

#### Administration

- Office hours
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- Workshop

## What did we talk about last time?

- Demand matters for sustainable development
- Individual factors: income, age, gender, education
- Household dynamics: gender, age inequality
  - Example: clean cookstoves, electricity access
- Next: demand at the societal level
  - Social preferences: community, society, state
  - Social failures (next class)

- Many decisions are made by individuals/households...
- Sometimes, society "makes" decisions
  - Collective decision
  - Example: demand for GMO, local wind turbines, Al
- Three levels
  - Socio-political acceptance
  - Community acceptance
  - Market acceptance

# Who are these people?



Source: wikipedia



Source: wikipedia

- Two very different view of sustainability of development
- Mary Shelley (1797-1851)
  - Dr. Frankenstein creates a beast
  - Nature > human rationality
- Bram Stoker (1847-1912)
  - Dr. Van Helsing solves the beast
  - Human rationality > nature
- Conflicting views by society on tech development

# Social acceptance

- Culture
  - Attitudes toward technology
  - Depends on priorities, values, and impact
- Economic factors
  - Threat to specific workers
  - Threat to regions (poverty traps)

## **Example: Amish**

- Amish: Christian protestant subgroup, DE-FR-CH
- First wave in US/PA early 1700s (rel tolerance)
- Focus on community (vs individual pride)
  - Tech rejection: threat to social ties+values ("Ordnung")
  - Tech rejection: defines against outsiders ("English")
  - Hard to change (veto power of 2+indiv and neighbor peer pressure)
- Elec (1910): threat to indep, fight w/ Mennonites

## **Example: Luddites and machines**

- Nottingham, 1811: mob led by "Ned Lud" destroys new textile tech (+1 death)
- Origin of the term "luddite"
- Mistakenly interpreted as anti-tech
- Instead: worry of high- (vs low-)skilled workers
- Impact of tech depends on complementarity with workers
  - 20th century: tech helps high-skilled workers
  - Before+after: tech often hurts high-skilled workers

#### Consider the threat from automation.

Can you design policies to both promote new tech...

## and protect at-risk people?

- 1st approach: reduce inequality *ex ante* 
  - Even the playground
  - Eg tax on robots, subsidies for workers
  - Downside: slows tech
- 2nd approach: compensate ex post
  - Let tech be deployed, help those hurt
  - Eg: unemployment insurance, re-skilling programs, etc.
  - Downside: not always credible

## Community acceptance

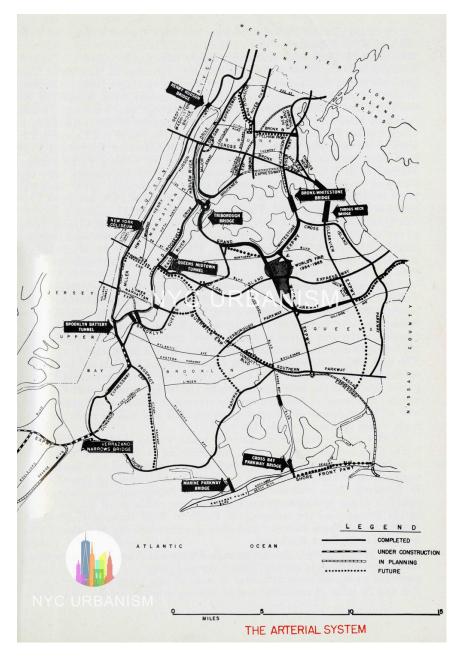
- Society is often too broad
- Community: local society
- Decisions over tech: often at community level
- Culture + economics still matter...
- Here: importance of equality/justice
- Tech often has distributional consequences: winners/losers

# Who will host unsustainable tech? Who will host sustainable tech?

- Who hosts bad tech is never neutral
- Some distributional consequences depend on econ factors...
- But many depend on politics
- Top-down biases: who controls the agenda?
- Bottom-up biases: who mobilizes?

## **Example: NIMBY-ism**

- Consider transportation: roads=critical infrastructure
- But where should they be built?
- NIMBYism: not in my backyward
- Three problems
  - Infrastructure (roads) are needed for econ growth!
  - Decision-makers will not treat everyone equally
  - Communities won't all mobilize equally



Jane Jacobs vs. Robert Moses. Source: NYC Urbanism

How would you overcome NIMBY-ism? And how would you run a NIMBY campaign?

## Country-level demand

- So far: individuals, households, community, society
- Some decisions: country- or nation-level
- Two ways to think about this:
  - Culture
  - Politics/international relations

## Culture

### Impact of culture

- Culture = "shared values, norms, beliefs, and preferences" of a society (Galor 2022)
- Individuals are embedded in culture
- Affects:
  - Priorities → development of new ideas
  - Acceptance → adoption of new ideas
- Markets depend on trust, networks (social capital) (eg S vs N Italy)

## Origins of culture

- General rule: culture is conservative
  - Old norms/values: proven track record
  - Role of religions, arts, etc.
- "Evolutionary theory" of cultural change
  - Accidental new cultural traits (eg conflict)
  - Survival depends on advantage they provide
- In post-Ind Rev: cultural traits that help w/ new tech
  - Enlightenment (Kant, etc.)
  - Eg: literacy in Protestant (and Jewish) culture (Weber)

# Politics & international relations

## Adoption

- Technology is broadly a public good
- Spreads within and across countries
- 2nd image reversed
  - "2nd image": countries affect global politics
  - "2nd image reversed": global pol affect countries
  - (Policy) diffusion processes

#### Mechanisms of diffusion

- Why do tech spread globally? Many mechanisms
- Learning
  - 1st-mover country in R&D: public good
  - 2nd-mover advantage
- Competition
  - International markets
  - Evolutionary process
- Coercion: forced acquisition of goods/tech

## Rejection

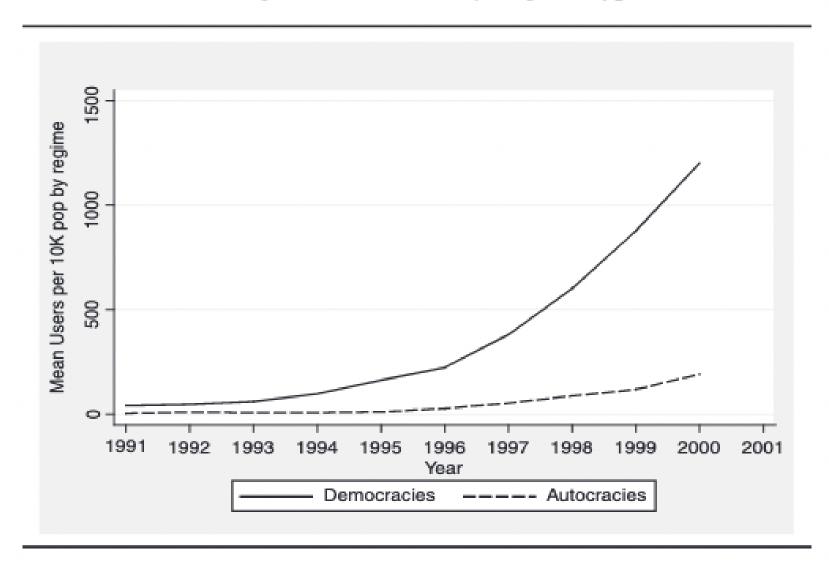
- Why would tech ever be rejected?
- Adoption of (sustainable) tech has distributional consequences
- "Selectorate": govs cater to whoever keeps them in power
  - Democracies: broad set of supporters needed
  - Autocracies: narrow set (eg army)
- General rule: need to look at who is affected

What do you think the political rationale to promote/block internet is?

## **Example: internet**

- New technology
- Considerable economic benefits
  - Access, diffusion of information
  - Access to customers
  - = good for economic growth
- But considerable hostility from autocracies
  - Lower cost of social mobilization

Figure 1a Average Internet Users by Regime Type



Source: Milner (2006)

- How can you combine growth and control?
- Solution: more tech (firewalls, internet police, software filters, etc) + barriers (cost)
- China: censorship of...
  - certain websites
  - publications
  - private speech, when about collection action

## Conclusion

- Tech adoption is not just an individual decision
- Society+community+state matter
  - Culture
  - Economy
  - Politics
- Not a good vs. bad
  - Different priorities (eg Amish)
  - NIMBYism: sometimes good, sometimes bad
- But for sustainable tech to work: need community+political support

## Questions?

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Source for title page painting: Georges Seurat, A Sunday Afternoon on the Island of La Grande Jatte, 1884

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