

## **Philosophy 497A Reasonable Measures: Science, Women, and Traditional Knowledge**

Spring Semester 2010      Monday 6 – 9 p.m.      319 Willard Building

### *Instructor:*

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*Student Intern:* Wehnee Browne      email: [wob5006@psu.edu](mailto:wob5006@psu.edu)

### *Book List:*

Richard Lewontin, *The Triple Helix: Gene, Organism and Environment* (Harvard UP, 2002)  
Bruno Latour, *Politics of Nature: How to Bring the Sciences into Democracy* (Harvard UP, 2004)  
Sandra Harding, *Sciences from Below: Feminisms, Postcolonialities, and Modernities* (Duke UP, 2008)  
Wangari Maathai, *Unbowed: A Memoir* (Anchor Books, 2007)  
Vandana Shiva, *Soil, not Oil: Environmental Justice in an Age of Climate Change* (South End Press, 2008)  
Various websites (t.b.a.)  
Course packet of case studies, sent electronically by our lecturers and by the professor.

### *Course Description:*

Philosophy of science in the twentieth century focussed on problems of epistemology: what are the specific features of scientific method and reasoning that make scientific knowledge distinctive, and especially effective? However, philosophers of science spent little time thinking and writing about the ethical and political dimensions of science. Twenty-first century philosophy of science is changing direction: the books on the reading list for this course are evidence of this shift. An important insight that emerges from these books is that science has for too long ignored the wisdom collected by traditional societies and dismantled by colonialism and modern technology, as well as the domestic knowledge collected by women. The current environmental and economic crises call for the novel synthesis of scientific and traditional knowledge. What would it look like? Wangari Maathai's book offers the successful example of the Green Belt Movement. Other examples show how this synthesis may develop, like Will Allen's N.G.O. Growing Power, devoted to urban farming in Milwaukee and Chicago; COMPAS, an international network that promotes endogenous development; the Community Led Environmental Action Network in India; and the World Agroforestry Center, and locally and globally funded projects in the Brazilian rainforest and Indonesia.

A number of Penn State faculty members will speak with us and present detailed case studies of successful, or instructively flawed, examples of such attempted synthesis: Gabeba Baderoon, Assistant Professor, Women's Studies and African and African American Studies; Karl Zimmerer, Professor and Head, Geography Department; Christian Becker, Assistant Professor, Science, Technology and Society, and Philosophy; Ikubolajeh Logan, Professor of African and African American Studies and Geography; and Ruth Mendum, Rural Sociology and Women's Studies, Director, University Fellowships Office. We will also include a lecture by Stephan Rist, Centre for Development and Environment, University of Bern, Switzerland. Their presentations will last about an hour, with half an hour for discussion afterwards, and will be video-taped for the website. Wehnee Browne, a Biobehavioral Health undergraduate major from Liberia, will coordinate the course and website as a student intern.

*Justification:*

Though the philosophy department regularly offers courses in the philosophy of science (many of which lately have focussed on the philosophy of biology), as well as courses in political philosophy, we have not offered a course that brings together the largely epistemological themes of twentieth century philosophy of science with the political problem of how to manage our global environment. It appears that we are now facing a crisis whose magnitude is so great that citizens have trouble thinking about it, governments don't know how to align national and international resolve in the face of it, and scientists fail to intervene effectively in the political process. This problem arises in part because scientific knowledge has supplanted traditional knowledge, which has worked well for a hundred thousand years to keep human populations alive and stable. Philosophy can play a role in investigating how scientific and traditional knowledge might be better integrated, so that we can move more swiftly to address the problem of environmental destruction.

*Course Aims:*

- \*To introduce students to some of the central ideas in twentieth century philosophy of science and philosophy of biology, the background against which the books in this course may be understood.
- \* To think about the limitations of our current concepts of scientific rationality, and how they might be integrated with the reasonable measures that women have used in the domestic sphere and that indigenous peoples have used in settled or nomadic ways of life for ten millenia.
- \*To think about the consequences of the industrial revolution, two world wars in the twentieth century, colonialism, and feminism for life on our planet.
- \*To articulate these discoveries through conversation in class and the more solitary exercise of written papers, short and long.

*Requirements:*

Attendance and class participation are mandatory, especially since the class is small: every student counts. Students will write five short (2 pp.) papers analyzing the five books we will read in common, six one-page papers responding to our six visiting professors, and then write a term paper of 9-12 pages on a topic to be chosen in consultation with the professor. Towards the end of the semester, students will present a draft of the final paper, about 6 pages, in class for 20 minutes. The short papers together will count for 60% of the grade, and the final paper, along with the oral presentation, will count for 40% of the grade.

*Policies:*

*Non-Discrimination Statement:* The Pennsylvania State University is committed to the policy that all persons shall have equal access to programs, facilities, admission, and employment without regard to personal characteristics not related to ability, performance, or qualifications as determined by University policy or by state or federal authorities. It is the policy of the University to maintain an academic and work environment free of discrimination, including harassment. The Pennsylvania State University prohibits discrimination and harassment against any person because of age, ancestry, color, disability or handicap, national origin, race, religious creed, sex, sexual orientation, or veteran status. Discrimination or harassment against faculty, staff or students will not be tolerated at The Pennsylvania State University. Direct all inquiries regarding the nondiscrimination policy to the Affirmative Action Director, The Pennsylvania State University, 328 Boucke Building, University Park, PA. 16802; Tel. (814) 863 0471.

*Academic Integrity:* Definition and expectations: Academic integrity is the pursuit of scholarly activity in an open, honest and responsible manner. Academic integrity is a basic guiding principle for all academic activity at the Pennsylvania State University, and all members of the University community are expected to act in accordance with this principle. Consistent with this expectation, the University's Code of Conduct states that all students should act with personal integrity, respect other students' dignity, rights and property, and help create and maintain an environment in which all can succeed through the fruits of their efforts. Academic integrity includes a commitment not to engage in or tolerate acts of falsification, misrepresentation or deception. Such acts of dishonesty violate the fundamental ethical principles of the University community and compromise the worth of work completed by others. To protect the rights and maintain the trust of high standards of integrity and reinforce them by taking reasonable steps to anticipate and deter acts of dishonesty in all assignments. At the beginning of each course, the instructor must provide students with a statement clarifying the application of University and College academic integrity policies to that course.

Calendar:

- Jan. 11 Introduction. Handout: Review essay of Sandra Harding, *Sciences from Below: Feminisms, Postcolonialities, and Modernities* (Durham and London: Duke University Press, 2008), and Emily Monosson, ed. *Motherhood, the Elephant in the Laboratory*, (Ithaca and London: Cornell University Press / ILR Press, 2008). *The Women's Review of Books*, Summer 2009. Review essay of Evelyn Fox Keller, *Making Sense of Life* (Harvard University Press, 2002 / 2003).
- 18 Martin Luther King, Jr. Day, no class.
- 25 Richard Lewontin, *The Triple Helix*, Ch. 1-2.  
Handout: Stephan Rist, "The Importance of Bio-cultural Diversity for Endogenous Development," and "Ethnoscience—A step towards the integration of scientific and indigenous forms of knowledge in the management of natural resources for the future."
- Feb. 1 Richard Lewontin, *The Triple Helix*, Ch. 3; Bruno Latour, *The Politics of Nature*, pp 231-232, and Ch. 2.
- 8 Bruno Latour, *The Politics of Nature*, Ch. 3; Sandra Harding, *Sciences from Below*, Ch. II.  
Handout: *Gender and Sustainable Development*: Ch. 6 and 7. "Beyond Economics: Analysing Micro-Finance from Women's Perspectives Using a Sustainable Livelihood Framework," S. Premchander and J. Klinck; "Local Knowledge and Gender in Ghana," C. Mueller.
- 15 Bruno Latour, *The Politics of Nature*, Ch. 4 and 5 and Conclusion.  
Handout: *Gender and Sustainable Development*: Ch. 14. "Incorporating Gender in Research on Indigenous Environmental Knowledge in the Tunari National Park in the Bolivian Andes," E. Serrano, S. Boillat, S. Rist.
- 22 **Ikubolajeh Logan.**  
Sandra Harding, *Sciences from Below*, Ch. III.
- Mar. 1 **Ruth Mendum.**  
Wangari Maathai, *Unbowed*, Ch. 1-6.
- Spring Break
- 15 **Christian Becker.**  
Wangari Maathai, *Unbowed*, Ch. 7-13 and Epilogue.
- Mar. 22 **Karl Zimmerer.**  
Vandana Shiva, *Soil, not Oil*, pp. 1-100.
- 29 Vandana Shiva, *Soil, not Oil*, pp. 1-200.  
Handout: *People, Protected Areas, and Global Change*, Ch. 5 and 6.  
"Government Wildlife, Unfulfilled Promises and Business: Lessons from Participatory Conservation in the Selous Game Reserve, Tanzania," P. Meroka and T. Haller; "Conservation for Whose Benefit? Challenges and Opportunities for Management of Mkomazi Game Reserve, Tanzania," G. E. Mbeyale and A. N. Songorwa.
- Apr. 5 **Gabeba Baderoon.**  
Handout: *Endogenous Development and Bio-cultural Diversity*: pp. 203-212, and pp. 213-222. "Intercultural dialogue in support of indigenous cultures: Indigenous knowledge curriculum design at Sichuan University, China," H. J. Tillmann and M. A. Salas; "Synergies between supporting endogenous development and participatory innovation: Development as methodologies for understanding and improving rural livelihoods," B. Letty and L. van Veldhuizen.
- 12 Student presentations
- 19 **Stephan Rist.** Student presentations.
- 26 Student presentations

Final Papers due by Monday May 3.