THIS IS THE 2013 SYLLABUS FOR CULTURE & ENVIRONMENT. THE 2014 SYLLABUS WILL BE SLIGHTLY DIFFERENT.

Anthropology 361
Env. Studies 361
Internat. Studies 361

Culture and Environment

Fall 2013
Tu/Th 2:30-4 Lab Sci 300
www.artsci.wustl.edu/~anthro/courses/361

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Overview. This course explores relationships between human culture and the environment, with the unifying theme of relationships among population, food production, and politics. We will discuss social, ecological, and political aspects of production systems from foraging to shifting cultivation to intensive cultivation, including questions of sustainability and how these systems are altered by state and industrial intervention. We will examine indigenous or "traditional" adaptations, with case studies drawn from West and East Africa, Brazilian Amazon, China, India, New Guinea, and the Philippines. We will explore ecological and political aspects of industrialized food production and the ecology and "ethical" food movements. Along the way we will pose questions such as:

- Does environment determine (or even shape) culture? Do cultures "evolve" as they switch from foraging to simple agriculture to intensive agriculture?
- In what ways are cultural uses of the environment controlled by population density? Is rising population density the primary cause of environmental destruction?
- Was Malthus right that population inherently tends to outstrip food production? Was he right that this is the prime cause of poverty? If not, why does this theory continue to be so influential? What practical
effects have the theory had? In what ways is it a political theory as opposed to an ecological one?
- Are there sustainable intensive small farms in the world? If so, what makes them work?
- What was the "Greap Leap Forward," and how did it starve 30 million people? What does this episode tell us about smallholder agriculture?
- What was the "Green Revolution"? If its chief architect won a Nobel Peace Prize, why is violence attributed to it? Has it helped or hurt agricultural sustainability?
- How and why has food production become industrialized in this country? What roles have been played by science and capital? Who are the winners and losers in this fundamental change in food production?
- What are genetically modified crops? What is the debate all about? Are they critical to the fight against world hunger? What are the larger issues?
- What is "shash & burn" farming, and why do so many farmers practice it? Is it really the cause of rainforest destruction?
- Is conflict over resources the exception or the rule among indigenous peoples? Has European expansion done more to suppress or cause indigenous conflict?
- How does religion mediate human interaction with the environment? Can religious rituals act as regulators of humans and their key resources?
- What is "Green Capitalism" and can it be used to mitigate human-environmental interactions?

Prerequisites. There are no prerequisites for the course and many freshmen have taken it and done well. The course may be used as a prerequisite for the Political Ecology seminar (Anth 4282) or Anthropology of Food (Anth 4215). The course goes particularly well with Prof. Childs' Population and Society.

Reading. We will read a selection of articles and book chapters, part of Ross's The Malthus Factor, and most of Pollan's Omnivore's Dilemma and Becker's Hungry Ghosts. Most readings will be available on the web. Malthus Factor, Omnivore and Ghosts are available at the Mallinkrodt bookstore. There is no coursepack to buy. The reading load is moderate overall, but it is not uniform -- there are occasional peaks and troughs. Please look ahead and budget your time.

Optional readings may help you on the exams but often they offer further information that you will not be tested on. Ask me for details on any of the readings.

Grading and exams. Grades will be based on the following weighting:

<table>
<thead>
<tr>
<th>Test</th>
<th>% of grade</th>
<th>Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quiz 1</td>
<td>3.0</td>
<td>Everything so far</td>
</tr>
<tr>
<td>Midterm 1</td>
<td>26.0</td>
<td>Everything so far</td>
</tr>
<tr>
<td>Quiz 2</td>
<td>4.0</td>
<td>Mainly material since midterm</td>
</tr>
<tr>
<td>Midterm 2</td>
<td>31.0</td>
<td>Mainly material since midterm</td>
</tr>
<tr>
<td>Midterm 3</td>
<td>35.8</td>
<td>Everything, with several synthetic questions</td>
</tr>
<tr>
<td>Eval</td>
<td>0.2</td>
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</table>

- Here is a discussion of details of tests.
- You are always responsible for readings assigned for the day of a test.
- Quizzes will usually have a few short essays and a few short answer questions. Midterms will always have a variety of questions, including essays of varying lengths, short answers questions, possibly multiple choice and/or T/F. Sample questions and review questions will be provided on the web.
- All tests (i.e., quizzes, midterms, and final is there is a final) will have a few questions on factoids. Factoids will be introduced throughout the course on the factoids page, and once they are introduced, they are fair game on any test. That is, they are cumulative. You may simply be asked to recite the factoid, or asked to answer a question for which a factoid could be used to support your answer. You have to know the factoids exactly; that's the whole point of factoids. (You don't have to know the sources of the factoids -- those are just listed in case you want to know where they come from. A curious student a few years ago wanted to know where I got my information, so I provide the sources.)
- Tests cover both lectures and readings.
- The TA's grade all exams, with input from the me. Normally each question is graded entirely by one TA to ensure consistency. If you have questions about the grading of any particular question, please see the TA's first; they can tell you who graded the question.
- A grade of D is required to pass if taken P/F.
Course grades will be on a modified curve, typically with 25-35% A, 35-50% B. Approximate curves will be given after each test, but final grades are based on total weighted scores, not on letter grades, to avoid rounding errors.

No extra credit assignments will be accepted, but I will read and evaluate practice answers prior to exams. Class participation is strongly encouraged (although it doesn't affect your grade); if you have comments or questions, don't be shy about raising your hand!

**Missing class.** We do not take attendance, but class is essential. Powerpoints are not designed to provide a summary for those who miss class, but rather to illustrate and clarify points made in lectures. You are very welcome to discuss any class material with me or the TA's in office hours, but we are not inclined to recapitulate missed lectures unless you had an unavoidable reason for missing class. However, if you had to miss class (for instance, due to a medical issue or a varsity athletic obligation), we will do our best to summarize what you missed.

**Make-ups.** Absences from exams will be excused for debilitating health problems or varsity athletic obligations. Due to the size of the class, we will request documentation for medical excuses. Requests for special treatment to accommodate flight schedules etc. will be cheerfully granted on the one condition that hell has frozen over.

**The email record.** Please remember that any arrangements regarding your fulfillment of course requirements must be recorded in email and must include acknowledgement from me. (For instance: "Dear Dr. Stone, when we spoke yesterday you agreed that because of my recent illness I could take a make-up midterm on Nov. 12. Please acknowledge this arrangement.") This avoids misunderstanding.

**Course website.** This website will be used to maintain the syllabus (which may be changed somewhat during the semester), to facilitate access to readings, and to post supplementary materials ranging from news articles to class discussion to grade distributions. Powerpoints and lecture notes will be available in a password-protected directory.

**Advice on how to do well:**

- **KEEP THINGS IN PERSPECTIVE.** The material in this course is not an undifferentiated stream of information; there are major themes and minor themes, major points, minor points, illustrations, and silly asides. Don't just memorize the details of each case; know what each case illustrates.
- **READINGS. Maybe you should adios your highlighter.** The most important parts of readings often are not highlight-able. I strongly recommend writing summaries of each article, chapter, etc. as soon as you have finished it. Keep up with the readings. When the syllabus lists a reading for a given date, make sure you have read it by class on that date. My lectures assume you have done the readings. If you have not done the readings, you will not always understand the lectures. Note that the time required for the readings is not uniform throughout the semester; some weeks are light, others heavy. I will try to remind you when longer readings are coming up, but you should also take the responsibility of looking ahead.
- **COME TO CLASS.** I don't take attendance, but I don't think anyone has ever done well in this course without coming to class regularly.
- **DISCUSS THE MATERIAL WITH US.** I have office hours, and I am always available for appointments. The TA's are very knowledgeable too.
# Anthro 361 Culture & Environment

## Syllabus for Fall 2013

<table>
<thead>
<tr>
<th>Tu, Aug 27</th>
<th>Introduction (<a href="#">ppt</a>)</th>
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</table>

**Population, Environment, and Evolution.** The most fundamental interactions between culture and environment pertain to the process of feeding ourselves, and the first section of the course introduces several Big Ideas on this process. Few ideas are bigger than that of human population growth outstripping the food supply: we confront this idea first in the caricature form of the famous Ehrlich - Simon bet, and then look at its origins by comparing perspectives of Malthus, Godwin and Marx. We also confront other historic Big Ideas on culture, environment, and evolution. Do cultures really evolve by changing their adaptation to environment? Do cultural adaptations become more energy-efficient as they evolve? What is the role of population pressure in such evolution? Does the environment shape culture, and if so, how?

<table>
<thead>
<tr>
<th>Th, Aug 29</th>
<th>Population Bomb film (<a href="#">ppt</a>)</th>
</tr>
</thead>
</table>
| More dinner, fewer diners, or better table manners?  
  - Ehrlich excerpts  
  - Simon excerpts  
  - Robbins excerpt  
| Regis 1997 (The Doomslayer, on Julian Simon)  
| Stone 2013 (Overpopulation? Don't Bet On It)  
| Start reading Malthus and Ross!  
| Optional: Ehrlich 1968 (The Population Bomb); Chertow 2001 (excerpt from The IPAT Equation and Its Variants) |

<table>
<thead>
<tr>
<th>Tu, Sept 03</th>
<th>Malthus and Malthusianism (<a href="#">ppt</a>)</th>
</tr>
</thead>
</table>
| Malthus 1798 (Population, chaps 1-2)  
| Ross 1998:1-54 (Malthus Factor, Intro + Chaps 1-2)  
| Strongly rec: review of Three Famines  
| Optional: the rest of Population; Simon 1996 (Population Matters); Stone 2001 (Malthus, Agribusiness, and the Death of the Peasantry); Sen 1981 (Poverty and Famines) |

<table>
<thead>
<tr>
<th>Th, Sept 05</th>
<th>Evolutionism and environmental determinism (<a href="#">ppt</a>)</th>
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</thead>
</table>
| Morgan 1877:8-12  
| Ross Chapter 3 (Eugenics and environmentalism; follows points made last time about population control) |
Tu, Sept 10
Materialism (ppt)

- optional: Foster 1999 (Marx's Theory of Metabolic Rift)

Th, Sept 12
Energetics, cultural ecology and political ecology (ppt)

- White 1949 (scan Energy and the Evolution of Culture)
- Steward 1938:101-111 (excerpt from Great Basin Shoshonean Indians) Ares
- Robbins 2004 (The Hatchet and the Seed, from Political Ecology)
- optional: Hardin 1986, Cultural Carrying Capacity (with comments) [cf White reading]

Low-Population Human Ecology: Foraging, Agricultural Origins, and Shifting Cultivation. Humans actually evolved as hunter-gatherers (foragers); how do foraging systems work? How efficient and productive is foraging? What is the historic and political context of foraging groups used in classic studies? Why was foraging replaced by cultivation, and what role did population play in the transition? We will then look at the slash & burn cultivation that is practiced in low-population areas, including how the system actually works, and at its relationship to deforestation (using the case study of the Amazon rain forest).

Tu, Sept 17
Hunter-Gatherers and the Kalahari case (ppt)

- Lee 1968 (What Hunters Do for a Living, excerpt)
- Sahlins 1972 (Original Affluent Society, from Stone Age Economics)
- Wilmsen 1994 (Creation of Subsistence Foraging in the Colonial Era)

Th, Sept 19
Behavioral ecology of hunting (ppt)

Quiz #1

- Hawkes & Bird 2002 (Showing Off, Handicap Signaling, and the Evolution of Men’s Work)
- Knight/Siskind, Sharanahua case study

Tu, Sept 24
Demography and the origins of agriculture (ppt)

- Scarre 2005 (Key Controversies)
- Katz & Voight 1987 (Bread and Beer)
- Optional: Smalley & Blake 2003 (Sweet Beginnings, excerpt); Jennings et al 2005 (Drinking Beer in a Blissful
### Mood: Alcohol Production, Operational Chains, and Feasting in the Ancient World; Bocquet-Appel 2009 (Demographic Impact of the Agricultural System in Human History)

**Th, Sept 26**  
Shifting cultivation; Rainforest agroecology and deforestation (ppt)  
- Hecht & Cockburn 1989:15-43 (Fate of the Forest)  
- Conklin 1954 (An Ethnoecological Approach to Shifting Agriculture)  
- Optional: Stone 1993 (The Delaware Valley)

### Population Density and Intensification

There are few questions as far-reaching as how human production systems change with population density. We look at the theory that turned Malthus on his head, and at important recent writing, to understand what intensive agriculture is, why is it practiced, and how it relates to other aspects of culture. We use case studies from West Africa, East Africa, East Asia, and ancient Mesoamerica.

**Tu, Oct 01**  
Intensification (ppt)  
- Boserup 1965:11-55 (Conditions of Agricultural Growth)  
- Richards 1983 (from Ecological Change & Politics of African Land Use)  
- Stone 2001 (Beyond the Square Chicken: The State of Agricultural Theory)

**Th, Oct 03**  
Intensification case studies: Kofyar (ppt) and Machakos case study (ppt)  
- Netting, Stone & Stone 1989 (Kofyar Cash Cropping: Choice and Change in Indigenous Agricultural Development)  
- Mortimore and Tiffen 1995 (Population and Environment at Machakos)

**Tu, Oct 08**  
Asian wetrice; expanding ideas of intensification  
- Netting 1993:41-50, 138-140 (Wet-Rice Farming as an Intensive System Par Excellence)  
- Durham 1995 (Political Ecology and Environmental Destruction in Latin America)  
- Optional: Bray 1986, The Rice Economies; Stone and Downum 1998, just the section "Boserup and Agrarian Ecology"

Th, Oct 10 **Midterm #1**

### Ecology and Politics of Conflict

Conflict over resources has been seen as the perpetual consequence of overpopulation, from Malthus through many contemporary writers. We will examine these ideas in light of classic anthropological studies in Papua New Guinea and the Amazon. Is "primitive warfare" a characteristic of indigenous society that Western colonization quells or creates?
<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tu, Oct 15</td>
<td>Big Ideas; the famous New Guinea case; Yanomamo; a better example of ritual regulation (html)</td>
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<tr>
<td></td>
<td>• Rappaport 1967 (Ritual Regulation of Environmental Relations)</td>
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<td></td>
<td>• Lansing summary (Balinese Water Temples -- including the PLEASE READ link)</td>
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<td></td>
<td>• Gross 1992:412-415 (Tribal warfare: The Yanomamo)</td>
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<td></td>
<td>• Ferguson 1992 (Tribal Warfare)</td>
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<td>• start reading Becker!</td>
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**State Intervention : Communal Agriculture.** State interventions into indigenous agriculture had profound effects on society during the 20th century. Although the most sustained transformations have resulted from the promotion of capitalist agriculture, Communist attempts to redesign agrarian societies have led to some spectacular tragedies. The answers to how an idealistic agricultural policy could kill 50 million farmers lie mainly in the cultural aspects of intensive agriculture. We will also look at state-directed communal agriculture in East Africa and Israel.

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<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Th, Oct 17</td>
<td>Great Leap Forward (html)</td>
<td>• Becker 1996 (Hungry Ghosts) Chaps 1-7, 18-20</td>
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<td>• optional: Becker 1996, Chaps 13-14</td>
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<td>Tu, Oct 22</td>
<td>Seeing Like A State (ppt)</td>
<td>• Scott 1998:223-252 (from Seeing Like a State) Ares</td>
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</table>

**Industrialization: Science and Capitalist Agriculture.** Although they are both called "intensive," the intensive smallholder farming examined earlier and the industrial agriculture epitomized by the US today are profoundly different. We will explore the interactions among science, capitalism, and the state in the industrialization of agriculture, and explore one of the ongoing legal conflicts resulting from industrial farming in Missouri.

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<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>References</th>
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</thead>
<tbody>
<tr>
<td>Th, Oct 24</td>
<td>Capitalist Agriculture in the US: Seeds and Industrialization (ppt)</td>
<td>• Kloppenburg 1988 (First the Seed intro, pp 1-18) Ares (listed under First The Seed)</td>
</tr>
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<td></td>
<td>• NYT 2005 (Mountains of Corn)</td>
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<td></td>
<td>• start reading Pollan 2006 (Omnivore's Dilemma, pp. 2-273; see note)</td>
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<td>• optional: Is Heterosis a Myth? and a special treat: The Myriad Genetics appellate brief on gene patenting and the US DOJ brief arguing against gene patents</td>
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<td></td>
<td>• Stoll 2002 (from Larding the Lean Earth)</td>
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<td></td>
<td>• continue Pollan 2006</td>
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<td>• optional: Horner 1945 (Ammonium nitrate from war to peace)</td>
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<tr>
<td>Date</td>
<td>Topic</td>
<td>Assignments</td>
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</tbody>
</table>
| Th, Oct 31 | Mechanization and Overproduction (ppt) | finish Pollan 2006 (pp. 2-273)  
  editorial on antibiotics and "efficiency"  
  Giesen and Hersey 2010 The New Environmental Politics and its Antecedents  
| Tu, Nov 05 | Factory Farming: Meat and Fish (ppt) | (The KAW reading has been made optional; will be posted later. So just 2 readings)  
  Guthman 2012 (Black Box of the Body)  
  Barber TED talk (Falling in Love with a Fish)  
  optional: K.A.W. (MRSA and animal agriculture -- the highlighted part); Hites et al. 2004 (Organic contaminants in farmed salmon) |
| Th, Nov 07 | Green Revolution: Mexico and India (ppt) | Perkins 1997:211-246 (from Geopolitics and the Green Revolution)  
| Tu, Nov 12 | Green Revolution politics | Shiva 1991 (Violence of the Green Revolution) Chaps 1-4 Ares  
  Ross 1998:137-199 (Malthus Factor chaps. 6-7) |

**GMO's**

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Assignments</th>
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</thead>
</table>
| Th, Nov 14 | GMO history and biology (ppt) | Stone 2002 (Both Sides Now) and biotech backgrounder from UC Press or here  
  Tripp 2009 (Biotechnology and agricultural development)  
  optional: Leonard 2007 (Ganesh and Brahma bow to a new god); Stone 2008 (Anthropology of Genetically Modified Crops) |
| Tu, Nov 19 | GMO case study (ppt) |                                                                                                      |

Th, Nov 21 **Midterm 2**
<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tu, Nov 26</td>
<td>(Re-scheduled for evening of Dec 2)</td>
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<tr>
<td>Th, Nov 28</td>
<td>Thanksgiving Break</td>
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<td></td>
<td><strong>Morality, Politics and Sustainability.</strong></td>
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<tr>
<td>Mo, Dec 2</td>
<td>Morality and anthropogenic environments</td>
<td>• Denevan 1992 (Pristine Myth: The Landscape of the Americas in 1492)</td>
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<td></td>
<td>(ppt)</td>
<td>• Smith 2007, Ultimate Ecosystem Engineers</td>
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<td>Tu, Dec 03</td>
<td>Alternative Production and Ethical Commodity Chains (ppt)</td>
<td>• Leonard 2007, How The World Works (on Badgley et al. 2007)</td>
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<td>• Economist 2006, Ethical Food: Good Food?</td>
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<td>• optional: Badgley et al. 2007 (Organic agriculture and the global food supply); Pretty and Hine 2001 (Reducing Food Poverty with Sustainable Agriculture: A Summary of New Evidence); CGFI 2007 (Can Organic Really Feed the World? Activism Disguised as Science)</td>
</tr>
<tr>
<td>Th, Dec 05</td>
<td>Midterm #3</td>
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