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PSY 4960/5960
Science vs. Pseudoscience
Ghosts, demons, & witches, oh my!

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Ghosts


- Usually the term is associated with some type of apparition of a dead person
- Often referred to as the souls of the dead
- Stories about ghosts date back millennia and are common in our earliest literature
- A 2005 Gallup poll found that 32% of Americans believe in their existence

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Ghostbusting

- Bill and Dan aside, there are not actually scientific methods that can be used to detect ghosts
- Those methods used (infrared cameras, magnetometers, etc.) may be scientific, but their use in this case is actually pseudoscience!



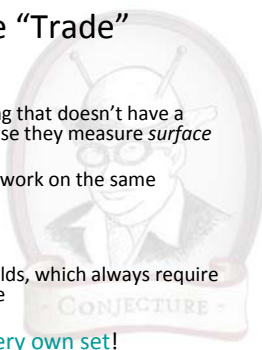
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Tools of the "Trade"

- Infrared thermometers
 - Unable to detect something that doesn't have a surface (i.e., ghosts) because they measure *surface* temperatures
 - Infrared motion detectors work on the same principles
- EMF meters
 - Detect electromagnetic fields, which always require some sort of energy source

You can even own your [very own set!](#)

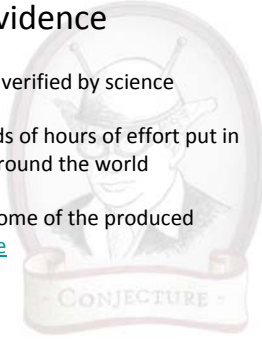
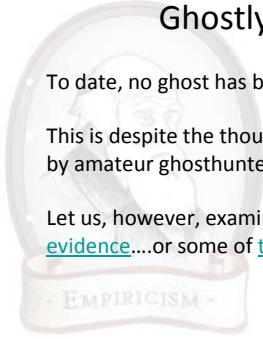


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Ghostly Evidence

- To date, no ghost has been verified by science
- This is despite the thousands of hours of effort put in by amateur ghosthunters around the world
- Let us, however, examine some of the produced [evidence](#)....or some of [these](#)



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Media Critique #3



A promotional image for the TV show 'Ghost Hunters' featuring the main cast members in a dark, industrial setting. The title 'GHOST HUNTERS' is prominently displayed in the center. The Sci-Fi Channel logo is in the bottom right corner.

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I do not fear Satan
half so much as I fear
those who fear him.

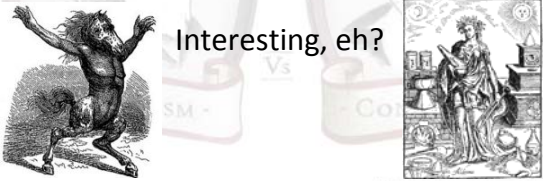
Saint Teresa of Avila

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Word Origins

Demon – Greek, meaning “knowledge”
Science – Latin, meaning “knowledge”

Interesting, eh?



Two small illustrations: on the left, a horned demon with a tail; on the right, a scientist in a lab coat working with laboratory equipment.

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A Brief History of Demons

- Viewed as a natural entity during Greece, neither good nor bad, but intermediaries between gods and humans
- Early Christian leaders “demonized” them and saw them as evil spirits
- Witches were often seen as the spawn of demons with human females

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Witchcraft

- From the Old English *wiccecraft*, or “sorcery”
- Usually refers to the use of some type of magic
- Negative connotations in the Western world since rise of monotheistic religions
- Today, often associated with either Neo-Paganistic movements or “Satanic cults”

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The Witching Cycle

1. Accused are often on margins of society
2. Sex or sexual abuse is involved
3. Mere accusation “proves” guilt
4. Denial of guilt is further “proof”
5. Once one claim appears, others quickly follow suit
6. Movement spirals out of control, until everyone is a suspect

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The Witching Cycle

7. As the accused fight back, accusers become the accused
8. Movement fades, public loses interest, proponents are shifted to margins once again

"The giving up of witchcraft is in effect the giving up of the Bible."
John Wesley

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Feedback Loops

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Which Witch is Which?

Accusations by suspected witches against other witches, Manningtree, England, 1645

Accusations against suspected witches (in boxes) by other villagers

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MALLEVS MALEFICARVM.
MALEFICAS ET EARVM
hæreticam fraudem & conuictas,
EX VARIIS AVCTORIBVS COMPILATVS,
Et in quatuor Tomos iuste distributus.

TOMVS PRIMVS.

Sumptibus CLAVDII BOYCELEY Labregno Mœquij Gallie.
AN. D. C. LXXV.
MCMV. F. 151. 1512. 1513.

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- This is the [Malleus Maleficarum](#), the “Hammer of Witches”
- Tells you how to determine if someone is a witch!

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She's a Witch!

[A startlingly accurate portrayal of witch trials](#)

Even though the times change, we often just find substitutes for “witches”

- For example...

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Satanic Panic!

- In 1980s and early 1990s, Satanists were Kidnapping and murdering children
- Well organized and numbered over 1 million members
- Forcing young women to have children like farm animals, so they could be killed in rituals
- Behind the scenes of major corporations, legal agencies, and the media
- A very lucrative business for a number of people

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Satanic Panic!

Even Proctor & Gamble were accused of being a front company for the Church of Satan

The 13 stars are a mockery of Christian symbolism, plus there's a 666 in the beard!



Vs

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Satanic Panic!

- No evidence of any actual "Satanic cults"
- Memories were often elicited during hypnosis or from children using questionable tactics
- Still, many people (especially fundamentalist, evangelical Christians) believe these stories to be partially true

[Thanks, Geraldo!](#)

CONJECTURE -

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Recovered Memories

- Followed same type of cycle as the witch and Satanist crazes
- True incest survivors formed support group, overzealous therapists helped them "recover" lost memories of abuse
- Most exposure came when Roseanne Barr said she had recovered sexual abuse memories from before she was one year old

CONJECTURE -

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Recovered Memories

“If you think you were abused and your life shows the symptoms, you were.”

Alleges that 1/3 to 1/2 of all women were sexually abused as children

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Recovered Memories

- We have reached the point where the accused become the accusers, fortunately
- Therapists, psychiatrists, and police detectives have all been sued successfully for making false accusations and implanting memories

Any guesses on what the next craze will be?

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Notice Any Similarities?

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Cultural Manifestations

- What is the purpose of demons, faeries, witches, aliens, and so forth?
- Why are the depictions of aliens so different from culture to culture?
- What does this say about us as a species?

Vs

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In the demon-haunted world that we inhabit by virtue of being human, this may be all that stands between us and the enveloping darkness.



Carl Sagan, on science and reason
