

# Random Thoughts on Career, Faith and Science, and Environmental Stewardship

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# Outline

- About me and starting a career.
- Faith and science.
- Applying science and the humanities: Environmental stewardship.

# My Son Timothy ...



... Son James ...



... Daughter Christianne and Wife Karen



# About Me

- Born in Ft. Collins, Colorado. Grew up in Bellevue.
- B.S. (Mech. Engr.), M.S. (Civil Engr.) Stanford University.
- Ph.D. (Atmospheric Sciences) UCLA.
- Postdocs: CIRES/University of Colorado, University of Chicago.
- Professor of Physics, North Park University, Chicago.
- Currently: Senior Lecturer, Division of Computing and Software Systems, University of Washington Bothell.
- Research interests: Tropical and arctic climate dynamics, environmental ethics, software engineering in climate modeling, alternative methods of credentialing and assessment.

# Random Thoughts About Starting a Career



# Make a Plan to Learn

- Beginning: Skills are basic but risk tolerance is high.
- More skills to gain (some of these are from Adams below):
  - How to have a conversation: Helping others talk about themselves.
  - Public speaking: Toastmasters, Dale Carnegie.
  - Writing: Be concise, practice.
  - Programming: Write an app!
  - Wisdom.
- How to learn: Focused training vs. a little at a time.
- Find a mentor: Someone one stage beyond you (work, church, etc.).

# Mentoring Through Books

- Career mentoring through books:
  - Richard Bolles, *What Color is Your Parachute*.
  - Fisher and Ury, *Getting to Yes*.
  - Bradberry and Greaves, *Emotional Intelligence 2.0*.
  - Scott Adams, *How to Fail at Almost Everything and Still Win Big*.
- Wisdom mentoring through books:
  - The Bible.
  - Jane Austen, *Mansfield Park*.
  - C. S. Lewis, “The Weight of Glory,” “The Inner Ring,” *The Weight of Glory and Other Addresses*.
- My Top 10: <http://www.johnny-lin.com/books/top10.html>.

# Achieving Balance in Priorities

- Vocation and calling:
  - Direct revelation.
  - Wisdom and priorities.
- Tensions concerning priorities:
  - Role of ambition.
  - Skills and talents (and lack thereof).
  - Stewarding time.
  - Passions, interests, and goals.

# Random Thoughts About Faith and Science

An aerial, wide-angle photograph of a mountain valley. The terrain is rugged and mountainous, with patches of snow and dense evergreen forests. In the center of the valley, there is a large, circular opening that looks like a natural hole in the ground or a large crater. The sky visible through this opening is a clear, bright blue. The overall color palette is dominated by dark greens, browns, and greys of the landscape, contrasted with the white snow and the bright blue sky.

# Moving From Conflict to Worship

- The conflict model:
  - Science is about reason, faith is about feeling.
  - Science disproves faith and demonstrates the Bible is not reliable.
  - Christians should be suspicious of science.
- The complementarity model:
  - Both science and faith incorporate reason and other forms of knowing.
  - Science is more supportive of faith than materialism (Wigner’s “unreasonable effectiveness of mathematics”).
  - Christians should embrace science: Historically, many founders of science were deeply religious (e.g., Pascal, Newton, Maxwell, etc.).

# Moving From Conflict to Worship (cont.)

- Some books on getting past the conflict model:
  - Charles Hummel, *The Galileo Connection*.
  - Francis Collins, *The Language of God*.
  - Stephen Barr, *Modern Physics and Ancient Faith*.
- Knowledge leading to worship: Powers of Ten:  
<https://www.youtube.com/watch?v=0fKBhvDjuy0>

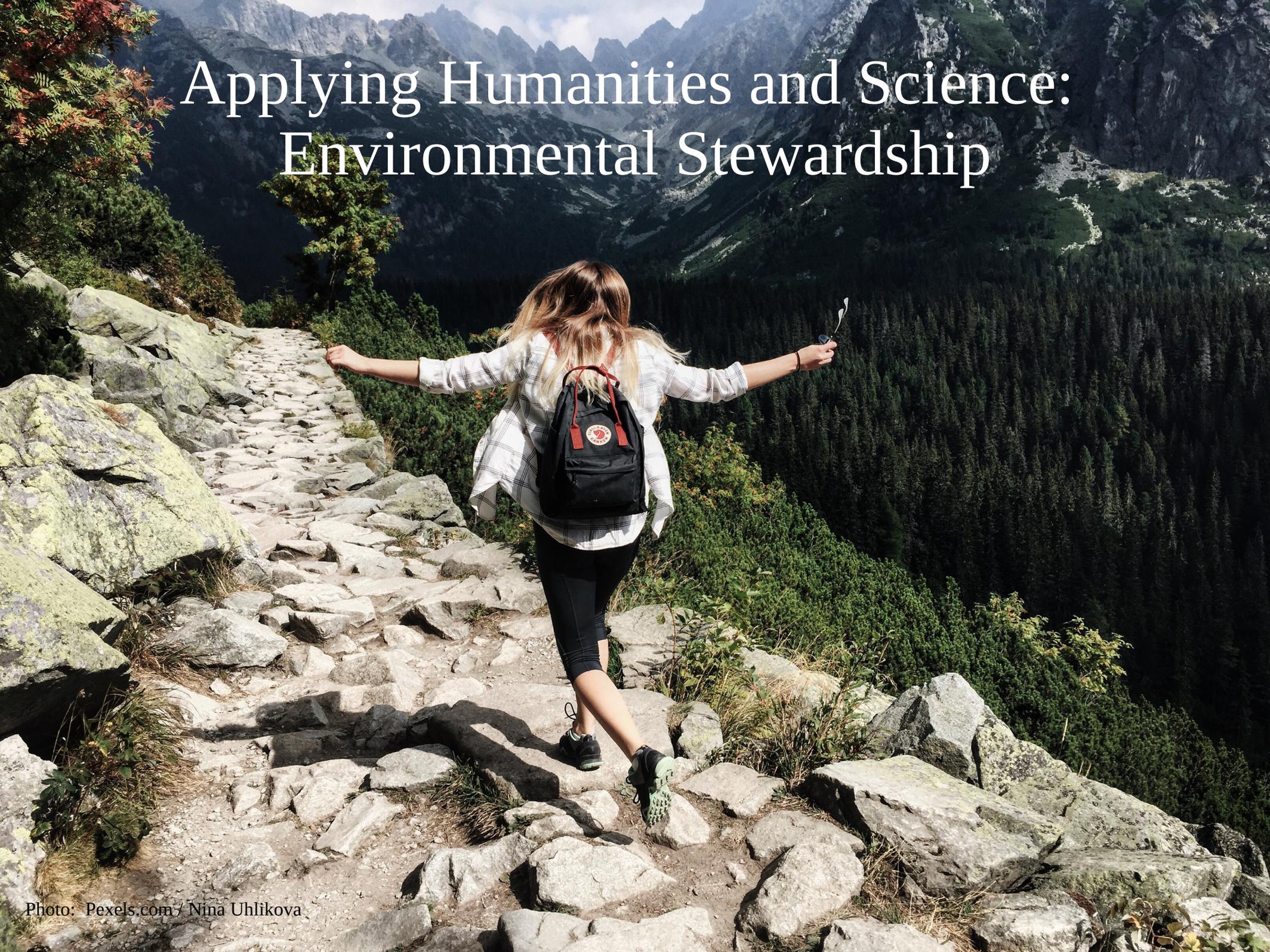
# Moving From Conflict to Worship (cont.)

- “When I consider your heavens,  
the work of your fingers,  
the moon and the stars,  
which you have set in place,  
what is mankind that you are mindful of them,  
human beings that you care for them?  
You have made them a little lower than the angels  
and crowned them with glory and honor.” (Psalm 8:3-5, NIV)
- “The Son is the radiance of God’s glory and the exact representation of his being, sustaining all things by his powerful word.” (Hebrews 1:3a, NIV)

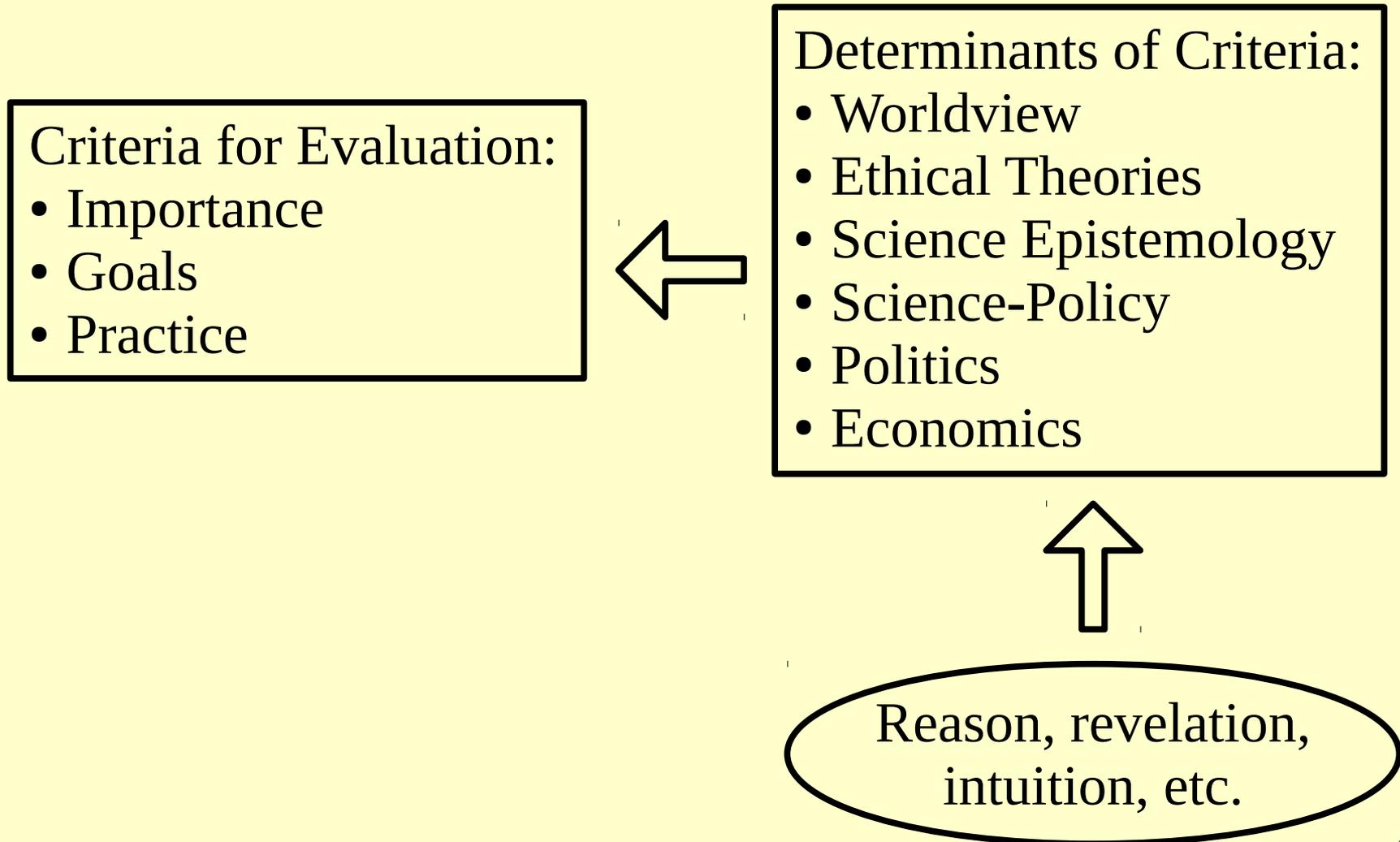
# Moving From Conflict to Worship (cont.)

- American Scientific Affiliation and Emerging Scholars Network's blog:
  - ASA: <http://www.asa3.org>
  - ESN: <http://blog.emergingscholars.org/>

# Applying Humanities and Science: Environmental Stewardship

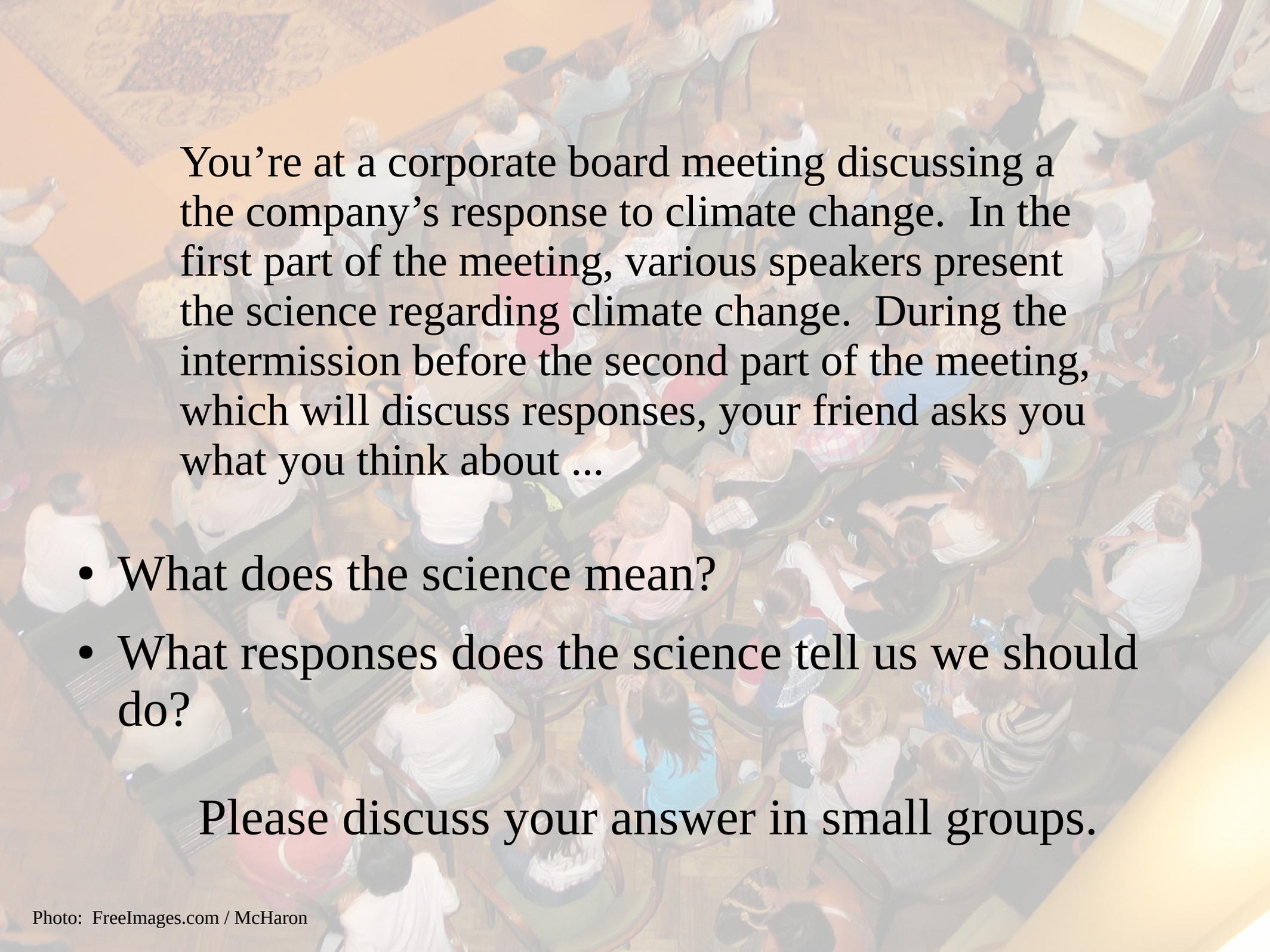


# How to Really Understand What Is Good Environmental Stewardship



Imagine the Following Scenario ...



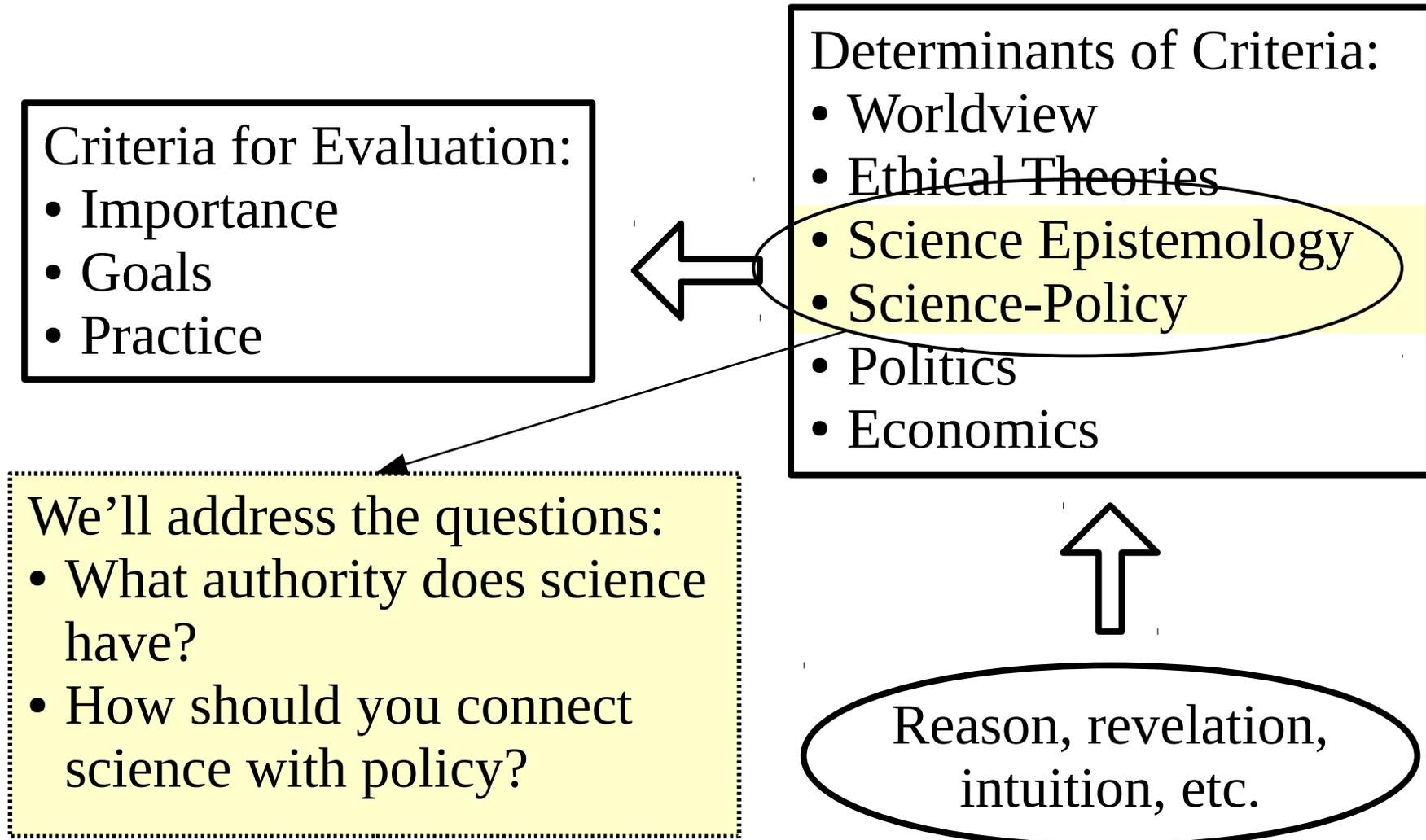


You're at a corporate board meeting discussing a the company's response to climate change. In the first part of the meeting, various speakers present the science regarding climate change. During the intermission before the second part of the meeting, which will discuss responses, your friend asks you what you think about ...

- What does the science mean?
- What responses does the science tell us we should do?

Please discuss your answer in small groups.

# Understanding Requires Looking at How Science Knows and Science-Policy Frameworks



# Understanding the Range of Views of How Science Knows and Science's Authority

- Science as hypothesis testing:
  - Hypothesis → Test → Confirmed? → Retest
  - Truth is accretive and multiple cycles lead to truth
- Popperian falsification:
  - Cannot generate positive truth
  - Negative results very powerful: can nullify consensus
- Kuhnian paradigm shift:
  - New models supplant use because of usefulness not truthfulness
  - Emphasis on science as a social construct
- Aside: These are views of how science works. Science can also work poorly (e.g., dishonesty, self-deception, etc.).

# Understanding the Range of Science-Policy Models (Grouped by Epistemic Authority)

- Science has high epistemic authority:

- Policy prescriptive
- Fact-value dualism

science → policy  
values

- Science unique in certain ways but less than commonly believed:

- Supporting Role (Science is Neutral)
- Honest Broker of Policy Alternatives (Pielke 2007)

science → values → policy

- Science is not unique:

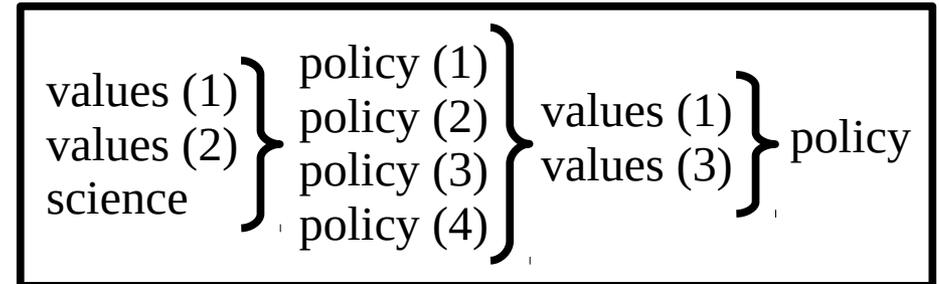
- Supporting Role (Science May Not Be Neutral)

values (1)  
values (2) + science → policy  
values (3)

# Understanding the Range of Science-Policy Models (Grouped by Epistemic Authority, cont.)

- Science has high epistemic authority:

- Policy prescriptive
- Fact-value dualism

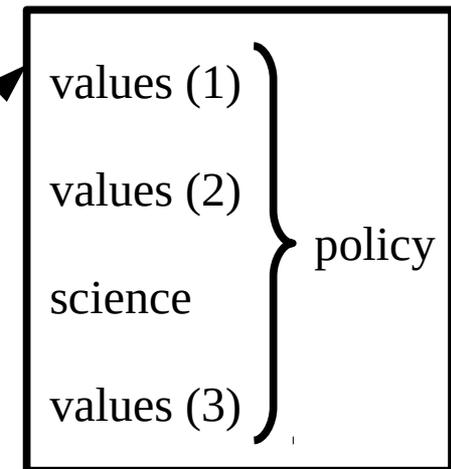


- Science unique in certain ways but less than commonly believed:

- Supporting Role (Science is Neutral)
- Honest Broker of Policy Alternatives (Pielke 2007)

- Science is not unique:

- Supporting Role (Science May Not Be Neutral)



# Your View of Science and Science-Policy Affects How You Care for Nature

- If you believe science is more authoritative:
  - Trust results of science studies more than other inputs.
  - Tend towards science-policy models where science has more uniqueness.
- In our scenario, this might mean those who believe science is more authoritative will:
  - Lending more weight to studies (scientific, engineering, economic, policy) than other sources of knowledge.
  - Choose a role for science where science is more than just one input among many (e.g., prescribe policy, determine the facts).
  - Consider the status of other value inputs as less important in determining what to do (e.g., ethical, political, economic, etc.).

# Bottom Line Points

- Graduation is not the end but the beginning of learning: **Come up with a plan** of how you'll go about doing so!
- Faith and science is **not in conflict** but has a rich dialogue.
- Environmental **stewardship is complex** and requires both humanities and sciences.

# A Shameless Commercial

*The Nature of Environmental Stewardship*  
(Pickwick Publications, 2016)

<http://nature.johnny-lin.com>

- Sample chapter on website
- Amazon: Print, Kindle



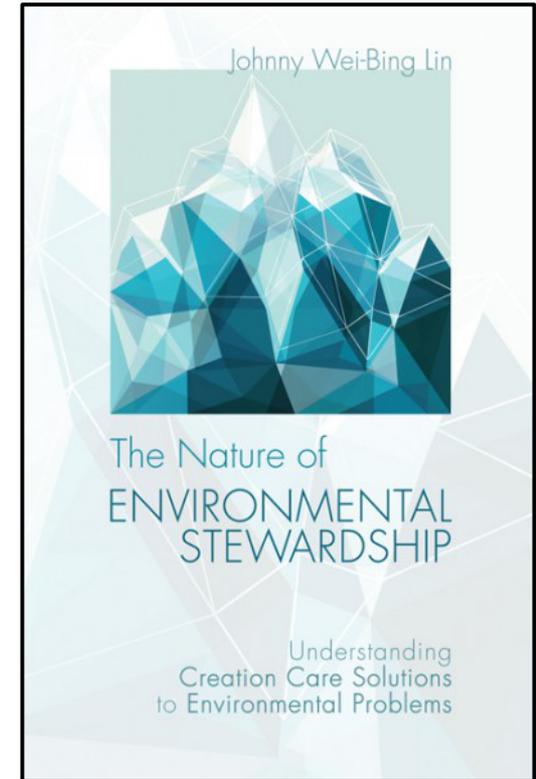
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# Extra Slides

# Understanding The Range of Views of What Nature Is

- Buddhist: Existence is all there is and there is no ontological separation between humanity and nature
- Christian: God made a material (but not “merely” material) nature and have assigned humans to take care of it
- Confucian: This world is all there is and humans are “elder brothers” to nature
- Taoism: The world is all there is and humans must live in harmony with the rhythms of nature (“go with the flow”)
- (Neo-)Enlightenment: Nature is mere “matter in motion” and purposeless
- Romantic: Nature is best understood via aesthetics