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*Entanglement in non-local games*

Non-local games are an operational interpretation of Bell scenarios in which the players, who are unable to communicate while the game is in progress, try to maximize the probability that they win at a simple cooperative game. Let  $E(\epsilon)$  be the amount of entanglement required by the players to play a non-local game  $\epsilon$ -optimally. Can we find non-local games where  $E(\epsilon)$  grows very fast as  $\epsilon \rightarrow 0$ ? So far, the best examples are games where  $E(\epsilon)$  grows sub-exponentially, i.e. like  $2^{Cn}$  for some constant  $C$ . I'll explain how to get a two-player game of this type by constructing a group with (at least) sub-exponential hyperlinear profile.