



Course program and reading list

Semester 1 Year 2023

School: Sammy Ofer School of Communications M.A.

Ethics and Technology

Lecturer:

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Teaching Assistant:

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Course No.:	Course Type :	Weekly Hours :	Credit:
2881	Lecture	2	2

Course Requirements :	Group Code :	Language:
Final Paper	232288100	English



Course Description

Unit 1. What technology wants?

An introductory unit to establish the foundation for the ethical discussions which will follow. We will discuss the foundation of the thought in regards to technology, its social, cultural and political position. Next we will learn how to ethically evaluate a technology phenomena or a specific use of the technology. We will define the problem with emerging technologies and cover a few ethical perspectives for analysing the morality of emerging technologies.

Class 1. Technology Today: Utopia or Dystopia? - 2/3/2022

.Is technology good or bad for us? Was the Unabomber right?

.deterministic approach towards technologies

.The tension of progress and the innovation presumption, The Collingridge dilemma

Class Readings (before 1st class):

1. Winner, L. (1997). Technology Today: Utopia or Dystopia?. Social Research Vol. 64, No. 3, Technology and the rest of culture (FALL 1997), pp. 989-1017
2. Postman, N. (1993). From Technocracy to Technopoly. In Technopoly: The Surrender of Culture to Technology. (pp.40-56). Vintage Books.
3. Joy, Bill. "Why the Future Doesn't Need Us." Wired Magazine 8, no. 4 (2000): 238-262. <https://www.wired.com/2000/04/joy-2/>

Suggested Watch/Read/Listen

1. Unabomber. The Unabomber Manifesto: Industrial Society and Its Future. WingSpan Classics, 2008.
2. Kevin Kelly podcast "The Unabomber was Right; the Amish, too: <https://radioopensource.org/kevin-kelly-on-tech-the-unabomber-was-right-the-amish-too/>
3. The Big Bang Theory - The Emotion Detection Automation: <https://www.youtube.com/watch?v=TfNnpsYATbQ>
4. Weinberg, Disagree (2021): "Nozick's Cavemen": <https://justinweinberg.org/2021/02/18/nozicks-cavemen/>
5. Kelly, K. (2011). "Deep Progress." In What Technology Wants, Unknown edition., 73-102. New York: Penguin Books.
6. Postman, N. (2013). Informing ourselves to death. In The Nature of Technology (pp. 5-14). Brill Sense.

Class 2. The Culture of Technology - 9/3/2022

.Change of perspectives: from neutrality to critical, from restrict to wide

.Definitions: Co-production, Situated technology, Pacey triangle

Class Readings:

1. Pacey, A. (2014). Technology: practice and culture. In Ethics and emerging technologies (pp. 27-36). Palgrave Macmillan, London.
2. Ames, M. G. (2015, August). Charismatic technology. In Proceedings of The Fifth Decennial Aarhus Conference on Critical Alternatives (pp. 109-120).

Suggested Watch/Read/Listen

1. The bet between "the neo-luddite" Kirkpatrick Sale and Kevin Kelly:
https://www.elon.edu/u/imagining/expert_predictions/interview-with-the-luddite-kirkpatrick-sale-is-a-leader-of-the-neo-luddites-wires-kevin-kelly-wrote-the-book-on-neo-biological-technology-food-fight-anyone-8/
2. The followup, so who won the bet? <https://www.wired.com/story/a-25-year-old-bet-comes-due-has-tech-destroyed-society/>

Class 3. Tension of Values, (and some about Morality and Norms)- 16/3/2022

.Values, Morality and Norms

.Simulation in class: "the moral machine"

.The neutrality thesis VS the embedded values thesis

Class Reading:

1. Moor, J. H. (2005). Why we need better ethics for emerging technologies. *Ethics and information technology*, 7(3), 111-119.
2. Shilton, K. (2018). Values and ethics in human-computer interaction. *Foundations and Trends® in Human-Computer Interaction*, 12(2). Chapter 4 pp.32-40
3. Brey, P. (2010). Values in technology and disclosive computer ethics. *The Cambridge handbook of information and computer ethics*, 4, 41-58.

Class 4. Three Ethical frameworks -23/3/2022

.Ethical Frameworks: Consequentialism, Deontological and Ecological

.Discussion on the moral obligation to whom? to what?

Class Mandatory watching:

1. Watch Black Mirror: "Fifteen Million Merits", Season 1, Ep.2. For class, write down a few points for our ethical discussion.

Suggested Watch/Read/Listen

1. Read this example in which they analyze micro-targeting from different ethics perspectives: [The Ethics of Political Micro-targeting, Gizzi, 2018. Link](#)

Class 5. Does technology have race? 30/3/2022

. Prominent ethical concerns of AI

- . From information ethics to data ethics
- . What can data feminism contribute?
- . Key principles for good AI
- . Simulation in class: "Survival of the best fit": <https://www.survivalofthebestfit.com/>

Class Reading for class:

1. Hankerson, D., Marshall, A. R., Booker, J., El Mimouni, H., Walker, I., & Rode, J. A. (2016, May). Does technology have race?. In Proceedings of the 2016 CHI Conference Extended Abstracts on Human Factors in Computing Systems (pp. 473-486).
2. D'Ignazio, C., & Bhargava, R. (2015, September). Approaches to building big data literacy. In Proceedings of the Bloomberg data for good exchange conference
3. Gebru, T. (2019). On race and Gender. In Oxford handbook on AI ethics, chapter 13, pp. 253-270. arXiv preprint arXiv:1908.06165.

Suggested Watch/Read/Listen

- a) Mashable (October, 2018), "Amazon used AI to promote diversity. Too bad it's plagued with gender bias: <https://mashable.com/article/amazon-sexist-recruiting-algorithm-gender-bias-ai/>
- b) Watch "The selfish ledger" by Google X: <https://www.theverge.com/2018/5/17/17344250/google-x-selfish-ledger-video-data-privacy>

Unit 2: Technological Use cases

In this unit we will apply the ethical framework on different technological domains. Students (in groups of 2-3) will prepare an introductory presentation to the class. Further instructions for the presentation will be given in class. Other students, who are not presenting, read and reflect as usual on the google doc. We will end this unit with a hands-on workshop in class based on the "Value Sensitive Design" Methodology.

Class 6. Synthetic Bio/Gen Engineering - 6/4/2022

Group1: Crispr technology (15 minutes)

Group2: Bionic Engineering (15 minutes)

.The question of Nature VS Technology

.Definition of Extrinsic/Intrinsic ethical concerns

.The cyborg manifesto (Donna Haraway)

Class Reading:

1. Kurzweil, Ray. The Singularity Is Near: When Humans Transcend Biology. 1st edition. 14-21; 25-30. New York: The Viking Press, 2005..
2. Greguric, I. (2014). Ethical issues of human enhancement technologies: Cyborg technology as the extension of human biology. Journal of Information, Communication and Ethics in Society.
3. Haraway, D. (2006). A cyborg manifesto: Science, technology, and socialist-feminism in the late 20th century. In The international handbook of virtual learning environments (pp. 117-158). Springer, Dordrecht.

Suggested Watch/Read/Listen

1. 25 years of wired predictions – why the future never arrives

<https://www.wired.com/story/wired25-david-karppf-issues-tech-predictions/>

2. What will humans look like in 100 years?, Futuristic Juan Enriquez on TED Summit:
https://www.ted.com/talks/juan_enriquez_what_will_humans_look_like_in_100_years

Passover break

Class 7. Social Robots - 27/4/2022

Group3: Social Caring Robots (15 minutes)

Group4: Sex Robots (15 minutes)

. Affecting Computing

. The question of trust, rights and human behaviour & relationships

Class Reading:

1. Appel, M., Izydorczyk, D., Weber, S., Mara, M., & Lischetzke, T. (2020). The uncanny of mind in a machine: Humanoid robots as tools, agents, and experiencers. Computers in Human Behavior, 102, 274-286.
2. Verbeek, P. P. (2004). Material morality. van Hinte (ed.), Time in Design. Rotterdam, 10, 198-210.
3. Sullins, J. P. (2012). Robots, love, and sex: the ethics of building a love machine. IEEE transactions on affective computing, 3(4), 398-409.

4. Scheutz, M., & Arnold, T. (2016, March). Are we ready for sex robots?. In 2016 11th ACM/IEEE International Conference on Human-Robot Interaction (HRI) (pp. 351-358). IEEE.

Suggested Watch/Read/Listen

1. NYtime article: Would you let a robot take care of your mother? [Link](#)
2. Ted talk by Kate Darling "Why we have an emotional connection to robots?".
<https://youtu.be/Uq6XgrYBugo>
3. Watch "uninvited Guests", a criticism over IoT devices for the elderly.
<https://vimeo.com/128873380>
4. Read short blog post: "Do Artifacts Have Ethics?"

<https://thefrailestthing.com/2014/11/29/do-artifacts-have-ethics/>

Memorial and Independence day break

Class 8. Autonomous Robots - 18/5/2022

Group5: Combat Robots (15 minutes)

Group6: Autonomous Cars (15 minutes)

. the morality of material agents

Class Reading:

1. Kroes, P., & Verbeek, P. P. (2014). Introduction: The moral status of technical artefacts. In The moral status of technical artefacts (pp. 1-9). Springer, Dordrecht.
2. Lokhorst, G. J., & Van Den Hoven, J. (2011). Responsibility for military robots. Robot ethics: The ethical and social implications of robotics, 145-155.
3. Lin, P., Bekey, G., & Abney, K. (2008). Autonomous military robotics: Risk, ethics, and design. California Polytechnic State Univ San Luis Obispo.
4. Lin, P. (2016). Why ethics matters for autonomous cars. In Autonomous driving (pp. 69-85). Springer, Berlin, Heidelberg.

Class 9. Digital/Online Experiences- 11/5/2022

Group7: Artificial Humans Avatars (15 minutes)

Group8: Virtual and Augmented Reality (15 minutes)

.Persuasion technologies, from manipulation to Dark Patterns

Class Reading:

1. Turkle, S. (2007). Authenticity in the age of digital companions. *Interaction studies*, 8(3), 501-517.
2. Turkle, S. (2011). *Life on the Screen*. Simon and Schuster.
3. Tromp, N., Hekkert, P., & Verbeek, P. P. (2011). Design for socially responsible behavior: a classification of influence based on intended user experience. *Design issues*, 27(3), 3-19.

Suggested Watch/Read/Listen

1. Watch "How far is too Far? The age of AI, Youtube original series. Ep:1:
<https://youtu.be/UwsrzCVZAb8>

Class 10. Climate/Food Engineering 25/5/2022

Group9: Geo-engineering technology (15 minutes)

Group10: FoodTech (15 minutes)

- . The idea of "techno-solutionism"
- . How far can the technological plateau reach?

Class Reading:

1. Morozov, Evgeny. *To Save Everything, Click Here: The Folly of Technological Solutionism*. New York: PublicAffairs, 2013. ix-xv, 1-16.
2. Blancke, S., Van Breusegem, F., De Jaeger, G., Braeckman, J., & Van Montagu, M. (2015). Fatal attraction: the intuitive appeal of GMO opposition. *world*, 22(24), 1360-1385.
3. Segal, Howard P. "The 'Scientific and Technological Plateau' and the Redefinition of Progress." In *Utopias: A Brief History from Ancient Writings to Virtual Communities*, 47:234-41. John Wiley & Sons, 2012.

Suggested Watch/Read/Listen

1. Pearl, Annie Zhao, Mike. "'Climate Despair' Is Making People Give Up on Life." *Vice* (blog), July 11, 2019. https://www.vice.com/en_us/article/j5w374/climate-despair-is-making-people-give-up-on-life.

2. [Kurzesagt – In a Nutshell](https://youtu.be/dSu5sXmsur4), Geoengineering: A Horrible Idea We Might Have to Do: <https://youtu.be/dSu5sXmsur4>

Class 11. Value Sensitive design (VSD) - 1/6/2022,

. "Value Sensitive Design" methodology and in-class workshop

Class Reading:

1. Friedman, B., & Kahn Jr, P. H. (2003). Human values, ethics, and design. The human-computer interaction handbook, 1177-1201.
2. Miller, J. K., Friedman, B., Jancke, G., & Gill, B. (2007, November). Value tensions in design: the value sensitive design, development, and appropriation of a corporation's groupware system. In Proceedings of the 2007 international ACM conference on Supporting group work (pp. 281-290).
3. Shilton, K. (2018). "Designing Good: Controversies in Applying Values and Ethics to Design" in Values and ethics in human-computer interaction. Foundations and Trends® in Human-Computer Interaction, 12(2), Chapter 3, (pp-20-27 only)

Class 12. Inclusive Design in the Industry - 8/6/2022

.VSD workshop wrap-up

.Guest Talk: Open Style Lab, Yasmin Keats

.Final submission explanation



Course Goals

The goal of this course is to allow prospective designers of the technology (that means you!) to be able to:

- Become familiar with a range of ethical issues raised by modern technology
 - Understand the importance of questioning and debating over the social and cultural implications of technology
 - Use ethical reasoning to make informed and principled choices
 - Recognize and be familiar with the language and content of ethical discourse
 - Understand modern debates surrounding ethics and technology
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Grading

All members of the class share responsibility for being active participants. As part of this class, every student is required to fulfill the following assignments:

1. Class materials are divided into Mandatory and Optional (Suggested).
2. Class mandatory readings: For each class, choose 1 item from the "Class reading" list and submit a short reflection before class on a class google doc:
<https://docs.google.com/spreadsheets/d/1oYbpvfaM6psVWO4LlErO9GBZyn0u4ZL45UDW-34r1l/edit?usp=sharing>
3. In class presentations of use cases: Choose a topic to present in class. 3 students per group. List yourself in the google doc in advance under the tab "TECH use cases". Submit the presentation in google slides or PDF after completion.
4. Submit a final assignment

Grades:

40% - Semester assignments (30% weekly readings/assignments, 10% class presentation).
We will discuss weekly readings in class

60% - Final assignment

Learning Outcomes

Reading List

Reading (in order of appearance. Note, not all mandatory):

Winner, L. (1997). Technology Today: Utopia or Dystopia?. Social Research Vol. 64, No. 3, Technology and the rest of culture (FALL 1997), pp. 989-1017

Pacey, A. (2014). Technology: practice and culture. In Ethics and emerging technologies (pp. 27-36). Palgrave Macmillan, London.

Ames, M. G. (2015, August). Charismatic technology. In Proceedings of The Fifth Decennial Aarhus Conference on Critical Alternatives (pp. 109-120).

- Postman, N. (1993). From Technocracy to Technopoly. In *Technopoly: The Surrender of Culture to Technology*. (pp.40-56). Vintage Books.
- Moor, J. H. (2005). Why we need better ethics for emerging technologies. *Ethics and information technology*, 7(3), 111-119.
- Shilton, K. (2018). Values and ethics in human-computer interaction. *Foundations and Trends® in Human-Computer Interaction*, 12(2). Chapter 4 pp.32-40 41-58.
- Hankerson, D., Marshall, A. R., Booker, J., El Mimouni, H., Walker, I., & Rode, J. A. (2016, May). Does technology have race?. In *Proceedings of the 2016 CHI Conference Extended Abstracts on Human Factors in Computing Systems* (pp. 473-486).
- D'Ignazio, C., & Bhargava, R. (2015, September). Approaches to building big data literacy. In *Proceedings of the Bloomberg data for good exchange conference*
- Gebru, T. (2019). On race and Gender. In *Oxford handbook on AI ethics*, chapter 13, pp. 253-270. arXiv preprint arXiv:1908.06165.
- Kurzweil, Ray. *The Singularity Is Near: When Humans Transcend Biology*. 1st edition. 14-21; 25-30. New York: The Viking Press, 2005..
- Greguric, I. (2014). Ethical issues of human enhancement technologies: Cyborg technology as the extension of human biology. *Journal of Information, Communication and Ethics in Society*.
- Haraway, D. (2006). A cyborg manifesto: Science, technology, and socialist-feminism in the late 20th century. In *The international handbook of virtual learning environments* (pp. 117-158). Springer, Dordrecht.
- Appel, M., Izydorczyk, D., Weber, S., Mara, M., & Lischetzke, T. (2020). The uncanny of mind in a machine: Humanoid robots as tools, agents, and experiencers. *Computers in Human Behavior*, 102, 274-286.
- Verbeek, P. P. (2004). Material morality. van Hinte (ed.), *Time in Design*. Rotterdam, 10, 198-210.
- Sullins, J. P. (2012). Robots, love, and sex: the ethics of building a love machine. *IEEE transactions on affective computing*, 3(4), 398-409.
- Scheutz, M., & Arnold, T. (2016, March). Are we ready for sex robots?. In *2016 11th ACM/IEEE International Conference on Human-Robot Interaction (HRI)* (pp. 351-358). IEEE.
- Kroes, P., & Verbeek, P. P. (2014). Introduction: The moral status of technical artefacts. In *The moral status of technical artefacts* (pp. 1-9). Springer, Dordrecht.
- Lokhorst, G. J., & Van Den Hoven, J. (2011). Responsibility for military robots. *Robot ethics: The ethical and social implications of robotics*, 145-155.
- Lin, P., Bekey, G., & Abney, K. (2008). *Autonomous military robotics: Risk, ethics, and design*. California Polytechnic State Univ San Luis Obispo.
- Lin, P. (2016). Why ethics matters for autonomous cars. In *Autonomous driving* (pp. 69-85).

Springer, Berlin, Heidelberg.

Turkle, S. (2007). Authenticity in the age of digital companions. *Interaction studies*, 8(3), 501-517.

Turkle, S. (2011). *Life on the Screen*. Simon and Schuster.

Tromp, N., Hekkert, P., & Verbeek, P. P. (2011). Design for socially responsible behavior: a classification of influence based on intended user experience. *Design issues*, 27(3), 3-19.

Morozov, Evgeny. *To Save Everything, Click Here: The Folly of Technological Solutionism*. New York: PublicAffairs, 2013. ix-xv, 1-16.

Blancke, S., Van Breusegem, F., De Jaeger, G., Braeckman, J., & Van Montagu, M. (2015). Fatal attraction: the intuitive appeal of GMO opposition. *world*, 22(24), 1360-1385.

Segal, Howard P. "The 'Scientific and Technological Plateau' and the Redefinition of Progress." In *Utopias: A Brief History from Ancient Writings to Virtual Communities*, 47:234-41. John Wiley & Sons, 2012.

Friedman, B., & Kahn Jr, P. H. (2003). Human values, ethics, and design. *The human-computer interaction handbook*, 1177-1201.

Miller, J. K., Friedman, B., Jancke, G., & Gill, B. (2007, November). Value tensions in design: the value sensitive design, development, and appropriation of a corporation's groupware system. In *Proceedings of the 2007 international ACM conference on Supporting group work* (pp. 281-290).

Shilton, K. (2018). "Designing Good: Controversies in Applying Values and Ethics to Design" in *Values and ethics in human-computer interaction*. *Foundations and Trends® in Human-Computer Interaction*, 12(2), Chapter 3, (pp-20-27 only)