NON-AMENABLE ACTION AND GAMES

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Strategies in a game are a way to colour or partition a probability space, and when they are in equilibrium they obey certain rules. We demonstrate a Bayesian game, constructed through non-amenable action, that has no epsilon-equilibria for small enough epsilon, however does possess a non-measurable equilibria. We conclude with rules for colouring probability spaces which can be satisfied but only in ways that cannot be measurable with respect to any finite additive extension.