



GrayIsGreen

Who are we?

Gray Is Green is an online gathering of older adult Americans aspiring to create a green legacy for the future. As environmentally conscious elders, we respond to a generational call: to co-create a future of economic justice, ecological sustainability and social justice.

We hold next generations of humans in mind and consider the future of ecosystems and other species. We are alert to the historic challenges facing our planet. And we are aware of the question arising from descendant generations hence:

What did you do, when you knew?

What do we do?

We aspire to embrace our eldership, living beyond consumerism and ageism. **Our Curriculum for Gray-Green Living** offers a variety of ways to join—and re-engage with—the elder movement.

We offer a periodic newsletter, a speaker's bureau, online resources, a [Facebook page](#) for relevant updates. In partnership with congenial organizations, we serve as a central clearinghouse of ideas and communications for older adults interested in greening their lives, learning about sustainability, advocating for sound public policy, being creative stewards or grandparents, emerging as elders, and mentoring young people.

*We invite **you** to get involved!*

www.grayisgreen.org

Pathways To Gratitude Science and the “Uncertainty Principle”

When scientific findings are released, people often focus on “scientific uncertainty”, instead of on the usefulness of those findings for the public. Within the framework of science, the ‘uncertainty principle’ refers to the limits of knowledge, rather than indicating distrust in the system. The awareness of these limits has motivated scientific fields to require increased transparency, confidence, and credibility.

- *Transparency* about what is known and what is not known can be communicated in numbers, data, charts and graphs, and in confidence intervals.
- *Credibility* comes from the requirement that findings are shared among peers and systematically reviewed by colleagues.
- *Confidence* in the findings is supported by requirements to report how much statistical risk exists in the data.

The limits of knowledge in science might be more accurately referred to as “levels of confidence”—high confidence as in “textbook science”, intermediate as in “a growing body of evidence”, and low as in “the jury is still out.” It is important to note that low confidence findings may result from research on critical questions well worth exploring with as yet uncertain answers, and this uncertainty in the beginning stages has been present throughout the history of science.

Science for Understanding and for Utility

Scientists view their research on a continuum from “pure” research for the sake of understanding how the world works to “applied” research for technological innovation or problem-solving. Of course, ecology and the environment are among the scientific fields that are keenly interested in a combination of the two, sometimes referred to a [Pasteur’s Quadrant](#), or “use-inspired basic research” that aims to both advance basic knowledge and seek solutions to human problems. [The Intergovernmental Panel on Climate Change \(IPCC\)](#) is an example of scientists convened to both extract useful information from basic research and frame research questions to deliver useful information for problem solving.

Roles Scientists Play in Public Policy
Scientists have a critical role to play in bringing evidence-based information to decisionmakers in government and business. When grounded in local and regional research, they are particularly helpful sources of information to elected officials. Scientists themselves are professionally required to be clear about the basis for their public statements about scientific findings. The Union of Concerned Scientists (UCS) provides a [tutorial on communicating science](#) including this helpful typology of roles scientists play in public policy discussions:

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Pathways To Gratitude: Science and the “Uncertainty Principle”

- *Pure Scientist*: report findings and describe process of data collection and analysis.
- *Science Arbiter*: weigh various scientific points of view.
- *Honest Broker*: promote values and knowledge at a table alongside business and other interests.
- *Issue Advocate*: take a position on action based on values, findings and interests.

Scientists as Public Speakers

In a public audience, at a legislative

hearing, or at a media event, scientist speakers need to be clear about their individual scientific expertise. This clarity includes making a distinction between discussing findings from their own field, and discussing findings from other scientific fields.

An effective speaker will also deliver a couple clear take away messages for the non-scientist audience. If you are interested in science related to local ecological or environmental policy issues, you might encourage

local groups to feature scientists whose research is conducted locally, where they have the most credibility with policy-makers.



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