

# **PHL 310**

# **Environmental Ethics**

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**Week Eight**

# Skepticism

- **Descartes' *Meditations***
- **Mistaken beliefs**
- **Certain and indubitable truths**
- **Methodological skepticism**
- **The senses lie**
- **Dream hypothesis**
- **Evil genius hypothesis**
- **Total skepticism?**
- ***Cogito Ergo Sum***
- **Clear and distinct ideas**
- **The evil genius?**
- **Proof of God**
- **God couldn't be a deceiver**
- **Knowledge is possible**
- **Is the argument a success?**

# Knowledge and Fallibility

- Setting the bar too high
- Setting the bar too low
- *J* knows *P* iff:
  - *J* believes *P*
  - *P* is true
  - *J* has exceedingly good evidence that *P* is true
- What is good evidence?

# Inference to the Best Explanation

- I believe global warming is occurring
- I believe human activities contribute to this
- Do I know this?
- Do I have exceedingly good evidence that these two beliefs are true?
- Are the global warming hypothesis and the human contribution hypothesis the best explanation of the relevant facts?

# Rival Explanations

- The earth is actually getting cooler
- The earth is getting warmer but not because of human activities
- Global warming is a political conspiracy to make government bigger, stronger, and more controlling
- Which explanation is the best?

# Evidence

- Evidence in a trial
- Scientific evidence
- Facts
- Data
- Data (facts, etc.) that *support* a hypothesis (theory, conclusion, etc)
- What is the relationship of support?

# Inference to the Best Explanation

- **Structure of evidence**

**Facts**



**Theory**

- **Facts support the theory**
- **Theory explains the facts**
- **Leslie's story**

# Inference to the Best Explanation

- **IBE — inference, to an explanation, the best explanation**
- **Rival explanations**
- **Which explanation is best?**
- **Ranking**
- **Ranking gives us an evaluation of the quality of the evidence**



# Naomi Oreskes' Study

- *An Inconvenient Truth*
- “Beyond the Ivory Tower: The Scientific Consensus on Climate Change”
- *Science* 3 December 2004
- The “consensus” opinion
- Institute for Scientific Information (ISI) data base
- 928 papers surveyed
- Keywords: “climate change”
- 10% of the total
- Some articles thrown out

# Naomi Oreskes' Study

- **Six categories**
  - explicit endorsement of the consensus position
  - evaluation of impacts
  - mitigation proposals
  - methods
  - paleoclimate analysis
  - rejection of the consensus position
- **75% explicit or implicit endorsement of consensus view (1<sup>st</sup> three categories)**
- **25% take no position (next two categories)**
- **0% reject consensus position**

# The Evidence

**e<sub>1</sub>.** In a sample of 928 peer reviewed papers addressing “climate change,” not one rejected the consensus view that “most of the observed warming over the last 50 years is likely to have been due to the increase in greenhouse gas concentrations”

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**t<sub>0</sub>.** Most, if not all, scientists working on climate change agree with the consensus view.

# Rival Explanations

- t<sub>1</sub>. It's just a statistical fluke that the articles from the sample showed such unanimity .**
- t<sub>2</sub>. It's just a statistical fluke that the articles listed in the ICI data base showed such unanimity .**
- t<sub>3</sub>. The ICI data base is biased and only lists "green" articles.**
- t<sub>4</sub>. Oreskes, because of her biases, misinterpreted many of the articles as favorable, or neutral, when in fact the authors were arguing against the consensus view.**
- t<sub>5</sub>. Respectable scientists arguing against the consensus view cannot get their articles published in peer reviewed journals.**

# The Best Explanation?

- Some of the rivals are possible
- The prestige of *Science*
- Oreskey's reputation
- Articles rejecting Oreskey's thesis?
- Statistical significance
- Censorship in science?
- Simplest, most plausible, explanation of the sample?

# **A Different Sample**

**$e_1$ . In a sample of 18% of the articles published in major newspapers on global warming in the past 14 years, over one half gave equal weight to the contentious view, and the rejection of the consensus view.**

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**$t_0$ . Journalists see the consensus view very controversial.**

# Explanatory Virtue

- What makes an explanation good?
- What makes it better than another explanation?
- Harman's criteria
- Wright's criteria
- Jeff's criteria
- Problems
  - Bad lot
  - Needs to explicit
  - Explanatory virtue and truth?

# Possible Answers

- We often recognize bad lots
- Intersubjective agreement
- Explanatory skill
- Evolutionary account
  - Vision
  - Folk physics
  - Theory of mind
- But we still have disagreements