

The Dynamics of Norm Formation and Norm Decay

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Motivation

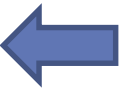
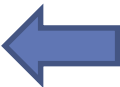
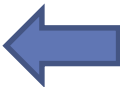
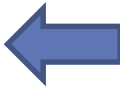
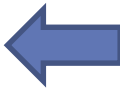
- Social norms are omnipresent and seem to permeate many domains of human social life.
- When legally codified they take the form of legal norms but many informal, non-legal, social norms exist. Examples are
 - Ten commandments
 - Gender relationships thoroughly permeated by social norms
 - Dress codes
 - Don't lie (honesty norm)
 - Keep your promises
 - Reciprocity norm
 - **Norms favoring participation in collective action & cooperation**

What exactly do we mean by a social norm?

- Social norms are *commonly known standards of behavior that are based on widely shared views of how individual group members ought to behave in a given situation.*
- Three crucial features
 - Applies to a particular group and to a particular situation
 - Not defined in terms of actual behavior but in terms of a normative behavioral standard («how group members **ought** to behave»)
 - Widely shared (i.e., approved) and this is commonly known

Many questions for which we have only scarce empirical evidence

1. How and when do such normative standards of behavior emerge?
2. How are they maintained and when do they decay?
3. Does the existence of a normative standard have an **independent causal effect** on the type of behavior that is demanded by the norm?
4. If so, why does the social norm exert a causal effect?
 - Because the standard generates a compliance motive (e.g., seeking others' approval) or is based on simple conformity motives or because the standard acts as an equilibrium selection device
5. Do norm violations undermine or change the normative standard and the extent to which it is widely shared?
6. Does the standard also affect informal norm enforcement behaviors?
7. Does it affect responses to norm enforcement behaviors?



Public good experiment to study some of these questions

- Repeated public goods game for 15 periods
- In all treatments
 - 4 group members
 - **Zero contribution** is maximizes an individual's payoff at the contribution stage of the game regardless of others' contributions
 - **Maximum contribution** maximizes overall group payoff
- Depending on treatment up to four stages per period
 - I. Norm Formation
 - II. Contribution to Public Good
 - III. Punishment
 - IV. Counter-Punishment

Requirements for a norm formation opportunity

- Should provide a measure of a «normative standard» related to cooperation levels
- Should provide a measure of how widely the standard is shared («agreement on the standard»)
- Face-to-face communication not ideal because of many potential confounds
 - Does not yield a clearly measureable normative standard
 - Ex-post side payments
 - Lifting of personal identity (reputational issues)
 - Sympathy, antipathy, etc.
- Anonymous or merely numerical communication also does not provide a clear measure of what is normatively approved

Norm Formation Opportunity

Subjects answer the following question at the norm formation stage:

“In your opinion, how many tokens **should** each group member contribute to the project?”

- By asking subjects about what everybody **should do** they indicate an individual normative standard

Group mean of answers is conveyed to the whole group:

“According to the average opinion of your group each group member should contribute the following number of token:”

- **Enhances a shared understanding about appropriate actions**

 **Facilitates key aspects of a social norm: normative standard and its shared understanding**

Experimental Design – Treatments

Norm Formation Opportunity stage 1

present

absent

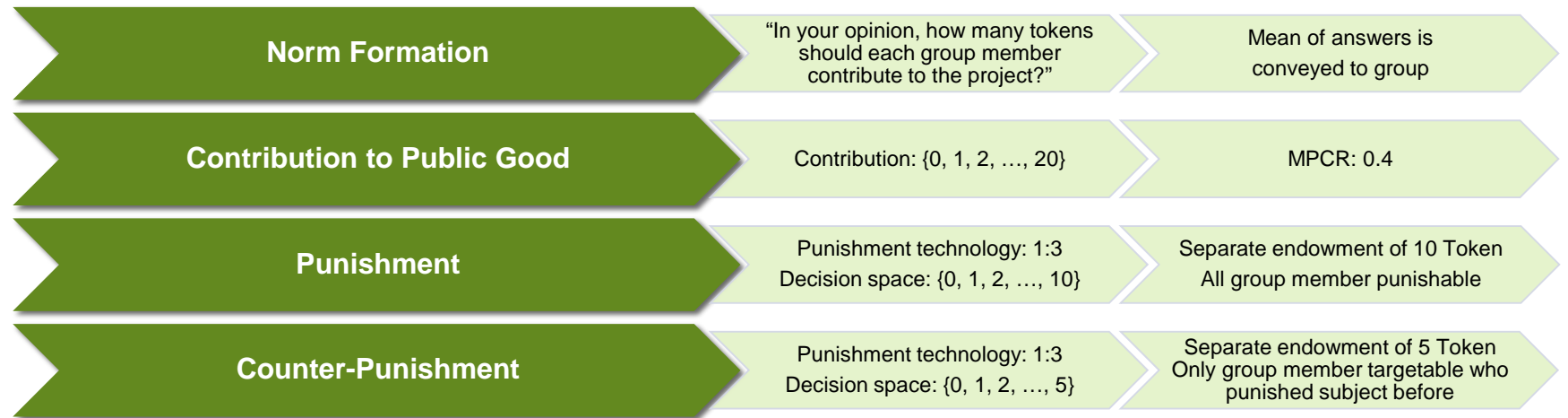
**Punishment &
Counter-Punishment**
stages 3 and 4

present

absent

| | |
|--------------|----------------|
| NF | noNF |
| NFnoP | noNFnoP |

NF

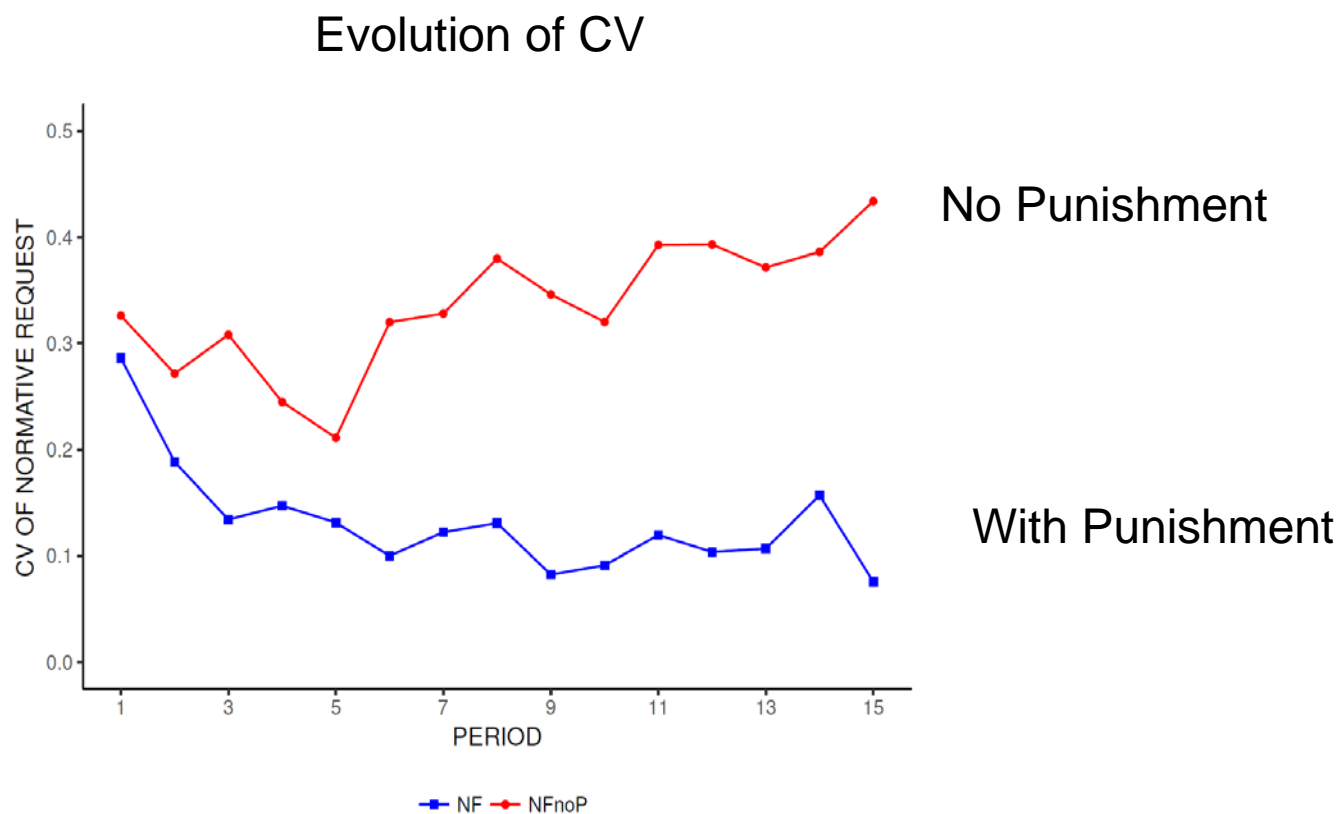


Repeat for 15 periods

What are the conditions under which a stable and widely shared normative standard emerges?

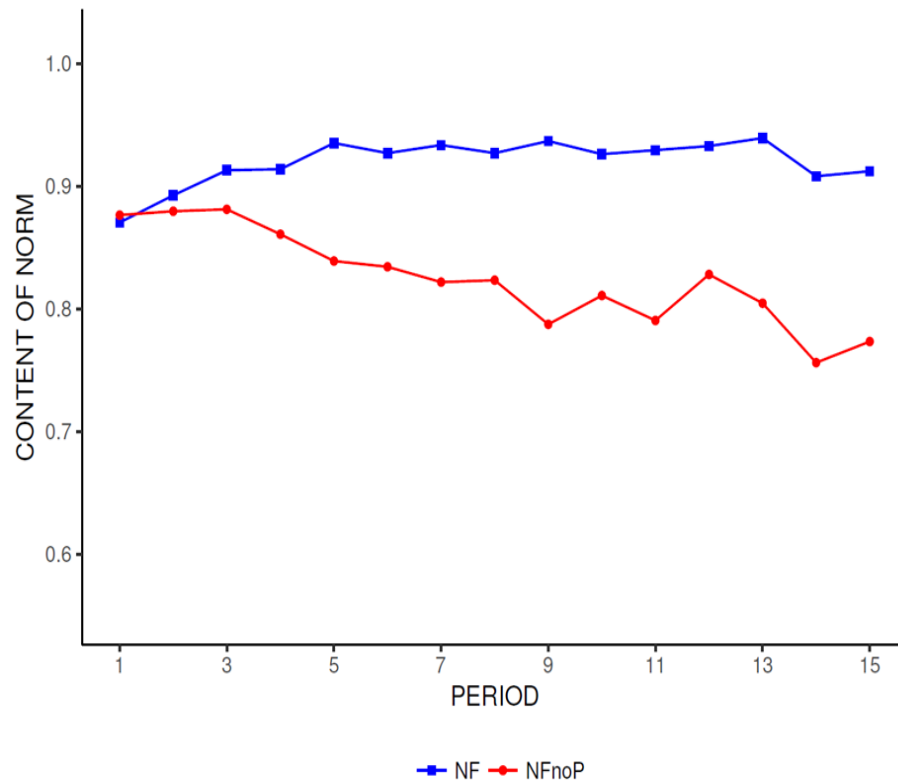
- Interpret the average normative request as the normative behavioral standard
 - Clearly the best candidate for a normative standard
 - We provide an **independent validation** of this interpretation with additional experiments that directly elicit the normative appropriateness of different cooperation behaviors
- Examine the movement of this normative standard over time
- Examine the degree to which group members agree with («share») the standard

Does a shared agreement on a normative standard emerge over time?



- Emergence of a strong social consensus with punishment opportunities
- Strong disagreements emerge w/o punishment opportunities

How does the normative standard evolve over time?

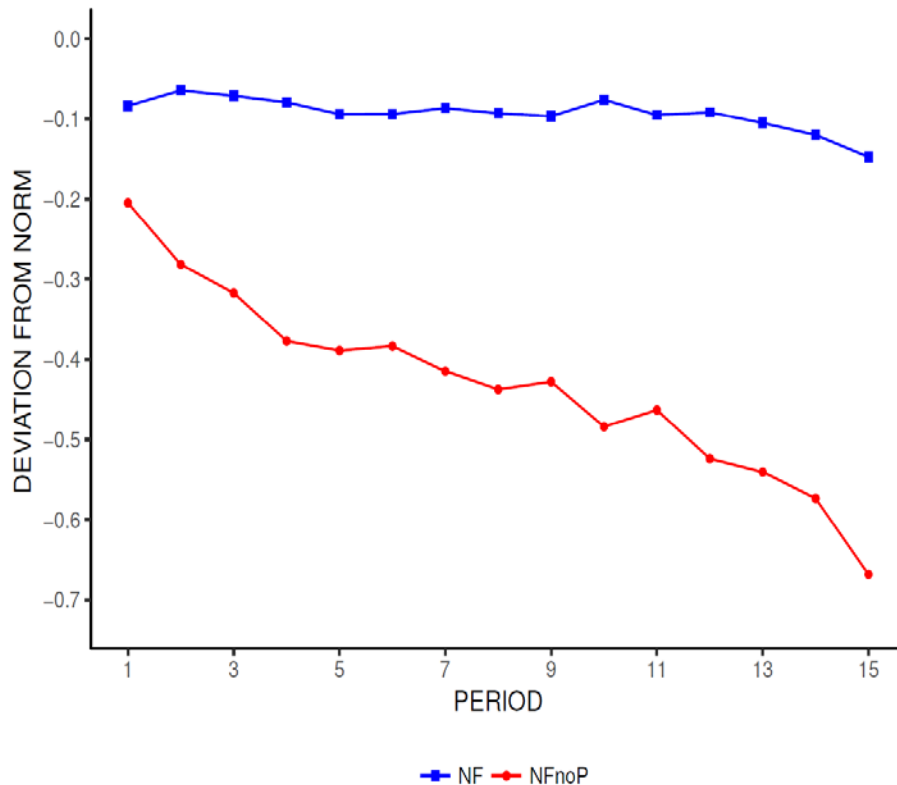


- With punishment
 - Close to full cooperation is requested
- W/o punishment
 - Relatively lenient average requests




When punishment opportunity exists, significantly *more demanding* and *more stable* social norm emerges

Do subjects obey the normative standard?



- Strong obedience to the demanding norm under punishment opportunity
- Strong disobedience to an already lenient standard w/o punishment opportunity

The dynamics of norm decay & norm maintenance

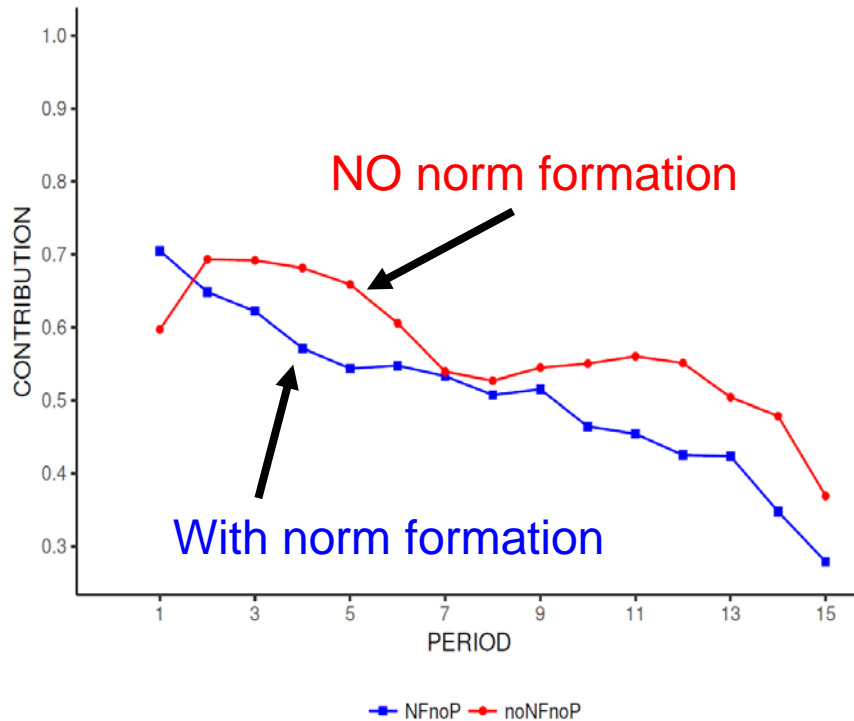
- Initially, there is a high normative standard with a fair amount of disagreement in both treatments
- This normative standard is immediately violated significantly **without** punishment opportunities which
 1. triggers further norm violations
 2. a decline in the normative standard
 3. disagreement about the normative standard
 -  each one of these factors triggers further norm violations and decreases in contributions
- With punishment opportunities **the forces described in 1. & 2. are also operative** but they are counteracted by the punishment activities of group members and a strong agreement about the normative standard

Does the norm formation opportunity have a causal impact on behavior?

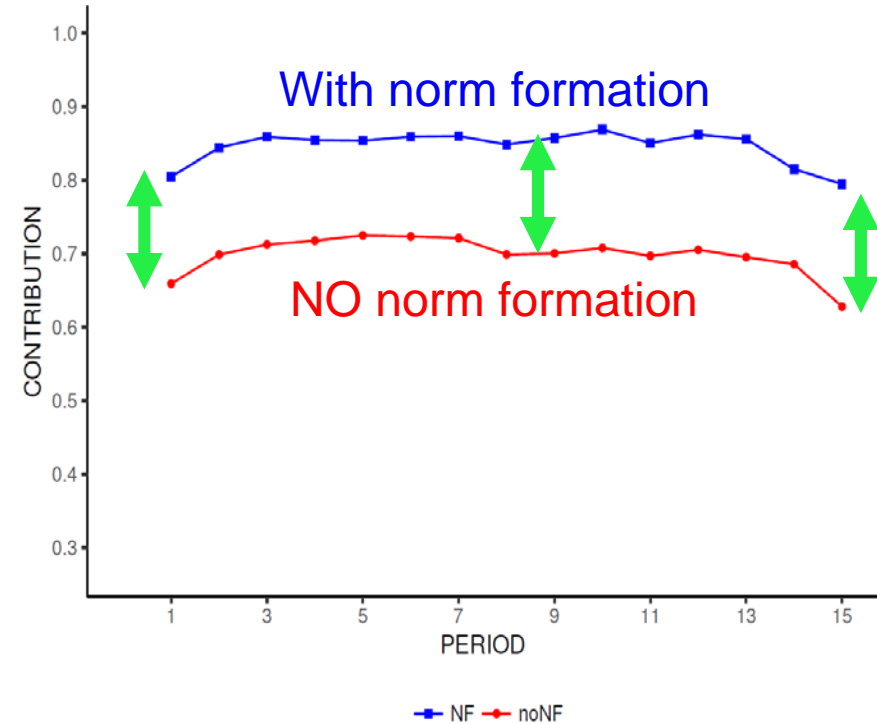
- Previous results are consistent with the view that normative requests cause behavioral changes
- But sceptics may not yet be convinced
- Therefore, examine the **causal impact** of the **norm formation opportunity** on
 - Contributions
 - Punishment of free-riders and its effectiveness in reducing free-riding

The behavioral effects of the norm formation opportunity on contributions

punishment opportunity **absent**

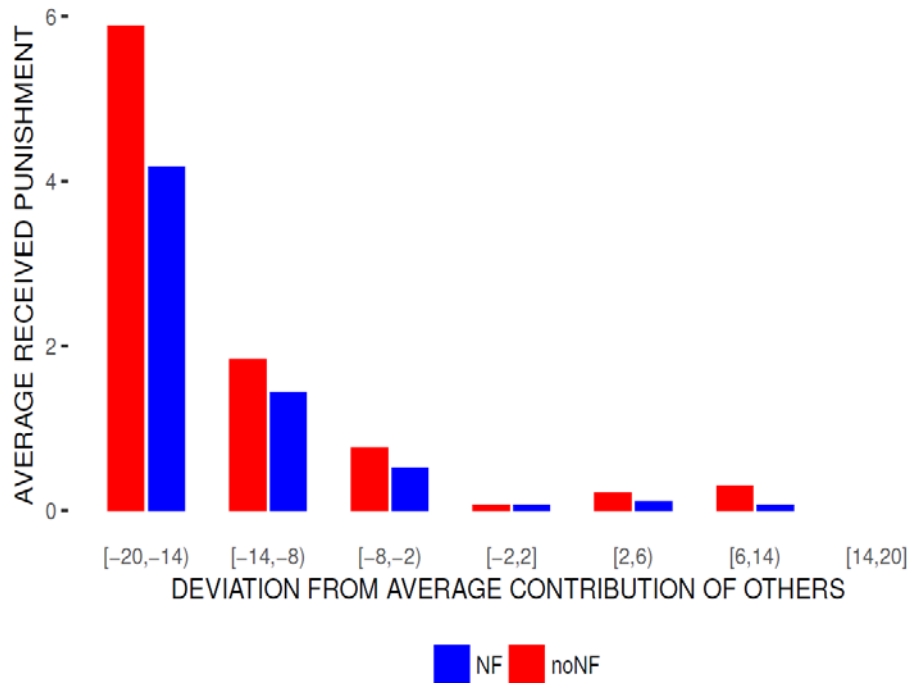


punishment opportunity **present**



- **No causal effect without punishment: normative standard does not overcome the forces pointing towards the decay of cooperation & norm compliance**
- **In contrast, the punishment opportunity enables to overcome these forces**

How does the norm formation opportunity affect punishment behavior?



- Norm formation **decreases** punishment of free-riding but nevertheless increases cooperation
- Slightly **decreases** «perverse» punishment of above-average contributors
- The higher the average contribution of the players not targeted for punishment the more the target is punished (keeping the targets deviation constant)
- Peer-punishment becomes more effective and stronger for higher average cooperation levels

Summary

1. Developed a simple method that provides a measure of social norms and how it changes across time and environmental conditions
2. Enables the study of the evolution of norms and their causal impact on cooperation, punishment & norm obedience
3. Initially a demanding normative standard emerges that is, however, subject to a fair amount of disagreement
4. Punishment opportunities gives rise to a stable and demanding social norm that is largely obeyed
 - disagreement quickly vanishes
 - stable and demanding social norm emerges & is largely obeyed
 - Higher cooperation at lower punishment of free-riders
5. Without a punishment opportunity
 - Disagreement about the normative standard increases over time
 - Steady decline in the normative standard
 - Even bigger decline in the obedience to the normative standard
 - Norm formation opportunity has no impact at all on actual cooperation

THANK YOU FOR YOUR ATTENTION