Philosophy 360/History 393
Introduction to History and Philosophy of Science
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We live in anxious, fractious times. Environmentally and politically, a story of the triumphant progress of science seems scarcely believable anymore. Trust in science is in a strange state— science still ranks very high in surveys of professions people trust but on some crucial public issues, notably climate change and public health, trust in science is harder to secure and seems unable to guide action. People who question the story of triumphant progress of science are now routinely decried as science deniers or "postmodern neo-Marxists." Meanwhile, some prominent public intellectuals draw science and the liberal order together as somehow intrinsically connected but seem unaware of even the main currents of historical and philosophical thought that have sought to question that claim. My purpose is not to defend truth and science against the barbarians, nor is it to turn you into Marxists or relativists (or both, a neat trick). My purpose is, rather, to give you some background to allow you to take seriously the question of the proper lessons of history and philosophy of science as they bear on questions of secure knowledge, political order, and human progress.

The interdisciplinary project of history and philosophy of science (HPS) became institutionalized in North America around 1960. For much of the remainder of the 20th century, HPS concentrated its attention on how our view of science changes when we see the various ways in which it is not isolated from the rest of culture. Partly due to the influence of other social scientific and humanities-based studies of science and technology, HPS in the 21st century has engaged in something of the contrary of this project, asking what we learn about contemporary culture when we see the various ways in which science and technology are embedded in it.

After a brief introduction to basic issues in history and philosophy of science, we will turn our attention to contemporary issues by looking at some of the places where the authority of science to speak the truth and the claim of technology to improve the human estate are, perhaps surprisingly, controversial. In particular, we will look at issues, in part raised by the pandemic but also by the research role of pharmaceutical companies and by medicalization in general, in medical and public health research and policy, and we will also look at issues of bias in algorithms and artificial intelligence.

Course Materials

Most of our readings are available on-line or on Canvas. The following book is required and will be available at the UBC Bookstore:

Gillian Barker and Philip Kitcher, *Philosophy of Science: A New Introduction*, Oxford University
    Press, 2014.

Required Work for Assessment

The course will have three short essays (600 words) that are due on 11 October, 15 November, and 11 December. Each essay is worth 20% (total 60%).
There will also be a final exam worth 30%.
Attendance and participation are worth 10%.

Week by Week Order of Things

Week One (6, 8 Sept): Introduction to the Issues
        Steven Shapin, "Is there a Crisis of Truth?" (2019)
        Safiya Umoja Noble, Introduction, *Algorithms of Oppression* (2018)
        Maya Goldenberg, "A lack of trust, not of science, behind vaccine resistance" (2017)

Week Two (11, 13, 15 Sept): Historical Excursus: History, Philosophy, Sociology of Science 1970s-1980s
        Thomas Kuhn, "What are Scientific Revolutions?" (1987)
        Imre Lakatos, "History of Science and Its Rational Reconstructions" (1970)
        S.B. Barnes and R.G.A. Dolby, "The Scientific Ethos: A Deviant Viewpoint" (1970)

Week Three (18, 20, 22 Sept): Philosophy of Science in the 21st Century
        Barker and Kitcher, Chapters 1 through 3

Week Four (25, 27, 29 Sept): History and Philosophy of Science
        Barker and Kitcher, Chapter 4
        Peter Galison, "Ten Problems in History and Philosophy of Science" (2008)
        Hasok Chang, "Who cares about the history of science?" (2016)

Week Five (4, 6 Oct): Science, Value, Critique
        Barker and Kitcher, Chapters 5 and 6
        Heather Douglas, "Science and Values: The Pervasive Entanglement" (2023)
        Ava Kofman, "Bruno Latour: Post-Truth Philosopher Mounts a Defense of Science" (2018)

Week Six (11, 12, 13 Oct): Medical Topic One: De/Medicalization: Mental/Brain Health
        Charles Rosenberg, "Contested Boundaries: Psychiatry, Disease, and Diagnosis" (2006)
        Ian Hacking, "Making Up People" (2006)
        Miriam Solomon, "On the Appearance and Disappearance of Asperger's Syndrome" (2017)

Week Seven (16, 18, 20 Oct): De/Medicalization: Sexual Health
        Michel Foucault, "Scientia Sexualis" (1976)
        Judy Z. Segal, "Sex, drugs, and rhetoric: The case of flibanserin for 'female sexual dysfunction'" (2018)
        Steven Epstein, "A New Definition and the Backstory: Inventing Sexual Health" (2022)

Week Eight (23, 25, 27 Oct): Medical Topic Two: Trust: Research
David Michaels, "Manufactured Uncertainty: Contested Science and the Protection of the Public's Health and Environment" (2008)
Leah Ceccarelli, "Manufactured Scientific Controversy: Science, Rhetoric, and Public Debate" (2011)
Sergio Sismondo, "Ghosts in the Machine: Publication Planning 101" (2018)

Week Nine (30 Oct, 1, 3 Nov): Trust: Advice/Decision/Treatment
Stephen John, "Epistemic trust and the ethics of science communication: against transparency, openness, sincerity and honesty" (2018)
Maya Goldenberg, "The 'Ignorant Public'" (2021)
Anita Ho, Introduction, *Live Like Nobody Is Watching: Relational Autonomy in the Age of Artificial Intelligence Health Monitoring* (2023)

Week Ten (6, 8, 10 Nov): Putting it Together: Covid
Robert Evans, "SAGE Advice and Political Decision-Making: 'Following the Science' in Times of Epistemic Uncertainty" (2021)
Stephanie Harvard et al, "Value judgments in a COVID-19 vaccination model: A case study in the need for public involvement in health-oriented modelling" (2021)
Philipa Spoel et al, "Who are 'we'? Examining relational ethos in British Columbia, Canada's COVID-19 public health communication" (2023)

Week Eleven (15, 17 Nov): Issues in Computing: Automation, Bias, Ethics
Safiya Umoja Noble, "Your Robot Isn't Neutral" (2021)
Catherine D'Agnazio and Lauren Klein, "On Rational, Scientific, Objective Viewpoints from Mythical, Imaginary, Impossible Standpoints" (2020)

Week Twelve (20, 22, 24 Nov): Is you AI I? Is it A?
Robert Sokolowski, "Artificial and Natural Intelligence" (1988)
Christian H. Hoffman, "Is AI intelligent? An assessment of artificial intelligence, 70 years after Turing" (2022)
Sarah T. Roberts, "Your AI is a Human" (2021)

Week Thirteen (4, 6 Dec): Conditions of Discourse, Power, and Law in Understanding and Engaging in Digital Practices
Thao Phan, "The Materiality of the Digital and the Gendered Voice of Siri" (2017)
Kristen Thomasen, "Safety in Artificial Intelligence and Robotics Governance in Canada" (2023)
Niels Kerssens, "De-Agentializing Data Practices: The Shifting Power of Metaphor in 1990s Discourses on Data Mining" (2019)