



Aliens Close Encounters of a Multidisciplinary Kind

Fall 2015

Cross-listed: **Cognitive Science 177/377**

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Course Description:

This course can be summed up as: *everything you wanted to know about aliens but were afraid to ask (a scientist)*. The course will explore the topic of extraterrestrial intelligence from the perspective of several different fields. We will look at the history of UFO sighting claims and analyze the reliability of eye-witness testimonies, explore psychological & sociological reasons behind claims of alien abductions, and analyze the current state of the search for extraterrestrial intelligence (SETI) from the perspective of astronomy and planetary research. We will also examine how film and television have shaped our view of aliens in popular culture. We will conclude the course by looking at religions that have been inspired by UFOs and extraterrestrials.

REA, WRI

Readings:

Readings will be available on the course moodle site.

“Extraordinary claims require extraordinary evidence”

- Carl Sagan

Requirements:

Readings & class participation: You are expected to have read the assigned reading for each class, and come prepared to participate in the class discussion. Your class participation will be part of your final evaluation.

Papers: There will be 2 papers (3-5 pages for 177 students and 5-7 pages for 377 students) assigned over the course of the semester covering the different topics discussed in the class. Paper 1 is due on **October 11th** and Paper 2 on **October 30th** (on moodle).

Final Paper and presentation: The third and final paper (5-7 pages for 177 students and 8-10 pages for 377 students) will be longer in length and you will be expected to conduct literature search for that. This final paper proposal (with an annotated bibliography) is due on **November 13th** and final paper itself will be due on **December 11th**.

In-class assessment: There will be an in-class assessment of the topics discussed in the class on **Tuesday, November 10th**.

E-mail policy: 1) I am happy to answer your questions over e-mail. However, before pressing the send button, please think: Is the information you are seeking already available elsewhere (for example on the syllabus)? 2) Please do not expect immediate response (please allow 24 hours for response before sending a reminder) 3) If for some reason you have to send an assignment by e-mail, please cc a copy to yourself. I will not accept the excuse of forgetting to attach the assignment or some other e-mail malfunction. It is *your* responsibility to make sure we have received the full assignment. I will send you a confirmation e-mail.

In order to receive an evaluation you must complete all written work (including the in-class assessment) on time. In order to receive a designation of 'satisfactory completion' you must meet the above requirements and your work must show sufficient effort and proficiency with the general themes of the class.

Class Policies:

- All assignments are due on Moodle on the specified due date; **late work will not be accepted unless you have spoken with me prior to the due date, and I have agreed to an alternate due date.** If, due to serious illness, death in the family or other tragedy, you miss significant class meetings and/or assignments, please notify me as soon as you can.
- You are expected to attend class prepared to discuss the material assigned for that day and to arrive on time. If you miss a significant number of classes this will affect your final evaluation.
- Class discussions should be a comfortable arena for sharing ideas, and every member of the class should feel respected and included in the discussion. Paranormal/pseudoscientific beliefs can sometimes be a sensitive topic, so it is particularly important to be mindful of this, and respectful of your classmate's ideas and contributions to class discussion. Be thoughtful and courteous in making your own comments, and be sure everyone has a chance to contribute.

Plagiarism is a serious offense and will not be tolerated. If a student is found guilty of plagiarism, he or she will not receive an evaluation for this class and the case will be brought before the Dean.

Syllabus

Introduction

Tu 9/15 **Human fascination with extraterrestrials: Imagination and critical thinking**

- i) Why are we fascinated with aliens? / Science – as an investigative tool
- ii) The idea of extraterrestrials – a brief history.

UFOs and Aliens

Tu 9/22 **Martian Canals and Flying Saucers**

- i) Civilization on Mars in the 19th century
Readings: Dick, *Life in the Solar System* (p 17-24)
Dick, *Life in the Solar System* (p 25-53)
- ii) A short history of the claims of UFOs
Readings: Dick, *The UFO controversy and the extraterrestrial hypothesis* from *Other Worlds*;
Denzler, *A short history of the UFO myth* from *The Lure of the Edge* (p 1-9)

Tu 9/29

Making sense of our senses

- i) How to evaluate strange claims?
Readings: *Aliens* Carl Sagan from *The Demon-Haunted World*;
How Thinking Goes Wrong Shermer from *Why People Believe Weird Things*
- ii) What factors influence our perception about UFOs?
Does Television news about UFOs affect viewer's UFO beliefs?,
Communication Quarterly, 46, 284, 1998
Hines, *Pseudoscience and the Paranormal*, ch. 7, 8 (p 257-266)

Tu 10/6

Aliens strike back!

- i) History of Alien Abductions
Reading: *A short history of Alien Encounters*, Denzler, from *The Lure of the Edge*
- ii) Understanding claims of alien abductions I
Readings: Clancy, *Abducted: How people come to believe they were kidnapped by aliens*, chapters 1-3
NOVA: *Kidnapped by the UFOs*

F 10/11

PAPER 1 DUE (by 5pm)

Tu 10/13

OCTOBER BREAK

Tu 10/20

Incubi and aliens: Two faces of the same coin?

- i) Understanding claims of alien abductions II
Readings: Clancy, *Abducted*, chapter 4-6

Discussion: Why do people believe in UFOs/Alien Abductions?
Readings: Denzler, *The Lure of the Edge*, Appendix
Bader, *UFO Abduction Support Groups in Alien Worlds*

Search for Extraterrestrial Intelligence in the Universe

Tu 10/27

“An awful waste of space”

i) How big is the universe?

Readings: Benett et al, *Developing Perspective from Cosmic Perspective*

ii) Are there other solar systems out there? Habitable Zone?

Readings: Marcy & Butler, *Giant planets orbiting faraway stars* from *Scientific American* 1998

Impey, *The First Thousand Exoplanets: Twenty Years of Excitement and Discovery* in *Astrobiology, History, and Society* (ed. Vakoch)

Explore this page for nice visuals for detection, and also its parent page for general information about extrasolar planets (here they are referred to as "exoplanets")

http://media4.obspm.fr/exoplanets/pages_detection/detectee.html

Optional: Nancy Kiang, *The Color of Plants on Other Worlds* from *Scientific American*, April 2008

F 10/30

PAPER 2 DUE

Tu 11/3

Still searching for Mr. Spock

i) Biologists versus Astronomers

Readings: Sagan and Mayr debate – *Can SETI Succeed? Not Likely* by Mayr; *The Abundance of Life-Bearing Planets* by Sagan; *Response to Sagan* by Mayr; *Response to Mayr* by Sagan

Nathan Taylor, *Avoiding “Sagan Syndrome.” Why Astronomers and Journalists should pay heed to Biologists about ET.* from *Praxtime* blog

Shermer, *Will ET look like us?* from *Scientific American*, November 2009

ii) Fermi’s paradox

Readings: Ian Crawford, *Where are they?* from *Scientific American* July 2000

Supplementary Readings: Penny: *The Lifetimes of Scientific Civilizations and the Genetic Evolution of the Brain* in *Civilizations Beyond Earth*, p. 60-73

Denning: *“L” on Earth* in *Civilizations Beyond Earth*, p. 74-83

Impact of the Detection of an ET Signal

Tu 11/10

i) In-class assessment (30-minutes)

ii) Impact on Human Societies: Lessons from Anthropology

Readings: Denning, *Impossible Predictions of the Unprecedented* from *Astrobiology, History and Society* p. 301-311

Lowrie: *Cultural Resources and Cognitive Frames: Keys to an anthropological approach to prediction* from *Astrobiology, History and Society* p. 259-268

F 11/13

Final Paper Proposal Due (with Annotated Bibliography)

F 11/13

Screening of “Contact” from 6:30-9:30

Tu 11/17

Impact on Human Societies: Religion

Readings: Davies, *First Contact* from *The Eerie Silence*

Bertka, *Christianity’s Response to the Discovery of ET Life: Insights from science and religion and the sociology of religion* from *Astrobiology, History and Society* p. 329-339

Supplementary Reading: Vakoch and Lee (2000), *Reactions to receipt of a message from ETI: A Cross-cultural empirical study*, *Acta Astronautica* Vol. 46, No. 10-12, pp. 737-74

Tu 11/24

THANKSGIVING

Tu 12/1

Gods from outer space

What are UFO Religions

Readings: Christopher Partridge, *Understanding UFO religions and abduction spiritualities* from *UFO Religions* 2003

Tu 12/8

Conclusion

[Come dressed up as your favorite alien]

Aliens – Mythology for the scientific age?

Readings:

Herrick, *The Myth of the Extraterrestrial in Scientific Mythologies*

Herrick, *The Myth of Space Religion in Scientific Mythologies*

Supplementary Reading: Herrick, *New Myths for a New Age in Scientific Mythologies*

Herrick, *The Myth of Alien Gnosis in Scientific Mythologies*

Fri 12/11

FINAL PAPER DUE

