Incentives and Social Norms

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Cooperation and Punishment in Public Goods Experiments  

• **Setting:** a public goods environment.
  
  – A public good is a good that is non-rival and non-excludable.
    
    – Non-rival: consumption of the good by one individual does not reduce availability of the good for consumption by others
    
    – Non-excludable: no one can be effectively excluded from using the good.
  
  e.g. public health (vaccination)
  
  – **Common-pool resources:** non-excludable, rival
  
  e.g. clear air → over pollution; clean environment (open defecation)
“punishment of defectors is a key motive for the explanation of cooperation”
A fine is a price

(Gneezy & Rustichini, *Journal of Legal Studies*, 2000, cited by 508)

**Setting:** day care centers.
Parents sometimes pick up their kids late from day-care center.

**Intervention:** charge $5 fine to those who are late
Announcement: A fine for coming late

As you all know, the official time at which the day-care ends every day is 16:00. Since some parents are coming late we (with the approval of 'Authority for Private Day-Care Centers in Israel') have decided to impose a fine on parents coming late.

As of Sunday (January XX), a fine of NIS 10 will be charged for every time a child will be collected after 16:10. This fine will be calculated monthly and will be paid together with the regular monthly payment.

Sincerely,

The manager of the day-care
A fine is a price
Once a price, always a price

Fine is introduced

Fine is removed

**Figure 1.**—Average number of late-coming parents, per week
How do incentives affect decisions?
Incentives

• External incentives (External Intervention):
  – Positive & Negative: punishment & reward by others
  – Formal & informal: law & peer punishment/reward, disapproval/esteem (behavior is observed and evaluated by others)

• Internal incentives:
  – Guilt/pride: one’s own belief
  – Shame: fail to meet standards set by others
Why do we need external intervention?

- Norms may freeze the behavior in place. Individual agents have little control over social norms even when they wish these to be very different from what they are.
- To change norms, we face a collective action problem.
- External intervention may *facilitate* the changes.
  - Punishment/reward changes the cost and the benefit of the targeted behavior
  - A new law might change perceptions of what incurs disapproval and create a new basis for shame, especially when there is a norm of obeying the law
  - Public opposition of the existing norms becomes less costly
  - Change expectations
Remaining empirical questions:

How does punishment/reward affect behavior?
Outline

• How do (material) incentives affect individual behavior?
  – Normative model: traditional economic analysis of incentives
  – Why do incentives backfire?
  – Solutions (suggestions)?
• Expressive function of punishment
• Non-material incentives: shame punishment; social approval/disapproval
Traditional economic analysis

- Traditional economic analysis of law focuses on its role in changing the cost and benefit of targeted behavior: people are predicted to abide by the law if sanctions are sufficiently severe and tend to break the law if sanctions for doing so are too mild.
Why do (material) incentives backfire?

Fine is introduced

Fine is removed

Figure 1.—Average number of late-coming parents, per week
Why do (material) incentives backfire?

Reason 1: Crowding out effect
- Crowding out intrinsic motivation
- Crowding out image motivation

Reason 2: Negative intentions
Reason 1: Crowding out effect

A. Crowding out intrinsic motivation: When threatened by (monetary) punishment, people are likely to interpret the penalty as a price they can pay to support selfish behavior
e.g. tax compliance
Without the deterrence of punishment: social exchange (tax moral)
With the deterrence of punishment: market exchange (profit maximization)
Implications

• Design the punishment mechanism so that it is hard for people to perceive selfish behavior as acceptable as long as one pays the penalty.
  e.g. combine material punishment with nonmaterial punishment or reward (e.g. praise, approval/disapproval)

• Make the norm transparent to the community so that paying a penalty cannot excuse one’s misbehavior.
Reason 1: Crowding out effect

B. Crowding out image motivation: when observing a prosocial activity, the addition of extrinsic incentives makes it more difficult to answer the question: “Is the individual behaving prosocially to do good or to do well?”

e.g. introducing well-publicized and large tax benefit for hybrid car drivers

Without the incentive: the individual cares for the environment

With the incentive: dilute the signaling value of driving a hybrid car
Image Motivation and Monetary Incentives
(Ariely, et al, 2009)

- Experiment: work for charity (with vs. without incentives; in public vs in private)
Implications

It is important to take into account the visibility of the target behavior when designing incentive mechanisms.

e.g. following traffic rules on the road.

To promote visible compliance without crowding out image motivation, it may help to introduce public normative messages. e.g. address that following the rule is desirable both for one’s own and others’ safety.
Reason 2: Negative intentions

The introduction of punishment can be viewed as an hostile/unfair act.

- Punishment can lead to retaliation.
  - People are more likely to reciprocate to bad intentions from an out-group member than an in-group member.
Implications

• Rewarding good behavior

• Some empirical findings on the effect of reward
  – (Monetary) peer rewards alone are relatively ineffective.
  – Punishments help to eliminated extremely selfish behavior.
  – Combining rewards and punishments had the strongest effect.
  – The type of reward matters.
Implications

- Humans (especially, male) have an intrinsic desire for unique and displayable rewards.

Public goods game, Pan & Houser (2011)
“drive legally and earn money. Perfect!”
How can we make it fun to wash one’s hands?
Implications

• Communication in addition to punishment.
  e.g. “wipe the sink after use”
    “wipe the sink after use as a courtesy to the next passenger”

• Good communication is especially important when the environment involves complexity.
  e.g. child beating, child marriage
Outline

• How do (material) incentives affect individual behavior?
  – Normative model: traditional economic analysis of incentives
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• Expressive function of punishment

• Non-material incentives: shame punishment; social approval/disapproval
Expressive function of punishment

• The function of punishment in “making statements” as opposed to controlling behavior directly by changing payoffs.
E.g. laws forbidding the sale of children: children should be valued in a way that forbids the acceptance of cash as a reason for taking them out of parental care.

• What factors may influence the effectiveness of expressive function of punishment?
  – Implementation (public vs. private)
  – Procedural justice
Public implementation of punishment
The Kellogg Honor Code

All students enrolled in a course offered by the Kellogg School of Management agree to abide by the Kellogg Honor Code.

IV. Honor Code Chairs’ Reports

A. Public Statement on Violations

The chairs may consider submitting a public statement to the Kellogg community about the proceedings. This statement will not reveal any personally identifiable information regarding the parties involved, including the members of the hearing panel. This statement may only reveal:

B. Annual Report

The chairs will be responsible for submitting an annual overview to the Kellogg community. This overview should not include student names or other personally identifiable information. It is recommended that the overview be made available to the school prior to the election of the incoming chairs, and copies also be distributed to incoming One Year and Two Year students.
Punish in public

- Punishment promotes targeted norms to both punishment receivers and observers when it is implemented publicly.
- Social norms are more readily obeyed when they are more salient.
- Publicly implemented “weak” punishment might foster cooperation.
Public punishment in a public goods game
Expressive function of punishment

• The function of punishment in “making statements” as opposed to controlling behavior directly by changing payoffs.

• What factors may influence the effectiveness of expressive function of punishment?
  – Implementation (public vs. private).
  – Procedural justice.
Procedural justice

- People are more likely to comply with law if they view the law is just even though this contradicts their interests.

- Procedural justice: views about the law/authority are strongly connected to the judgments of the fairness of the procedures through which authorities make decisions.
Procedural justice

- What might influence people’s judgment about the procedural justice?

Example: rural migrant entrepreneurs’ disobedience to the business license requirement. A considerable proportion of these migrants rent licenses from the locals which is illegal. (He, 2005)
Procedural justice

• How the law is originated. Individuals’ opportunity to take part in the decision-making process: present their arguments, being listened to, having their views considered by the authorities…
  – Urban governments more or less represent the interests of local people.
  – The governments never consulted the migrants themselves. The migrants live and work in the city but they have little say in laws and regulations.
Experimental evidence

When communication is possible, people are less likely to use costly punishment and are more likely to accept unfair outcomes (e.g. Xiao and Houser, 2005).

- Anticipating receiving disapproval against undesirable behavior, people are less likely to misbehave. (e.g. Xiao and Houser, 2009)
Experimental evidence

“Achieving Compliance when Legal Sanctions are Non-deterrent” Tyran and Feld (2006)

When people vote for mild law, they are more likely to comply with it.

1. Participants expect higher compliance with mild law if many others express support for the law.

2. Participants are conditionally cooperative. That is, they tend to comply with mild law if they expect many others to comply.
Things to consider when implementing “consensual institutions”

Bad behavior may be less likely to be punished because:
- In some societies bad norms exist and good ones do not.
- It often takes time for the negative consequences of bad behavior to be visible/identified.
  e.g. open defecation,
- Uncertainty of the negative outcomes: bad behavior does not necessarily lead to bad outcomes.
  e.g. to give birth at home.
Procedural justice

• How the law is enforced. The law is not consistently enforced.

e.g. Sporadic campaigns are lunched to enforce the laws during politically sensitive periods, such as the meeting period of the national people’s congress.

“...I was walking on the street, on my way to buy some daily items. All of a sudden, some guys in uniform appeared in front of me and asked me for temporary resident permit. I did not have one at that moment. They just stuffed me into their car...” (Interview on Dec.15, 2002)
Outline

• How do material incentives affect individual behavior?
  – Normative model: optimal deterrence
  – Solutions?
• Expressive function of punishment
• Non-material incentives: shame punishment
Stop Crime with Sign "I am a Thief"

Former Texas judge, now Congressman, Ted Poe, was inspired to launch shame punishment in the late 1990's in Houston, when a rich kid getting his MBA shoplifted from a Wal-Mart. “He thought he could do anything,” Poe stated. “But shame punishment changed his attitude. Plus the store manager said that no one stole during the week that he was standing outside the store with the sign.

In more recent news, a judge in Alabama ordered two shoplifters to wear signs that read "I am a Thief, I stole from Wal-Mart." What was the reaction? Most of the comments from customers were positive, stated the manager.
Shame punishment

• Positive?
  – Less costly.
    e.g. no imprison cost
  – Chance of being punished by the legal system is small or misconduct is not deterred by court → informal sanction.
  – Cause the public to avoid the offender.
  – Deterrence: reputation, long-term cost.
    • What are situation that shame would work?
      e.g. commercial crime.
  – Avoid crowding out effect of fine?
Shame punishment

• Negative?
  – Hard to control, severity of punishment is unpredictable.
  – Negative effect on others (criminal’s families, friends…)
  – Observer’s moral judgment
    • Dignity (norm: treat criminals with respect?)
  – Likely to encourage deviant behavior:

Offenders cannot earn a living honestly → join gangs and earn their living through crime.

Being excluded from the dominant community, offenders must turn to a life of crime and form a deviant and hostile subcommunity.
Summary

• Punishment (and reward) can facilitate changes in norms and enforce conformity.

• Incentives can backfire. To design effective incentive mechanisms requires understanding how incentives influence behavior.
  – Why does punishment backfire?
  – How can we enhance the expressive function of punishment?

• Material and non-material incentives are complements in altering human behavior.