

Experiential Ethics 2024



Values in Science and Technology

Outline of the Session

1. Presentation: Benjamín Muñoz
2. Assignments: Op-Ed
3. Basic Concepts and Ideas
4. Take a Position: Should Science/Technology be Value-Neutral?
5. Discussion

Values in Science

- Facts: statements or assertions about reality (the way things are).
- Values: principles or standards of behavior that reflect evaluations (the ways things should be).
- Practical Activity 1: What is science? Write your own definition of science
 - Put your thoughts [here](#).
 - 2 minutes.
 - One or two lines is enough.

What is Science?

- 1. General Definition:** Science is a systematic enterprise that builds and organizes knowledge in the form of testable explanations and predictions about the universe.
- 2. Philosophical Definition:** Science is the pursuit of knowledge and understanding of the natural and social world following a systematic methodology based on evidence.
- 3. Operational Definition:** Science is the process of observing, hypothesizing, experimenting, and validating results to develop a body of knowledge that explains phenomena in the natural world.
- 4. Educational Definition:** Science is a body of knowledge that encompasses the principles, laws, and theories about the world, learned through observation, experimentation, and validation.
- 5. Practical Definition:** Science is a collaborative human activity involving a community of researchers who share methods, standards and principles for the development of their activities.

Values and Science

- What is the value-neutral ideal in Science?
 - Examples
 - Descriptive Thesis
 - Normative Thesis
- What are the criticisms of it?
- Let's go back to the different definitions and to your own experience: what are examples of values in science?

Do Artifacts Have Politics?



- Concepts
 - **Politics:** arrangements of power and authority in human associations.
 - **Technologies:** all of modern practical artifice (a way of building order in our world).
- Do technologies have political properties?
 - What is the conventional wisdom?
 - What is Winner's argument?



Taking Position

- Practical Activity 2: How do you see ideas of value-neutrality and objectivity in your work/experience? What politics or values are infused in your work?
 - Put your thoughts [here](#).
 - 3 minutes.
 - One or two lines is enough.
- Should Science/Technology be value-neutral?
 - Each participant presents his vision and his reasoning (try to keep it short, 1-3 minutes).
 - Let's continue the discussion.

Discussion

- Why does it matter that artifacts have politics?
- If artifacts have politics and science is value-laden, Who is responsible/Who should have a say in those values/politics?
- Are there certain discoveries or inventions we should avoid making because they conflict with our values?