UNIV 1200/HMAN 1200
Making Choices:
Ethics at the Frontier of Global Science

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Primary Instructor: **RA/TA:**
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Office Hours: Tuesdays 9:30-11:00
Seminar meets every Thursday from 4-6:20 pm in Pembroke Hall 202, (172 Meeting Street). Teleconferences will meet in a location to be announced.

Aims of the seminar:
This seminar considers the ethical tradition in the sciences, and the varied ways in which ethical issues are engaged in scientific fields. Readings and case study examples are drawn from a range of fields, including engineering, chemistry, physics, astronomy, psychology and the biological sciences. Training in ethics or RCR (Responsible Conduct of Research) is often proscriptive and universalizing, listing practices to avoid rather than recommending attitudes to adopt. Students in the sciences are not always encouraged to reflect upon the ways in which science intersects with larger societal questions. This seminar is not a training course, but a forum for exploring the ways in which we make ethical decisions in a global world. The seminar has been designed with NSF funding, and is being co-taught at Brown University, Zhejiang University in China and the Indian Institute of Technology in Mumbai, India. The three sections of this seminar will meet together to share international perspectives several times during the semester. It is open to undergraduates and graduate students from all fields, and is also open to medical students and students in public health.

Requirements:
-active class discussion and participation…………………………………..20%
-weekly position papers (1-2 pages)……………………………………..20%
-15 minute presentation in the end-of-the-year student conference………..20%
-research term paper (15-20 pages)…………………………………………40%

Reading Assignments:
Students are expected to have read all material listed for the week's assignment by class time. Readings are available on the University *mycourses* website.

SCHEDULE OF SEMINAR MEETINGS AND READING ASSIGNMENTS
(Please come to class prepared to discuss and critique the readings in detail.)

Week 1: Introduction: Thinking Ethically and Globally
"A Framework for Thinking Ethically," Markkula Center for Applied Ethics, Santa Clara University, http://www.scu.edu/ethics/practicing/decision/framework.html

Lawrence Rhoades and Andrzej Górski, "Scientific Misconduct: An International Perspective," *Sci Eng Ethics* 6 (2006), 5-10.
(http://www.springer.com/philosophy/ethics/journal/11948)

Case Study: The BP Spill
Stephanie Malik, "Ethical Questions Surrounding the BP Oil Spill," *Practical Ethics* 6/29/10:
http://www.practicalethicsnews.com/practicalethics/2010/06/ethical-questions-surrounding-the-bp-oil-spill.html

Week 2: Global Science and its Obligations: Cosmopolitanism and Narrative Imagination
K. Anthony Appiah, *Cosmopolitanism: Ethics in a World of Strangers*, New York: Norton, 2006, Introduction (pp. x-xxi.)

Martha C. Nussbaum, *Cultivating Humanity: A Classical Defense of Reform in Liberal Education,* Cambridge: Harvard University Press, 1997, introduction, (pp. 1-14).

Jared Diamond, "Yali's Question," in *Guns, Germ and Steel*, New York, 1999, preface (pp. 13-32).

Week 3: First Videoconference: Comparing global science, priorities and cosmopolitanism in India, China and the US.

Week 4: Is an International Code of Ethics Possible? Is it Desirable?
Michael Gazzaniga, *The Ethical Brain*, New York: Harper, 2005, "The Nature of Moral Beliefs and the Concept of Universal Ethics," Part IV (143-178)

Meredith Gibbs, "Toward a Strategy for Undertaking Cross-Cultural Collaborative Research," *Society and Natural Resources*, 14 (2001), 673-687.

Catherine Kohler Reissman, "Exporting ethics: a narrative about narrative research in South India," *Health* 9 (2005) 473-90 (http://hea.sagepub.com)

Gary Lee Downey, Juan C. Lucena and Carl Mitcham, "Engineering Ethics and Identity: Emerging Initiatives in Comparative perspective," *Sci Eng Ethics* 13 (2007), 463-487. (http://www.springer.com/philosophy/ethics/journal/11948)

Case Study 1: Engineering Ethics Codes
Merry Bullock and Sangeeta Panicker, "Ethics for All: Differences Across Scientific Society Codes," *Science and Engineering Ethics (Sci Eng Ethics)* (2003) 9, 159-170. (http://www.springer.com/philosophy/ethics/journal/11948)

Case Study 2: Stem Cell Research
Michael Gazzaniga, *The Ethical Brain*, New York: Harper, 2005, "Conferring Moral Status on Embryos," chap. 1 (3-18).

Week 5: Cultural Competence, Cultural Humility and Participatory Research
Conny Seeleman, Jenine Suurmond and Karien Stronks, "Cultural competence: a conceptual framework for teaching and learning," *Medical Education*, 43 (2009) 229-237.

Jennifer Foster, "Cultural Humility and the Importance of Long-term Relationships in International Partnerships," JOGNN 38 (2009) 100-107 (http://jognn.awhonn.org)

S. Devereaux and J. Hoddinott, eds., *Fieldwork in Developing Countries*. Boulder, CO: Lynne Rienner, 1993.

Case Study: Participatory Rural Appraisal in a Maori Tribal Context
Robert Chambers, "The Origins and Practise of Participatory Rural Appraisal," *World Development* 22.7 (1994), 953-969. (https://entwicklungspolitik.uni-hohenheim.de/uploads/media/Day_4_-_Reading_text_8_02.pdf)

Week 6: Who Owns Ideas? Intellectual Property, Publishing and Credit
Francis Gurry, "The Growing Complexity of International Policy in Intellectual Property," *Sci Eng Ethics*, 11.1 (2005), 13-20.

David Cyranoski, "Strong Medicine for China's Journals," *Nature* 467, 261 (15 Sept. 2010) http://www.nature.com/news/2010/100915/full/467261a.html

Case Study: IP in the US, India and China
Intellectual Property statements from IIT, Zhejiang and Brown

Week 7: Second Videoconference: Comparing intellectual property and scientific publishing in India, China and the US.

Week 8: Who Owns the Past? Who Owns the Future? The Ethics of Heritage and Planning
Robin Attfield, *The Ethics of Environmental Concern*, Atlanta: University of Georgia Press, 1991, chap. 1

Diane Curtain, *Environmental Ethics for a Postcolonial World*, Lanham, 2005, chap. 1

Sara Jo Peterson, "The Ethics of Urban Planning," http://www.planetizen.com/node/20046

J. Ballet, N. Sirven, and M. Requiers-Desjardins, "Social Capital and Natural Resource Management: A Critical Perspective," *The Journal of Environment Development* 16, (2007), 355-374.

Richard R. Wilk, "Whose Forest? Whose Land? Whose Ruins? Ethics and Conservation," *Sci Eng Ethics*, 5 (1999), 367-374.
http://www.springerlink.com/content/cv42v0480670nkw2/

Case Study: Planning and Water Resources in India
"Water Rights." *Global Issues in Context* Online, Gale, 26 October 2010.
http://find.galegroup.com/gic/infomark.do?contentSet=GREF&docType=GREF&idigest=5240efa7b366f5e884b288775e253a14&type=retrieve&prodId=GIC&docId=CP3208520219&userGroupName=gale&version=1.0&source=gale

Philippe Cullet, *Water Rights in India: Overview of Existing Framework and Proposed Reforms*, International Environmental Law Research Center Working Paper, 2007-01.
http://www.ielrc.org/content/w0701.pdf

Week 9: Who Owns Data? Open Access, Creative Commons and the Ethics of Uncertainty
Kate Worlock, "The Pros and Cons of Open Access," *Nature*
http://www.nature.com/nature/focus/accessdebate/34.html

Public Library of Science: Open Access (http://www.plos.org/oa/index.html)

Association of Learned and Professional Society Publishers, "The Facts about Open Access,"
(2005), http://www.alpsp.org/publications/FAOAcompleteREV.pdf

John Ewing, "The Orthodoxy of Open Access," *Nature*, Sept. 13, 2003,
http://www.nature.com/nature/focus/accessdebate/32.html

BioMed Central, "Creative Commons," http://www.biomedcentral.com

Elinor Ostrom, Joanna Burger, Christopher B. Field, Richard B. Norgaard and David Policansky, "Revisiting the Commons: Local Lessons, Global Challenges," http://www.sciencemag.org/cgi/content/full/284/5412/278

Case Study 1: Hubble and Kepler Telescopes and Access to Astronomical Data
Dennis Overbye. "In the Hunt for Planets, Who Owns the Data?" *New York Times*, June 15, 29010, B3: http://www.nytimes.com/2010/06/15/science/space/15kepler.html

Case Sudy 2: Representing Uncertainty
Christof Tannert, Horst-Dietrich Elvers, and Burkhard Jandrig, "The ethics of uncertainty: in the light of possible dangers, research becomes a moral duty," *Science and Society* 2007, European Molecular Biology Organization, http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2002561/

Week 10: Third Videoconference: Open Access and Data

Week 11: Where are the Human Subjects in Engineering and the Physical Sciences?
Belmont Report: http://ohsr.od.nih.gov/guidelines/belmont.html

Zachary M. Schrag, "How Talking Became Human Subjects Research: The Federal Regulation of the Social Sciences, 1965-1991," *The Journal of Policy History*, 21.1 (2009), 3-37 http://muse.jhu.edu/journals/journal_of_policy_history/v021/21.1.schrag.html

Paul S. Appelbaum, Charles W. Lidz and Robert Klitzman, "Voluntariness of Consent to Research: A Conceptual Model." *Hastings Center Report*, 39.1 (2009), 30-39.

Case Study: Human Impact of Engineering Design
Joan . Sieber, "Protecting Research Subjects, Employees and Researchers: Implications for Software Engineering," *Empirical Software Engineering*, 6.4 (2010) 329-341. http://www.springerlink.com/content/t151985m46g34503/

Week 12: The Ethics of Language: Translation and Communication in International Discourse
Tala Asad, "A Comment on Translation, Critique and Subversion," in *Between Languages and Cultures,* ed. Anuradha Dingway and Carol Maier, eds., Pittsburgh: University of Pittsburgh Press, 1995, " 325-332.

Mike Rossner and Kenneth M. Yamada (2004) "What's in a Picture?: The Temptations of Image Manipulation," *Journal of Cell Biology* 166 (2004), 11-15. http://jcb.rupress.org/content/166/1/11.full.pdf+html

Week 13: Final Videoconference: Translation and Cross-Cultural Communication

Week 14: Conclusions