

Discussion – Tavoni, Schlüter, and Levin’s *Survival of the Conformist*



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Survival of the Conformist



- This paper asks a very interesting question.
- Should we expect to see conformism in common pool resources in which punishment is possible?
- Or should we expect a polymorphic population?
With a fraction following the norm and the rest deviating but being punished enough that it is only just worthwhile to deviate.

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- What is the prediction of the paper? Conformism or polymorphism?
- In the first model, the defector effort level is left exogenous.
- When it is low, there is monomorphism with everyone adhering to the norm. (I am ignoring the all-defect outcome, as uninteresting.)
- When it is high, there is polymorphism.

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- In the model with endogenously varying effort levels, I couldn't tell what the prediction was from the paper.
- It seemed to suggest monomorphism, except possibly for a small range of the (unexplained) delta parameter.
- I am not wholly comfortable with this model.

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- On the one hand, punishment isn't costly in the model. Why not?
- I think the rationale for this is that we have evolved (biologically) to have some degree of group loyalty. So we are willing to punish on behalf of the group.
- But then, we need to know what “on behalf of the group” means. How do groups arrive at this?
- By a process or reasoning based on what is thought to be good for the group.

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- So to have a model in which the “norm” is whatever one player in a random match does, doesn’t take the deliberative part of decision-making seriously enough.
- I would prefer to see a model in which the *norm* is set exogenously (by the reasoning of the group as to what is socially beneficial) but agents’ effort level evolves. Then, punishment is always relative to deviation from the norm.
- Would such a model deliver polymorphism? I’d like to know the answer.

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- Turning to the data, do we see polymorphism of the sort described in the paper in the world?
- My reading of Ostrom's (1990) book is that the answer is mostly no. She describes punishments as being mostly nominal. These are intended to serve as warnings. (In recognition of fact, the payoff to defection may be very high for some people when the resource has suffered a negative shock.) Serious punishments are very rare.
- This doesn't fit well with the model of polymorphism in the paper.

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- On the other hand, perhaps this question simply hasn't been examined carefully enough.
- It certainly seems to be the case that people are dissatisfied with the way Village Forest Councils in the Indian central Himalayas function. This, in part, reflects rule violations. (Rinki Sarkar, EPW, 2008).
- I find the same thing in data I collected with some collaborators in a project on social capital (in progress).

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- On the other hand, the distribution of forest cover in Village Council Forests is distinctly bi-modal with peaks at the extremes. (Online Data Appendix to Somanathan et al, PNAS, 2009), while that of government forests is uni-modal. This seems to suggest conformism.
- It could, of course, be the case that the right-hand peak is associated with polymorphism, since forest cover doesn't capture all relevant characteristics of the forest.
- Baland et al (in press) find that lopping damage is not well-captured by crown cover.



- **Turning to the modeling of resource variability: One feature that may be important is that when the resource stock falls, the norm may be adjusted downwards. The marginal utility of withdrawals exceeding the norm may then become very high, particularly for some users. This would work in the opposite direction from the effect supposed in the paper.**