Newcomb's Problem and Repeated Prisoners Dilemmas

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Abstract

I present a game-theoretic way to understand the situation describing Newcomb's Problem (NP) which helps to explain the intuition of both one-boxers and two-boxers.
David Lewis has shown that the NP may be modelled as a Prisoners Dilemma game (PD) in which 'cooperating' corresponds to 'taking one box'. Adopting relevant results from game theory, this means that one should take just one box if the NP is repeated an indefinite number of times, but both boxes if it is a one-shot game. Causal decision theorists thus give the right answer for the one-shot situation, whereas the one-boxers' solution applies to the indefinitely iterated case. Because Nozick's set-up of the NP is ambiguous between a one-shot and a repeated game, both of these solutions may appear plausible – depending on whether one conceives of the situation as one-off or repeated.
If the players' aim is to maximize their payoffs, the symmetric structure of the PD implies that the two players will behave alike both when the game is one-shot and when it is played repeatedly. Therefore neither the observed outcome of both players selecting the same strategy (in the PD) nor, correspondingly, the predictor's accurate prediction of this outcome (in the NP) is at all surprising. There is no need for a supernatural predictor to explain the NP phenomena.

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