**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

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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,

309-79

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.