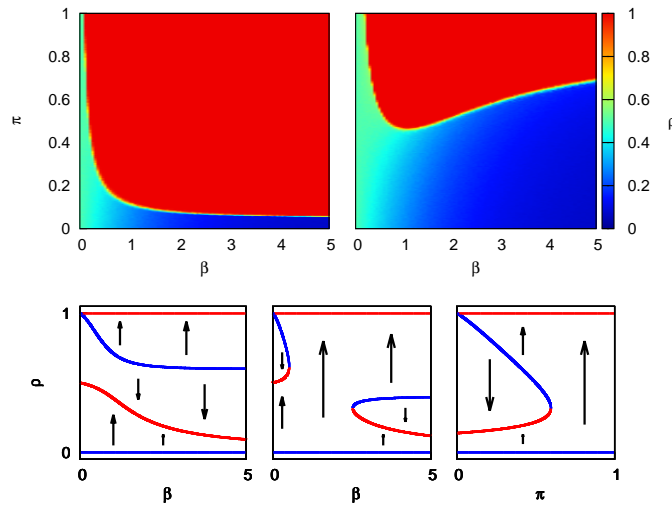


ESCAPING THE TRAGEDY OF THE COMMONS THROUGH TARGETED PUNISHMENT

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It is well known that cooperation in many settings can be maintained thanks to the possibility of punishment, but achieving global cooperation in the first place is much more difficult. The figure shows the stationary proportion of cooperators, ρ , in a simple ‘social dilemma’ model against rationality, β , and the level of punishment, π . The difference between the top two panels is in the initial conditions: all cooperate (left), or all defect (right). The panels below show stability analysis for $\pi = 0.4$, $\pi = 0.6$, and $\beta = 2.5$. I describe strategies of ‘targeted punishment’ whereby a small number of punishers can shift a population of defectors into a state of global cooperation [1]. Might such a strategy help us to combat climate change?



[1] S. Johnson. Escaping the Tragedy of the Commons through Targeted Punishment. Submitted to Nature.