

Lecture 17: Self regulation, collective action and the evolution of norms

- Purpose

- ▶ show that in some cases externalities may be resolved by internally decided rules/regulations
- ▶ show that self regulation does not imply that the absence of incentives, the participation constraint or informational viability

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1:18

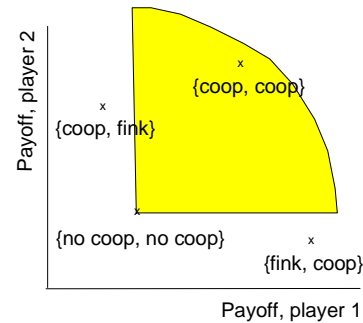
Outline

- Background
 - ▶ Self regulation is "surprisingly often" used in successful ways given the emphasis in main stream economics on the need for an external regulator
- Behavior
 - ▶ the general economic model
 - ▶ in games looking at cooperation
- Ostrom's analysis
 - ▶ Elinor Ostrom: Nobel prize economics 2009
- Implications for policy formulation

2:18

Background (1)

- Garret Hardin (1968): Tragedy of the commons
 - ▶ international fisheries management
 - ▶ international climate negotiations
- Common feature
 - ▶ failure to reach a "cooperative" solution even when benefits of this are quite obvious
 - ▶ resemblance to Nash equilibria:
 - all agents play their best reply strategy given others also play their best reply strategy



3:18

... background (2)

- Failure to cooperate:
 - ▶ do not see gains? OR
 - ▶ lack of trust (= fear of being taken advantage of/ losing out)?
- Mainstream economic theory
 - ▶ self regarding (expected) Umax individuals
 - ▶ expected profit maximizers
- Contrast with: many cases of observed cooperation/self-regulation
 - ▶ what characterizes these cases?
 - ▶ what can we learn?

4:18

Behavior (1)

- Self regarding utility maximization ⇒
 - ▶ unwilling to commit (exception: infinitely repeated games with few agents (cfr. Folk theorem, lect. 18))
 - ▶ ⇒ individuals do not undertake environmental actions (that cost "too much")
- ⇒ core of ordinary regulation: make desirable actions relatively more profitable
- ... but observations/econ.experiments:
 - ▶ individuals willing to contribute to common causes without expectations about reciprocal behavior (getting favors in return)

5:18

... behavior (2)

- Public good (trust) experiments:
 - ▶ 2 individuals, A and B
 - ▶ each player gets an initial endowment at start of game that he/she freely manages (can give all or some or none to the common cause)
 - ▶ whatever A contributes to the common cause is tripled by the experiment coordinator
 - ▶ B decides what to do (keep all or donate some)
 - ▶ share of the common endowment returned to A
- Returned favor a non-issue:
 - ▶ game only played once with one player (or unknown terminal time)
 - ▶ agents do not know each other

6:18

... behavior (3)

- Self regarding UfnCs: rational not to contribute
- ... main result from many public goods games
 - ▶ individuals contribute 40-60 % of their endowment
 - ▶ expectations about cooperation increase contribution
 - ▶ increased cooperation takes when:
 - learning (repeated games or repeated one-shot games \Leftarrow impact of 40-60 % giving)
 - personal encounters (players see each other)
 - ▶ repeated games with known terminal time: contributions decline
 - ▶ degree of contributions influenced by external factors: f.ex. selection of participants by lottery)

7:18

... behavior (4)

- Variants of the public goods game
 - ▶ when agents allowed to give more than the game endowment, they often do (= willing to accept risk on other player's cooperation)
 - ▶ when agents are allowed to penalize other players for not cooperating they often do (even when penalizing never is profitable)
- Main impression from public (trust) goods games:
 - ▶ observed behavior inconsistent with self regarding utility maximization
- ... also observed in "daily life" settings: people help out without expecting a favor in return

8:18

The Ostrom insights (1)

- Main focus: contingent cooperation:
 - ▶ agents willing to cooperate (accept risk) if they believe others will cooperate
 - observed by willingness to give a large share of the endowment at the start (1. round) of game
 - ... becomes disappointed if others do not respond by returning what is perceived a "fair share"
 - without communication: cooperation gradually erodes (cfr. Elster's "The cement of society")
- Research question: under which conditions can contingent cooperation be used to make internal regulations that work?
(recall: few like taxes and punishments)

9:18

... Ostrom insights (2)

- Self regulation works well for local common pool resources
 - ▶ coastal fisheries in Turkey
 - ▶ irrigation drawing water from a common aquifer
- ... and for some larger cases
 - ▶ "open source" software (Linux, OpenOffice, FireFox: donations even though these pgms. free of charge)
 - ▶ donations to first aid/catastrophic aid (but that could also be a "warm glow effect")
- ... but have also been found not to work
 - ▶ overgrazing by reindeer on Finnmarksvidda

10:18

... Ostrom insights (3)

- Basic conditions when self regulation works
 - ▶ easy to monitor what others do
 - ▶ possibilities to sanction "free riders"
- Self regulation works even better when
 - ▶ they help develop norms (= this is "how we do it here")
 - norms are important as most people are weak in formal logic: examples and experiences have larger impacts on behavior than theoretic models
 - ... but models are helpful to understand behavior/ identify anomalies

11:18

... Ostrom insights (4)

- Challenges for norms
 - ▶ traditional structures collapse or are subject to external pressures
 - slash and burn agriculture in Africa
 - water resource management when new agents enter (urban pressure)
 - ▶ entrepreneurs who (are more inclined to) go their own route
 - entrepreneur's success erodes norms
- Norms (as institutions) only survive as long as they are deemed beneficial for/by those in power (Aoki)

12:18

... Ostrom insights (5)

- Norms :: a principle for long living self regulation regimes
 - ▶ clear boundaries for the resource/problem
 - without boundaries, difficult to decide who is subject to the regime
 - ▶ clear rules for acceptable behavior
 - ▶ local participation and influence
 - ▶ able to self-select those who monitor (who are held responsible in case of failure, and offer themselves are users of the resource)
 - early stage sanctions have the purpose of signalling (about unwanted behavior)
 - follow up: sanctions become stricter

13:18

... Ostrom insights (6)

- Self regulation: individuals accept a set with local rules, and expect this to be the "best way" to manage the resource
 - ▶ willingness to contribute to maintain the regime
 - ▶ lower control costs
 - ▶ local influence (local management better than "remote management")
- ⇒ norm development
 - ▶ ... but "conditional cooperation is conditional"

14:18

... Ostrom insights (7)

- For larger common pool resources = networks and other governing structures
 - ▶ basics for self regulation must hold
 - provide better value to agents than alternative
 - users/providers identifiable
 - sanctions available
- Follow up - how does open source software meet these criteria when
 - ▶ when users not fully identifiable?
 - ▶ alternatives (that also are free) are available?

15:18

Summary (1)

- First impression:
 - ▶ self regulation breaks with economic theory on behavior
- ... but
 - ▶ successful self regulation regimes must have internal control and penalty mechanisms
 - ▶ 1. phase of penalty mechanism: necessarily not $\text{exp. value of coop.} > \text{exp. value of non-coop}$
- Other conditions for self regulation to work
 - ▶ clear demarcation of resources/who has user rights
 - ▶ clear rules for "acceptable use"
 - ▶ local participation and influence

16:18

... summary (2)

- Main result:
 - ▶ self regulation regimes: many common features with ordinary regulatory regimes (RAM criteria)
- Self regulation - clear norm components \Rightarrow reduced costs for monitoring and enforcement
- Norms influenced by other regulatory regimes
 - ▶ laws (the process leading to a law) + information
- Economic behavioral theory: much relevant critique, but for self regulations to be robust, they share necessary RAM features

17:18

Concept questions

- Common pool resources
 - ▶ self regulation works for local commons but not for international commons \Leftarrow low N , identifiable resource, participation in the decision making process
 - ▶ any implications for managing international commons?
 - ▶ ... and if so, why?
- Common pool resources - extensions
 - ▶ self-regulation was originally designed for common pool resources
 - ▶ is self-regulation applicable for other types of environmental goods and services -- if so, which?

18:18