Transhumanism: Ethical, Social and Religious Implications

Provisional Syllabus, Summer 2015

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Course Description

• Transhumanism is the belief that technology can allow us to improve, enhance and overcome the limits of our biology. More specifically, transhumanists believe that by merging man and machine via biotechnology, molecular nanotechnologies and artificial super intelligence, one day science will yield humans that have increased cognitive abilities, are physically stronger, emotionally more stable and have indefinite life-spans. This path, they say, will eventually lead to "posthuman" intelligent (augmented) beings far superior to man - a near embodiment of god
• Critics, although accepting the premise of accelerated technological developments (called Technological Singularity) in all these areas, are much more pessimistic about outcomes; they are emphasizing ways in which these science/technology trends could bring existential threats to mankind and are using the Fermi paradox (The apparent size and age of the universe suggest that many technologically advanced extraterrestrial civilizations ought to exist; however, this hypothesis seems inconsistent with the lack of observational evidence to support it) to posit that super advanced civilizations tend to self-destruct.
• Which position is right? Where would the balance tilt: happy outcomes or terribly destructive ones? Are the trends and their consequences real? If they are, what are the desired paths humans should take to maximize the benefits and minimize the perils? These are no easy yes/no answers; the method we will use to bring some light is to understand the implications of different (possible) scenarios and develop a sensitivity analysis of factors that could change the outcomes and those factors may give an indication of directions to follow for positive results.
• We will analyze arguments on both sides and try to understand the ethical, social and religious implications of these concepts that seem futuristic but whose consequences
could be closer than what it appears given the accelerated progression of remarkable scientific developments (especially during last century)

- We cannot ignore these problem; the genie (or better said the genies) of biotech/genetics, artificial intelligence, nanotechnology are already out of the bottle(s) and we (the humans) better make the right decisions in the coming decades or else? We better find ways to invalidate Fermi’s paradox.

This course is intended to give students an overview of a number of hot topics at the intersection of technical, scientific, ethical and religious debates in our society. Specifically, by the end of this course, students should be able to understand the major facts about the accelerated development of scientific concepts and technologies:

1. Understand what the concepts of Transhumanism and Technological Singularity (TS) are and their relationship
2. Understand key trends about genetics, nanotechnology and advanced robotics which could lead to Singularity
3. Get an update of recent computer science developments in AI (artificial intelligence) and of paths that could lead (in a fairly short period of time) to ASI (artificial superintelligence)
4. Become aware of potential dangers in developing these technologies (existential threats) and ways of mitigating these perils by developing checks and balances within research projects for ASI and nanotechnology
5. Review the ethical, social and religious implications of these developments and get involved in debating the options

**Evaluation**

Students will be evaluated by their active participation in class discussions and submitting a (take home) final exam paper

**Course Requirements**

- Watch one movie and few short documentaries as specified below
- Submit a 5 to 6 pages exam paper on a subject that can be selected from a list proposed by the instructor (alternatively, students can propose a subject relevant to the content of the course and submit the final exam on it - with the instructor’s approval).

**Grading Policy**

This is a one-credit pass/no-pass course

**Texts (required)**

* Gatacca (director: Andrew Niccol): movie released by Columbia Pictures, 1997
* The Singularity (director: Doug Wolens); documentary

**Texts (not required, but recommended)**

Disabilities

If you are a student with a documented disability who requires accommodations or if you think you may have a disability and want to inquire about accommodations, please contact the Academic Resource Center at 202-687-8354 or arc@georgetown.edu.

Turnitin.com

Students acknowledge that by taking this course all required papers can be submitted for a Textual Similarity Review to Turnitin.com for the detection of plagiarism. Use of the Turnitin.com service is subject to the terms of use agreement posted on the Turnitin.com site.

Extreme weather, Emergencies, and Instructional Continuity

During inclement weather or other emergencies on a day when we are scheduled to meet face-to-face, check the university’s Web site or call (202) 687-7669 for information on whether the university is open. If the university is open, this class will meet. If the university is closed, this class will meet through distance means such as online videoconferencing; check your e-mail for a message from me on how we will proceed in that situation. Due dates for written assignments submitted through Blackboard will not be changed due to campus closings.

The university recently has acquired the capability to send text messages and recorded messages about emergencies to cell phones and other mobile devices. Sign up on MyAccess.

Georgetown Honor System

All students are expected to follow Georgetown's honor code unconditionally. We assume you have read the honor code material located at http://scs.georgetown.edu/academic-affairs/honor-code, and in particular have read the following documents: Honor Council Pamphlet, What is Plagiarism, Sanctioning Guidelines, and Expedited Sanctioning Process. Papers in this course will all be submitted to turnitin.com for checking.

Submitting material in fulfillment of the requirements of this course means that you have abided by the Georgetown honor pledge:

In the pursuit of the high ideals and rigorous standards of academic life, I commit myself to respect and uphold the Georgetown Honor System: To be honest in any academic endeavor, and to conduct myself honorably, as a responsible member of the Georgetown community, as we live and work together.

Plagiarism

In accord with university policy, all incidents of suspected plagiarism or other Honor Code violations will be reported to the Honor Council without fail.

If the Honor Council finds that a student has plagiarized or has violated the Honor Code in any other way, the student will receive a grade of F for the course.

Policy Accommodating Students’ Religious Observances

The following is university policy:
Georgetown University promotes respect for all religions. Any student who is unable to attend classes or to participate in any examination, presentation, or assignment on a given day because of the observance of a major religious holiday or related travel shall be excused and provided with the opportunity to make up, without unreasonable burden, any work that has been missed for this reason and shall not in any other way be penalized for the absence or rescheduled work. Students will remain responsible for all assigned work. Students should notify professors in writing at the beginning of the semester of religious observances that conflict with their classes.

**Course Outline**

**Day 1:** Introductions and orientation; Definition of Transhumanism; Overview of Transhumanism position with respect to:
- Influences of Enlightenment on Transhumanism
- Dependence on major technical and scientific advances
- Traditional areas of philosophy (ethics, theory of knowledge)
- Relationship to religion

**Day 2:**
Technological Singularity. The overlapping of three major revolutions GNR (genetics, nanotechnology, robotics).
The law of accelerated returns; Benefits and potential contributions of GNR to achieving Transhumanism’s goals

Watch the documentary: The Singularity (director Doug Wolens)

**Day 3:**
Genetics/Biotechnology; gene therapy, bio-determinism, eugenics
Social and ethical implications of bio-determinism
Analysis of bio-determinism implications in the movie Gatacca

Watch the movie: Gatacca (director Andrew Niccol)

**Day 4:**
Artificial Superintelligence (ASI); the paths to achieve ASI (whole brain emulation, biological cognition, etc.)
Cognitive superpowers (an ASI takeover scenario)
ASI and existential threats to mankind; the control problem

Watch the BBC documentary: Making Gods (1h:20min)

**Day 5:**
Critics and alternative points of view to Transhumanism.
“Singularity is not near”; challenges to the timeline and other technology assumptions
The “mind-body” problem; challenges to the concept of conscious machines
Religious implications of the concepts of Transhumanism and of “living in a simulated world”
Summary of ethical and social implications of GNR and ASI.

This syllabus is subject to revision at the discretion of the instructor