

sci.logic: Nim morphs that have draws Re: There exists a Nim version that is a "draw" OS

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Fri, 9 Jul 2004 15:40:54 -0700 someone wrote:

>>
>> *How do you draw in a game where there is progress made in every move*
>> *and the last one to pick an object loses?*
>>
>
> *Simple! Start with aleph-naught lines and each move consists of erasing a*
> *finite number of lines.*

This question of a draw in Nim, whether in the game itself or the idea of a draw being where either first player or second player can win in the OS. Apparently the game with its rules has only a winner and no draws. Can we consider a Draw OS as one in which either player can win, not just the second player always winning.

I wonder if Nim is really a VonNeumann gametheory with its minimax theorem. Could it be that checkers and chess are truly VonNeumann games but that Nim is not?

Suppose the game tictactoe when created was a game where its rules had it that player with first move makes an X, one X and player with second move makes an O but four Os, and otherwise regular tictactoe rules. This tictactoe morph is a assured win for O in the OS. It is somewhat analogous to Nim in that second player always wins in the OS and where there never exists a draw in this morphed tictactoe. Now is this morphed tictactoe a game under VonNeumann gametheory. I would guess yes.

I would guess yes that Nim is a VonNeumann gametheory game, even though it never allows for a draw.

So, what should I conclude from this. I think I should conclude that we would be repulsed by such a game of tictactoe-morph where second player has 4 first moves and is forced to win on his next move if he does not want to win on his initial move and it is irrelevant where X player puts his X or Xs. I would conclude then that a alteration of those rules exist to create a Tictactoe

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Likewise for Nim, I would conclude from that example that Nim at present is a slanted game in that it has no draws and it forces second player to always win in the OS of Nim. Therefore, I would conclude that a Nim-morph exists such that either first move player or second move player can win and yet still no draw in the actual game itself. And this brings up a tantalizing question for Gametheory, on whether you can have a VonNeuma