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Sheldon Ross*, smross@usc.edu, and **Yang Cao**, cao573@usc.edu. *A winner plays model.*

Two of a total of n players play a game, with the loser then joining the queue and the winner staying to play a game against another player, chosen according to probabilities depending on how long the players in queue have been waiting. Player i has value v_i and when i plays j , i will win with probability $v_i/(v_i + v_j)$. Among other things we determine the proportion of all games played that are won by player i . (Received September 18, 2017)