

BEHV-4900.012 SYLLABUS
WEIRD BEHAVIOR II
Clear Thinking about Weird Behavior

INTRODUCTION

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PURPOSE

The purpose of this class is to teach students how to utilize scientific critical thinking to examine the causes of various strange phenomena, including alleged paranormal events, magic, superstition, mystery illness, bogus therapies, and pseudoscience. It is hoped that students will leave this course with an open mind but not so open that their brains fall out. As the second course in a two-course series, this course will focus more on the methods of critical thinking so students leave the class more competent and capable at telling truth from fiction.

REQUEST FOR ACCOMMODATIONS

The Department of Behavior Analysis in cooperation with the Office of Disability Accommodation, gladly complies with the Americans with Disabilities Act in making reasonable accommodation for qualified students with disabilities. *You are required to present your written request for accommodation within 1 week of the first class period.*

ATTENDANCE POLICY

- **Class attendance is mandatory.**
 - You must sign the attendance sheet to be counted as present in class.
 - Students who are late to class by more than 30 minutes may be counted as absent unless prior arrangements have been made with the instructor.
 - Students who sign the attendance sheet and then leave the class before the class is over may be counted as absent unless prior arrangements have been made with the instructor.
 - Students must sign the attendance sheet only for themselves.
 - It is considered cheating for one student to sign the attendance sheet for another.
 - Because your grade in this course is linked to your attendance, cheating in this way has serious consequences. Anyone caught doing this will suffer those consequences.
- **Students are allowed 3 unexcused absences in this course.**
 - An unexcused absence is one that has not been approved by the instructor.
 - Students don't need to tell the instructor that you are going to be absent to use one of your unexcused absences.

- Each unexcused absence beyond the 3rd one will drop your final grade in this course by one letter grade.
- After the 6th unexcused absence has been reached, the instructor reserves the right to drop you from the course.
- **There is no limit for how many excused absences you can have in this course.**
 - An excused absence is one that has been approved by the instructor.
 - For an absence to be approved by the instructor, the instructor must be notified before the absence is taken and there must be some form of evidence, other than your word, to justify the absence.
 - For example, I can't just take your word for it that you were at your friend's wedding, I need a wedding announcement.
 - Even though there is no limit for how many excused absences you can have in this course, the instructor reserve the right to set a limit for students who are missing too many classes.
- **Students are responsible for tracking their own absences.**
 - Do not ask the instructor how many absences you have accumulated during the semester.
 - Total absences will be calculated and given to students at the end of the semester.

CLASS RULES

- Avoid being critical of the "person" speaking; instead, be critical of what that person "says".
- Do not intentionally insult others with whom you disagree.
- If you have a question that is relevant to the discussion please ask it during class and avoid waiting until the class has ended to ask your question.
- If you have a personal experience relevant to a topic, please share it.
- If you are offended by something in this course, please come and talk to me about it.
- Debate is welcome in this course and it is okay for students to disagree with what the instructor says during class. Spirited debate and argument during class is welcome and even encouraged as long as things remain civil and productive.

DISCLAIMER

- Topics discussed in this course will make some of you uncomfortable and some people may even find the content offensive.
- Any topic is fair game, including religion & politics and other hot button topics.
- We are going to question commonly held beliefs that some people think should not be questioned.
- This course promotes methodological naturalism (science & reason) as superior to all forms, methods and perspectives for understanding nature and human experience.
- Colorful language, explicit topics, and materials may be presented in this course and may appear at any time.
- If you are not okay with this then I respectfully ask that you drop the course

GRADING

POINT STRUCTURE		
Assignment	(# of Assn) x (pt Value)	Total Point Value
Reading Quiz	12 x 5pt	60 points
Unit Quiz	3 x 100pt	300 points
Bonus Questions	3 x 10pt	30 points
Total Possible Points →		390 points
GRADE STRUCTURE		
A		312 – 390
B		234 – 311
C		156 – 233
D		78 – 155
F		77 or below

ABSTRACTS & OBJECTIVESSECTION I - INTRODUCTION**CRITICAL THINKING: YOUR SURVIVAL KIT**

Life can be a Pandora's box of problems and mysteries. This includes all things great and small. Everyday, challenges like starting college, dating, and finding work. Threats to society, like war, poverty, disease, and environmental disaster. Yes, even frantic internet exposes of mind-controlling psychics, flesh-eating vampires, and invasions from other universes. In a world full of troubles, every student needs one important survival kit – a toolbox of powerful critical thinking skills. In this section, students will be introduced to their survival kit of critical thinking tools.

THE PARANORMAL SPECTRUM

What is the realm of the paranormal? This is a question of considerable interest to scholars. Clearly, mind-reading, astrology and seeing into the future are paranormal claims. But what about acupuncture? Yoga? Space aliens? Silly mistakes of sloppy scientist? Dark energy? Typically, paranormal claims lie beyond science, that is, "Normal" scientific observations and explanation. Some mysteries are bigger than others. Cherishing a magic rabbit's foot isn't as dramatic as going to war over an astrological reading. In this section, students will learn to organize paranormal and supernatural claims into eight groups placed on a *paranormal spectrum* according to the degree to which they challenge what is or can be known by current science.

WHAT IS THE HARM? WHY STUDY THESE THINGS?

Why study the worlds of the paranormal? First, if you believe in such things you are not alone. Most people (73-76%) have at least one paranormal belief not derived from Judeo-Christian tradition and 80-96% hold a religious-based paranormal belief. More people believe in astrology today than did so in the Middle Ages. At the very least it is important to understand what our friends' neighbors, politicians, presidents, doctors, and preachers believe. But there are deeper reasons for exploring strange and extraordinary claims. In this section students will learn about the reasons for exploring these phenomena and learn about dangers associated with unexamined paranormal beliefs.

SECTION II – THE CRITICAL THINKERS TOOLKIT

EVALUATING SOURCES

Perhaps the easiest way to support a claim is to accept what others report. In most cases this involves trusting their logic and testing and evaluation of hypotheses and theories, or perhaps their sources. A good source uses the foundation of sound logic and science. An inappropriate source can lead to fallacious logical conclusions or flawed scientific observation. In this section, students will examine some reality-checking precautions one needs to take when considering support from sources.

LOGIC

Why do people believe in astrology? For many, astrology must be true because it is popular, ancient, and used by friends, celebrities and authorities. Such thinking is logically fallacious in that it bases a conclusion on an unacceptable premise (the unquestioned truthfulness of what someone else says). Much pseudoscientific thinking is based on logical error. In this section, students will take a deeper look at logic, or the process of drawing conclusions from premises, and examine how it can be a very useful reality checking tool.

LOGIC AND LANGUAGE: FALLACIES OF AMBIGUITY

Fallacies of ambiguity draw into question reality itself. Sometimes, this is achieved through the distorting lens or mirror of sloppy language. Or one might treat a "similarity" as an "equivalency". Ambiguity can involve transforming the very "ontological status" or a topic under discussion. Fallacies of ambiguity fool us into thinking something is other than what it really is. In this section, students will learn about sloppy language like weasel words, jargon, and technobabble. They will learn to discriminate arguments from similarity and composition and why these arguments can be fallacious. Students will learn that the misuse of sources, logic, and language can impair our ability to separate fact from fiction and discern things as they really are.

SCIENCE

Science is one of our best reality-checking tools. When you test an idea, often you use science. When you try to find out what works and what doesn't work, you use science. When you take a pragmatic or practical approach to solving a problem, you use science. Doctors use science to diagnose illness and prescribe treatment. Detectives use science to solve crimes. In this section

students will take a more in depth look at science in action and how to discriminate between good science, junk science, and pseudoscience.

SECTION III – ALTERNATIVE EXPLANATIONS

ODDITIES OF NATURE AND THE WORLD OF NUMBERS

We misjudge probabilities because of a lack of experience with the unusual. Sometimes this simply involves not knowing an esoteric statistic. Here are some examples. Are you more likely to die on a motorcycle or on a bicycle? The odds of dying on a motorcycle are 1 in 938, and on a bicycle 1 in 4472. What about a bus or train? Your odds on a bus are 1 in 94, 242 and on a train 1 in 139,617. Drowning in a swimming pool or bath tub? 1 in 6031 vs 1 in 9377. Most people are bad at estimating the odds. In this section students will learn about the world of numbers and how a misunderstanding of statistics can fool us and lead us to make pseudoscientific mistakes.

PERCEPTUAL ERROR AND TRICKERY

Perception is fundamentally biased and constructive. We do not see exactly what is "really out there" but a selective and distorted picture. At any moment, the real world provides far too much information to be assimilated. Our attention is something like a spotlight that targets and intensifies some stimuli and ignores others. Our emotions and motivations guide this spotlight; we perceive what is consistent with how we feel as well as our wants and needs. In this section, students will learn how to reality check their perceptions, so they are more likely to arrive at correct conclusions about what they perceive and how to avoid being tricked.

MEMORY ERRORS

Few things are as precious as our personal memories and yet few things are so immune from accurate review. Whenever a friend tells you of a paranormal incident, they are almost always sharing a memory. Memories can have consequences. Are they to be trusted? This question and others are discussed in this section where students will learn about memory myths, what memory is, how memories can be in error and student will learn to reality check experiences like Déjà vu and learn about what can happen when people fail to take the constructive and selective aspects of memory into account when making decisions.

THE PLACEBO EFFECT

In this section students will learn about the placebo effect. Students will learn about how placebos relate to superstitious beliefs, psychotherapy, stress management and performance and the role that suggestion and expectation plays in establishing placebos.

SENSORY PHENOMENA, HALLUCINATIONS, and PSYCHIATRIC CONDITIONS

Most people realize that certain drugs can distort perception and trigger hallucinations. People with Schizophrenia sometimes hear voices. A patient suffering a severe fever can become delirious. A parched desert hiker may have visions of an oasis. Sometimes the brain and senses

can go awry and lead us to experience things that are not there. Sensory phenomena, hallucinations, and various psychiatric conditions can be mistaken for the paranormal. In this section students will learn about these phenomena and more as alternative explanations for some paranormal experiences.

TEXTBOOK

[Critical Thinking: Pseudoscience and the Paranormal, Second Edition](#)

