

ESC203—Ethics

Jonah Chen

September 17, 2021

Contents

1 Affordances	1
1.1 Mechanism and Conditions Framework	1
2 Central Claims of STS Theories	2
3 Actor Network Theory (ANT)	2
3.1 Why?	2
3.2 Types of Actors in ANT	2
3.3 Punctualization	2
3.4 Power	3
3.5 Example—Federal Election	3

1 Affordances

Affordance is request, demand, allow, encourage, discourage, refuse. It answers the question of **how**.

- **Real affordances:** functions attached to a given object—what, potentially, that object affords
- **Percieved affordances:** feature that are clear to the user

1.1 Mechanism and Conditions Framework

- Mechanism: Technology
 - **(request, demand)** initiated by object
 - **(encourage, discourage, refuse)** responses to subject inclination
 - **(allow)** could be initialted by subject or object
- Conditions: People interacting with technology
 - Perceive a range of functions
 - Having varying skills in operating/interacting (dexterity)
 - Different level of support due to cultural norms, intelectual regulations.

2 Central Claims of STS Theories

- *Technological Momentum*: Individuals and groups direct the development of new technologies, but investment in large socio-technical systems makes them difficult to change
- *Technological Determinism*: the idea that technology develops as the sole result of an internal dynamic, and then, unmediated by any other influence, molds society to fit its patterns
- *Social Construction of Technology*: What matters is not technology itself, but the social or economic system in which it is embedded. This maxim, which in a number of variations is the central premise of a theory that can be called the social determination of technology, has an obvious wisdom.
- *Actor Network Theory*:

3 Actor Network Theory (ANT)

3.1 Why?

- To analyze sociotechnical systems, in particular organization and power.
- More rigorous ways to analyze ever-shifting nature of technology.
- ANT attempts to improve *Technological Determinism*, *Technological Momentum* and *Social Construction of Technology* by treating technological and social actors as relational.
- Allows us to map affordances.
- It is an analytical tool which allows to bring change to a system, not a predictive tool.

Political: arrangements of power and authority in human association as well as a system

3.2 Types of Actors in ANT

- Human actors:
- Conceptual actors:
- Artifact actors: Interactions can be mediated

The notion of generalized symmetry treats all types of actors as equal in the theory.

- Interactions are mediated through non-human actors.
- An **Intermediary** is an actor that transport the force of another actor.
- A **Mediator** is an actor whose outputs cannot be predicted by their inputs.

3.3 Punctualization

- Relationships with affordances is known as **translation**, Process of making connection and therefore how the technology, system or organization comes to be.
 - Actors “agree” (resistance must be overcome) that the network is worth building.
 - Creating convergence between actors
- These questions can only be asked once the network is constructed.
 - Processes: How has the translation occurred? How is it occurring?
 - What are the outcomes? How are they ordered?
- **Patterning/Ordering** is a pattern that emerges and is stable enough over time

- **Punctualisation** is when a network of heterogenous bits and pieces with their own roles and resistances is concealed in a coherent entity. All the work of the network is concealed making it hard to detect network complexities. This is also known as “Black box”.
- Black boxes can be leaky.

3.4 Power

- Neutral: depending on how it is used.
 - Originally concentrated in large structures like government or cooperation
 - Modern sense of power is a component of all relationships between different actors
 - **Power is always faced with resistance**
 - ANT can be used to identify sources of power and suggest ways to dismantle power
- **You stop depunctualizing when there is an important power relation you want to analyze.**

3.5 Example—Federal Election

It is helpful to start with one actor and establish relations with other actors.

affordances

- Voter demands pencil
- Voter allows voting
- Voter requires Voter ID
-