

NEUROETHICS¹

Dr. Kevin Jung
Wake Forest University

Course Description:

This course introduces students to central philosophical and ethical issues in neuroethics. In this course we explore two main areas of neuroethics: the neuroscience of ethics and the ethics of neuroscience. The neuroscience of ethics re-examines traditional philosophical ideas and issues through the lens of cognitive science, seeking to ground ethics on empirical science. The ethics of neuroscience investigates the ethical implications of the application of neuroscience and neurotechnology in medicine, law, and religion.

Course Background:

Neuroethics is an emerging field of ethics, which has established itself in recent years as a formidable challenger to both traditional bioethics and to traditional philosophical and religious ethics. The remarkable advancement of neuroscience has brought unprecedented ethical issues and questions concerning both the practical implications of neurotechnology and neuroscientific accounts of what it means to be a moral agent. For instance, brain imaging through positron emission tomography (PET), functional magnetic resonance imaging (fMRI), magnetoencephalography (MEG), and near infrared spectroscopy (NIRS) raise questions about brain privacy and brain profiling. The emergence of neurotechnology helps to frame traditional metaphysical and ethical questions such as personhood, consciousness, memory, and responsibility, in terms of completely physical concepts like neuronal processes and functions. Neurotechnology also has wide reaching practical implications, for instance, in areas such as cognitive enhancement and criminal justice.

Learning Goals:

After finishing this course, students should be able to

- understand philosophical and religious implications of cognitive science research;
- compare traditional philosophical and contemporary naturalistic views about moral agency and responsibility and explain why they differ from each other;
- identify ethical, legal, and public policy issues related to various uses of neurotechnology;
- develop coherent moral argument in response to concrete ethical issues concerning the use of neurotechnology

Required Texts:

¹ The information in this syllabus is subject to change in special circumstances. Any changes to the course syllabus will be notified to students. For the most updated version of the syllabus, please check Sakai.

Glannon, Walter, *Defining Right and Wrong in Brain Science: Essential Readings in Neuroethics*, Dana Press, 2007.

Satel, Sally, and Scott O. Lilienfeld, *Brainwashed: The Seductive Appeal of Mindless Neuroscience*, New York: Basic Books, 2013.

Other required texts are also available on Sakai.

Recommended Texts:

Churchland, Patricia Smith. *Brain-wise: Studies in Neurophilosophy*. Cambridge, Mass.: MIT Press, 2002.

Damasio, Antonio. *Descartes' Error: Emotion, Reason, and the Human Brain*. New York: Putnam, 1994.

Damasio, Antonio. *Self Comes to Mind: Constructing the Conscious Brain*. Reprint. Vintage, 2012.

Farah, Martha J. *Neuroethics: An Introduction with Readings*. Cambridge, Mass.: MIT Press, 2010.

Flanagan, Owen J. *The Problem of the Soul : Two Visions of Mind and How to Reconcile Them*. New York: Basic Books, 2002.

Gazzaniga, Michael S. *Who's in Charge?: Free Will and the Science of the Brain*. New York, NY: HarperCollins, 2011.

Glannon, Walter. *Bioethics and the Brain*. New York: Oxford University Press, 2007.

Illes, Judy, and B. J Sahakian, eds. *The Oxford Handbook of Neuroethics*. Oxford; New York: OxfordUniversity Press, 2011.

Kim, Jaegwon. *Philosophy of Mind*. 3rd ed. Boulder: Westview Press, 2011.

Levy, Neil. *Neuroethics*. Cambridge, UK: Cambridge University Press, 2007.

Pereboom, Derk, ed. *Free Will*. 2nd ed. Indianapolis: Hackett Publishing Press, 2009.

Pinker, Steven. *How the Mind Works*. Reissue. W. W. Norton & Company, 2009.

Sinnott-Armstrong, Walter. *Moral psychology Vol. 3: The Neuroscience of Morality: Emotion, Brain Disorders, and Development*. Cambridge, Mass.; London: MIT Press, 2008.

Course Expectations

- Students must read all assigned readings before coming to class.
- Students ought to respect each other in class discussion. The University's Honor Code guides student classroom and professional ethical behaviors.
- Class attendance and active class participation are expected for each class meeting.

Course Requirements

Class Preparation and Participation: 20%:

Read carefully the whole reading assignment for each class. You are required to post a set of prepared questions on the day's reading on the Sakai Blogs by 12 a.m. before each class meeting (except the first day of class). All questions must focus on a specific passage, idea, or concept that you find interesting, insightful, or puzzling. Be prepared to present your question at the beginning of class. Please note that one's participation in class discussion will also be graded.

Midterm Paper (30%): Write a critical essay on a prompt provided by the instructor. The paper should be about 6 pages long, double spaced.

Final Paper (50%): Students can choose from any topics covered in the course. The paper should be about 10-11 pages long, double-spaced.

Course Schedule:

- Jan. 13 Introduction
- Jan. 20 Personhood
- Lynne Rudder Baker, "When Does a Person Begin?" *Social Philosophy and Policy*, 22:25–48, 2005. (See Sakai)
 - Eric T. Olson, "Was I Ever a Fetus?" *Philosophy and Phenomenological Research*, 57 (1):95-110, 1997. (See Sakai)
- Jan. 27 **Sheep Brain Dissection (Lab)**
- **Sheep Brain Atlas (See Sakai)**
- Feb. 3 Personal Identity: Persistence Question
- Anthony Quinton, "The Soul" *Journal of Philosophy*. Vol. 59 (15), 1962. (<http://home.sandiego.edu/~baber/analytic/soul.pdf>)
 - Sidney Shoemaker, "Personal Identity and Memory" *Journal of Philosophy*. Vol. 56 (22), 1959. (<http://www.jstor.org/stable/2022317>)
- Feb. 10 Consciousness
- Steven Pinker, "The Mystery of Consciousness" *Time* (Jan. 19, 2007) (<http://content.time.com/time/magazine/article/0,9171,1580394,00.html>)
 - David Chalmers, "The Puzzle of Conscious Experience," *Scientific American*, 273 (1995) (<http://philosophyfaculty.ucsd.edu/faculty/rarneson/Courses/chalmersphil1.pdf>)
 - Ned Block, "Philosophical Issues about Consciousness" (See Sakai)
- Feb. 17 **Human EEGs (Lab)**
- **Electroencephalography (See Sakai)**

- Feb. 24 Brain Damage and Brain Death
- Walter Glannon, ed., *Defining Right and Wrong in Brain Science*, 319-365
- Mar. 3 Neuroimaging and Mind Reading
- Walter Glannon, *Defining Right and Wrong in Brain Science*, 99-167
 - (recommended) Satel and Lilienfeld, *Brainwashed*, chs. 1, 4
- Mar. 10 Spring Break
- Mar. 17 *Midterm paper due in class
- Free Will
- Galen Strawson, "The Impossibility of Ultimate Moral Responsibility" (See Sakai)
 - Sam Harris, "Life Without Free Will" (<http://www.samharris.org/blog/item/life-without-free-will>)
 - Roderick Chisholm, "Human Freedom and the Self" (See Sakai)
- Mar. 24 Free Will:
- Harry Frankfurt, "Alternate Possibilities and Moral Responsibility" (See Sakai)
 - John Martin Fischer, "My Compatibilism" (See Sakai)
- Mar. 31 Free Will and Moral Responsibility
- Walter Glannon, *Defining Right and Wrong in Brain Science*, 175-205
 - Satel and Lilienfeld, *Brainwashed*, chs. 5-6.
- Apr. 7 Neuropharmacology (Prof. Katy Läck)
- Walter Glannon, ed., *Defining Right and Wrong in Brain Science*, 237-288
 - Galen Strawson, "Against Narrativity" (See Sakai)
- Apr. 14 Brain Enhancement and Brain Computer Interfaces
- Ray Kurzweil, "The Coming Merging of Mind and Machine," *Scientific American*, March 23, 2009 (<http://www.scientificamerican.com/article/merging-of-mind-and-machine/>)
 - Walter Glannon, *Defining Right and Wrong in Brain Science*, 289-311
 - Jens Clausen, "Man, machine and in between," *Nature* 457, 1080-1081 (26 February 2009)
- Apr. 21 Emotion and Morality
- Walter Glannon, *Defining Right and Wrong in Brain Science*, 206-229
 - Jonathan Haidt, "The New Synthesis in Moral Psychology"

Apr. 28

Science and Ethics

- Owen Flanagan, "Ethics Naturalized: Ethics as Human Ecology"
(http://pages.uoregon.edu/koopman/siap/readings/flanagan_ethics_naturalized.pdf)

May 5

Final Paper Due, 3:30pm