

sci.math: 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 VonNeumann game where either first mover or second mover can win in the OS of that game yet still the game has no draws???

Very tough question.

And further, that another Nim-morph exists where it actually has draws in the game itself and that the OS of this Nim-morph is a draw.

So the tictactoe morph and Nim raises the question of whether you can have a VonNeumann gametheory game that has no draws and that has a assured win in OS, and whether there is a morph where you can have no draws in the game but that either player can win and finally have a Nim morph where you have draws inside the game and a draw OS.

Maybe my memory of Nim is so poor and outdated that I have raised vacuous questions.

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whole entire Universe is just one big atom where dots
of the electron-dot-cloud are galaxies