

## is there a Great Attractor in Gametheory of VonNeumann?? Re: There exists a Nim version that is a "draw" OS

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**Date:** 07/11/04

Date: Sun, 11 Jul 2004 13:55:07 -0500

Sat, 10 Jul 2004 15:24:42 -0500 Archimedes Plutonium wrote:

> *Sat, 10 Jul 2004 13:16:51 -0500 Archimedes Plutonium wrote:*

>

>> *10 Jul 2004 00:25:53 -0700 Jan Kristian Haugland wrote:*

>>

>>> *A combinatorial game such as Nim can not be a draw.*

>>> *Here is a distant relative that can be a draw:*

>>>

>>> <http://home.no.net/zamunda/split.htm>

>>

>> *I beg to differ.*

>>

>> *Yesterday I was working on a game of Nim, a morph of Nim where there are*

>> *no draws in the game itself but where either player can win in the OS*

>> *and not automatically that one player always wins the OS. Call it a*

>> *pseudodraw.*

>

> *The minimax theorem says a singular point. Thus a pseudodraw is*

> *nonexistent.*

>

> *Unless there is a draw within the game itself can the OS be a draw.*

>

>>

>>

>> *Secondly, I was looking for another Nim morph where it actually has a*

>> *draw within the game itself and the OS is a draw.*

>>

>> *Thirdly I was looking for a Tictactoe morph that was not a draw in the*

>> *OS and where either X or O can win in the OS. Call it a pseudodraw.*

>>

>> *Here is what I come up with:*

>>

>> *Nim-morph with pseudodraw OS: Let me call the person with first move as*

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> > *white and let me call the person with second move as black. The first  
> > move in this game is not the removal of any matchsticks but is the  
> > actual layout of the number of rows and the number of matchsticks within  
> > each row. Black then proceeds as in normal nim. I contend, thence, that  
> > this nim morph will end up as a win for one of the players but not  
> > automatically the black player (provided regular nim is considered a  
> > loss for the one who is forced to pick up the last matchstick).*

>  
> *This is a erroneous claim. Even if I added the rule that only one or two  
> matchsticks can be removed per move.*

>  
>>  
>>

> > *Nim-morph with a Draw in the game itself: This is where white with first  
> > move determines the number of rows of matchsticks and the number of  
> > matchsticks in each row. And finally, determines that at least one row  
> > is a "Draw row" so that if this row or any of its matchsticks is picked  
> > up last then the entire game is a draw.*

>  
> *This is possible. It perhaps needs the rule of only one or two matchsticks  
> removed per move.*

>  
>>  
>>

> > *TicTacToe-morph with pseudodraw OS: this one was a tough one to work out  
> > last night. I would have thought that Nim was going to be the tougher  
> > challenge. We have several rule changes to normal tictactoe. Call the  
> > first mover as X and the second mover as O. In this morph, O gets two  
> > first moves so that at the end of the game there will be five O on the  
> > board to four X. And the other change in rule is that if there are no  
> > three-in-a-row for a outright win then the win goes to the person who  
> > has the most two-in-a-row. Now I have not fully played out all the  
> > consequences. But I suspect, not sure of this suspicion, that the OS of  
> > this morph tictactoe is a win for either X or O or a pseudodraw. And  
> > that every game played of this morph will produce a winner whether it be  
> > X or O.*

>>  
>

> *Trouble with whether "end row middles" would count as 2-in-a-row rather  
> than having only "shortened 3-in-a-rows" count as 2-in-a-row. When X makes  
> first move with placing an X in center square then X has the most  
> 2-in-a-row unless we count end-row-middles as 2 in a row for O.*

>

> *Here again, the concept of Pseudodraw is erroneous, and that unless a draw  
> exists in the game itself can the OS be a draw. And the minimax theorem  
> says as much.*

>  
>>

> > *Now, the most important aspect of the above, if true, implies that there  
> > exists a Pseudodraw for the games of checkers and chess, but more  
> > importantly, that those games OS is a draw with their current and*

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- > > *present rules.*
- >
- > *But the above is not all lost and wasted. I can salvage the idea that to*
- > *make Nim a draw is to add the rule that the player with first move decides*
- > *the arrangement of how many rows and number of matchsticks per row and*
- > *which row is the "Draw" row.*
- >
- > *The implications for chess and checkers still remain. That if a game has a*
- > *draw possibility, then the OS of that game ends up into that draw play.*
- >
- > *Nim OS is a win for one of the players always, well, because there is no*
- > *draw possibility while playing the game.*
- >
- > *I never played Go. I suspect it has a draw possibility. If it does, then*
- > *that is its OS-- a draw. Chess has a draw possibility, thus chess OS is a*
- > *draw.*
- > *This claim can be made into a assertion and then a theorem.*
- >
- > *Devise a game that is a VonNeumann game which has a draw possibility but*
- > *has a nonDraw OS. Nim has a nondraw OS but nim has no draw within the game*
- > *itself. So when we inject a draw possibility into Nim then does the one*
- > *player always win the OS??????*
- >

Initially I was tempted to call a draw game in any VonNeumann game as a gravity attractor such as gravity equilibrium or gravitational center so that if you introduce a "draw game inside of Nim" that the OS of Nim shifts and then becomes something different from its automatic win for second player. That the moment you introduce a possible draw game that the entire OS of Nim shifts and becomes that draw end result.

But there is another concept in physics that is like gravitational attraction. And I suppose a "good physicist" not the usual run of the mill sort can tell you the conceptual difference between gravity attraction and Great Attractor in chaos theory.

I like to think of Great Attractors in EM of electricity and magnetism.

Anyway, Nim is VonNeumann gametheory and the OS is a certain victory for second player. But introduce just one possibility of a draw outcome, then, does the entire OS of this Nim change to the draw outcome? As like a Great Attractor, the draw outcome forces itself as the Optimal Strategy.

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

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