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So Long Sucker: 2-player, 2-color case

So Long Sucker is a 1950 strategy board game developed by mathematician John Forbes Nash Jr. and his colleagues. It has a simple layout consisting of 4 players with k chips each of their designated color, and a board consisting of r empty rows. With a clear setup comes intricate rules that allow the game to reflect real life negotiations and conflicts between multiple parties. It is a useful tool to study players' behaviors in situations that involve individual and group decisions.

The set of rules is very distinctive: players take turns but not in a fixed order, agreements can be made and broken at any time, and a player can win the game even if they are out of chips. One of the main points of interest in studying this game, is to study when a player has a winning strategy.

The game starts off with four players that get eliminated one after the other until only the winner is left. Thus in order to study winning strategies, it is of interest to look at endgame situations; particularly when there are only two players left in the game. During this talk, we will present a particular setup of the game: there are two players, first player Blue and second player Red, and their respective colors left in play. We will show through inductive reasoning, how we are able to characterize Blue's winning strategies.