PH-4720
Philosophy of Technology:
From Heidegger to Neural Networks
Fr. Justin Gable, O.P., Fr Anselm Ramelow, O.P.
Fall 2021

Time: Thursdays 12:40PM-3:30PM
Location: DSPT # 2
3 units

Office Hours:
Fr Anselm: by appointment; he can be reached under (415) 567 7824 (St. Dominic’s parish, ask for Fr. Anselm) or aramelow@dspt.edu; I am also available after class.
Fr. Justin: jgable@dspt.edu

Course Description
Philosophy of Technology is an emerging new field and of special importance in the contemporary world: artificial intelligence and machine learning raise questions about the status of computers (are they conscious, intelligent, persons?) and ethical questions around the dangers of algorithms in criminal justice, public surveillance and other fields. Algorithms fragment the social sphere, machines blend with human beings (cyborgs), promises are made by transhumanist theories and takeovers of a “singularity” predicted. This seminar will investigate the underlying philosophical assumptions with the help of philosophers like M. Heidegger, A. Turing, Hubert Dreyfus, Hans Jonas, Andrew Feenberg, Albert Borgmann, Don Ihde, Sherry Turkle, Jaron Lanier, Peter-Paul Verbeek and others.

Format
The format of the class is a seminar; attendance and participation in the discussion is important. Research Paper. (MDiv, MA/MTS, PhD/ThD)
This class will meet only in person, not online.
[20 max enrollment; Auditors excluded]

Course Outcomes

Course Outcome 1: The student will have gained an understanding of the problems that the current and emerging philosophy of technology is discussing.
Course Outcome 2: The student will have gained an understanding of the history of technology and the thoughts that reflect them.
Course Outcome 3: The student will be able to relate various thinkers and their positions on this topic.
Course Outcome 4: The student will learn to identify a topic of interest and research, in collaboration with the instructor (paper proposal).
Course Outcome 5: The student will learn to identify relevant literature for this topic of research.
Course Outcome 6: The student will hone his/her skill in academic writing, making a sustained and coherent argument or exposition of a given author or problem.
**Course Outcome 7**: The student will learn how to articulate and/or defend various positions orally in seminar discussion and presentations on various authors and topics.

**Course Outcome 8**: The student will collaborate with other participants in developing an understanding of the texts under discussions, assisting them with prepared handouts and presentations.

The instructors will assess each student’s achievement of these outcomes through (A) Research Paper, (B) Paper Proposal, (C) Class Presentations, (D) Class Participation. The Course & Curricular Outcomes Table in the Appendix at the end of this syllabus relates these outcomes and assessment activities to both the DSPT Institutional Goals and the MDiv Program Outcomes.

The student will demonstrate this knowledge through
a) Class participation and contribution to the discussions.
b) Taking turns in preparing texts that are to be discussed in class.
c) a 15-20pp research paper (75%)
   This will include an evaluation of the student in the following areas:
   a. Deep Learning (Institutional Goal A.1 and 2): based on the paper, according to the published rubrics of assessment.
   b. Collaborative learning (Institutional Goal B.1); based on
      i. class participation
      ii. the paper proposal you are submitting and integration of feedback
      iii. your contribution to the common good of the class:
         1. class preparation
         2. class participation
   c. Self-direction (Institutional Goal A.3): finding your own paper topic will demonstrate this ability
   d. Leadership (Institutional Goal B.1)
      Your paper and its topic can be an opportunity to show that you can identify relevant issues and address them.

Students will take turns in the class preparation: this preparation should articulate the argument of the text in a brief and concise manner (ideally stating the thesis of the text in 3 sentences), so as to give the participants a starting point for the discussion. It should make the text’s logic as clear as possible and might offer some reflection questions for discussion. It is always helpful to use handouts.

The research paper is subject to approval and may consist in
a) relating two different authors or positions, or
b) defending a particular position (perhaps on a particular technology) using one of he approaches discussed in class, and/or doing so in a historically informed way

Other kinds of topics are possible, and you should feel free to choose a subject matter or a topic of your interest (e.g. relating to a thesis topic).

For this purpose, we ask you to give us a paper proposal by TH 11/4. This proposal should consist of a short paragraph, describing the topic of your choice (it might be good to talk to one of us about it sometime beforehand), and a bibliography. The bibliography is most important. Please make your bibliography as specific as possible. Do not quote general handbooks or the
textbooks of the class. Please include at least *three articles from academic journals*. It is not required – but a good practice – to write an outline as well. Please also consult the *paper guidelines* at the end of this syllabus.

As one possible research tool I recommend as a starting point the “philosopher’s index” that is available on the GTU library website (there is also a new tool, called Summon, which you might want to try). In time of COVID, you do still have access to *library resources* for your research; please visit the following site for more information: [https://www.gtu.edu/library/remote-resources-gtu-library](https://www.gtu.edu/library/remote-resources-gtu-library).

The **deadline** for the **paper** is **TH 12/16**. Out of fairness to other students who submit their work on time, missed deadlines will result in a lower grade.

Given the COVID situation, please submit this paper **electronically, in Word Format (not as Pdf)**.

Class **attendance** is mandatory. Attendance and participation will impact the grade.

*We would like you do forgo the use of electronic devices in the classroom.*

**Bibliography**
Readings will be distributed by Moodle.
Class Schedule:

9/9: **Introduction to the Course**

*Reflections on Technology (and its History) in the History of Philosophy*

- **Aristotle**, selections from *Nicomachean Ethics*, Book VI and Metaphysics, Book Alpha (1) and Zeta (VII), and *Physics* Book II
- **Bacon**, selections from the *Novum Organum* and *The New Atlantis*
- **Jonas**, “Toward a Philosophy of Technology”
- **Ortega y Gasset**, “Man the Technician” (in part)
- **Spengler**, *Man and Technics* (selections)

9/16: **Heidegger on Technology**

- **Heidegger**, selections from *Being and Time*
- **Heidegger**, “Question Concerning Technology”
- **Dreyfus**, “Heidegger on Gaining a Free Relation with Technology”

9/23: **Dialoguing with Heidegger**

- **Ellul**, “On the Aims of a Philosophy of Technology”
- **Borgmann**, “Focal Things and Practices”
- **Jonas**, “Technology and Responsibility”
- **Feenberg**, “Philosophy of Technology at the Crossroads: Critique of Heidegger and Borgmann”

9/30: **Post-Phenomenology**

- **Ihde**, “A Phenomenology of Technics”
- **Verbeek**, “Obstetric Ultrasound and the Technological Mediation of Morality: A Postphenomenological Analysis” and “Postphenomenology of Technology” and excerpts from *Moralizing Technology*
10/7: **Critical Theory and the Politics of Technology**

Marx, selections from *Das Kapital*

Marcuse, selections from *One Dimensional Man*

Foucault, “The Panopticon” (from *Discipline and Punish*)

Andrew Feenberg, “Ten Paradoxes of Technology”

Langdon Winner, “Do Artifacts Have Politics?”


*optional:

Feenberg, “The Ambivalence of Technology” (on Marx)

Feenberg, “The Bias Of Technology” (on Marcuse)


10/14: **What Is Intelligence? Can it be “Artificial”?**

Turing, “Computing Machinery and Intelligence” (summary)

*But What is a Neural Network?* (4 short videos)

Tegmark “Matter Turns Intelligent”

Dennett, “Consciousness in Human and Robot Minds”

Dreyfus and Dreyfus,

“Why Computers May Never Think Like People”

10/21: **What Is Intelligence? Can it be “Artificial”? continued**

Searle, “Consciousness” and “Minds, brains, and programs”

Feser, “Kripke, Ross, and the Immaterial Aspects of Thought”

Ramelow, *Artificial Intelligence and the Soul*

10/28: **Reading Week (No Class)**
11/4: **Genome Editing and Enhancement**

John Paul II, "Address at the Conclusion of the 35th General Assembly of the World Medical Association"

Jonas, “Ethics and Biogenetic Art”

Walter, "Human Germline Therapy: Proper Human Responsibility or Playing God?"

Paul Scherz, "The Mechanism and Applications of CRISPR-Cas9"

Fitzgerald, S.J., "Human Genome Editing: A Catholic Perspective"

"Living in a CRISPR World" (Austriaco): (Listen to the Podcast)

Michael Sandel (interview)

11/11: **Transhumanism**

Bostrom, "Human Genetic Enhancements—A Transhumanist Perspective"

Kurzweil, “Twenty-First Century Bodies”

Videos:

Nick Bostrom
(https://www.youtube.com/watch?v=pywF6ZzsghI&t=483s),

S. Hawking
(https://www.youtube.com/watch?v=fFLVyWBDTfo&t=246s),

Bill Gates
(https://www.youtube.com/watch?v=EmfrMKLwr3k&t=109s),

and Elon Musk
(https://www.youtube.com/watch?v=PULkWGHeIQQ&t=3630s)

Savulescu and Persson, “The Perils of Cognitive Enhancement and the Urgent Need to Enhance the Moral Character of Humanity”

Vallor, “Knowing What to Wish For” (from Technology and the Virtues)

Franks, Angela “Deleuze on Desire”

Ramelow, “Can Computers Create”
11/18: **Posthumanism**

**Bolter**, “Posthumanism” (from *The International Encyclopedia of Communication Theory and Philosophy*)

**Latour**, “A Collective of Humans and Nonhumans: Following Daedalus’s Labyrinth”

*optional:

**Haraway**, “A Cyborg Manifesto”

**Social Media and Virtual Reality (I)**

**Capurro** and **Hjørland**, “The Concept of Information”

**Turkle**, “Connecting With Sherry Turkle”

**Documentary**: “The Social Dilemma”

11/25: **Thanksgiving (No Class)**

12/2: **Social Media and Virtual Reality (II)**

**Lanier** and **Weyl**, “A Blueprint for a Better Digital Society”

**Lanier**, “*How We Need to Remake the Internet*” (TED talk)

**Crawford**, “Virtual Reality as Moral Ideal”

**Forster**, “The Machine Stops” (short story)

**Vallor**, “Surveillance and the Examined Life”

(from *Technology and the Virtues*)

**Zengotita** on mediation and performing ourselves: [here](#), and [here](#) and [here](#)

**Herzfeld**, “Playing Games in a Virtual World”
12/9: **Robot Ethics and Rights**

Moor, “The Nature, Importance, and Difficulty of Machine Ethics”

Gunkel, “The Other Question: Can and Should Robots Have Rights?”

Floridi and Sanders, “On the Morality of Artificial Agents”

Bostrom/Yudkowsky: “The Ethics of Artificial Intelligence”

Vallor, selections from *Technology and the Virtues*

Part I, and “Robots at War and Home”

Levy, “The Ethics of Robot Prostitutes”

Richardson, “The Asymmetrical ‘Relationship’: Parallels Between Prostitution and the Development of Sex Robots”

Jenkins, Ryan “Autonomous Vehicles: Ethics and Law”

12/16: **Robot Ethics continued**

*(time permitting:) Technology and Environmental Ethics*

Thompson, “Philosophy of Technology and the Environment”

Lemmens, Blok, and Zwier,

“Toward a Terrestrial Turn in Philosophy of Technology”


Light, “Ecological Restoration and the Culture of Nature: A Pragmatic Perspective”
Paper Guidelines

As to the topic, there is flexibility, and we do encourage you to use topics of your own interest or background. There are many graduate student conferences now; you might want to write a paper with an eye to presenting it in such a venue. An increasing number of students have done so successfully. The topic is, however, subject to approval. You can talk to us before or after your proposal.

The paper is a research paper (15-20 pages, 12pt, double space). Hence we expect you to do research and use secondary literature. This is to be documented in the use of footnotes (not endnotes) and in a bibliography.

The bibliography is most important. Please make your bibliography as specific as possible. We would like to see at least three pertinent journal articles in your bibliography; this is more important than generic books. As a help: please use the “philosopher’s index” at the GTU library, although this might only provide you with a starting point. Topics without pertinent literature are not viable; if it requires very extensive research on primary texts, then you should leave it for your dissertation.

To avoid some common pitfalls: please focus on your topic. There is typically no need for biographical introductions on philosophers. (Biographical details can, of course, be brought in, if they explain some subject matter.)

Please avoid flowery or cryptic language. Be as sober as possible. Building literary smoke screens will not make your paper appear more profound, but only less intelligible. Focus on making arguments and positions clear.

Do some proofreading. If English is your second language, it can be a good idea to ask someone else to help you. Please do write complete sentences that have a proper grammatical structure. (Unfortunately that does not always seem to be self-understood.) Shorter sentences can make that easier. Grammatical correctness is more important than political correctness (e.g., please do not use “they” as a singular).

Subdividing it into chapters (with headlines) can help the structure of your paper. It will help the clarity of your own thought process – as well as that of the reader. Please use page numbers.

Plagiarism is unacceptable and will result in a failing grade.

Proposal

The proposal is due the class after reading week. It consists in 2 or 3 sentences, stating your topic, plus a pertinent bibliography. This exercise is meant to help you to clarify your topic and focus your bibliography. After that, the paper should come easy. It is also a good exercise for a future thesis proposal. The topic is subject to approval.
# Appendix: Course & Curricular Outcomes Table

In the following table, each Course Outcome is listed, followed by course activities and/or assignments by which the Course Outcome is to be measured, along with the DSPT Institutional Outcomes and Program Goals/Outcomes to which the given Course Outcome contributes. The DSPT Institutional Goals and Program Goals/Outcomes are available on the following page.

<table>
<thead>
<tr>
<th>Course Outcome</th>
<th>Activities &amp;/or Assignments To Measure Course Outcome</th>
<th>Related Program and Institutional Goals/Outcomes</th>
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<tbody>
<tr>
<td>1. have gained an understanding of the problems that the current and emerging philosophy of technology is discussing</td>
<td>(A) Research Paper (C) Class Presentations (D) Class Participation</td>
<td>IGA1-Integrative Thinking MAPhEG2&amp;MAPhTG2-understanding of systematic phil</td>
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<tr>
<td>2. have gained an understanding of the history of technology and the thoughts that reflect them.</td>
<td>(A) Research Paper (C) Class Presentations (D) Class Participation</td>
<td>IGA1-Integrative Thinking MAPhEG1&amp;MAPhTG1-knowledge of history of phil MAPhEG4-integration of knowledge</td>
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<td>3. able to relate various thinkers and their positions on this topic</td>
<td>(A) Research Paper (B) Paper Proposal (D) Class Participation</td>
<td>IGA2-Intellectual Humility IGB1-Ability to Collaborate MAPhEG1&amp;MAPhTG1-knowledge of history of phil MAPhEG4-integration of knowledge MAPhTG4-specialized knowledge</td>
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<td>4. identify a topic of interest and research, in collaboration with the instructor (paper proposal)</td>
<td>(B) Paper Proposal</td>
<td>IGA2-Intellectual Humility IGA3-Self-Direction IGB1-Ability to Collaborate MAPhEG3&amp;MAPhTG3-research skills MAPhTG4-specialized knowledge</td>
</tr>
<tr>
<td>5. identify relevant literature for this topic of research</td>
<td>(A) Research Paper (B) Paper Proposal</td>
<td>IGA1-Integrative Thinking IGA3-Self-Direction IGA2-Intellectual Humility MAPhEG3&amp;MAPhTG3-research skills MAPhEG4-integration of knowledge MAPhTG5-skills for advanced writing</td>
</tr>
<tr>
<td>6. skill in academic writing, making a sustained and coherent argument or exposition of a given author or problem</td>
<td>(A) Research Paper</td>
<td>IGA1-Integrative Thinking IGA2-Intellectual Humility MAPhEG1&amp;MAPhTG1-knowledge of history of phil MAPhEG2&amp;MAPhTG2-understanding of systematic phil MAPhEG4-integration of knowledge</td>
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7. articulate and/or defend various positions orally in seminar discussion and presentations on various authors and topics

<table>
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<th>(C) Class Presentations</th>
<th>(D) Class Participation</th>
<th>MAPhTG5- skills for advanced writing</th>
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<td>IGA1-Integrative Thinking, IGA2-Intellectual Humility, IGB1-Ability to Collaborate MAPhEG2- understanding of systematic phil knowledge, MAPhEG4- integration of knowledge, MAPhEG5-communication skills</td>
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8. collaborate with other participants in an understanding of the texts under discussions, assisting them with prepared handouts and presentations

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**DSPT Goals and Outcomes**

**DSPT Institutional Goals:**

**Pedagogical Goal: Deep Learning.** Motivated by a thirst for truth, the disciplined inquirer is a life-long learner who recognizes fundamental principles in a given field of inquiry and applies them in creative or innovative ways to broader contemporary issues which are of importance to Church, the academy, and/or society. Disciplined inquiry includes the following characteristics:

A1. Integrative Thinking: the ability to recognize, understand, retain, integrate, and apply the fundamental principles operative in a field of inquiry, and use them to make synthetic judgments.

A2. Intellectual Humility: an orientation of mind and heart that fosters intellectual collaboration, precludes both rigidity and passivity of mind, and recognizes that contrary opinions are not a threat, but provide the opportunity to test and deepen one's own grasp of the truth.

A3. Self-Direction: the disposition to take primary responsibility for one's own education, manifested in a keen intellectual interest in the topic of studies, and the ability to teach oneself through a habit of skilled and responsible research and resilient exploration.

**Vocational Goal: Collaborative Leadership.** A collaborative leader inspires within others the desire to realize the common good by articulating to academy or society a coherent vision rooted in the mission of the Church, all the while leading by example.

B1. Ability to Collaborate: expressed in good listening and communication skills which foster decisions stemming from and leading to an open, transparent,
and mutually enriching dialog with others in order that the gifts of all can be appropriately acknowledged and utilized.

Abbreviations: IGA1-Integrative Thinking, IGA2-Intellectual Humility, IGA3-Self-Direction, IGB1-Ability to Collaborate

MAPh – Exam Option: Goals
1. a comprehensive knowledge of the history of the Western philosophical tradition;
2. a detailed understanding of systematic philosophy;
3. skills for academic research;
4. an ability to integrate historical and systematic knowledge in a chosen area of interest;
5. skills for effective communication of philosophical ideas.

Abbreviations: MAPhEG1-knowledge of history of phil, MAPhEG2-understanding of systematic phil, MAPhEG3-research skills, MAPhEG4-integration of knowledge, MAPhEG5-communication skills

MAPh – Thesis Option: Goals
1. a comprehensive knowledge of the history of the Western philosophical tradition;
2. a detailed understanding of systematic philosophy;
3. skills for academic research;
4. a focused knowledge in one specific topic of philosophical inquiry;
5. skills for advanced academic writing and publication.

Abbreviations: MAPhTG1-knowledge of history of phil, MAPhTG2-understanding of systematic phil, MAPhTG3-research skills, MAPhTG4-specialized knowledge, MAPhTG5-skills for advanced writing