

The Tragedy of the Commons



Garrett and Jane Hardin



Preliminary Questions

- What is a “commons”?
- What does Hardin think happens to every commons?
- What makes this a tragedy?
- What are the different kinds of commons? (as sinks and sources)
- What is Hardin’s solution to the tragedy?
- What are “economic externalities”?
- What is Linear and Exponential Growth

Discuss in your Groups

What is Hardin's solution to the tragedy?

What are his assumptions?

Do you agree with him?

[**facilitators**: start the discussion, keep it on track]

[**monitors**: make sure everyone's ideas are heard]

[**recorders**: write down your group answer, and be ready to report]

What are Commons?

Commons: a renewable resource that is owned
“in common” (or: “not owned at all”?)

Why would it be a “renewable” resource?

— renewable vs finite/wasting

Regulated vs Unregulated Commons

Elinor Ostrom: Nobel Prize in Economics (2009)
for her work on her work on economic governance,
esp. regarding the use of commons.

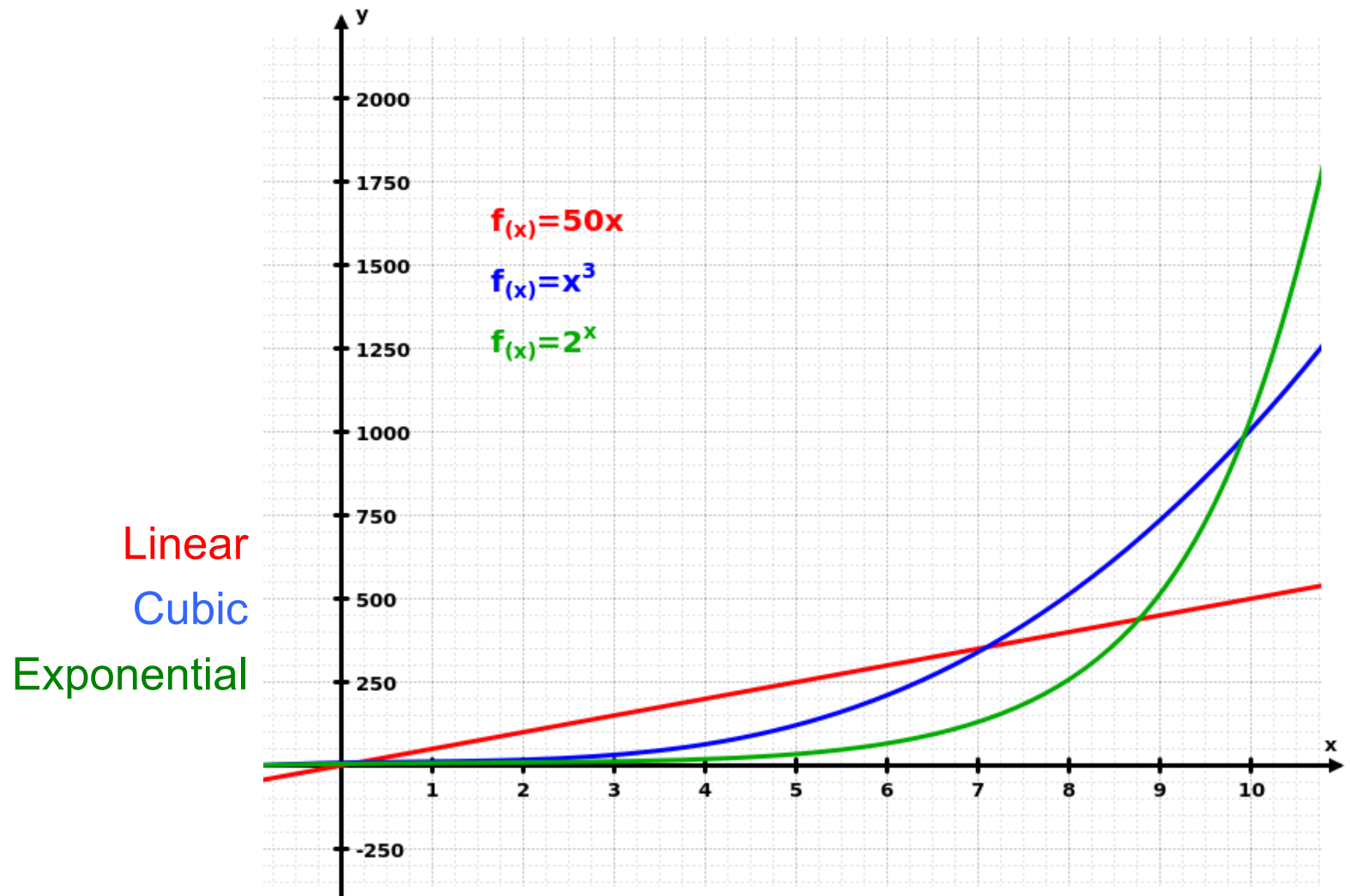


Commons that Work

Swiss alpine cheese makers — successful commons since 1200 CE.

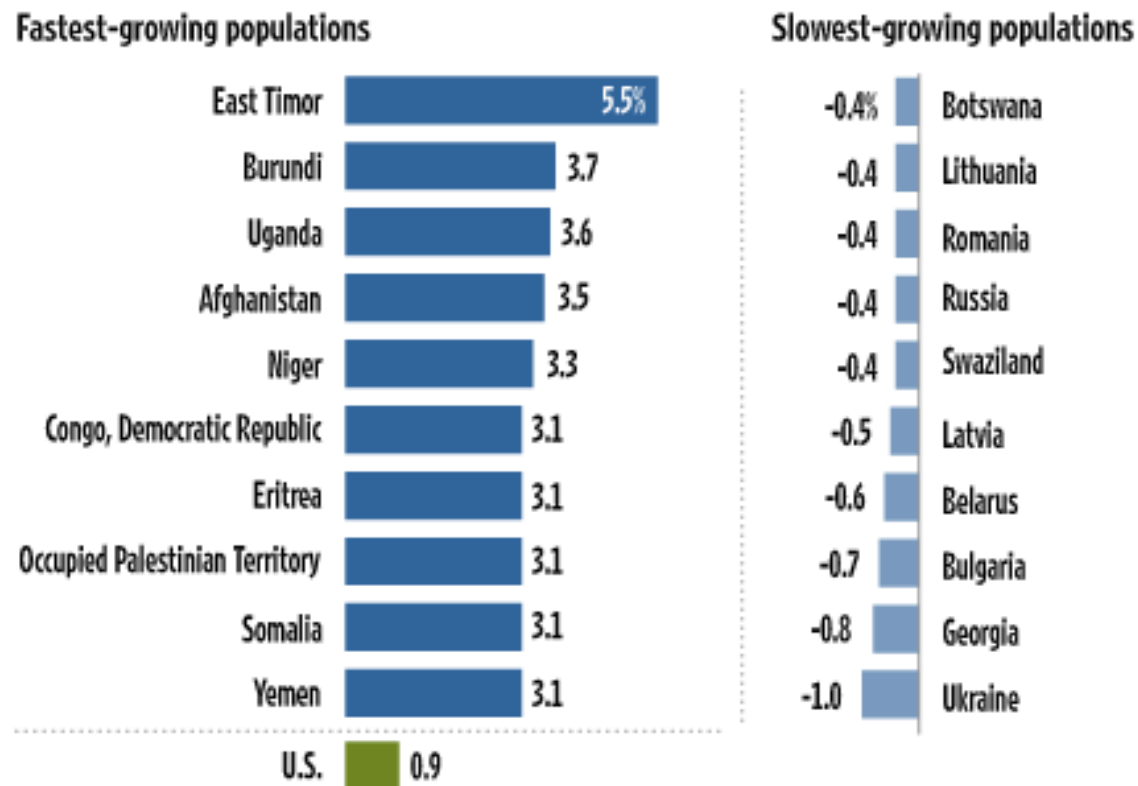


Growth Rates



Growth Rates

Average estimated population growth rate, 2005-2010, in percent



Source: United Nations Population Division, United Nations Population Fund

Economic Externalities

Externality: a benefit or harm that results from the production or use of some good or service and that is not reflected in the market price of that good or service.

The externality is borne by some third party to an economic transaction, who either benefits (**positive**) or is harmed (**negative**) by the transaction.

In other words, benefits are enjoyed without cost, or burdens are endured without compensation.

Avoiding Externalities

- (1) Seek voluntary restraints — tends not to work.
- (2) Re-arrange property rights to privatize a common source or sink that is being exploited, and rely on tort law to control for damages.
- (3) Attach penalties and compensation and/or enjoin the nuisance — e.g., government imposed emission fees or penalties.

Discuss in your Groups

Hardin's essay is primarily about population: "overpopulation is a tragedy of the commons." In what sense does this fit the model of a commons?

[**facilitators**: start the discussion, keep it on track]

[**monitors**: make sure everyone's ideas are heard]

[**recorders**: write down your group answer, and be ready to report]

Rules for Playing Prisoner's Dilemma

- (1) You may either confess to the crime or stay silent.
- (2) If one of you confesses and the other is silent, the one confessing goes free, while the silent one gets **three** years in jail.
- (3) If you both confess, you both get **two** years in jail.
- (4) If you both are silent, you both get **one** year in jail.
- (5) Your partner is being told these same things.

Prisoner's Dilemma

		Barbara	
		Confess	Silent
Alice	Confess	A = 2 B = 2	A = 0 B = 3
	Silent	A = 3 B = 0	A = 1 B = 1

Worst for the Group

$1/2(2+0) = 1 \text{ yr}$

$1/2(3+1) = 2 \text{ yrs.}$

Best for the Group

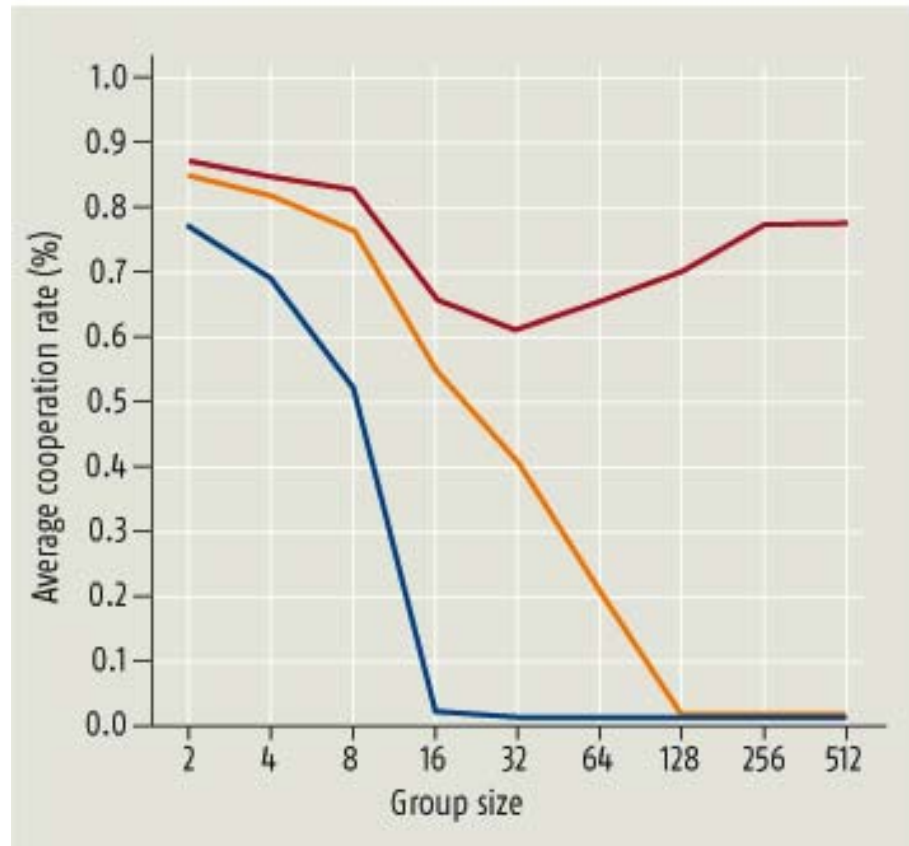
Rules

- (1) You may either confess to the crime or remain silent.
- (2) If one of you confesses but the other is silent, then the one who confesses will go free and the other one will go to jail for **three** years.
- (3) If both of you confess, then you will both go to jail for **two** years.
- (4) If both of you are silent, then you will both go to jail for just **one** year.
- (5) Your partner is being told these same things.

When it Pays to Play Along

Small groups of people are likely to be very cooperative, but as numbers increase so will cheating. If people are allowed to punish cheats cooperation will persist in larger groups. If they can also punish those who do not punish cheats then cooperation flourishes in groups with hundreds of members

- No punishment possible
- Punishment of cheats possible
- Punishment of cheats and those who don't punish cheats possible



SOURCE: NATURE