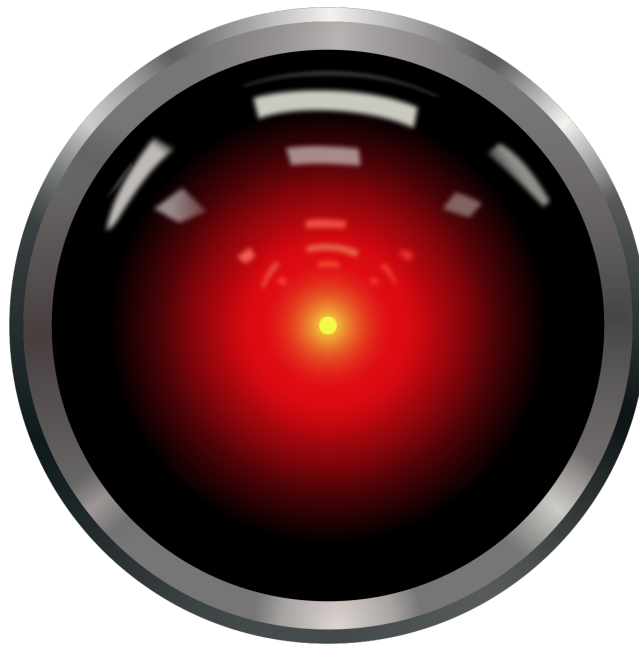


Walk with the Algorithms, Talk with the Algorithms
Philosophy of Technology and Society

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Course Overview

Human history is, in large part, the history of technology. Humans are, it seems, essentially technological animals. From the control and production of fire, through agriculture, carpentry, and the written word, up to computers and smart phones, technologies have radically transformed our capacities, our environment, our relationships, and arguably even human nature itself. The most recent step in this trajectory is the introduction of **information technologies**. These are tools and systems which generate, accumulate, manipulate, interpret, and act on the production of vast quantities of data concerning who we are, what we do, how we feel, and more. Such systems have been put to use in almost every aspect of human life, in self-driving cars, automatic weapons systems, the production of music and visual artwork, the distribution of education, and so on. For these reasons, in the last few years, it has been widely claimed that data has overtaken petrochemicals to become the world's most valuable resource. The vast sea of data produced to fuel such systems has prompted another crucial development: learning machines. Because no human programmer could conceivably work through this information overload, machines have been developed which can themselves develop so as to find the key patterns and signal amidst this massive noisiness. Recent, and well-publicized, breakthroughs in the development of such systems have produced systems capable of seemingly human-level or human-exceeding performance in tasks such as playing video games, diagnosing illness, and even linguistic communication.

In this course, we will ask two main questions: What do we want out of these information technologies? And, What will we actually get out of them? These technologies are here to stay. We could not get rid of them if we wanted to, and they provide sufficient benefits that we probably should not want to anyway. But that does not mean that we must be passive in the way that technology develops and is integrated into our society. If our physical and digital environments are to be reshaped, we ought to have a say in this. This course will thus examine the ways that these technologies are shaping our current environments (and thus, our capacities and relations), as well as the ways they may do so in the future, with an eye to whether these are for the better or worse. If the latter, we will ask how we might alter course, and work towards an information technology that works to improve human life.

Reading Schedule

Readings marked with a '*' are recommended, not required.

- **Week 1: Introduction: What is (Information) Technology? What Should It Be?**
 - Kitcher, P. *Science, Truth, and Democracy* (Excerpts)
 - O' Neal, C. *Weapons of Math Destruction* (Excerpts)
- **Week 2: We Are Our Tools**
 - Clark, A. *Natural Born Cyborgs* (Excerpts)
- **Week 3: Algorithmic Bias**
 - Johnson, G. *Algorithmic Bias*
 - Johnson, G. *Are Algorithms Value-Free?*
- **Week 4: The Value of Data**
 - Beaulieu, A., and Leonelli, S. *Data and Society: A Critical Introduction* (Chapters 1, 8, and 9)
 - * Basu, R. *The Importance of Forgetting*
- **Week 5: Privacy and Control**
 - Zuboff, S. *Surveillance Capitalism* (Excerpts)

- Skinner, B.F. *Walden Two* (Excerpts)
- **Week 6: Communication in a Machine-Made World**
 - Nguyen, T. *Echo Chambers and Epistemic Bubbles*
 - * Neufeld, E. and Woodard, E. *On Subtweeting*
 - Pepp, J. et al. *Manipulative Machines*
 - Dupre, G. and Johnson, G. *Uncanny Performance, Divergent Competence: Biases as Principled Barriers to Human-Machine Communication*
 - * Dupre, G. *(What) Can Deep Learning Contribute to Theoretical Linguistics?*
- **Week 7: Too Much Information!**
 - Mandelbaum, E. and Quilty-Dunn, J. *Believing without Reason: Or Why Liberals Shouldn't Watch Fox News*
 - O'Connor, C. and Weatherall, J. *The Misinformation Age: How False Beliefs Spread* (Chapter 3)
 - * Sperber, D. *The Epidemiology of Beliefs*
- **Week 8: In Machines We Trust?**
 - Simion, M. and Kelp, C. *Trustworthy Artificial Intelligence*
 - Vallor, S. and Bekey, G. *Artificial Intelligence and the Ethics of Self-Learning Robots*
- **Week 9: Work**
 - Frey, C.B., and Osborne, M.A. *The Future of Employment: How Susceptible Are Jobs to Computerisation?*
 - Wilde, O. *The Soul of Man Under Socialism*
- **Week 10: Virtual Reality**
 - Nozick, R. *The Experience Machine*
 - Chalmers, D.J. *Reality+* (Excerpts)
 - * Pryor, J. *What's So Bad About Living in the Matrix?*
 - * Hayward, M. *Does The Rise of the Metaverse Mean the Decline of Cities?*
- **Week 11: The Singularity**
 - Shanahan, M. *The Technological Singularity* (chapters 4 and 7)
 - * Chalmers, D. *The Singularity: A Philosophical Analysis*

Assignments

Media Report: 15% of final grade.

Topics surrounding the relationships between artificial, especially artificially intelligent, technologies and human society are common in fiction. Novels like those by William Gibson, Kazuo Ishiguro, or Philip K. Dick, TV shows like *The Capture* and *Black Mirror*, and many movies and video games, all involve consideration of the ways that different technologies can reshape our social landscape, and the ethical problems this can lead to. For this exercise, I would like you to select one such example of a fictional world centering on these issues, and write a 'philosophical media report' on it. This report should: explain how the distinctive technologies in this world work and the ways that this changes things; compare this world, with its technologically-sculpted social landscape, to our own; and discuss the potential and prospects for real technological disruption of this sort.

Reading Responses (500-1000 words per assignment, totaling 20% of final grade): for five of the weekly seminar meetings, I would like you to write a brief response to one or more of the assigned readings for that week. These responses may be objections to the reading, novel applications, clarifications of the argument in the reading, or anything else, so long as it is clearly relevant to discussion of the assigned material, and contributes to understanding of these debates. Students may choose which weeks they submit these responses, and may submit more than 5 in total if they wish, although they will not receive extra credit for additional submissions. Each response will be graded pass/fail, and will be worth 4% of your final grade. Written feedback will be provided.

Essay One (1000 words, 20% of final grade): I will provide several options for essay titles, based on material covered in the first half of the course. This paper will be largely exegetical, demonstrating your understanding of the course material and the arguments discussed therein.

Essay Plan (One page, 10% of final grade): I will not provide a prompt for the final paper. You will need to come up with your own topic. In preparation for this, you will submit to me an essay plan, identifying the key thesis you will be defending, the argument you will be making in defense of this claim, any key texts you will be relying on, and so on. I will provide feedback and guidance, which should be incorporated into your final paper. I highly recommend you begin thinking about possible paper topics, and discussing them with me, early on in the course. All students who submit an essay plan will receive the full 10%.

Final paper (2500 words, 35% of final grade): This will be a substantive piece, detailing and motivating your own take on one of the issues discussed in the class. As this is the largest piece of work you will do for this class, it is highly recommended that you start thinking about your topic early on in the course, and discuss possible ideas with me. Incorporating feedback from your essay plan, including following up on reading recommendations, will be crucial for a good grade on this paper.