

# The Range and Choice of Responses in Addressing Environmental Problems


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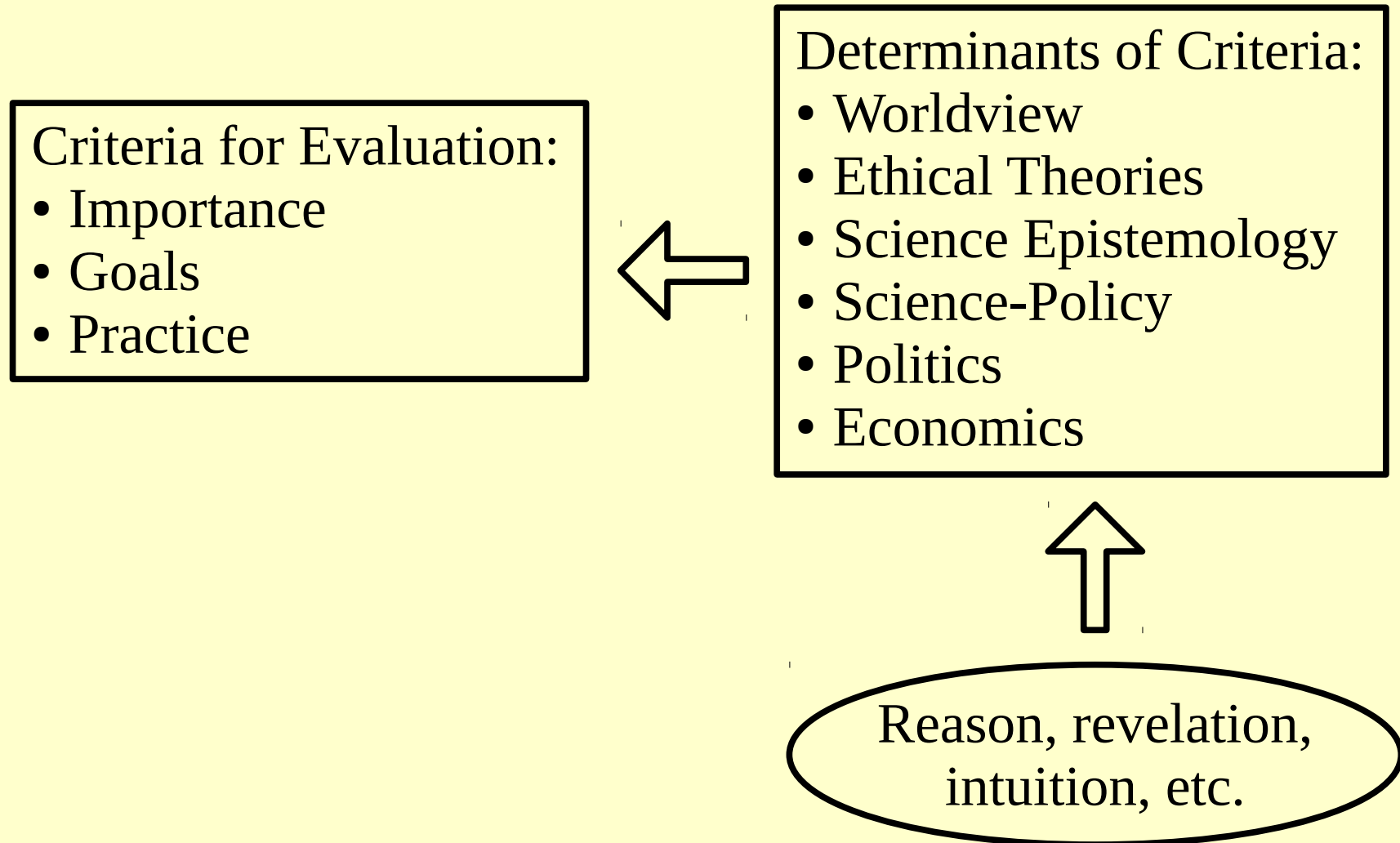
Imagine the Following Scenario ...



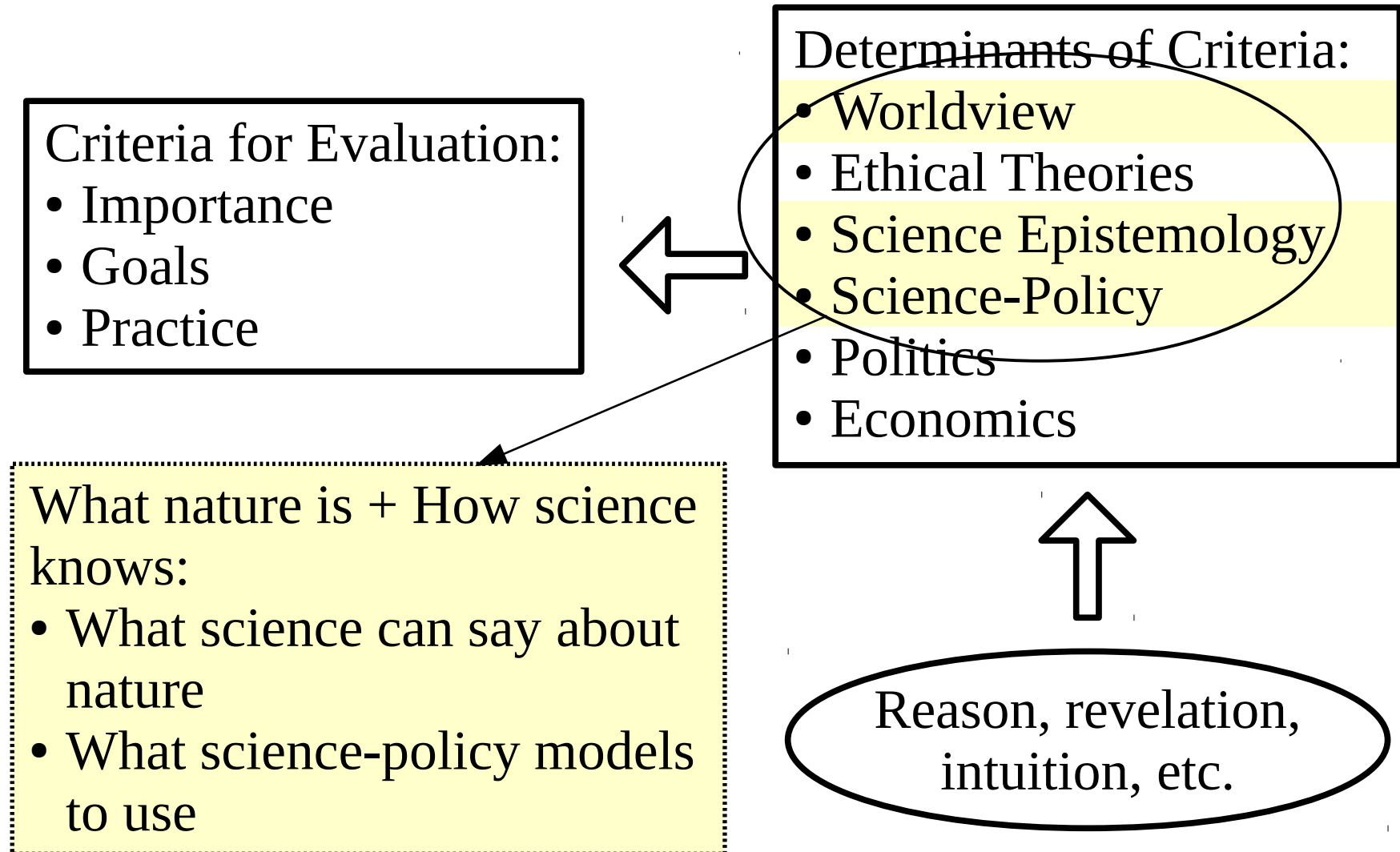


You're working to move forward the formulation of land- and water-use policy for the city. When all the stakeholders meet together, each party seems to advocate a different response to the challenges the city faces. Is there an **analytical framework** to help us understand these differing responses and **facilitate dialogue**?

# How to Really Understand What Is Good Environmental Stewardship



# Figuring Out Why People Hold the Views They Do About Science and Policy



# Figuring Out Why People Prefer Certain Practices

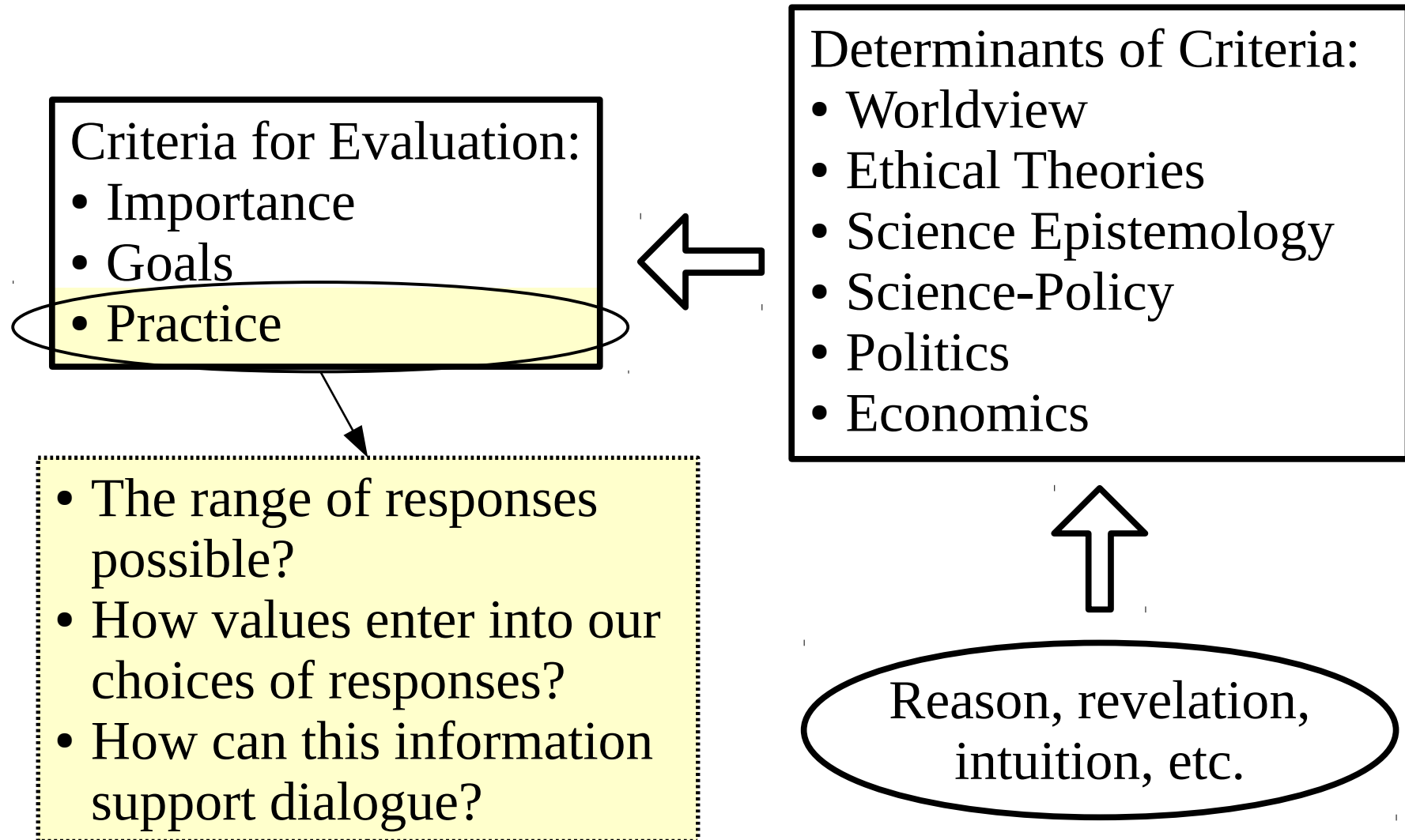




Photo: Pexels.com/Igor Ovsyannykov

# A Schema For Problems

$$A \rightarrow B$$

Action or  
activity

Undesirable  
consequence

# The Range of Responses to Problems

$$A \rightarrow B$$

Action or  
activity

Undesirable  
consequence

- Do nothing
- Eliminate A:  $\star \rightarrow B$
- Eliminate the connection:  $A \nrightarrow B$
- Isolate the harmful effects:  $A \rightarrow (\hat{B})$

# A Non-Environmental Example of the Range of Responses

$A \rightarrow B$

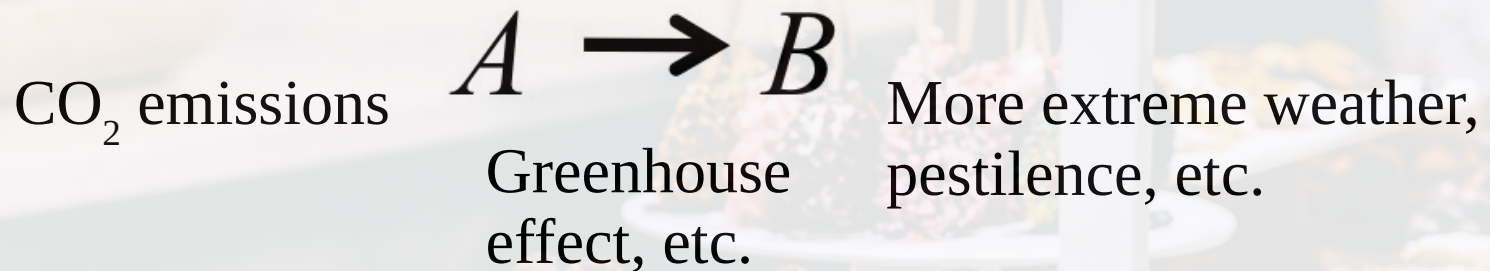
Motor vehicle  
accidents

Act of  
killing

Death

- Do nothing
- Decrease and/or eliminate motor vehicle accidents: DUI laws, self-driving cars, etc.
- Prevent motor vehicle accidents from killing people: Seat-belt laws, air bags, etc.
- Make death less undesirable: Laws to mandate liability insurance, etc.

# An Environmental Example of the Range of Responses



- Do nothing
- Decrease CO<sub>2</sub> emissions: Renewable energy sources, increase conservation, air capture, etc.
- Disrupt connection between CO<sub>2</sub> emissions and harms: Orbiting parasol at Lagrange point between Sun and Earth.
- Avoid harms: Stricter zoning in floodplains, higher sea walls, etc.



Spiral Staircase, Vatican Museums (photo © User:Colin / Wikimedia Commons)

# Evaluating Various Responses

- Is it possible to eliminate *A*? At what cost?
- Will eliminating *A* result in side-effects? Are they desirable or undesirable?
- Is it possible to eliminate the connection between *A* and *B*? At what cost?
- Will putting a “hedge” around *B* result in other side-effects? How desirable or undesirable are they?
- Are the undesirable effects of *B* undesirable enough to justify action? Of what kind?
- Note: “Costs” and “benefits” are not only monetary but may be spiritual, moral, cultural, mental, etc.

# Checklist of Eight Places Values Enter Into the Evaluation of Responses

- ☐ The nature and value of *A*.
- ☐ The nature and value of *B*.
- ☐ The nature and value of “ $\rightarrow$ ”.
- ☐ Value of doing nothing.
- ☐ Value of eliminating *A*.
- ☐ Value of eliminating “ $\rightarrow$ ”.
- ☐ Value of isolating harmful effects of *B*.
- ☐ How we weigh and compare actions and their effects (e.g., anthropocentric consequentialist vs. Romantic deontologist).

# How This Structure Can Help Support Dialogue

- Don't prematurely restrict range of responses to consider.
- Non-obvious solutions may be ground for compromise.
- Identify values used in the evaluation of responses: find common ground and build trust around those.

## Determinants of Criteria:

- Worldview
- Ethical Theories
- Science Epistemology
- Science-Policy
- Politics
- Economics

# Getting a Handle on the Breadth of Complex Motivations

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

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

- Sample chapter on website
- Amazon: Print, Kindle

