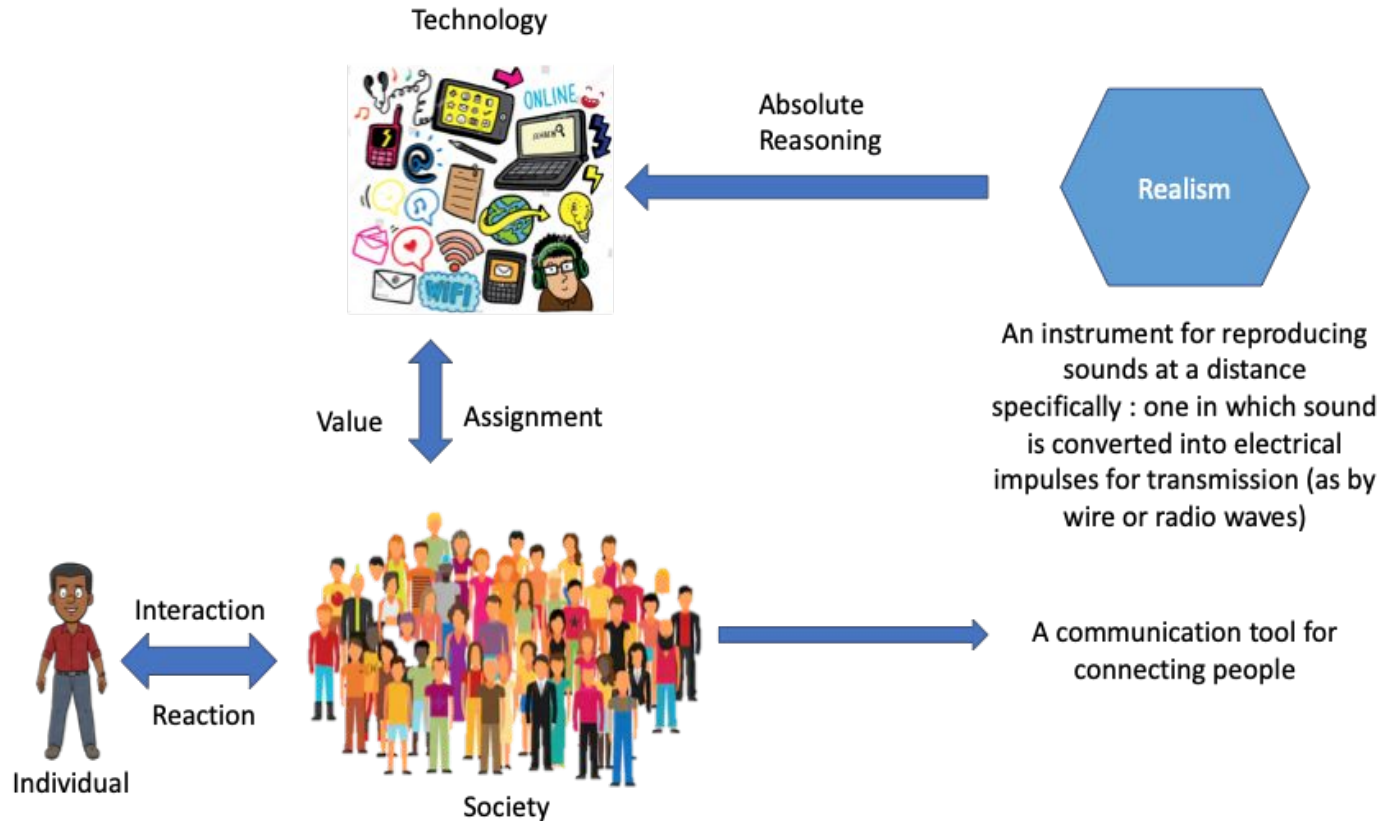# Social Construction of Technology

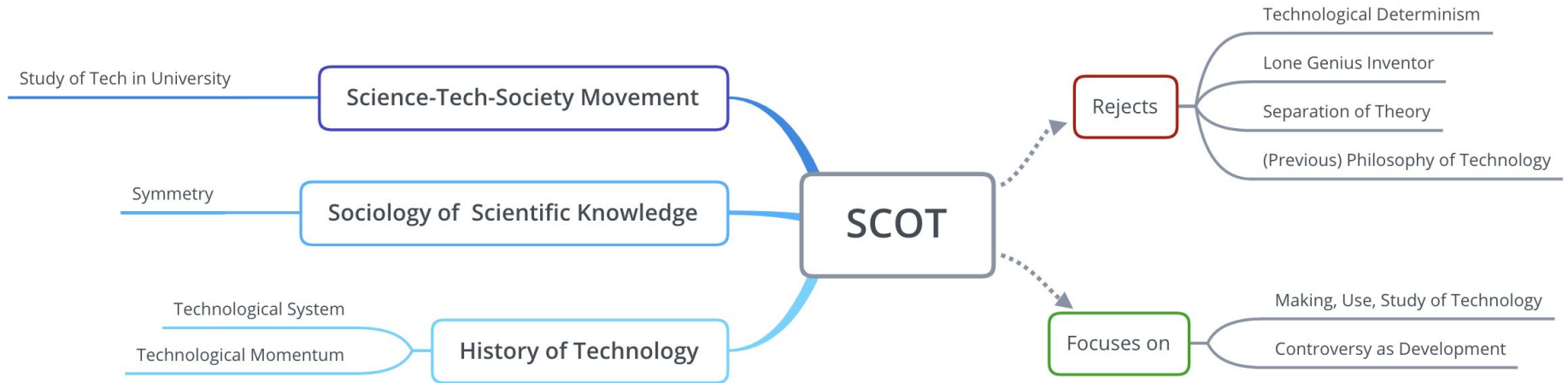Team Purple

Introduction to SCOT

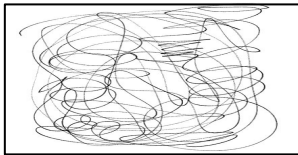# Sociology Rediscovers Technology

Work of Wiebe Bijker and Trevor Pinch

Study of Tech in University — **Science-Tech-Society Movement**

Symmetry — **Sociology of Scientific Knowledge**

Technological System
Technological Momentum — **History of Technology**

SCOT

Rejects
- Technological Determinism
- Lone Genius Inventor
- Separation of Theory
- (Previous) Philosophy of Technology

Focuses on
- Making, Use, Study of Technology
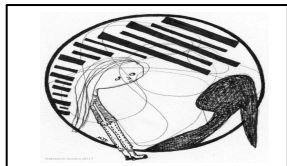- Controversy as Development
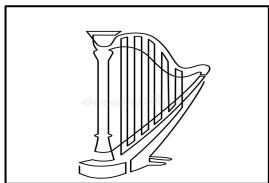
Social Constructivism

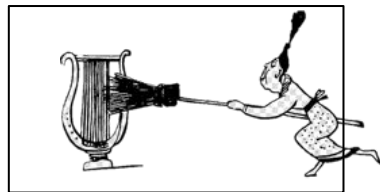**The social construction of social reality**

Near Nonsense
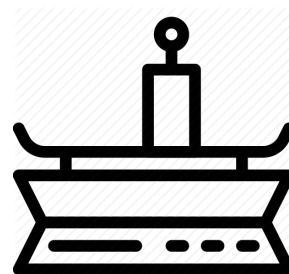
Possible

False

Solid Fact

Possibly True

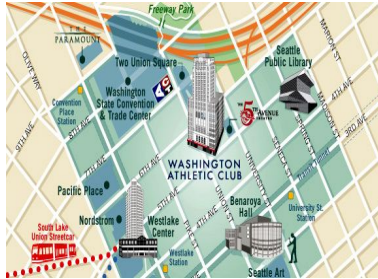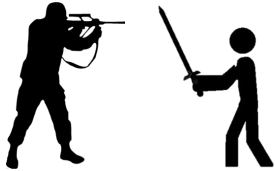**The construction of things and phenomena**

Natural?

GRAVITY

Versus

"most of the phenomena of modern physics are manufactured" (Hacking 1983).

Social Constructivism

The scientific and technological construction of material and social environments

Technology affects environment /world

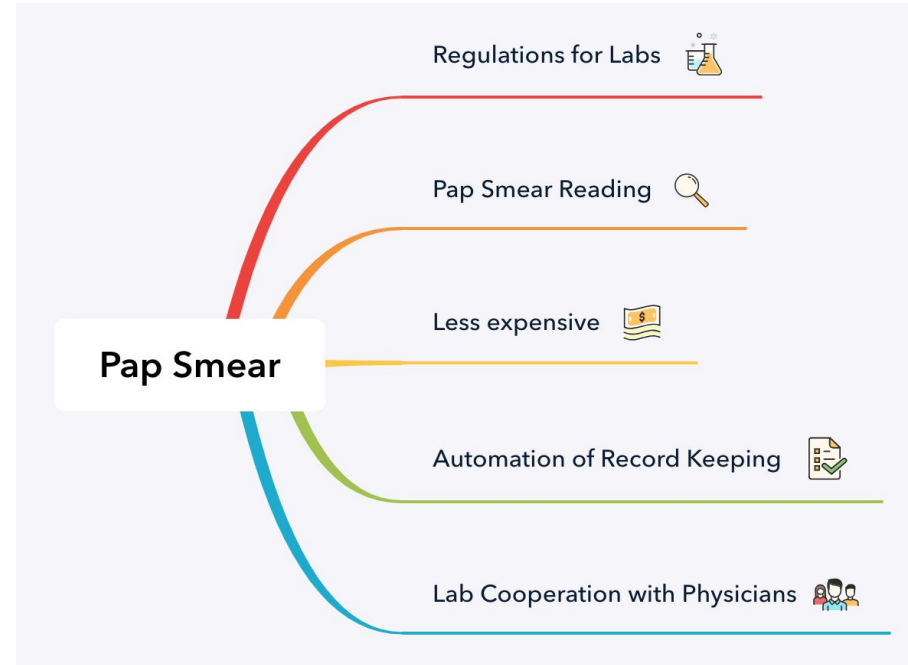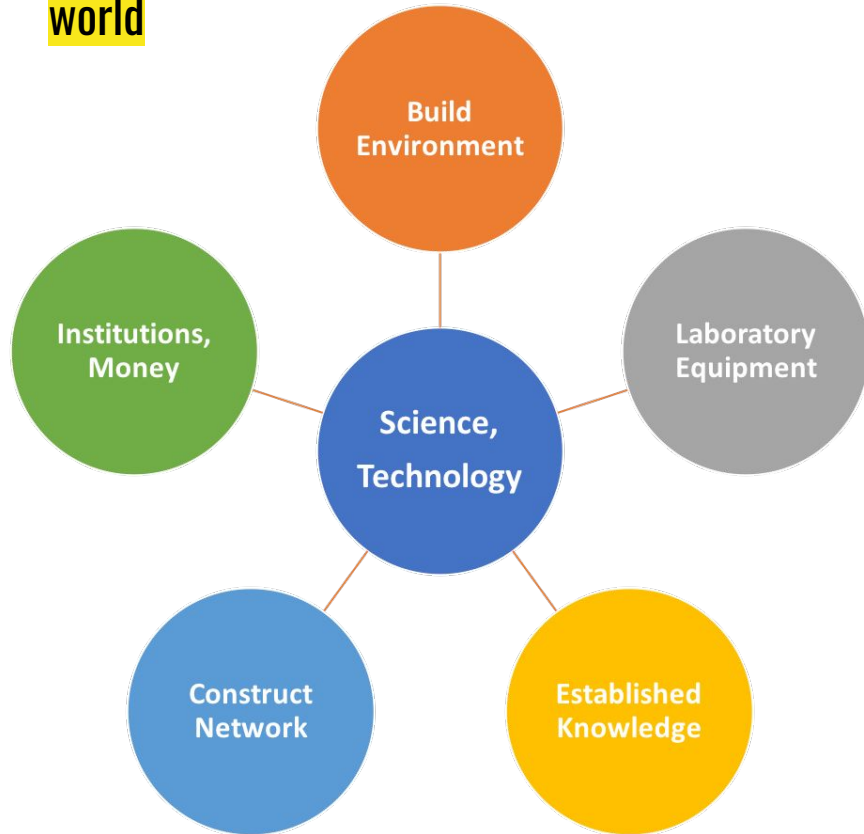Research in Science affects environment /world
-policies

The construction of theories

Heisenberg's Uncertainty

Theory if absolute, then becomes stagnant and truth. It rather is a constructional tool for building further theories and concepts.

Wall vs stairs.

Heterogeneous Construction - Simultaneous shaping of social and material world

The Construction of Kinds

Nominalist
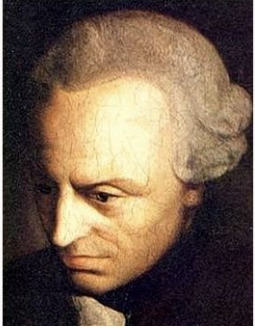
- Kinds are human impositions
- Socially constructed by people
- Only individual objects are real

Realist

- Kinds are real features of the world
- Kinds are external to people

The Construction of Nature

Immanuel Kant

Neo-Kantian Constructivism

Natures of things are not available without representations

Large amount of contingency in our knowledge

Neo-Kantianism

Issues
- Could violate some fundamental assumptions about cause and effect
- Political concerns
  - Feminists
  - Environmentalists

Advantages
- Researchers could question about the causes of contingency
- Co-production of science and politics may produce successful science in the public
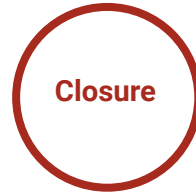
Richness in Diversity

- Genders
- Emotions
- Political Movements
- Identities

Contested Technology

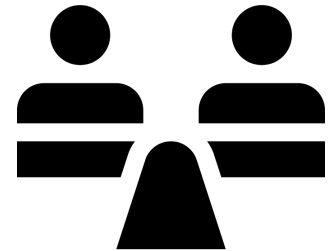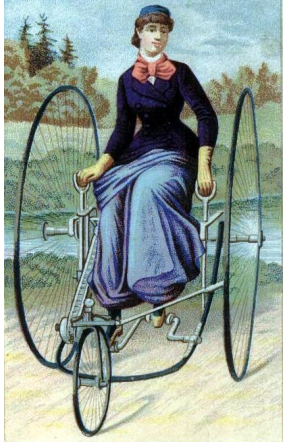"Technology has no essence, only the meanings that groups give to it."

Controversy

Closure

Stabilization

Groups Shape Tech Development

Reach Agreement

Frame Anchors Technology

An example: history of bicycle

1850	1860	1885	1890s
Tricycle	**Velocipede**	**Safety Bicycle**	**Closure: Air-filled tyre**

Societal Expectations

- Constant Need for Innovation
  - Performance /Accuracy
  - Security and Privacy
  - Affordability
  - Health Safety
- Ease of Use
- Universal availability
  - Portable

What other expectations do you think society has for new technology?

Criticisms

Questions the data and historical accuracy

Questions whether closure and stabilization exist

Questions how to recognize relevant social groups

Questions about the limitation of social structures and actors considered

What do you think of this theory?