

Social Norms and Norm Dynamics

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Norm: *A standard, a type; what is expected or regarded as normal; customary behavior.*

Oxford English Dictionary

Examples

- Table manners
- Queuing
- Avenging an insult
- Not littering
- Tipping
- Keeping to the left side of the road (but to the right in a stairwell)
- Looks: body weight
- Professional standards: medical treatment

What holds norms in place?

I. Coordination motive

- examples: keeping to the right, transacting business with dollar bills instead of glass beads...
- an equilibrium *at the population level*
- there is no need for third-party punishment
- these are sometimes called *conventions*

II. Fear of third-party punishment

- Social ostracism if you fail to avenge an insult to your sister
- Raised eyebrows if you eat peas with your fingers

III. Adherence to internalized values

- Littering is wrong
- Failing to tip is ungenerous
- Being overweight is unattractive

Violating the norm triggers feelings of shame, guilt, or impairs one's self-image

Norm dynamics

There is a positive feedback loop from behaviors in a reference group to expectations among individuals in that group about the behaviors that are appropriate or desirable

The payoff to an individual from taking an action is increasing in the prevalence of that action among members of one's reference group

What triggers norm shifts?

1. Technological change

- A new medical treatment is introduced that shifts standards of professional practice
- The price of food falls, leading people to eat more and become heavier on average
- Agriculture becomes mechanized, leading to a change in the relative factor productivities of labor and land.

2. Social spillover effects

A technological change (e.g., the birth control pill) leads to changes in social norms regarding age of marriage, number of children, and female labor force participation

3. Idiosyncratic deviations by individuals

This process is difficult to identify because the triggering events tend to be small and isolated, like mutations in biological evolution

(A documented example would be Rosa Parks refusing to sit at the back of the bus – she deviated from a prevailing norm and the deviation helped trigger a norm shift.)

An illustrative model: contractual norms in agriculture

A landowner (the principal) negotiates a contract with his tenant (the agent). In practice, the only contracts used are:

Rent: the tenant rents the land at a negotiated price per acre

Share: the tenant receives a negotiated proportion of the gross output

A 'Chicago' model

The landlord makes a take-it-or-leave-it share offer to the tenant. The tenant accepts if and only if the expected payoff exceeds his reservation wage (say at a local factory job)

Prediction: the share depends on the productivity of the land, the ability of the tenant, and the reservation wage

Incorporating norms

The landlord realizes that the tenant expects a share that is consistent with the shares of other tenants in the area.

If the tenant is not offered a normal and customary share, he may accept but be resentful and difficult to deal with.

There are n farms

Each farm i is identified with the vertex of a graph

N_i is the set of neighbors of i

X is a finite set of possible share contracts

$x \in X$ is the tenant's share, $1 - x$ the landlord's share

A *state* of the process is a choice of contract

on each farm: $\mathbf{x} \in X^n$

w_i = reservation wage at location i

s_i = soil productivity at location i

Adjacency indicator

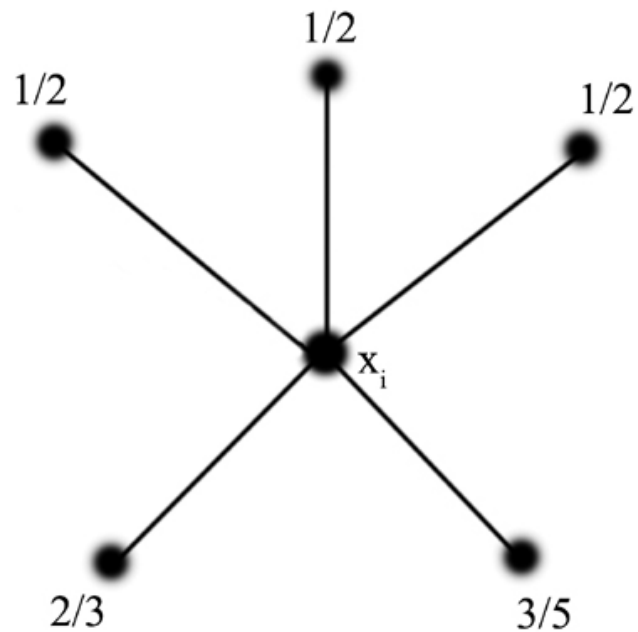
$$\delta(x_i, x_j) = 1 \text{ if } x_i = x_j$$

$$\delta(x_i, x_j) = 0 \text{ if } x_i \neq x_j$$

Expected payoff to landlord from contract x_i :

$$\begin{aligned} u_i(x_i, x_{-i}) &= (1 - x_i)s_i + \gamma \sum_{j \in N_i} \delta(x_i, x_j) \text{ if } x_i s_i \geq w_i \\ &= 0 \text{ if } x_i s_i < w_i \end{aligned}$$

Conformity part of payoff function



$$e(\mathbf{x}) = (1/2) \sum_{i \neq j} \delta(x_i, x_j)$$

= # neighbor-pairs choosing same contract

$$r(\mathbf{x}) = \sum_i (1 - x_i) s_i = \text{total rent to landowners}$$

$$\rho(\mathbf{x}) = r(\mathbf{x}) + \gamma e(\mathbf{x}) = \text{potential function}$$

Stochastic adjustment process

- One farm is chosen at random each period
- Contract there is renegotiated
- Probability of choosing a given contract is log-linear in its expected payoff conditional on neighbors' choices

$$P[x_i = x] = \frac{e^{\beta u_i(x, x_{-i})}}{\sum_{y \in X: y s_i \geq w_i} e^{\beta u_i(y, x_{-i})}} \text{ if } x s_i \geq w_i$$
$$= 0 \text{ otherwise}$$

Let $X_i = \{x \in X : xs_i \geq w_i\}$, $\tilde{X} = \prod_i X_i$

The long-run probability of being in state $\mathbf{x} \in \tilde{X}$ is given by the Gibbs distribution

$$\mu(\mathbf{x}) = \frac{e^{\beta[r(\mathbf{x}) + \gamma e(\mathbf{x})]}}{\sum_{\mathbf{y} \in \tilde{X}} e^{\beta[r(\mathbf{y}) + \gamma e(\mathbf{y})]}}$$

Empirical estimation

Use event data on contract choice to estimate a logit model conditional on neighbors' contract choices, landlord's expected income under the contract, local wages, etc.,

Qualitative Behavior

Assume γ , β , and n are large.

- Most probable states involve regional customs that mask local heterogeneity in soil quality
- Areas with high *average* soil quality tend to have offer shares for tenants (as a neoclassical model would predict)
- Boundaries between regional customs can be quite sharp, and the change in custom across the boundary quite large

Summary

- Norms tend to exhibit long periods of stasis punctuated by sudden shifts (*punctuated equilibrium*)
- Locally norms induce excess uniformity that masks individual heterogeneity (*conformity warp*)
- Norms may differ markedly among regions and groups (*local conformity/global diversity*)

References

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