

**The Circle of Life:
Visions of Nature in Modern Science, Religion, Politics and Culture**

Instructor: Greg Priest

gpriest@stanford.edu

Tuesdays and Thursdays, 3:15-4:45, Building 200, Room 217

Office hours: Thursdays, 2:00-3:00, Building 200, Room 033, or by appointment

C.P. Snow famously described western intellectual society as split between two opposing cultures: the sciences and the humanities. The notion of a radical discontinuity between science and the rest of society can generate an understanding of science as a rarified pursuit of knowledge unsullied by contact with the broader culture. But such an understanding of science would be impoverished. Science is formed by, and forms, the religious, political and cultural contexts in which it is pursued.

In this course, we will explore these issues through the lens of a new understanding of nature that began to emerge in the mid-eighteenth century and that conceived of nature as a complex, dynamic system of interacting organisms. This understanding fundamentally altered how we perceive the living world, and how we understand humanity's relationship with that world. By tracing the evolution of this new conception of nature over the ensuing centuries, we will gain insight into the interpenetration of science, religion, politics and culture. Over the course of the quarter, we will explore:

- Early modern visions of nature
- The emergence of the new, interactive conception of nature in the works of Carl Linnaeus, the father of modern taxonomy, and Gilbert White, an English country parson
- Visions of nature in Romantic science, poetry and art
- Charles Darwin's image of nature, and its afterlife in science, literature and popular culture.
- Developing ecological ideas in the U.S. in the early 20th century
- Rachel Carson's *Silent Spring* and the politicization of environmental debates
- New metaphors of nature, including Spaceship Earth and the "Gaia Hypothesis"—the idea that the earth is a single, integrated organism.
- How the ideas we have been considering appear in, and are affected by, modern debates about biodiversity and human-caused extinctions.
- The question whether we are witnessing "the end of nature."

In addition to close readings of canonical texts and contemporary commentaries, you will be introduced to digital history methods. If you wish to do so, you will be encouraged to pursue digital history projects.

Course Themes

How do scientific ideas affect religion, politics and culture, and how do the religious, cultural and political impinge upon and affect science? Is there such a thing as a characteristically “modern” conception of nature? If so, how much room for variation is there in that conception? To what extent do modern ideas of nature trace back to earlier predecessors? How do the ways in which ideas of nature are represented affect their meaning and reception? What different metaphors, narratives and other rhetorical strategies do authors deploy in the service of their visions of nature? How do these strategies affect our reception of those visions?

Pedagogical Goals

After having completed the course, students should be able to analyze and interpret a wide array of primary historical documents, such as scientific essays, letters, journals, travelogues, novels, poems, paintings and diagrams; to assess sources critically, identifying each source’s central argument, target audience, sources of evidence, rhetorical strategies and biases and blind spots; to trace continuities and contrasts among ideas, both synchronically (ideas expressed by different thinkers who are contemporaries) and diachronically (ideas expressed by thinkers who are temporally distant from one another); to engage critically with debates about the interpretation and import of primary historical documents; to evaluate how different historical methods and approaches illuminate certain aspects of history and cast others into shadow; and to communicate such ideas clearly, persuasively and confidently, orally and in writing.

Assignments

Attendance and Participation (25%). Because this course is a seminar, its success is dependent upon your active and thoughtful preparation for, and participation in, class discussions. You may miss one class session for any reason without penalty. Otherwise, attendance at every class is required. If you must miss more than one class, email me as far in advance as possible to let me know, and email me by the Sunday following the missed class a 2-page (double-spaced) reflection paper on the missed assignment.

In addition, each week (other than week 1), students will be expected to participate in the online forum in coursework. Each week, I will post an idea or question to the forum, to which each student will offer some kind of response. Students will also be encouraged to offer their own questions, comments and interpretations. The short responses are intended to help you think about important questions posed by the week’s readings. Your responses should show careful thought, but they need not be polished. The short responses will not be separately graded but will be an important component in your participation grade. **Late short responses do not foster group dialogue and will not be accepted.**

First Project (25%). You will write a 5-page (double-spaced, 12-point font, 1-inch margins) paper on a prompt to be chosen by the instructor. The paper will be due by midnight on May 2.

Final Project (50%). You will, at your option, do one of the following: (1) You will write a traditional 10-page research paper on a topic of your choice relating to visions of nature in the modern period; or (2) You will identify or construct a digital corpus suitable to the investigation of a topic of your choice relating to visions of nature in the modern period and write an 8-page paper on that topic using your corpus as your primary source material. In both cases, in our final course session on June 3, you will orally present your project to the class. Your final paper is due at midnight on June 9.

In order to earn a passing grade in the class, you must attend at least 75% of class sessions (not including excused absences due to illness or emergency) and complete all written assignments and the oral presentation.

Note on Texts:

Readings generally total fewer than 100 pages per week. The weeks that we read *The Island of Dr. Moreau* and *Silent Spring* the reading is a little longer. You are only required to purchase one text, as follows:

Carson, Rachel. *Silent Spring*. Anniversary edition. Houghton Mifflin Company, 2002. ISBN 0618249060.

A good introduction to the history of ecological thought is Donald Worster. *Nature's Economy: A History of Ecological Ideas*. 2nd Edition. Cambridge University Press, 1994. ISBN 0521468345. This book is not required, but it is a useful introduction to many of the themes and people we will discuss.

For your convenience and to reduce costs, all remaining texts will be available online. You should make sure to read the texts in a format that will allow you both to highlight and to make marginal notes while reading and to refer to the texts during class. You can print out hard copies, or use reading and annotating applications for your laptop or tablet. Do not, however, simply read from your browser.

Students with Disabilities:

I strongly encourage students with disabilities to notify me if it will help their learning experience in this course. Students who may need an academic accommodation based on the impact of a disability must initiate the request with the Office of Accessible Education (OAE). Professional staff will evaluate the request with required documentation, recommend reasonable accommodations and prepare an Accommodation Letter for faculty dated in the current quarter in which the request is being made. Students should contact the OAE as soon as possible since timely notice is needed to coordinate accommodations. The OAE is located at 563 Salvatierra Walk (phone: 723-1066, URL: studentaffairs.stanford.edu/oea).

Honor Code:

Students are responsible for understanding and complying with the Honor Code. For more details, please consult <http://studentaffairs.stanford.edu/communitystandards/policy/honor-code>.

Schedule and Readings:

Week 1: Introduction and Early Natural Histories

April 1 Readings: None.

April 3 Readings: Conrad Gesner. *Historiae Animalium*. Spend 15 minutes paging through the online version (coursework) to get a sense for how the work is structured, and to examine some of the images. Read the first 15 pages of the English translation of Gesner's entry on the chicken (coursework), and selectively explore the rest of the entry to get a sense of the kind of information that Gesner included in his entries.

William B. Ashworth. "Emblematic Natural History of the Renaissance" (coursework).

Week 2: The Birth of Ecology: Gilbert White and Carl Linnaeus

April 8 Readings: Gilbert White. *The Natural History and Antiquities of Selborne* (coursework). Read letters VIII (pp. 21-24), XLII (pp. 237-39), XLIII (pp. 240-43), XLVI (pp. 250-53), L (pp. 261-63), LIV (pp. 269-271).

Tobias Menely. "Traveling in Place: Gilbert White's Cosmopolitan Parochialism" (coursework).

April 10 Readings: Carl Linnaeus. "The Oeconomy of Nature" (coursework). Read pp. 39-50 and 113-129.

Lisbet Koerner. "God's Endless Larder" (coursework).

Week 3: Methods of Digital History and Romantic Nature

April 15 Readings: Michael S. Carolan. "The Values and Vulnerabilities of Metaphors Within the Environmental Sciences" (coursework).

Reading(s) on methods of digital history to be determined.

April 17 Readings: Erasmus Darwin. *The Botanic Garden and The Temple of Nature*, excerpts (coursework). Be sure to read the footnotes.

William Bartram. *Travels through North and South Carolina, Georgia, East and West Florida* (coursework). Read the introduction (pp. viii-xxiv).

Ashton Nichols. "Romanticism and Ecology: The Loves of Plants and Animals: Romantic Science and the Pleasures of Nature" (coursework).

Week 4: Romantic Nature (continued)

April 22 Readings: William Cullen Bryant. Two Poems (coursework).

Spend 30 minutes exploring the landscape paintings of Thomas Cole and Frederic Edwin Church in the virtual gallery. (There is a pane on the left of the screen with the artists names; click on “Cole” and “Church” to get to the paintings.)

Charles L. Sanford. “The Concept of the Sublime in the Works of Thomas Cole and William Cullen Bryant” (coursework).

Eleanor James Harvey, “America’s Moral Volcano” (coursework).

April 24 Readings: Henry David Thoreau. *Walking*, excerpts (coursework).

Walt Whitman. *Song of Myself*, (coursework). Read sections (not pages) 1, 2, 6, 14, 20, 31, 32, 39, 44, 52.

M. Jimmie Killingsworth. “As if the Beasts Spoke” (coursework).

Week 5: Nature Red in Tooth and Claw? Charles Darwin’s Vision(s) of Nature

April 29 Readings: Alfred, Lord Tennyson. *In Memoriam*, excerpts (coursework).

Charles Darwin. *On the Origin of Species*, pp. 60-79 (coursework).

Barry Gale. “Darwin and the Concept of a Struggle for Existence” (coursework).

May 1 Readings: Charles Darwin, Excerpts from the *Origin*, *The Journal of Researches*, and *The Formation of Vegetable Mould through the Action of Worms* (coursework).

Charles Darwin. *The Descent of Man*, Vol. I: pp. 263-279 (coursework).

Rosemary Jann. “Darwin and the Anthropologists” (coursework).

Reminder: Paper # 1 is due by midnight on May 2. Post it to Dropbox in coursework.

Week 6: Darwin Digested

May 6 Readings: Constance Clark, “‘You Are Here’: Missing Links, Chains of Being, and the Language of Cartoons” (coursework).

Robert J. Richards. “The Tragic Sense of Ernst Haeckel” (coursework).

Begin reading H.G. Wells, *The Island of Dr. Moreau* (coursework).

May 8 Readings: Finish reading H.G. Wells, *The Island of Dr. Moreau* (coursework).

Reminder: Your 1-2 paragraph summary for your final project topic is due by midnight on May 9. Post it to the forum in Coursework.

Week 7: Ecology Evolves and The Politics of Nature: Rachel Carson and *Silent Spring*

May 13 Readings: Frederick Clements. *Plant Succession*, pp. 3-7 (coursework)

H.A. Gleason. "The Individualistic Concept of the Plant Association" (coursework).

Debra Journet. "Ecological Theories as Cultural Narratives: F.E. Clements's and H.A. Gleason's 'Stories' of Community Succession" (coursework)

During this class session, we will meet with John Mustain, Stanford's Curator of Rare Books, who will show us rare books that are relevant to the course.

May 15 Readings: Carson, Rachel. *Silent Spring*. pages 1-14, 63-84. 85-102, 245-261 and 277-300.

Spend 30 minutes exploring the website www.rachelwaswrong.org.

Week 8: The Politics of Nature: Rachel Carson and *Silent Spring* (continued) and New Metaphors for Nature: From Gaia to Spaceship Earth

May 20 Readings: Zuoyue Wang. "Responding to Silent Spring" (coursework).

Michael B. Smith. "'Silence, Miss Carson!'" (coursework).

May 22 Readings: Kenneth E. Boulding. "The Economics of the Coming Spaceship Earth" (coursework).

Garrett Hardin. "Living on a Lifeboat" (coursework).

James Lovelock and Lynn Margulis. "Atmospheric Homeostasis by and for the Biosphere: The Gaia Hypothesis" (coursework).

Reminder: Your longer summary and annotated bibliography (or corpus description) for your final project is due by midnight on May 23. Post it to Dropbox in coursework.

Week 9: There and Back Again? White and Linnaeus Redux, and The End of Nature

May 27 Readings: Robert Costanza, et al. "The Value of the World's Ecosystem Services" (coursework).

Donald Worster. "The Intrinsic Value of Nature" (coursework).

William Cronon, "The Trouble with Wilderness" (coursework).

May 29 Readings: Bill McKibben. *The End of Nature*, excerpts (coursework).

Erle Ellis and Navin Ramankutty. "Putting People in the Map: Anthropogenic Biomes of the World" (coursework)

C. Josh Donlan, et al., "Pleistocene Rewilding," pp. 660-66 and 671-74 (coursework).

Week 10: The End of Nature (continued) and Student Presentations

June 3 Readings: Wells Tower. "Raw Water" (coursework).

At this session, students will also orally present their final projects.

Reminder: Your final project is due by midnight on June 9. Post it to Dropbox in coursework.