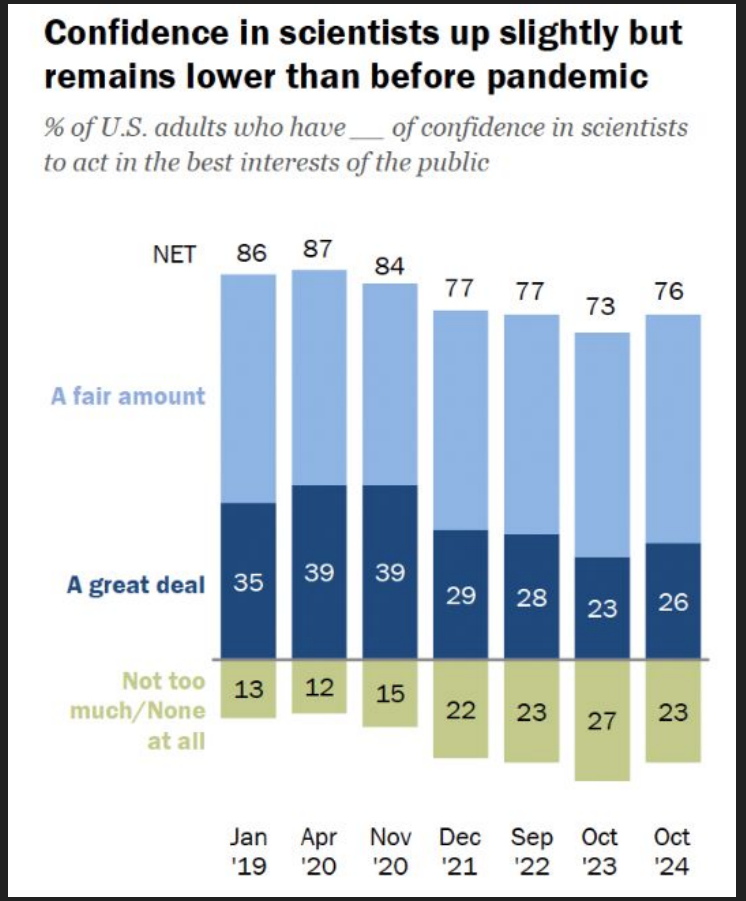
Some of our responsibilities as scientists

Daphne Broski-Laing

Why do we have responsibilities?

In general, the public trusts scientists



Pew Research Center

Why do we have responsibilities?

Science Holds Power

- Policy
- Funding
- Technology
- Environment
- Politics

Why do we have responsibilities?

Scientists have unique expertise,

and we control how this knowledge is shared

As a member of the scientific community, what are our responsibilities to society?

Is there more to it than just ‘doing good science’?

Passive Responsibilities

Active Responsibilities

Proactive Responsibilities

Ethics

Integrity

Reproducibility

Accessibility/
Communication

Anticipate
harm/misuse

Environment

Equity

Public
engagement

Advocacy

Passive Responsibilities

International Guide: Singapore Statement on Research Integrity

Principles

- Honesty in all aspects of research
- Accountability in the conduct of research
- Professional courtesy and fairness in working with others
- Good stewardship of research on behalf of others

Passive Responsibilities

International Guide: Singapore Statement on Research Integrity

Responsibilities:

- Integrity
- Adherence to Regulations
- Research Methods, Records, Findings
- Authorship
- Publication Acknowledgement
- Peer Review
- Conflict of Interest

Active Responsibilities

International Guide: Singapore Statement on Research Integrity

- Public Communication
  - Limit professional comments to their recognized expertise (in public discussions)
  - clearly distinguish professional comments from opinions based on personal views
- Reporting Irresponsible Research Practices
- Responding to Irresponsible Research Practices
- Research Environments
  - Encourage integrity through policies, standards, and education
  - Foster environment that supports research integrity
- Societal Considerations
  - Recognize ethical obligation to weigh societal benefits against inherent risks in their work

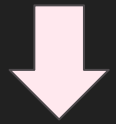
Proactive Responsibilities

- Often, people think about science as a pursuit of objective truth, but this is impossible, and science doesn't exist in a vacuum

- Science **literally** shapes the way humans interact with the world and each other
  - Environmental destruction and preservation
  - Medicine, weapons, energy
  - Mining on the moon, thousands of satellites in low-earth orbit
  - Communication, education, funding

Proactive Responsibilities

- We don't just do science, we are in a community of scientists



- We are responsible for the part we play in society, and for the ways that we engage with a flawed system
  - Are we perpetuating inequities?
    - In terms of the way we conduct and report science, but also through our institutions/communities, and educational systems
  - Are we aware of (and comfortable with) the broader implications of our work?
  - Are we engaging with the public?

Proactive Responsibilities

Astronomy is not as closely-connected to politics as some other fields of science

At the end of the day, it’s up to us to decide what we are comfortable with, what our values are, and how we engage as scientists in our society

Resources

- https://www.pewresearch.org/science/2024/11/14/public-trust-in-scientists-and-views-on-their-role-in-policymaking/
- https://www.wcrif.org/statement
- https://theconversation.com/scientific-objectivity-is-a-myth-cultural-values-and-beliefs-always-influence-science-and-the-people-who-do-it-259137