Brains, Identity, and Moral Agency  
Steven E. Hyman  
Spring 2014

Lectures: Wednesdays 1-2:30 PM, Biolabs 1080

Section: Mondays 1-2:30 PM, Fairchild G062 or Fairchild 268 or Bauer 001

Office Hours (beginning Wednesday, 2/5): Wednesdays, 10:30 AM - noon and 4:00 PM - 5:00 PM, Bauer 203 (unless otherwise noted)

Enrollment: Limited to 60 students (three sections).

Human beings experience a coherent sense of self that seems to provide a stable foundation from which to understand personal experience, consciously formulate goals, and initiate actions. The concept of moral agency is based on the view that people act in accordance with their characters and their freely formed intentions. However, evidence from neuroscience suggests that memories and personal identity are more mutable than is generally recognized, and both are increasingly subject to alteration by therapeutically intended manipulations. This course will examine competing views of human identity and moral agency grounded in a series of concrete scientific examples. The overall goal of this course is to encourage serious reflection and discussion on the implications of neuroscience for ethics and policy.

Prerequisites

This course requires LPS A or LS1a or equivalent (which would require permission of the instructor). This course will require students to engage seriously with selected topics in neurobiology.

Course Website

http://isites.harvard.edu/k101945

Course Requirements / Grade Breakdown

The course requires informed engagement. Thus, students who enroll should be prepared to do the readings each week and to participate in discussions. I have attempted to ensure that the readings are important, but not excessive. As a result, I will feel free to ask specific questions about the readings in class.

Formal requirements include four papers of 3-4 pages each (45% of the course grade), a final assignment (requiring additional research beyond the course readings; 25%), participation in lecture/discussions (10%), and regular attendance and participation in a weekly discussion section (20%). All written assignments must be completed and uploaded to the course web site on time.
Assignments

Wednesday, 2/12: Short Paper #1
(uploaded to the course website by 1 PM)

Wednesday, 3/5: Short Paper #2
(uploaded to the course website by 1 PM)

Wednesday, 4/2: Short Paper #3
(uploaded to the course website by 1 PM)

Wednesday, 4/23: Short Paper #4
(uploaded to the course website by 1 PM)

Thursday, 5/8: Final Assignment
(uploaded to the course website by 8 PM)

Academic Integrity

All written work submitted to the course must be the student’s own. Students may discuss work with others but should be sure to write everything in their own words. Students also may not copy writings from textbooks, journals, or other sources without proper citations. Plagiarism is a very serious offense.

For an example of guidelines on how to properly cite work, please see:

http://usingsources.fas.harvard.edu/icb/icb.do

http://isites.harvard.edu/fs/docs/icb.topic839457.files/Guide_to_Citing_in_the_Life_Sciences.pdf

Topics

1. Exploiting human brain circuitry to treat psychiatric disorders
2. Representation of memory in the human brain
3. Treating memory disorders with stem cell therapies
4. Cognitive enhancement
5. The usurpation of memory by posttraumatic stress disorder
6. Memory consolidation, reconsolidation, editing, and false memories
7. Addiction and the brain
8. If addiction is a disease, is there any role for punishment? For involuntary treatment?
9. My brain made me do it: The question of free will and volition
10. Experimental manipulation of moral emotions
11. Manipulating moral emotions
12. Pharmacological manipulations of moral emotions
13. Human personal identity and moral agency
14. Modeling human neuropsychiatric disorders: from cells to transgenic or chimeric non-human primates
Books


Useful Background Readings on Ethical Theory

• Brink, D.O. Some forms and limits of consequentialism
• McNaughton, D. and Rawling, P. Deontology
• Annas, J. Virtue ethics.

or

Stanford Encyclopedia of Philosophy. Sections that may have useful information include:
• Consequentialism
• Deontological Ethics
• Virtue Ethics
• Ethics, biomedical
http://plato.stanford.edu

Web Resources

Presidential Commission for the Study of Bioethical Issues (see session on December 18, 2013 which touches on this course.) www.bioethics.gov


http://bioethics.georgetown.edu/pbbe/reports/beyonddata/index.html

Lectures


2. Wednesday 1/29. Exploiting human brain circuitry to treat psychiatric disorders

   **Readings:**

DARPA Broad Agency Announcement. Systems-Based Neurotechnology for Emerging Therapies (SUBNETS). Defense Sciences Office DARPA-BAA-14-09 (October 24, 2013)


Monday 2/3. NO SECTION

3. **Wednesday 2/5.** Representation of memory in the human brain

*Readings:*

Obituary: [http://www.nytimes.com/2008/12/05/us/05hm.html?pagewanted=all](http://www.nytimes.com/2008/12/05/us/05hm.html?pagewanted=all)


*Monday 2/10.* Section discussion.

Screening of *A Clockwork Orange* (time and date to be determined).

4. **Wednesday 2/12.** Treating memory disorders with stem cell therapies

*Note: 1st Short Paper due by 1 PM.*

*Readings:*


*Optional/Recommended:*


*Monday 2/17. Presidents’ Day Holiday – NO SECTION*

Screening of *Memento* (time and date to be determined).
5. **Wednesday 2/19.** Cognitive Enhancement

*Readings:*

Farah, M (Ed). Reading 2.1 Flower, R. Lifestyle drugs: Pharmacology and the social agenda.

Farah, M (Ed). 2.4. President’s Council on Bioethics. Beyond Therapy: Essential Source of Concern


Recommended: view the following website [http://www.envivopharma.com/pipeline-nicotinic.php](http://www.envivopharma.com/pipeline-nicotinic.php)

**Monday 2/24.** Section discussion.

6. **Wednesday 2/26.** The usurpation of memory by posttraumatic stress disorder

*Readings:*


**Monday 3/3.** Section discussion.

**Screening of Eternal Sunshine of the Spotless Mind (time and date to be determined).**

7. **Wednesday 3/5.** Memory consolidation, reconsolidation, editing, and false memories

*Note: 2nd Short Paper due by 1 PM.*

*Readings:*


**Monday 3/10.** Section discussion.

*Readings:*

Farah, M (Ed). Reading 3.1 President’s Council on Bioethics. Memory blunting: ethical analysis.

Farah, M (Ed). Reading 3.2 Kolber, AJ. Ethical implications of memory dampening.

8. **Wednesday 3/12.** Addiction and the brain

*Readings:*


**Monday 3/24.** Section discussion.

*Readings:*

Charbonneau V Boehringer Ingelheim, US District Court of Minnesota


9. **Wednesday 3/26.** If addiction is a disease, is there any role for punishment? For involuntary treatment?

*Readings:*

Farah, M (Ed). Reading 5.5 Boire, RG. State-imposed brain intervention: The case of pharmacotherapy for drug abuse.


Monday 3/31. Section discussion.

10. Wednesday 4/2. My brain made me do it: The question of free will and volition
Note: 3rd Short Paper due by 1 PM.

Readings:
Farah, M (Ed). Reading 5.1 President’s Council on Bioethics Staff. An overview of the impact of neuroscience evidence in criminal law.

Farah, M (Ed). Reading 5.2 Greene, J and Cohen, J. For the law, neuroscience changes nothing and everything.

Farah, M (Ed). Reading 5.4. Morse, SJ. Brain overclaim syndrome and criminal responsibility: A diagnostic note.


Monday 4/7. Section discussion.


Readings:
Churchland PS. 2013. Exploring the causal underpinnings of determination, resolve, and will. Neuron 80:1337


Readings:
Blair, J. 2013. The neurobiology of psychopathic traits in youths. Nat Rev Neuroscience 14:786-99


Readings:

Farah, M (Ed). Reading 3.3 Elliott, C. Prozac as a way of life.

Farah, M (Ed). Reading 3.4 Kramer, PD. The valorization of sadness: Alienation and the melancholic temperament.


13. Wednesday 4/23. Personal identity and moral agency

Note: 4th Short Paper due by 1 PM.

Readings:


Farah, M (Ed). Reading 6.2 Personhood: An illusion rooted in brain function?

Monday 4/28. Section discussion.

14. Wednesday 4/30. Modeling human neuropsychiatric disorders: from cells to transgenic or chimeric non-human primates

Readings:


Note: 5/8 Final Assignment due by 8 PM.
In addition, there will be three movie nights (complete with pizza!) showing the following films:

- *A Clockwork Orange* (1971)

Based on student preferences, we will schedule a time for three evenings that are most convenient for students.