An excess of objectivity? Scientific expertise and the challenge to achieve precautionary policy outcomes

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Questions

• What are the potential roles of scientists in politics and policy in the context of decision making?

• Does the current science policy (the “linear model”) aid or undermine inclusion of policy alternative policy choices?

• What role(s), positions and actions may strengthen inclusion of the PP in decision making?
A scientist’s choice of roles in policy and decision making context

Adapted from Pielke, 2007
The “linear model” of science policy since WWII

- Conceptualized flow of scientific knowledge, descriptive, normative frames

- Useful model for “tornado politics”

- Applied to “abortion politics” model’s assumption that reduction of scientific uncertainty will increase the likelihood of political consensus, but often has the opposite effect.

- Scientists posturing as science arbiters when they are in fact playing the role of issue advocate leads to a reduction of policy alternatives and denigration of science
Science relating to politics where uncertainty and value consensus are low within the linear model

- Political inertia undermines the legitimacy of science as a useful tool for policy decision making
- Increase (rather than reduction) of uncertainty – An excess of objectivity
- Calls for more science to resolve political conflict
- Lack of scientific consensus leads to a politicization of science through issue advocacy, and a reduction of policy options to advance political agendas
- Production of (more) scientific knowledge
  - MY “sound science”
- Differing perspectives and values on new scientific knowledge
Science relating to politics where uncertainty and value consensus are low within a policy of positive alternative options.

- Decision making among multiple options
- Expansion of policy alternatives in the face of higher quality information and new science policies
- Calls for more science to investigate the range of feasible policy alternatives that can improve decision making
- Production of relevant and high quality scientific knowledge through asking well built questions
- Inertia for an innovative science policy that gives positive alternative options and reinforces the legitimacy of science
- Reduction of uncertainties by consensus over evidence quality, error and uncertainty analysis
- Values consensus compelled by compromise and agreed "sound science"
Possible roles, positions and actions that may strengthen the PP in policy decision making

• Roles

  – The role of facilitator of policy alternatives can provide an important counterweight the role of the issue advocate (which often overshadows other roles by seeking to limit policy choices) to avoid pathological politicization of science.

• Positions

  – In issues where values are in dispute, and uncertainty irreducible, instead of a calling for more science, we need a call for expanding policy options and achieving values consensus to the degree possible.

  – The PP is consistent with view of increasing policy alternatives, and can be the invoked as a basis for new innovative science policy that provides for consensus among scientific values (evidence).

  – Recognize that science is not value free, but still plays an vital role in democracy. Until this mythical view of science is acknowledged, an alternative policy to the linear model will not be possible.

• Actions

  – The creation of a new science policy towards Positive Alternative Options and implementation through panels or institutions (a new Enquete commission for GMOs)?
Thus the role of scientists is not to decide which risks are worth taking, or which policy options are the best, but to aid in determining the range of possible options and infer the potential liabilities of each.