

Geography of Health: Body, Landscape, Technology

For graduate students and upper level undergraduates

Professor: Nicholas Bauch

Course Description and Objectives

The intersection of geography and health has become increasingly important as we realize more and more that solutions to many of the world's health problems are both spatial and environmental. As two long-standing cores of the discipline, geographers have developed nuanced theoretical and practical understandings of how health can be rethought in terms of space and environment. You will leave this class with a deeper understanding of how geographers think, and with a toolkit for describing and solving health problems at home and abroad.

To accomplish this goal we examine the relationship between bodies and the surrounding material environments in which bodies exist. Far from separate, the boundary between these two categories of body and environment is porous. The effects of macro scale human behavior – i.e. the landscapes we create as a society – are legible on the micro scale of our bodies, and vice versa. Understanding health from a geographical perspective is opening up new possibilities for solutions that were previously unimaginable, as well as new concerns that are the product of our relationship with technology in the Information Age.

Our guiding question this semester is “where does the body end and the environment begin?” Answering this question will lead us on a journey through politics, culture, industry, science, and technology.

Based on field work you conduct, by the end of the course – in the form of a research paper and presentation – you will be able to articulate the way in which health, or non-health, has been materially and culturally produced in a case study of your choosing. You will be able to explain how bodies are made with respect to the environment surrounding them and the technologies embedded therein. Through this exercise you will learn how to be an active geographer.

Geography majors with a nature-society focus will greatly benefit from this course, as many of our readings and discussions address this fundamental geographical problematic as it applies to the **history of, as well as current trends in biotechnology**. Students from other fields of study – including public health, nursing, and medicine – also have much to gain. Here we challenge the 20th-century notion of practicing medicine which rested on the belief that curing happens exclusively inside the body. In this class we strive for nothing less than to make a new medicine that must include spatial and environmental concerns into its way of healing.

I hope you will join us on this fascinating path, and help us create new ways of thinking.

Assignments

- Weekly response papers, between 250-300 words. These are smaller writing assignments in which you formally organize your reactions to the readings and class discussions for that week. You must do at least 12/15 of the possible response weeks. In the response, generate what you believe to be the most important unanswered question about health geography based on that week's topic. What question do we ask next as people concerned with remaking human health in terms of technology and landscape? Draw readers through your thinking on how you arrived at that question, citing at least two sources from the week. This is not only helpful for all of us in the field, but is excellent practice for writing bibliographic reviews with a strong thesis. Look carefully at the Assignment Appendix for further explanation on how to do this.
- Essay based on a close reading of Ishimure's *Paradise in the Sea of Sorrow*. The essay must be between 1000-1200 words and address one of the prompts. It is due at the beginning of week 10. Please see the Assignment Appendix below for the paper prompt options.
- Final Project Pitch. In week 5 you will present your proposal for a final project to the class. They will offer feedback, suggestions, and we will work together to brainstorm for your project.
- Final Fieldwork Project Report. *I want you to think of all the work we do in class as creating a toolkit for you to accomplish this project.* With the help of the professor and peer working groups, you will identify a research site in the Twin Cities metropolitan region from which you can read and describe an important theme in body-technology relationships. This is a humungous topic, so you will need to narrow significantly using class discussions, readings, and your response papers. Based on the work you do in your weekly response papers you will construct a thesis about your site, then work to answer it in the form of a final research paper and a short image-based presentation, which you will give in week 15.

Readings & Lecture Schedule

The Emergence of Health Geography as a Sub-discipline

In this introductory section we look at some of the recent origins of health geography as it exists today. We make comparisons with what these geographers are arguing with what we expect to learn this quarter. Where should health geography go next?!

Week 1

- Kearns, Robin A. 1993. Place and Health: Toward a reformed medical geography. *Professional Geographer* 45:139-147.
- Dorn, Michael, and Glenda Laws. 1994. Social Theory, Body Politics, and Medical Geography: Extending Kearns's Invitation. *Professional Geographer* 46 (1):106-110.
- Parr, Hester. 2002. Medical Geography: Diagnosing the body in medical and health geography, 1999-2000. *Progress in Human Geography* 26 (2):240-251.
- Kearns, Robin, and Graham Moon. 2002. From Medical to Health Geography: Novelty, place and theory after a decade of change. *Progress in Human Geography* 25 (5):605-625.

Week 2

- Gesler, Wilbert M. 2003. *Healing Places*. New York: Rowman & Littlefield.
- Cummins, Steven, Sarah Curtis, Ana V. Diez-Roux, and Sally Macintyre. 2007. Understanding and Representing 'Place' in Health Research: A relational approach. *Social Science & Medicine* 65:1825-1838.
- Lea, Jennifer. 2008. Retreating to Nature: Rethinking 'therapeutic landscapes'. *Area* 40 (1):90-98.
- Andrews, Gavin J., Sandra Chen, and Samantha Myers. 2014. The 'Taking Place' of Health and Wellbeing: Towards non-representational theory. *Social Science & Medicine* 108:210-222.

Health and Biotechnologies

Here we look at how biotechnologies are changing the nature of being human. While this is a vast topic of broad concern in the 21st century, these readings focus on the geographical implications of material relationship between technologies, landscapes, and bodies.

Week 3

- Greenhough, Beth, and Emma Roe. 2006. Guest Editorial: Towards a geography of bodily biotechnologies. *Environment and Planning A* 38:416-422.
- Whatmore, Sarah. 2006. Materialist Returns: Practising cultural geography in and for a more-than-human world. *Cultural Geographies* 13:600-609.
- Coyle, Fiona. 2006. Posthuman Geographies? Biotechnology, nature and the demise of the autonomous human subject. *Social and Cultural Geography* 7 (4):505-523.
- McCormack, Derek. 2007. Molecular Affects in Human Geographies. *Environment and Planning A* 39:359-377.

Week 4

- Braun, Bruce. 2008. Environmental Issues: Inventive life. *Progress in Human Geography* 32 (5):667-679.
- Greenhough, Beth. 2010. Vitalist Geographies: Life and the more-than-human. In *Taking-Place: Non-representational theories and geography*, edited by B. Anderson and P. Harrison. Burlington, Vt.: Ashgate.
- Bauch, Nicholas. 2011. The Extensible Digestive System: Biotechnology at the Battle Creek Sanitarium, 1890-1900. *Cultural Geographies* 18 (2):209-229.

Historical Perspectives

To get a grasp on body-health-environment relationships in the present day, we need to know how these relationships happened in the past. You will discover that what we know – or what we think we know – about medicine has an enormous impact on how we interpret and build places.

Week 5

Read selections from:

- Drake, Daniel. 1854. *The Principal Diseases From the Interior Valley of North America*. Philadelphia: Lippincott, Grambo & Co.
[This is a classic in what is known as Medical Topography]
- Martin, Emily. 1994. *Flexible Bodies: Tracking immunity in American culture from the days of polio to the age of AIDS*. Boston: Beacon Press.
- Valencius, Conevery Bolton. 2002. *The Health of the Country: How American Settlers Understood Themselves and Their Land*. New York: Perseus Books.
- Nash, Linda. 2006. *Inescapable Ecologies: A history of environment, disease, and knowledge*. Berkeley: University of California Press.
- Mitman, Gregg. 2007. *Breathing Space: How allergies shape our lives and landscapes*. New Haven: Yale University Press.

Hazards and Health

Body-environment relationships become especially visible in hazardous places. Using insights from political ecology we interrogate 1) how natural disasters actually become disasters, and 2) how we can read human health inequalities directly from disaster landscapes.

Week 6

- Root, Elisabeth D., and Michael E. Emch. 2013. The Ecology of Injuries in Matlab, Bangladesh. In *Ecologies and Politics of Health*, edited by B. King and K. A. Crews. New York: Routledge.
- Lakoff, Andrew, and Stephen J. Collier. 2010. Infrastructure and Event: The political technology of preparedness. In *Political Matter: Technoscience, democracy, and public life*, edited by B. Braun and S. J. Whatmore. Minneapolis: University of Minnesota Press.
- Zook, Matthew, Mark Graham, Taylor Shelton, and Sean Gorman. 2010. Volunteered Geographic Information and Crowdsourcing Disaster Relief: A case study of the Haitian earthquake. *World Medical & Health Policy* 2 (2):7-33.

Johnson, Leigh. 2011. Climate Change and the Risk Industry: The multiplication of fear and value. In *Global Political Ecology*, edited by R. Peet, P. Robbins and M. Watts. New York: Routledge.

Davis, Mike. 1998. *Ecology of Fear: Los Angeles and the imagination of disaster*. New York: Metropolitan Books; Chapter 3: The Case for Letting Malibu Burn.

Week 7

** *In class: Final project pitches. Class brainstorming and feedback sessions.* **

Bodies, Toxins & Politics

One of the clearest ways of conceiving the ways in which bodies are connected with the environment is by imagining how environmental toxins sneak their way to us, and poison us. But the process by which this happens is riddled with controversy, uncertainty, commerce, and politics. With mercury poisoning in Japan as our main case study, we unravel the mystery of toxins.

Week 8

Read pp. 1-174 from:

Ishimure, Michiko. 2003 [1969]. *Paradise in the Sea of Sorrow: Our Minamata Disease*. Translated by L. Monnet. Ann Arbor: The University of Michigan Center for Japanese Studies.

[This book is the first English translation from Ishimure, famous as “Japan’s Rachel Carson” for her exposition of the horrors of mercury poisoning in Minamata Bay in the mid 20th century. Her inventive narrative structure asks us to grapple with science, politics, medicine, economy, bodies, and pain as all part of the same equation.]

And selections from:

Langston, Nancy. 2010. *Toxic Bodies: Hormone disruptors and the legacy of DES*. New Haven: Yale University Press.

DuPuis, E. Melanie. 2004. *Smoke and Mirrors: The politics and culture of air pollution*. New York: New York University Press.

Week 9

Read pp. 175-300 from:

Ishimure, Michiko. 2003 [1969]. *Paradise in the Sea of Sorrow: Our Minamata Disease*.

And:

U.S. Environmental Protection Agency, “Emergency Management: Exposure Pathways.” Available at: <<http://www.epa.gov/oem/content/hazsubs/pathways.htm>>.

Special EventWeek 10

Conversation with Kristen Ehresmann, RN, M.P.H., and Brenda Rengstorf, N.P.

Ms. Ehresmann is from the Division of Epidemiology & Community Health at the University of Minnesota. She specializes in disease prevention and refugee health, with a focus on malaria. Ms. Rengstorf is a nurse practitioner with Doctors Without Borders who has worked around the globe with epidemiological problems.

Read:

Mendis, Kamini, et al. 2001. The Neglected Burden of *Plasmodium Vivax* Malaria. *American Journal of Tropical Medicine and Hygiene* 64 (1):97-106.

Bodies and Environment in the Information Age

From our email accounts, to Facebook, to Google Docs, all the way to our medical records, we in part exist online as virtual people. As geographers we are concerned with where and how this virtual existence happens in the real world. In this part of the class we look at data centers (a.k.a. server farms) as a way to understand how electronic versions of our bodies exist in other places, and the attending environmental and humanistic implications.

Week 11

** Close Reading Essay Due **

Explore a Google data center with Street View:

<http://www.youtube.com/watch?v=avP5d16wEp0>

View “Inside a Container,” about a Chicago Microsoft data center:

http://news.cnet.com/2300-10805_3-10001679.html?tag=mncol

Read:

Massumi, Brian. 1999. Strange Horizon: Buildings, biograms, and the body topologic. *Architectural Design* 69 (9-10):12-19.

Hanauer, David. 2004. Information Storage for Health-Care Providers: It's not as simple as it seems. *The Journal of Medical Practice Management* 20 (1):7-12.

Blanchette, Jean-Francois. 2011. A Material History of Bits. *Journal of the American Society for Information Science and Technology* 62 (6):1042-1057.

Bauch, Nicholas. 2013. Extensible, Not Relational: Finding bodies in the landscape of electronic information with wireless body area networks. *GeoJournal* 78 (6):921-934.

Week 12

Parr, Hester. 2002. New Body-Geographies: The embodied spaces of health and medical information on the Internet. *Environment and Planning D: Society and Space* 20 (73-95).

Mariscal, Judith, Ramon Gil-Garcia, and Armando Aldama-Nalda. 2011. Policies on Access to Information Technologies: The case of e-Mexico. *Information Technologies & International Development* 7 (2):1-16.

Coole, Diana, and Samantha Frost, eds. 2010. *New Materialisms: Ontology, agency, and politics*. Durham, NC: Duke University Press.

Bodies and Cities

Urban geographers have perhaps gone as far as anyone in re-thinking how bodies and the built environment are connected. Here we learn that the way we shape and plan our cities has as much impact on our health as the way we protect “nature.”

Week 13

- Jarvela, Marja, and Eva-Marita Rinne-Koistinen. 2005. Purity and Dirt as Social Constructions: Environmental health in an urban shantytown of Lagos. *International Journal of Urban and Regional Research* 29 (2):375-388.
- Corburn, Jason. 2009. *Toward the Healthy City: People, places, and the politics of urban planning*. Cambridge, Mass.: MIT Press.
- Murphy, Michelle. 2006. *Sick Building Syndrome and the Problem of Uncertainty*. Durham: Duke University Press.

Week 14

- Marvin, Simon, and Will Medd. 2006. Metabolisms of obesity: flows of fat through bodies, cities, and sewers. *Environment and Planning A* 38:313-324.
- Gandy, Matthew. 2005. Cyborg Urbanization: Complexity and monstrosity in the contemporary city. *International Journal of Urban & Regional Research* 29 (1):26-49.
- Graham, Stephen, ed. 2010. *Disrupted Cities: When infrastructure fails*. New York: Routledge.
- Melosi, Martin V. 2000. *The Sanitary City: Urban infrastructure in America from colonial times to the present*. Baltimore: Johns Hopkins University Press.

Week 15

** Student presentations of final projects.

Assignment Appendix

Asking Good Questions for Weekly Responses

- An important mark of becoming an engaged reader is learning how to ask “good” questions as you read along. What are good questions? Good questions bring us past the text itself, because good questions depend on your active mind. Instead of monotonously soaking up information and storing it, try to catch yourself when you are most deeply enthralled with the story. Catch yourself, stop, and ask yourself: why am I so captivated by the author right now? What am I *imagining*? What is just beyond the text, just out of reach ... there, but not explicitly said?
- Twist your imagining into a question that makes us all learn about how you are reading this text. Pull us into your world. We should be puzzled and intrigued with your question. We should want to answer it, and try to answer it, but it should not have a singular, quick answer.

Essay based on Ishimure

Please choose one of the following prompts:

1. Write an essay that furthers our understanding of how Ishimure uses the human body (sick, healthy, or otherwise) to express environmental issues. How can we understand the Minamata Bay landscape more thoroughly by reading them through the bodies that she presents to us? One trick you might consider as you brainstorm is ‘how would we understand these landscapes without the author’s descriptions of bodies in them?’.
2. Ishimure highlights organizations that work alongside or outside the state: corporations, international organizations (IOs), and non-governmental organizations (NGOs). In the context of the story she tells, why is the state alone inadequate for taking responsibility for the environment and the effects of environmental decline on society and individuals? How does her narrative conceive of responsibility at the greater scales of organization and decentralization increasingly characteristic of our globalizing world today? How, according to Ishimure, might responsibility be reconceived?
3. Make an argument about how the pressures of modernization are experienced by different genders in *Paradise in the Sea of Sorrow*. Do women and men have the same relationship to the past, the present, and the future? How and why are their narratives of environmental and social collapse similar or different?

Evaluation Criteria

The strongest papers will have the following qualities: (1) a solid and persuasive thesis (a central and governing claim that is far from self-evident but can be argued on the basis of the text); (2) deep and complex analysis, well supported by textual evidence and balanced by a consideration of counter-arguments; (3) effective organization; (4) clear and lively prose; and (5) originality of thought.