**Science, Technology, and Medicine: Global Knowledges?**

HISC 250, Foundations in Science Studies, Winter 1999

Donna Haraway, Oakes 209, x4653, haraway@cats.ucsc.edu

All required books are at The Literary Guillotine, 204

Locust Street, Santa Cruz. Phone: (831) 457-1195. Readers

for required assignments are at the Copy Center,

Communications Bldg on campus. All required and recommended

books and essays are also on reserve at McHenry.

**BOOKS**

Required:

Sandra Harding, Is Science Multicultural? (Bloomington:

 Indiana University Press, 1998)

Valerie Kuletz, Tainted Desert (Routledge)

Vandana Shiva, Biopiracy: The Plunder of Nature and

 Knowledge (Southend Press, 1997)

Helen Watson, with the Yolngu community at Yirrkala, and

 David Chambers, Signing the Land, Singing the Land

 (Deakin University Press, 1989, reprinted 1993.

 Available from Deakin University, Geelong, Victoria

 3217, Australia.)

Thongchai Winichakul, Siam Mapped (Honolulu: University

 of Hawaii Press, 1994)

**Recommended (on reserve):**

D. Arnold, ed., Imperial Medicine and Indigenous Society

 (Manchester University Press, 1989)

James Clifford, Routes: Travel and Translation in the Late

 Twentieth Century (Harvard University Press, 1997)

Susantha Goonatilake, Aborted Discovery. Science and

 Creativity in the Third World (London: Zed, 1984)

Richard H. Grove, Green Imperialism: Colonial Expansion,

 Tropical Island Edens and the Origins of

 Environmentalism, 1600-1860 (Cambridge University Press,

 1995) ), chpt. 2, "Indigenous Knowledge and the

 Significance of South-West India for Portuguese and

 Dutch Constructions of Tropical Nature," and chpt. 7,

 "The Beginnings of Global Environmentalism: Professional

 Science, Oceanic Islands and the East India Company,

 1768-1838," pp. 73-94, 309-79

Donna Haraway, Primate Visions: Gender, Race and Nature in

 the World of Modern Science (Routledge, 1989)

Sandra Harding, ed., The 'Racial'Economy of Science (Indiana

 University Press, 1993)

David Hess, Science and Technology in a Multicultural World

Calestous Juma, The Gene Hunters: Biotechnology and the

 Scramble for Seeds (Princeton University Press, 1989)

Roy MacLeod and Milton Lewis, eds., Disease, Medicine and

 Empire (Routledge, 1988)

Ashis Nandy, ed., Science, Hegemony and Violence: A Requiem

 for Modernity (Delhi: Oxford University Press, 1990)

Diane Paul, Controlling Human Heredity, 1865 to the Present

 (Atlantic Highlands, NJ: Humanities Press, 1995)

Patrick Petitjean, et al, Science and Empires: Historical

 Studies about Scientific Development and European

 Expansion (Dordrecht: Kluwer, 1992)

Mary Louise Pratt, Imperial Eyes: Travel Writing and

 Transculturation (New York: Routledge, 1992)

Nathan Reingold and M. Rothenberg, eds., Scientific

 Colonialism: A Cross Cultural Comparison (Smithsonian

 Institution Press, 1987)

Harriet Ritvo, The Animal Estate: The English and Other

 Creatures in the Victorian Age (Harvard University

 Press, 1987), esp. chpt 5, "Exotic Captives," and Chpt.

 6, "The Thrill of the Chase," pp. 205-88, 323-36

Ziauddin Sardar, ed., The Revenge of Athena: Science,

 Exploitation, and the Third World (London: Mansell,

 1988)

Nancy Leys Stepan, The Idea of Race in Science, Great

 Britain, 1800-1960 (Hampden, CT: Archon Books, 1982)

Megan Vaughn, Curing Their Ills: Colonial Power and African

 Illness (Stanford University Press, 1991)

**READER FOR REQUIRED ASSIGNMENTS**

Arun Agarwaal, "Dismantling the Divide between Indigenous

 and Scientific Knowledge," Development and Change 26

 (1995): 413-39 (Blackwell Publ., 108 Cowley Rd., Oxford

 OX4 !JF, UK)

Warwick Anderson, "Excremental Colonialism: Public Health

 and the Poetics of Pollution," Critical Inquiry 21

 (Spring, 1995): 640-69

Warwick Anderson, "The Trespass Speaks: White Masculinity

 and Colonial Breakdown," American Historical Review 102,

 no. 5 (1997): 1343-70

Joan Fujimura, "Transnational Science: Views of Genomics

 from Sites outside Euro-America," a grant proposal,

 1998

Donna Haraway, "Universal Donors in a Vampire Culture. It's

 All in the Family. Biological Kinship Categories in the

 Twentieth-Cenbtury United States," in

 Modest\_Witness@Second\_Millennium (Routledge, 1997), pp.

 213-65, 309-15.

Gabrielle Hecht, "Colonialism and Postcolonialism in the

 Nuclear Age," paper from the conference Materializing

 Cultures: Science, Technology, and Medicne in Global

 Context, Stanford University, May 1-2, 1998.

Aihwa Ong, "Making the Biopolitical Subject: Cambodian

 Immigrants, Refugee Medicine and Cultural Citizenship in

 California," Soc. Sci. Med. (1994): 1-15 (published by

 Elsevier Science, Ltd.)

Nancy Peluso, "Whose Woods Are These? Counter-Mapping Forest

 Territories in Kalimantan, Indonesia," Antipode 274, no

 4(1995): 383-406

Michael Pollan, "Playing God in the Garden," New York Times

 Magazine, October 25, 1998, pp. 44-51, 62-63, 82, 92-93.

Gary Shaw, "Clearcut Identities: Tracking Shapeshifters in

 Clayoquot Sound," manuscript for Warren Magnusson and

 Kara Shaw, eds., Rainforest Crunch, in press.

Ann Laura Stoller, "Making Empire Respectable: Race and

 Sexual Morality in Twentieth-Century Colonial Cultures,"

 American Ethnologist 16 (1989): 26-51

Marilyn Strathern, "What Is Intellectual Property After?"

 paper for workshop Actor Network Theory and After, Keele

 University, July 1997

David Turnbull, "Local Knowledge and Comparative Scientific

 Traditions," Knowledge and Policy 6, nos. 3&4 (1993):

 29-54.

Helen Verran, "Investigating the Social Foundations of

 Mathematics," Social Studies of Science no. 20 (1990):

 283-312.

Helen Watson, with the Yolngu community at Yirrkala, and

 David Chambers, Signing the Land, Singing the Land

 (Deakin University Press, 1989, reprinted 1993.

 Available from Deakin University, Geelong, Victoria

 3217, Australia.)

Helen Watson-Verran and David Turnbull, "Science and Other

 Indigenous Knowledge Systems," in Sheila Jasanoff,

 Gerald Markle, James Petersen, and Trevor Pinch, eds.,

 Handbook of Science and Technology Studies (Thousand

 Oaks, CA: Sage, 1995), pp. 115-39

selections from documents on the Internet from Rural

 Advancement Foundation International (RAFI)

selections from documents for a conference on comparative

 knowledges in Clayoquot Sound in relation to

 environmentalisms, forestries, and ecologies

**RECOMMENDED READINGS ON RESERVE**

P. Palladino and M. Worboy, "Science and Imperialism," Isis

 (1993): 91-102.

Peter J. Taylor, "Re/constructing Socioecologies: System

 Dynamics Modeling of Nomadic Pastoralists in Sub-Saharan

 Africa," in Adele Clarke and Joan Fujimura, eds., The

 Right Tools for the Job: At Work in Twentieth-Century

 Life Sciences (Princeton: Princeton University Press,

 1992), pp. 115-48

Peter Taylor and Frederick Buttel, "How Do We Know We Have

 Global Environmental Problems? Science and the

 Globalization of Environmental Discourse," Geoforum

 (1992):1-11

Helen Verran, Numbers, Judgment, and Certainty:

 Storytelling about African Logics, in manuscript

 (University of Chicago Press, forthcoming), selections.

**IMPORTANT WEB SITES**

the Race-Science Web Site, a bibliography, teaching tool and

 forum for the History of Race in Science, Medicine and

 Technology. This web page grew out of the Race and

 Science Workshop (Harvard and MIT).

 http://stsfac.mit.edu/racesci/index.html

Rural Advancement Foundation International (RAFI), an

 organization that does watchdog and solidarity work on

 gene politics in the Third World. See the web page on

 Monsanto's current effort to patent a gene crucial to

 proprietary control of genetically engineered seeds.

 http://www.rafi.org/usda.html

**SEMINAR SCHEDULE**

**Week 1.**  Jan. 6.

Introduction. Contexts, Contents, Methods, Readings.

Student Research Projects and Write-Ups.

**Week 2**. Jan 13.

Universal Knowledge ? Comparative Knowledges, Indigenous

Knowledges, Scientific Knowledges: What Are They? What

Claims Are Made and By Whom? Why Does It Matter? Part I.

Reading:

Sandra Harding, Is Science Multicultural? (Indiana

 University Press, 1998)

**Week 3.** Jan 20.

Universal Knowledge? Comparative Knowledges, Indigenous

Knowledges, Scientific Knowledges. Part II.

Required Readings: Arun Agarwaal, "Dismantling the Divide

 between Indigenous and Scientific Knowledge,"

 Development and Change 26 (1995): 413-39

David Turnbull, "Local Knowledge and Comparative Scientific

 Traditions," Knowledge and Policy 6, nos. 3&4 (1993):

 29-54.

Helen Verran, "Investigating the Social Foundations of

 Mathematics," Social Studies of Science no. 20 (1990):

 283-312.

Helen Watson-Verran and David Turnbull, "Science and Other

 Indigenous Knowledge Systems," in Sheila Jasanoff,

 Gerald Markle, James Petersen, and Trevor Pinch, eds.,

 Handbook of Science and Technology Studies (Thousand

 Oaks, CA: Sage, 1995), pp. 115-39

Recommended Readings: Helen Verran, Numbers, Judgment, and

 Certainty: Storytelling about African Logics, in

 manuscript (University of Chicago Press, forthcoming),

 selections.

Nathan Reingold and M. Rothenberg, eds., Scientific

 Colonialism: A Cross Cultural Comparison (Smithsonian

 Institution Press, 1987)

P. Palladino and M. Worboy, "Science and Imperialism," Isis

 (1993): 91-102.

Patrick Petitjean, et al, Science and Empires: Historical

 Studies about Scientific Development and European

 Expansion (Dordrecht: Kluwer, 1992)

**Week 4.**  Jan 27.

A Case Study: Crafting the Categories, Crafting the

Interface: Ecosystem Ecology, Traditional Ecological

Knowledge, Forestry, and Clayoquot Sound

Required Readings: selections from documents for a

 conference on Clayoquot Sound in relation to comparative

 knowledges, environmentalisms, forestries, and ecologies

Gary Shaw, "Clearcut Identities: Tracking Shapeshifters in

 Clayoquot Sound," manuscript for Warren Magnusson and

 Kara Shaw, eds., Rainforest Crunch, in press.

Recommended Readings: Richard H. Grove, Green Imperialism:

 Colonial Expansion, Tropical Island Edens and the

 Origins of Environmentalism, 1600-1860 (Cambridge

 University Press, 1995), especially ), Chpt. 2,

 "Indigenous Knowledge and the Significance of South-West

 India for Portuguese and Dutch Constructions of Tropical

 Nature," and chpt. 7, "The Beginnings of Global

 Environmentalism: Professional Science, Oceanic Islands

 and the East India Company, 1768-1838," pp. 73-94,

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Peter J. Taylor, "Re/constructing Socioecologies: System

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 Africa," in Adele Clarke and Joan Fujimura, eds., The

 Right Tools for the Job: At Work in Twentieth-Century

 Life Sciences (Princeton: Princeton University Press,

 1992), pp. 115-48

Peter Taylor and Frederick Buttel, "How Do We Know We Have

 Global Environmental Problems? Science and the

 Globalization of Environmental Discourse," Geoforum

 (1992):1-11

**Week 5.**  Feb 3.

Categories, Boundaries, Nations, and Peoples. Mapping the

World

Required Readings: Nancy Peluso, "Whose Woods Are These?

 Counter-Mapping Forest Territories in Kalimantan,

 Indonesia," Antipode 274, no 4(1995): 383-406

Helen Watson, with the Yolngu community at Yirrkala, and

 David Chambers, Signing the Land, Singing the Land

 (Deakin University Press, 1989, reprinted 1993.

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Thongchai Winichakul, Siam Mapped (Honolulu: University

 of Hawaii Press, 1994)

Recommended Readimg: James Clifford, Routes: Travel and

 Translation in the Late Twentieth Century (Harvard

 University Press, 1997)

Mary Louise Pratt, Imperial Eyes: Travel Writing and

 Transculturation (New York: Routledge, 1992)

**Week 6.**  Feb. 10.

Mapping Nuclear Worlds

Readings: Gabrielle Hecht, "Colonialism and Postcolonialism

 in the Nuclear Age," paper from the conference,

 Materializing Cultures: Science, Technology, and

 Medicne in Global Context, Stanford University, May 1-2,

 1998.

Valerie Kuletz, Tainted Desert (Routledge, 1998)

selections from documents on Pacific anti-nuclear politics

get web sites

**Week 7.**  Feb. 17.

Medicine and Empire: Sexuality, Race, Class, and Disease

Required Readings: Warwick Anderson, "Excremental

 Colonialism: Public Health and the Poetics of

 Pollution," Critical Inquiry 21 (Spring, 1995): 640-69

Warwick Anderson, "The Trespass Speaks: White Masculinity

 and Colonial Breakdown," American Historical Review 102,

 no. 5 (1997): 1343-70

Aihwa Ong, "Making the Biopolitical Subject: Cambodian

 Immigrants, Refugee Medicine and Cultural Citizenship in

 California," Soc. Sci. Med. (1994): 1-15

Ann Laura Stoller, "Making Empire Respectable: Race and

 Sexual Morality in Twentieth-Century Colonial Cultures,"

 American Ethnologist 16 (1989): 26-51.

Recommended Readings: D. Arnold, ed., Imperial Medicine and

 Indigenous Society (Manchester University Press, 1989)

Roy MacLeod and Milton Lewis, eds., Disease, Medicine and

 Empire (Routledge, 1988)

Megan Vaughn, Curing Their Ills: Colonial Power and African

 Illness (Stanford University Press, 1991)

**Week 8.** Feb 24.

Traveling Genes: Questions of Property, Questions of

Rhetoric

Required Readings: Michael Pollan, "Playing God in the

 Garden," New York Times Magazine, October 25, 1998, pp.

 44-51, 62-63, 82, 92-93.

Vandana Shiva, Biopiracy: The Plunder of Nature and

 Knowledge (Southend Press, 1997)

Marilyn Strathern, "What Is Intellectual Property After?"

 paper for workshop Actor Network Theory and After, Keele

 University, July 1997

Rural Advancement Foundation International (RAFI),

 documents. RAFI is an organization that does watchdog

 and solidarity work on gene politics in the Third World.

 See the web page on Monsanto's current effort to patent

 a gene crucial to proprietary control of genetically

 engineered seeds. http://www.rafi.org/usda.html

Recommended Readings: Calestous Juma, The Gene Hunters

Visitor: Cori Hayden, graduate student, Antrhopology Dept.,

 UCSC, dissertation: Biomass for Biotech: Negotiating

 the Value of Mexican Biodiversity

**Week 9.** March 3.

Classifying Human Diversity: Nineteenth-Century and Early

Twentieth-Century Racial Science, Late Twentieth-Century

Genetics

Readings: Joan Fujimura, "Transnational Science: Views of

 Genomics from Sites outside Euro-America," a grant

 proposal, 1998

Donna Haraway, "Universal Donors in a Vampire Culture. It's

 All in the Family. Biological Kinship Categories in the

 Twentieth-Cenbtury United States," in

 Modest\_Witness@Second\_Millennium (Routledge, 1997), pp.

 213-65, 309-15.

web sites on human genome projects

web site on human germ line genetic engineering:

http://www.ess.ucla.edu:80/huge/report.html

the Race-Science Web Site, a bibliography, teaching tool and

 forum for the History of Race in Science, Medicine and

 Technology. This web page grew out of the Race and

 Science Workshop (Harvard and MIT).

 http://web.mit.edu/racescience/

Recommended Reading: Sandra Harding, ed., The

 'Racial'Economy of Science (Indiana University Press,

 1993)

Diane Paul, Controlling Human Heredity, 1865 to the Present

 (Atlantic Highlands, NJ: Humanities Press, 1995)

Nancy Leys Stepan, The Idea of Race in Science, Great

 Britain, 1800-1960 (Hampden, CT: Archon Books, 1982)

Visitor: Joan Fujimura, Stanford University, Anthropology

 Department

**Week 10.** March 10.

Conclusions and Projects.