



# Learning to play public good games

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We extend recent analyses of stochastic effects in game dynamical learning to cases of multi-player games, and to games defined on networked structures. By means of an expansion in the noise strength we consider the weak-noise limit, and present an analytical computation of spectral properties of fluctuations in multi-player public good games. This extends existing work on two-player games. In particular we show that coherent cycles may emerge driven by noise in the adaptation dynamics. These phenomena are not too dissimilar from cyclic strategy switching observed in experiments of behavioural game theory.

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