TECHNOLOGY IN SOCIAL THEORY

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CLASS 3

FALL 2015 / SECTION 02 / HOLLY BUCK

TODAY'S CLASS

- Turn in:
    - Reading Journal 1 (Winner)
- In-class reading (MacKenzie and Wajcman, from *The Social Shaping of Technology*, 1999)

- Small group, then large group discussion

- Mini-lecture: Technologies in Social Theory

IN-CLASS READING

1. What is the key question being asked or addressed here?

2.   What, if any, are the new terms introduced? Define them for the rest of the class.

3. What is / are the main points? (What is said about these terms?) Summarize them for the rest of the class.

4. What did members of your group think about the idea(s) in this excerpt?

5. Read aloud for the class & comment on your group's special discussion question.

Each of these 5 points should be reported to the wider class by a different group member ☺

QUESTIONS

1. (Happy Trolls) Can societies actively shape technological change? In what ways do they try?
2. (SOPA stars) What is the difference between science and technology?
3. (BIG DATA) Within computing, do you see "inevitable" inventions?
4. (The Dull Pointers) "A technological system like an electric light is never merely technical; its real-world functioning has technical, economic, organizational, political, and even cultural aspects." Identify these aspects of an IT system. Do you agree with the authors that the economic aspects are most important?
5. (null persons?) How / where do you see economic reasoning shaping IT / computing development? Share some examples.
6. (Team Apache) Try and think of some examples, related to IT, where economic shaping of technology is also social shaping.
7. (Above Average Sized Data) Discuss the state's role in shaping IT / computing development. Today, do you see a place for a stronger or weaker role?
8. In which IT technologies do you see path-dependence? What about technologies where the "intrinsically best" technology triumphs?

WHAT IS TECHNOLOGY?

Oxford English Dictionary, "technology"

- 1.a. A discourse or treatise on an art or arts; the scientific study of the practical or industrial arts.
- 1.b. Practical arts collectively.
- 1.c. A particular practical or industrial art.
- 2. The terminology of a particular art or subject; technical nomenclature.

Practice & art, not necessarily artifact

(*Techne*: art, skill, craft in work, system of making)

Implication: technology is not separate from, but deeply enmeshed, in culture / society
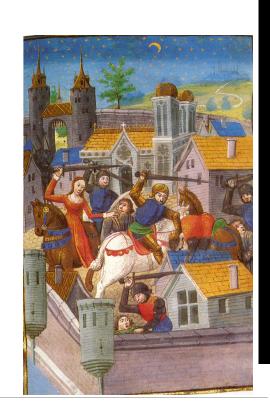
TECHNOLOGICAL BEINGS

"Technology is a world-shaping force, a force that also shapes us as inhabitants of that world, in both our individual and communal facets. … Ever since the first ape grasped a stone to smash a nut, technology has helped shape who we are. It shaped our activities, our emotions and even the contours and capacities of our bodies. Our hands would not have evolved as they did, if it were not for the tools that we have wielded. That is why Stiegler characterizes the human condition in terms of an "original technicity": We are technological beings." (Guston, 2014)

HOW DOES TECHNOLOGY DEVELOP?

TECHNOLOGICAL DETERMINISM

- Technological progress moves along one track in all societies

- Society must adapt to technology's progress & impacts

Great Stirrup Controversy

The **Great Stirrup Controversy** is the academic debate about the Stirrup Thesis, the theory that feudalism in Europe was largely the result of the introduction of the stirrup to cavalry.[1] [2] It relates to the hypothesis suggested by Lynn Townsend White, Jr. in his 1962 book, *Medieval Technology and Social Change*. White believed that the stirrup enabled heavy cavalry and shock combat, which in turn prompted the Carolingian dynasty of the 8th and 9th centuries to organize their territory into a vassalage system, in which these mounted warriors were rewarded with land grants for their service. White's book has proved very influential, but he has also been accused of speculation, oversimplification, and ignoring contradictory evidence on the subject. Other scholars have debated whether the stirrup actually provided the impetus for this social change, or if the rise of heavy cavalry was a result of political changes in Medieval Europe.

SOCIAL SHAPING OF TECHNOLOGY

- Economic, Political (nation-state, US state, international…), Cultural

- Social construction of technology perspective: derives from 1980s scholarship

- Scholars wanted to open the "black box" of technology; illustrate pathways of development & their alternatives

- Interpretive flexibility: an artifact doesn't have inherent properties; it matters how people / society interprets the use of that artifact. "Guns don't kill people, people kill people."

- Closure and stabilization: technologies are not forever under revision; at some time their design phases closes & social groups agree on what that artifact is

- Path dependency

MORE THEORETICAL APPROACHES

- **Actor-network theory:** Objects are part of social networks

- Critical race / ethnicity & feminist theory

- Systems theory

FOR NEXT CLASS

- Finding Readings Assignment: Turn in suggestions for readings by 9pm Saturday

  Submission form for readings is posted to schedule and Piazza

- Do Baase reading – 1.4

- Do Reading Journal 2 (Piazza), non-anonymously, by 9pm Monday 9/7 - #rj2