on Mutual Responsibilities and Classroom Etiquette" states, "Our commitments to a strong learning community are expressed in many ways. Respectful professors convey their commitment to the discipline of history and their desire to share its delights and challenges. They are well prepared for class, provide students with clear goals and expectations, listen carefully to student questions and comments, and

conscientiously evaluate their students' work. Respectful students bring a strong work ethic to the history courses that they select. They expect to attend the scheduled classes, to be on time, to be prepared for class, and to be attentive during class. A shared respect for the discipline of history and for one another as teachers and students of history is essential to the academic integrity of our program. We must all do our part to maintain an environment of openness and civility that encourages and honors the intellectual achievement represented by the discipline of history.”

<http://history.rutgers.edu/undergraduate/academic-policies/52-academics/undergraduate-program/108-policy-on-mutual-responsibilities-and-classroom-etiquette> (Accessed January 13, 2016.)

Each of you is a valuable member of our intellectual community this semester, and I trust that you will conduct yourselves accordingly. My goal is that our classroom will be a space for thoughtful, sustained, and respectful engagement with the course material and with each other. In order to achieve that goal, we will need to give each other and the material our undivided attention, which means that texting and online activity unrelated to the class are not permitted for any reason. **Mobile phone use is not permitted in class. Laptops and tablets may be used for note-taking and for accessing the assigned reading only.** I trust that you will make your best effort to contribute to our intellectual collaboration by arriving to class on time, participating in class discussions and activities, not distracting yourself or others during class, and not leaving class early (unless you have explained to me in advance why you must leave early). **Twenty percent** of your course grade will be based on class participation and citizenship.

Late submissions

Please note that late paper submissions will be penalized by half a letter grade (e.g., from B+ to B) for each day they are late, unless you have obtained a letter from a doctor or a dean explaining why you were unable to complete your work on time.

Grading scale

Individual assignments will be graded according to the following scale:
A (93-95%), A- (90-92%), B+ (87-89%), B (83-86%), B- (80-82%), C+ (77-79%), C (73-75%), C- (70-72%), D+ (67-69%), D (63-66%), D- (60-62%), F (59% and below).

Final course grades will conform to University policy that uses “+” but not “-“ grades: A (90% and above), B+ (85-89%), B (80-84%), C+ (75-79%), C (70-74%), D (60-69%), F (59% and below).

Your grades

Our Sakai grade book will be updated regularly throughout the semester, so please make sure to check your grades so that you know where you stand. If you would like to discuss your grades at any point, I am always happy to meet with you during office hours (but I do not discuss grades over email). There are no extra credit assignments in this course.

Academic Integrity

The foundation of this course and any scholarly endeavor is academic integrity. I fully expect that all students will adhere to principles of academic integrity in their work. **You are responsible for understanding the Rutgers policies regarding academic integrity, as outlined**

at <http://academicintegrity.rutgers.edu>. Ignorance of these policies or the consequences for violations is not an acceptable excuse.

All written work must be a student's own original work. Collaboration on written work is not permitted. Any and all references to other sources within your own paper must be properly cited according to the bibliographic conventions of the Chicago Manual of Style, which is available at the Alexander Library and online at the Purdue Online Writing Lab: <https://owl.english.purdue.edu/owl/resource/717/01/>

If you have any questions about quoting, paraphrasing, or referring to the work of others, please ask! It is better to be safe than sorry, better to have too many citations than not enough and thus run the risk of unintentional plagiarism.

Any and all violations of academic integrity in this course will result in the formal consequences and disciplinary action that are outlined in the Rutgers policy on academic integrity. I have a zero-tolerance policy for academic dishonesty and refer all violations directly to the Office of Student Conduct.

Contacting the Professor

I am available during office hours each week and by appointment. I check email regularly and will almost always respond within one business day. **In compliance with the Family Educational Rights and Privacy Act (FERPA), please use your Rutgers ScarletMail account (and not a personal email account) to communicate with me.** As the Rutgers University Ethics and Compliance webpage states, "All Rutgers University students, staff, and instructors are assigned a university managed email account to be utilized for purposes of official correspondence." <https://uec.rutgers.edu/programs/ferpa-student-privacy/for-faculty-and-staff/>

Please contact me with any questions or concerns as soon as they arise. I am always happy to help students with the course material and with their writing.

Students with Disabilities

Rutgers, the State University of New Jersey abides by the Americans with Disabilities Act of 1990, the Americans with Disabilities Act Amendments (ADAA) of 2008, and Sections 504 and 508, which mandate reasonable accommodations be provided for qualified students with disabilities and accessibility of online information. If you have a disability and may require some type of instructional and/or examination accommodation, please contact me during the first week of the semester so that we can arrange accommodations. If you have not already done so, you will need to register with the Office of Disability Services, Lucy Stone Hall, Livingston Campus, 54 Joyce Kilmer Ave., Suite A145. Phone: 848.445.6800 Online: <https://ods.rutgers.edu/>

Schedule

*The professor reserves the right to make changes to the schedule in the event of inclement weather or other unforeseen events.

Week 1

Thurs 18 Jan Introductions and course overview

Screening and discussion of short video on affective forecasting:

Dan Gilbert, "Why We Make Bad Decisions" TED Talk (24 min.)

<https://www.youtube.com/watch?v=c-4flnuxNV4>

UNIT 1: PROPHECIES AND WAYS OF KNOWING THE FUTURE

Week 2 Prophecy and Apocalypse Then

Mon 22 Jan Prophetic Traditions

NPR Fresh Air, interview with Elaine Pagels, author of *Revelations: Visions, Prophecy, and Politics in the Book of Revelation*, March 7, 2012

<https://www.npr.org/templates/transcript/transcript.php?storyId=148125942>

Paul Boyer, *When Time Shall Be No More: Prophecy Belief in Modern American Culture* (Belknap Press, 1992), ch. 1 ("Origins of the Apocalyptic") [Sakai]

Thurs 25 Jan The Second Coming, Oct. 22, 1844/Flying Saucers, Dec. 21, 1954

The Disappointed: Millerism and Millenarianism in the Nineteenth Century, eds. Ronald L. Numbers and Jonathan M. Butler (Knoxville: University of Tennessee Press, 1993), pp. 17-35 (ch. 2: "William Miller: Disappointed Prophet"). *Recommended*: pp. 209-226 (Appendix I: "The Disappointment Remembered") [Sakai]

Leon Festinger, Henry W. Riecken, and Stanley Schachter, *When Prophecy Fails: A Social and Psychological Study of a Modern Group that Predicted the Destruction of the World* (University of Minnesota Press, 1956), chs. 2, 8, epilogue [Sakai]

Week 3 Promises of Love and Money

Mon 29 Jan Policing and Prosecuting Fortune-Tellers

Skim *The Witches' Dream Book; and Fortune Teller* (New York: Henry J. Wheman, 1885). <https://archive.org/details/witchesdreambook00noea> [Flip through each page of the book, pausing to read sections that are of most interest to you. What are the different methods of prediction described? How is this knowledge organized and/or systematized? How might a reader in 1885 have used this book?]

Q. K. Philander Doesticks, P. B., *The Witches of New York* (New York: Rudd & Carleton, 1859), chs. 1, 6, 11, 12, 14, 18

<https://archive.org/details/witchesofnewyork00doesrich>

Research Project Part #1 due: Preliminary topic/research question (1 paragraph)

Thurs 1 Feb The Business of Astrology

Selections (pages TBA) from Evangeline Adams, *The Bowl of Heaven* (1927; repr., New York: Dodd, Mead, 1926) [Sakai]

Evangeline Adams, *The Law and Astrology* (pamphlet) (New York: Schulte Press, n.d.) [Sakai]

Week 4 Predicting the Weather and the Harvest

Mon 5 Feb Weather Prophets

Skim *Vennor's Almanac and Weather Record for 1877-8* (Montreal: John Dougall, 1877) <https://archive.org/details/vennorswinteralm00venn> [Flip through each page of the book, pausing to read sections that are of most interest to you. Think about all the different types of information and knowledge that are contained in this almanac. How might readers in 1877 have used the different parts of the book? How would you characterize Henry Vennor's forecasts and his method?]

Thurs 8 Feb Weather Forecasts and Agricultural Statistics

Willis L. Moore, *Moore's Meteorological Almanac and Weather Guide* (Rand, McNally, 1901) <https://babel.hathitrust.org/cgi/pt?id=hvd.hs15i6;view=1up;seq=64> [Flip through the entire book, reading carefully the preface, pp. 32-38, 53-60, 102-110. How does Moore's almanac compare to Vennor's? How does Moore describe the system of government weather forecasting? How does Moore define the boundary between *forecasting* and *prophecy*?]

Silver, *Signal and Noise*, ch. 4

UNIT 2: CAPITALISM, FORECASTING & RISK MANAGEMENT

Week 5 Navigating the "Economic Chance-World"

Mon 12 Feb Reading the Market

Samuel Benner, *Benner's Prophecies of Future Ups and Downs in Prices* (Cincinnati, 1876), pp. 7-30, 96-131 (Preface, Introduction, "Predictions," "Panic," "Theory," "Conclusion") <https://archive.org/details/bennersprophecie01benn>

Caitlin Zaloom, "How to Read the Future: The Yield Curve, Affect, and Financial Prediction," *Public Culture* 21, no. 2 (2009): 245-68

Silver, *Signal and Noise*, ch. 11

Thurs 15 Feb Commodity Futures Trading and “Fictitious Dealings”

Jonathan Ira Levy, “Contemplating Delivery: Futures Trading and the Problem of Commodity Exchange in the United States, 1875-1905,” *American Historical Review* 111, no. 2 (2006): 307-335 [Sakai]

William Cronon, “Pricing the Future: Grain” in *Nature’s Metropolis: Chicago and the Great West* (W. W. Norton, 1991), pp. 97-147 [Sakai]

Research Project Part #2 due: Annotated bibliography

Week 6 Professional Economic Forecasting

Mon 19 Feb Modeling the Economy

Friedman, *Fortune Tellers*, chaps. 1-3 and Preface, Introduction, and Gallery of Business and Forecasting Charts

Thurs 22 Feb Commercial and Government Economic Forecasting

Friedman, *Fortune Tellers*, chaps. 4-6 and postscript

Silver, *Signal and Noise*, ch. 1

Week 7 Accidents Happen

Mon 26 Feb Industrial Accidents and Accident Law

John Fabian Witt, *The Accidental Republic: Crippled Workingmen, Destitute Widows, and the Remaking of American Law* (Harvard University Press, 2004), introduction [Sakai]

Nan Goodman, *Shifting the Blame: Literature, Law, and the Theory of Accidents in Nineteenth-Century America* (Princeton University Press, 1998), ch. 4 (“‘Nobody to Blame’: Steamboat Accidents and Responsibility in Twain”) [Sakai]

Thurs 1 Mar Risk and Insurance

Mark Twain, “The Danger of Lying in Bed,” in *The Writings of Mark Twain*, vol. 6 (P. F. Collier, 1917), pp. 315-319 <https://books.google.com/books?id=sWUqAAAAYAAJ>

Jason Puskar, “William Dean Howells and the Insurance of the Real,” *American Literary History* 18, no. 1 (2006): 29-58 [Sakai]

Research Project Part #3 due: One best source analysis (1 page)

Week 8 Probabilistic and Utopian Futures

Mon 5 Mar Clearing a Space for Chance

William James, “The Dilemma of Determinism,” in *The Will to Believe and Other Essays in Popular Philosophy* (New York: Dover Publications, 1956 [1897]), pp. 145-183 [Sakai]

Jackson Lears, *Something for Nothing: Luck in America* (New York: Penguin, 2003), pp. 147-186 (chapter 4: “The Waning of Providence”) [Sakai]

Thurs 8 Mar Future Perfect

Edward Bellamy, “The Blindman’s World” (1886), reprinted in H. Bruce Franklin, ed., *Future Perfect: American Science Fiction of the Nineteenth Century—An Anthology* (Rutgers UP, 1995 [revised and expanded edition]), pp. 261-276 [Sakai]

Howard Segal, “The Technological Utopians,” in Joseph J. Corn, ed., *Imagining Tomorrow: History, Technology, and the American Future* (MIT Press, 1988), pp. 119-136 [Sakai]

SPRING RECESS**UNIT 3: PREDICTION & GEOPOLITICS IN THE 20TH CENTURY****Week 9 Imagining Better Tomorrows**

Mon 19 Mar Eugenics and the Better Babies and Fitter Families of the Future

Robert Rydell, *World of Fairs: The Century of Progress Expositions* (Chicago: The University of Chicago Press, 1993), pp. 38-58 (ch. 2: “‘Fitter Families for Future Firesides’: Eugenics Exhibitions Between the Wars”) [Sakai]

"WHAT THE BABY IS WORTH AS A NATIONAL ASSET: Last Year's Crop Reached a Value Estimated at \$6,960,000,000---Why Every Child Is Worth More Than Ever Before," *New York Times*, Jan. 30, 1910 [Sakai]

Recommended: Matthew Frye Jacobson, *Barbarian Virtues: The United States Encounters Foreign Peoples at Home and Abroad, 1876-1917* (New York: Hill and Wang, 2001), pp. 139-172 (ch. 4: “Theories of Development: Scholarly Disciplines and the Hierarchy of Peoples”) [Sakai]

Thurs 22 Mar Displaying the Future in the 1930s

Folke T. Kihlstedt, “Utopia Realized: The World’s Fairs of the 1930s,” in Joseph J. Corn, ed., *Imagining Tomorrow: History, Technology, and the American Future* (MIT Press, 1988), pp. 97-118

Robert Rydell, *World of Fairs: The Century of Progress Expositions* (Chicago: University of Chicago Press, 1993), pp. 157-192 (ch. 6, "African Americans in the World of Tomorrow") [Sakai]

Week 10 Cold War Scenarios

Mon 26 Mar World War III

Collier's, October 27, 1951 ("Preview of the War We Do Not Want") [Sakai], selections from pp. 6-31, 68

Recommended: Matthew Connelly et al., "General, I Have Fought Just as Many Nuclear Wars as You Have: Forecasts, Future Scenarios, and the Politics of Armageddon," *American Historical Review* 117, no. 5 (2012): 1431-1460 [Sakai]

Research Project Part #4 due: Introductory paragraph and outline

Thurs 29 Mar Predictive Social Science and Computer Science

Kaya Tolon, "Futures Studies: A New Social Science Rooted in Cold War Strategic Thinking," in *Cold War Social Science: Knowledge Production, Liberal Democracy, and Human Nature*, ed. Mark Solovey and Hamilton Cravens (Palgrave Macmillan, 2012), pp. 45-62 [Sakai]

Silver, *Signal and Noise*, ch. 9

Week 11 Demographic Futures

Mon 2 Apr Futurism and Population Control in the 1960s and 1970s

"The Futurists: Looking Toward A.D. 2000," *Time Magazine*, February 25, 1966 [Sakai]

Matthew Connelly, "Controlling Passions," *The Wilson Quarterly* 32, no. 3 (Summer 2008): 60-66 [Sakai]

L. Mazur, et al., "Population Control's Missteps," Discussion of "Controlling Passions," *Wilson Quarterly* 32, no. 4 (Autumn 2008): 6-7, 9 [Sakai]

Recommended: Matthew Connelly, "Future Shock: The End of the World as They Knew It," in *The Shock of the Global: The 1970s in Perspective*, eds. Niall Ferguson, Charles Maier, Erez Manela, Daniel Sargent (Cambridge, MA: Harvard University Press, 2010), pp. 337-350 [Sakai]

Thurs 5 Apr A Population Bomb?

Paul Ehrlich, *The Population Bomb* (1968; repr. Rivercity Press, 1975), pp. xi-25 [Sakai]

NPR Planet Money podcast, Episode 508: "A Bet on the Future of Humanity," January

8, 2014

<https://www.npr.org/sections/money/2014/01/08/260761433/episode-508-a-bet-on-the-future-of-humanity>

Paul Sabin, *The Bet: Paul Ehrlich, Julian Simon, and Our Gamble over Earth's Future* (Yale University Press, 2013), introduction and ch. 5 ("Polarizing Politics") [Sakai]

Week 12 Predicting and Engineering Climate

Mon 9 Apr Climate Modeling

Paul Edwards, "Modeling Wicked Problems," *Anthropocene Campus*, November 2014, <https://www.youtube.com/watch?v=Kbfx62CGxm4>

Recommended: Silver, *Signal and Noise*, ch. 12

Research Project Part #5 due: Draft of at least first 5 pages of research paper

Thurs 12 Apr Climate Hacking

James Rodger Fleming, *Fixing the Sky: The Checkered History of Weather and Climate Control* (New York: Columbia University Press, 2010), pp. 225-268 (ch. 8: "The Climate Engineers")

David Keith, "A Critical Look at Geoengineering Against Climate Change," TEDSalon 2007, https://www.ted.com/talks/david_keith_s_surprising_ideas_on_climate_change

UNIT 4: BIG DATA, PREDICTIVE ANALYTICS & CALCULATING OUR FUTURES

Week 13 Speculation and Gambling

Mon 16 Apr Speculating on Weather and Climate

Michael Specter, "Climate By Numbers," *New Yorker*, November 11, 2013
<https://www.newyorker.com/magazine/2013/11/11/climate-by-numbers>

Samuel Randalls, "Weather Profits: Weather Derivatives and the Commercialization of Meteorology," *Social Studies of Science* 40, no. 5 (2010): 705-730 [Sakai]

Thurs 19 Apr Place Your Bets!

NPR Planet Money podcast, Episode 690: "All In," March 18, 2016
<https://www.npr.org/sections/money/2016/03/18/470866146/episode-690-all-in>

Natasha Dow Schüll, "The Gaming of Chance: Online Poker Software and the Potentialization of Uncertainty," in *Modes of Uncertainty: Anthropological Observations*, ed. P. Rabinow & L. Samimian-Darash (University of Chicago Press, 2015), pp. 46-68 [Sakai]

Silver, *Signal and Noise*, chs. 8 (skim) & 10

Week 14 Individual Futures in the Aggregate

Mon 23 Apr Predicting Human Behavior

Philip K. Dick, "The Minority Report," in *The Minority Report and Other Classic Stories* (Citadel, 2002), pp. 71-102 [Sakai]

Andrew Guthrie Ferguson, *The Rise of Big Data Policing: Surveillance, Race, and the Future of Law* (NYU Press, 2017), ch. 7 ("Black Data: Distortions of Race, Transparency, and Law"). [Sakai]

Kevin Dupzyk, "The Internet Knows What You Did Last Summer," *Popular Mechanics*, March 1, 2016, pp. 15-17.
login.proxy.libraries.rutgers.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=112422687&site=ehost-live

Thurs 26 Apr Quantified Selves

Vannevar Bush, "As We May Think," *The Atlantic*, July 1945.
<https://www.theatlantic.com/magazine/archive/1945/07/as-we-may-think/303881/>

Natasha Dow Schüll, "Data for Life: Wearable Technology and the Design of Self-Care," *Biosocieties* 11, no. 3 (2016): 317-333.

Week 15 Black Swans?

Mon 30 Apr Black Swans?

Nassim Nicholas Taleb, *The Black Swan: The Impact of the Highly Improbable* (New York: Random House, 2007), ch. 10 ("The Scandal of Prediction"). [Sakai]

Silver, *Signal and Noise*, chs. 2, 13, conclusion

Final papers due in hard copy to Prof. Pietruska's mailbox (Van Dyck copy room) or office (Van Dyck 311) by 5 P.M. Thursday, May 3rd