Landscape **Archaeology**

GIS Applications in Anthropology
Anthropology 6181C—Fall 2018
Fridays, 1-4 pm, Psychology 107

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Office Hours: M, W 9:30-11:30 AM, or by appointment (contact me by email and I will try to reply in 24 hours)

Course Description

In this class we will work together to read and debate literature in Landscape Archaeology, while using GIS to apply those ideas to our own research. I expect that you have already developed a working knowledge of Geographic Information Systems, including ArcGIS, QGIS, IDRISI, or another software package, and how GIS can be applied to many kinds of problems. This class takes the form of a seminar, and students are expected to be active members of a working and learning community, giving constructive feedback to one another.

Attendance policy

If you will not be able to attend class, you should choose a different course. Attendance at **all** class sessions is expected because it is the **only** way that this course can succeed, and provide the best opportunity for us to pool our experience and learn together. Should you be forced to miss a class, please notify me ahead of time.

Course Goals

To read and analyze literature in landscape archaeology

To use GIS to apply theoretical concepts to archaeological data.

To prepare a manuscript on an independent research question that uses GIS to address a theoretical question.

To share knowledge and thoughtful, critical feedback with the other members of the class.

Required Software

ArcGIS (version 10) If you do not already have access, I will also be able to get a license for each of us (as needed). You can also use the my apps link through UCF, and use the software remotely, although past experience suggests that this is not the best option.

Google Earth [http://earth.google.com/download-earth.html] or ArcGIS Earth [http://www.esri.com/software/arcgis-earth] Note that this is free software.

Before purchasing any books for the course, please come to the first day of class for a discussion of sources and the availability of electronic texts though the UCF library.

We will also be using readings distributed electronically. Other class materials may include websites, online manuals, maps and other documents. A fairly high degree of familiarity and ease with computers and managing information is expected. We will be using Webcourses to communicate with each other and distribute documents.

Grading

The requirements for this course are weighted as follows:

Class participation	20%
Leading seminar classes	30%
Final project	50%

Class participation: The engagement of everyone in the class is necessary for each of us to get the most out of the experience. Accordingly, class participation makes up 20% of your grade. Be prepared every week to discuss the readings for that week, and to work with each other on the lab assignments. If you understand the material well, you have an obligation to communicate that and to **help your classmates**. If you are still figuring it out, you have an obligation to ask questions and **work with your classmates**. No matter how you use GIS in the future, you will spend a lot of your time explaining it to people and helping them to understand it better.

The format of part of each class meeting will be a combination of lecture and discussion. Each week, we will discuss the readings using a variety of formats, which we will organize in class. As a group, we will experiment with different formats for discussion, but all of them will depend on everyone being involved in every class session. Some of the plans or "scripts" for class format include debates, having individual discussion leaders, creation and discussion of study questions, small group work, or perhaps even "fieldwork" of some kind. In all cases, the point of the format will be to lead all of us to a productive conversation about that week's readings.

Final Projects: Each student will prepare a project that consists of three related parts: a GIS database, a seminar paper that presents a problem based on that database, and a presentation of the database and the analysis to the class. Here is an important point: you can work collaboratively on the database, even though you will each be turning in a separate paper. We will talk in class about working together on a database. Groups of no more than 5 people can work together in this way. Another important point is that you will be required to provide feedback to one another on the final projects. This peer review will be part of the final project grade.

Seminar papers:

Each participant in the class will be required to write a research paper on a topic of their choice relating to Landscape Archaeology. I will approve each student's topic. Please select your topic immediately and begin work right away. Dates for intermediate steps in the research process are listed in the syllabus. These dates are important because if they are not followed, the quality of your manuscript will suffer accordingly.

Formal presentation: A complete draft of the paper is due in the final two weeks of the semester. Each student is responsible for distributing copies to all participants one week before the paper is to be presented. Each paper will be assigned a discussant. The discussant, in consultation with the author, will present a concise summary of the paper and a critical review of it (about 5-10 minutes). Following this presentation, the author will be allowed to address issues and questions that have been raised, and then discussion will be open to all participants.

Final version: Each student must give the authors prompt feedback on their drafts, including comments on everything from theoretical arguments to data presentation to punctuation. Based on these comments, a final version is prepared and a hard copy is turned in during Final exam week. Students will also make copies of their papers available to all seminar participants. Papers and comments will be made available on the class wiki.

Access to ArcGIS

The University of Central Florida has a site license for ArcGIS, which is a very valuable resource. I can get registration numbers so that all students can install the program on their own computers. We will sometimes use the program here during class time, and it is also available on campus. The program has been installed at the following locations:

Main computer lab, Classroom 1
Business Administration148A
Computer Science II 113B and 104

Course Websites

The web is a very important tool for learning more about GIS, acquiring data, finding help from other people, online training, and downloading the results of GIS research. Here is a very brief selection of relevant websites to help you get started.

UCF Library (library.ucf.edu)
Google Scholar (scholar.google.com)
Google Earth (earth.google.com)
Maryland Global Land Cover Facility (http://www.landcover.org/)
USGS data gateway (https://datagateway.nrcs.usda.gov/)
ESRI (www.esri.com)
Strange Maps (http://bigthink.com/blogs/strange-maps)

Writing Center

UCF has an excellent service to help all writers improve their work by conferencing with other writers. Find out more about it at (www.uwc.ucf.edu). Take advantage of these resources, because they will certainly improve your writing, and they are available to you at no charge.

I urge you to take every opportunity to work with your graduate student peers to edit and critique each others' written work. **The people you learn the most from in graduate school are your fellow students**.

Classroom decorum

In order for many humans to coexist in a computer lab, cooperate and learn something, some basic ground rules are necessary.

Small electronics—turn off all things that beep, whistle or sing before you come to class.

Tape recorders—it is okay to tape lecture, but please inform me before doing so. We will discuss as a class whether we think it is okay to tape our discussions.

Disruptions—Talking during class, reading newspapers and other disruptive behavior will not be tolerated.

Cheating and Plagiarism—I have a zero-tolerance policy towards cheating and plagiarism. Students who cheat or plagiarize will fail the course, and most likely be expelled from the University. Please refer to the Golden Knights handbook for UCF rules regarding cheating.

Revisions

This syllabus is **subject to revision** as we work on topics throughout the semester. Updated syllabi will be distributed via email or the web, and you will hear about them in class. Additional readings will be distributed in the same fashion.

1) August 24th **Introduction to the seminar**
Course and personal introductions; expectations, mechanics, scheduling.

David, B., & Thomas, J. (Eds.). (2016). *Handbook of Landscape Archaeology*. Routledge: New York. Chapter 1 (David and Thomas), Chapter 5 (Patterson)

2) August 31st **Sites and Landscapes**

Dunnell R.C. (1992) The Notion Site. In: Rossignol J., Wandsnider L. (eds) Space, Time, and Archaeological Landscapes. Interdisciplinary Contributions to Archaeology. Springer, Boston, MA

Hodder, I. (1977). The distribution of material culture items in the Baringo district, western Kenya. *Man*, 239-269.

Wilkinson, T. J. (2003). *Archaeological landscapes of the Near East*. Tucson: University of Arizona Press. Chapter 1 (3-14)

Recommended:
Willey, G. R. (1953). Prehistoric settlement patterns in the Viru Valley, Peru.

3) September 7th **Historical Ecology**

Crumley, C. L. (1987). Historical ecology. *Regional Dynamics: Burgundian Landscapes in Historical Perspective*, 237-264.

Balée, W. (2006). The research program of historical ecology. *Annu. Rev. Anthropol.*, *35*, 75-98.

Erickson, C. L., & Balée, W. (2006). The historical ecology of a complex landscape in Bolivia. *Time and complexity in historical ecology: Studies in the Neotropical Lowlands*, 187-233.

4) September 14th **Phenomenology and Landscape 1**

Tilley, C. (2017). *Landscape in the Longue Durée: A History and Theory of Pebbles in a Pebbled Heathland Landscape*. London: UCL Press. Chapters 1, 3, 4, 5, 6 (skim 2, 7, 8, 9)

5) September 21st **Phenomenology and Landscape 2**
[Topic, Title and 300 word Abstract of Seminar Paper due]

Tilley, C. (2017). *Landscape in the Longue Durée: A History and Theory of Pebbles in a Pebbled Heathland Landscape*. London: UCL Press. Chapters 10, 12, 15, 16 (skim other chapters)

6) September 28th **Landscapes of Power**

Lansing, J. S. (2009). *Priests and programmers: technologies of power in the engineered landscape of Bali*. Princeton: Princeton University Press.

Smith, A. (1999). The Making of an Urartian Landscape in Southern Transcaucasia: A Study of Political Architectonics. *American Journal of Archaeology, 103*(1), 45-71. doi:10.2307/506577

7) October 5th **Nature versus Culture**
[Revised Abstract and 5-10 page double spaced essay on Definition of the Archaeology of Landscapes due.]

Redford, K. H. (1991). The ecologically noble savage. *Cultural survival quarterly*, *15*(1), 46-48.

Levis, C., Costa, F. R., Bongers, F., Peña-Claros, M., Clement, C. R., Junqueira, A. B., ... & Castilho, C. V. (2017). Persistent effects of pre-Columbian plant domestication on Amazonian forest composition. *Science*, *355*(6328), 925-931.

Crystal N. H. McMichael, Frazer Matthews-Bird, William Farfan-Rios, Kenneth J. Feeley Understanding of Amazon skewed by ancient people PNAS Jan 2017, 114 (3) 522-527

Descola, P. (2016). Landscape as Transfiguration. *Suomen Antropologi: Journal of the Finnish Anthropological Society*, *41*(1).

8) October 12th **Reading the Landscape 1**: Places, social space, sacred landscapes

Bender, B. (2002). Time and landscape. *Current anthropology*, *43*(S4), S103-S112.

Bender, B. (2002). Contested landscapes: medieval to present day. *The material culture reader*, 141-74.

David, B., & Thomas, J. (Eds.). (2016). *Handbook of Landscape Archaeology*. Routledge: New York. Chapter 15 (Ashmore)

Ingold, T. (2016). *Lines: a brief history*. Routledge. Chapter 3

9) October 19th **Reading the Landscape 2**: Gardens, Fields and Communities

Erickson, C. L. (2000). An artificial landscape-scale fishery in the Bolivian Amazon. *Nature*, *408*(6809), 190.

McKey, D. B., Durécu, M., Pouilly, M., Béarez, P., Ovando, A., Kalebe, M., & Huchzermeyer, C. F. (2016). Present-day African analogue of a pre-European Amazonian floodplain fishery shows convergence in cultural niche construction. *Proceedings of the National Academy of Sciences*, *113*(52), 14938-14943.

Wilkinson, T. J. (2003). *Archaeological landscapes of the Near East*. Tucson: University of Arizona Press. Chapter 2, 5 (15-31; 71-99)

10) October 26th **Methodology 1**: GIS, DEM, VR
[Detailed Outline of Seminar Paper due.]

Blatrix, R., Roux, B., Béarez, P., Prestes-Carneiro, G., Amaya, M., Aramayo, J. L., ... & Robinson, M. (2018). The unique functioning of a pre-Columbian Amazonian floodplain fishery. *Scientific reports*, *8*(1), 5998.

David, B., & Thomas, J. (Eds.). (2016). *Handbook of Landscape Archaeology*. Routledge: New York. Chapter 56 (Conolly)

Llobera, M. (2007). Reconstructing visual landscapes. *World Archaeology*, *39*(1), 51-69.

11) November 2nd **Reading The Landscape 3**: Vernacular Landscapes, Agrarian Households

Robin, C. (2002). Outside of houses: the practices of everyday life at Chan Nòohol, Belize. *Journal of Social Archaeology*, *2*(2), 245-268.

Robin, C., & Rothschild, N. A. (2002). Archaeological ethnographies: Social dynamics of outdoor space. *Journal of Social Archaeology*, *2*(2), 159-172.

Wilkinson, T. J. (2003). *Archaeological landscapes of the Near East*. Tucson: University of Arizona Press. Chapter 6 (100-127)

12) November 9th **Roads and Communication Networks**

Arkush, E. (2008). War, chronology, and causality in the Titicaca Basin. *Latin American Antiquity*, *19*(4), 339-373.

Snead, J. E. (2002). Ancestral Pueblo trails and the cultural landscape of the Pajarito Plateau, New Mexico. *Antiquity*, *76*(293), 756-765.

Snead, J. (2012). Obliterated itineraries: Pueblo trails, Chaco roads, and archaeological knowledge. *Highways, Byways, and Road Systems in the Pre-Modern World*, *5*, 106.

Wilkinson, T. J. (2003). *Archaeological landscapes of the Near East*. Tucson: University of Arizona Press. Chapter 7 (128-150)

13) November 16th **Sacred, Ritual, and Cosmic Landscapes**
Draft versions of seminar papers presented on November 30th are due

Ashmore, W., & Sabloff, J. A. (2002). Spatial orders in Maya civic plans. *Latin American Antiquity*, *13*(2), 201-215.

Smith, M. E. (2003). Can we read cosmology in ancient Maya city plans? Comment on Ashmore and Sabloff. *Latin American Antiquity*, *14*(2), 221-228.

Ashmore, W., & Sabloff, J. A. (2003). Interpreting ancient Maya civic plans: reply to Smith. *Latin American Antiquity*, *14*(2), 229-236.

Lawres, N. R. (2017). Materializing Ontology in Monumental Form: Engaging the Ontological in the Okeechobee Basin, Florida. *Journal of Anthropological Research*, *73*(4), 647-694.

Pauketat, T. R. (2012). *An archaeology of the cosmos: rethinking agency and religion in ancient America*. Routledge. Chapter

14) November 23rd *Thanksgiving weekend*
Draft versions of seminar papers presented on December 7th are due

15) November 30th **Student Presentations**

16) December 7th **Student Presentations** (backup)

Course Bibliography

Course Books (Tilley is available at no cost from the UCF library)

David, B., & Thomas, J. (Eds.). (2016). *Handbook of Landscape Archaeology*. Routledge: New York.

Lansing, J. S. (2009). *Priests and programmers: technologies of power in the engineered landscape of Bali*. Princeton: Princeton University Press.

Tilley, C. (2017). *Landscape in the Longue Durée: A History and Theory of Pebbles in a Pebbled Heathland Landscape*. London: UCL Press.

Wilkinson, T. J. (2003). *Archaeological landscapes of the Near East*. Tucson: University of Arizona Press.

Articles (most available online)

Arkush, E. (2008). War, chronology, and causality in the Titicaca Basin. *Latin American Antiquity*, *19*(4), 339-373.

Ashmore, W., & Sabloff, J. A. (2002). Spatial orders in Maya civic plans. *Latin American Antiquity*, *13*(2), 201-215.

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Blatrix, R., Roux, B., Béarez, P., Prestes-Carneiro, G., Amaya, M., Aramayo, J. L., ... & Robinson, M. (2018). The unique functioning of a pre-Columbian Amazonian floodplain fishery. *Scientific reports*, *8*(1), 5998.

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McKey, D. B., Durécu, M., Pouilly, M., Béarez, P., Ovando, A., Kalebe, M., & Huchzermeyer, C. F. (2016). Present-day African analogue of a pre-European Amazonian floodplain fishery shows convergence in cultural niche construction. *Proceedings of the National Academy of Sciences*, *113*(52), 14938-14943.

Pauketat, T. R. (2012). *An archaeology of the cosmos: rethinking agency and religion in ancient America*. Routledge.

Redford, K. H. (1991). The ecologically noble savage. *Cultural survival quarterly*, *15*(1), 46-48.

Robin, C. (2002). Outside of houses: the practices of everyday life at Chan Nòohol, Belize. *Journal of Social Archaeology*, *2*(2), 245-268.

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