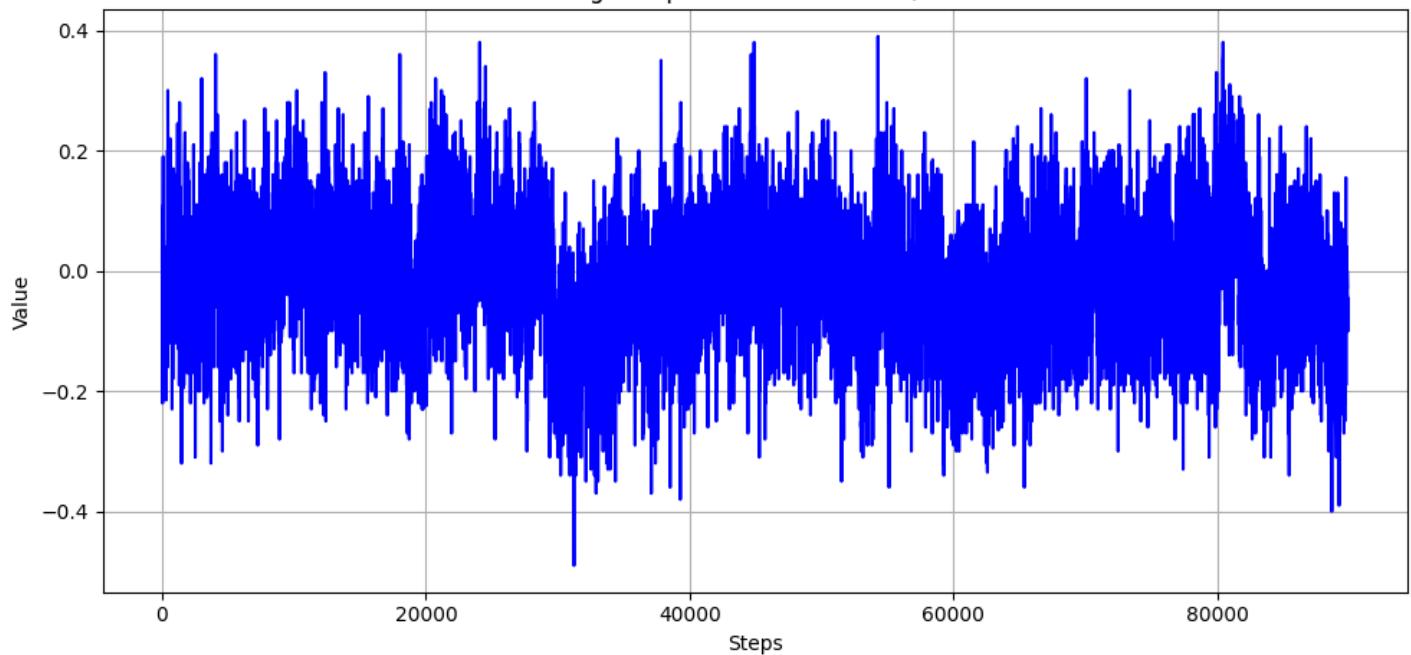
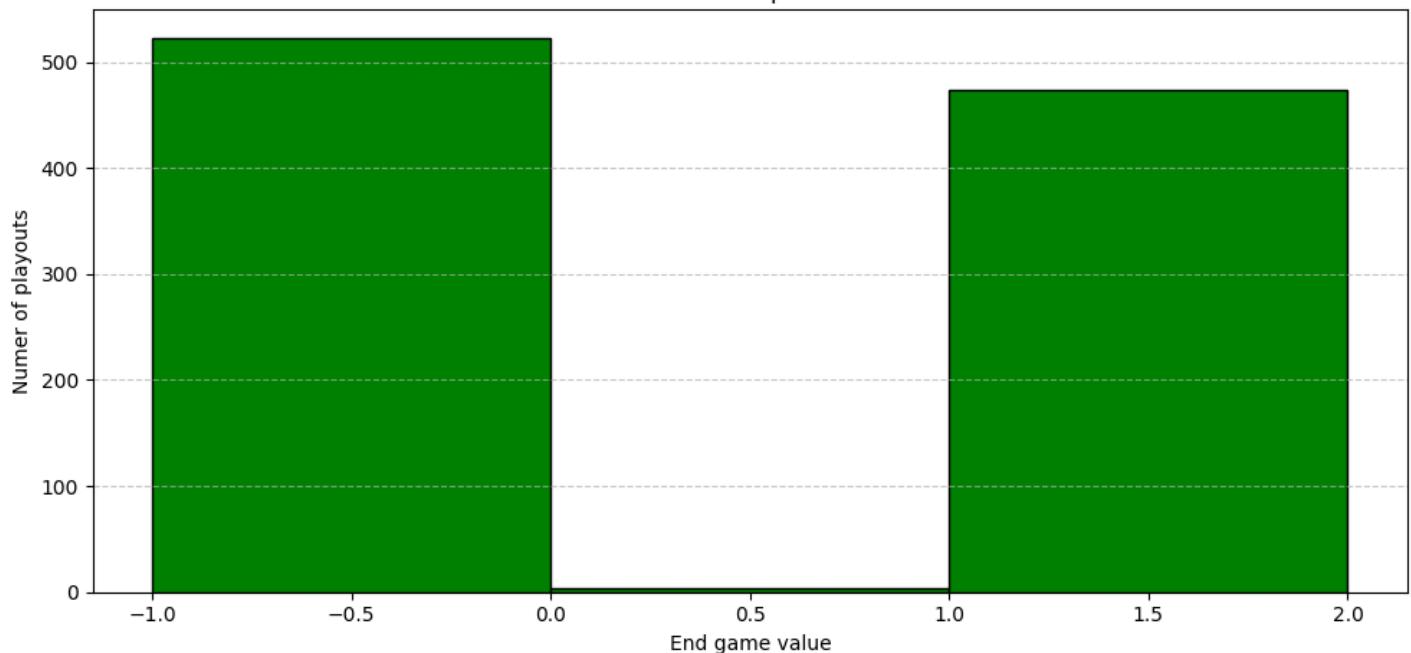


agent episode returns mean/0



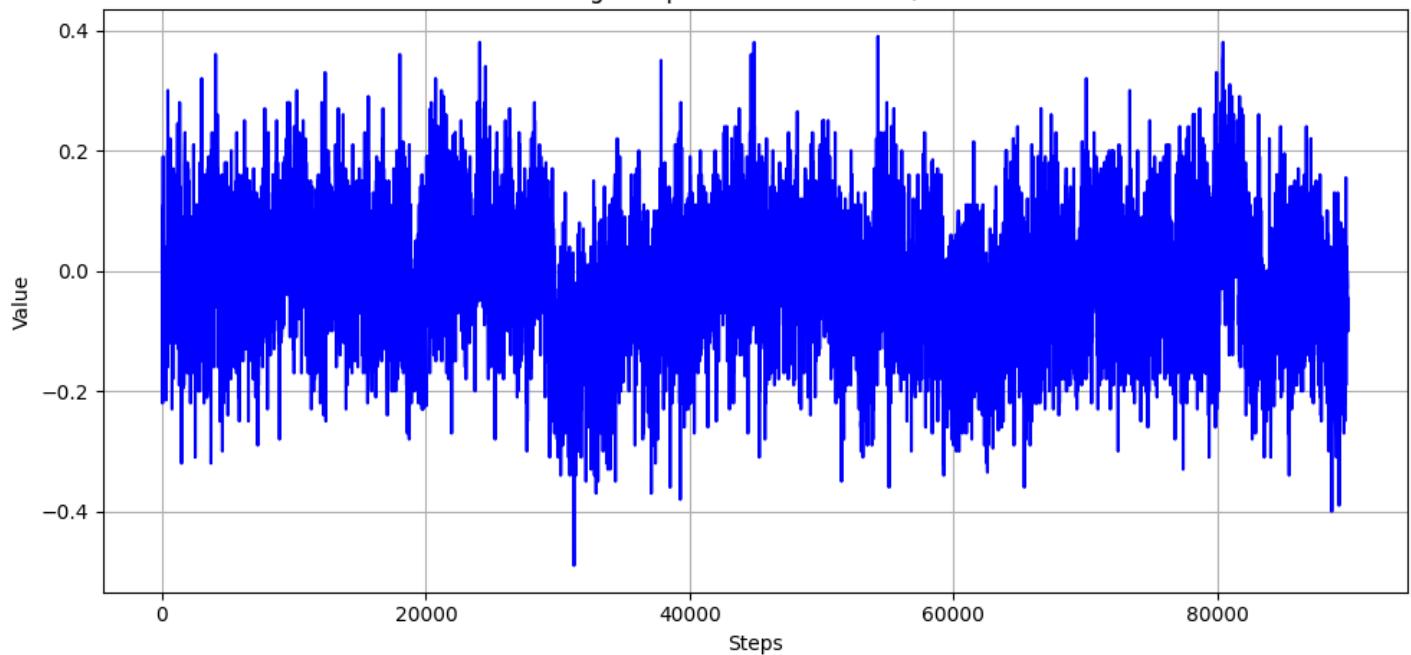
score p0



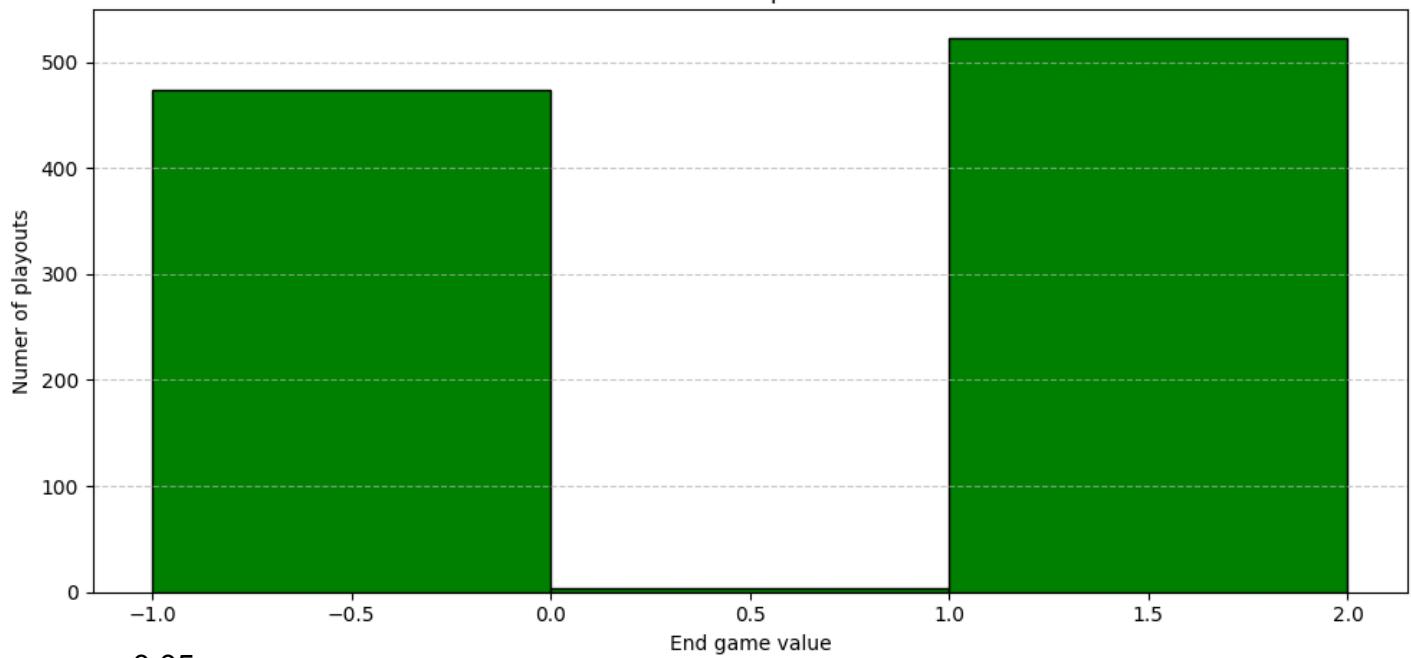
average: -0.05

Number of games lost (first bar) and won (second bar). Very close to 50%. Working as designed.

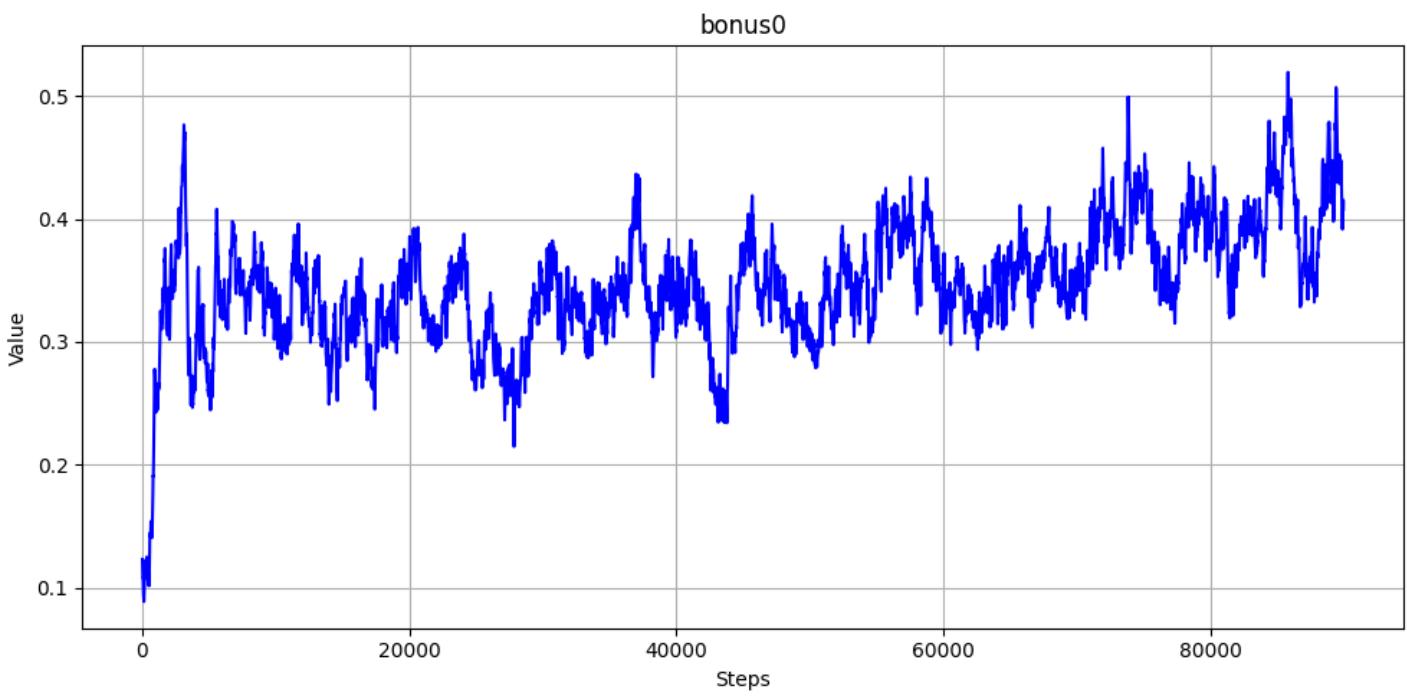
agent episode returns mean/0

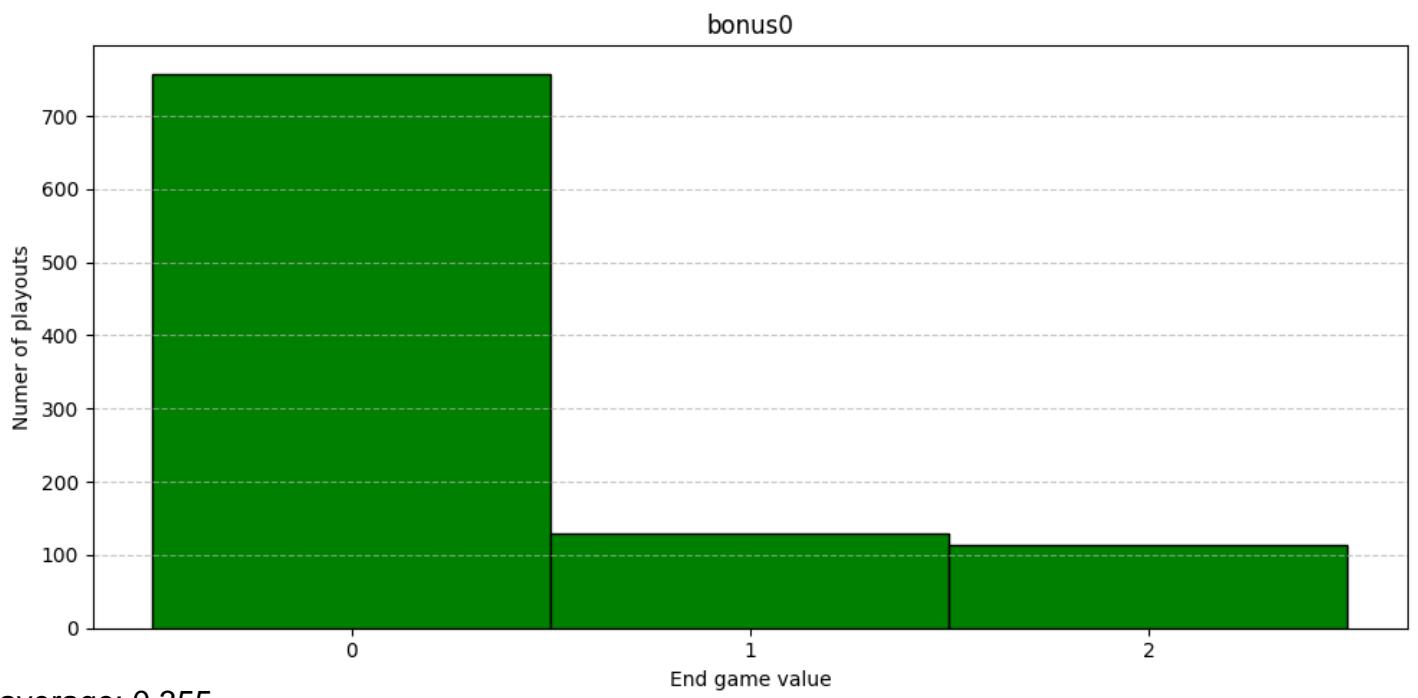


score p1



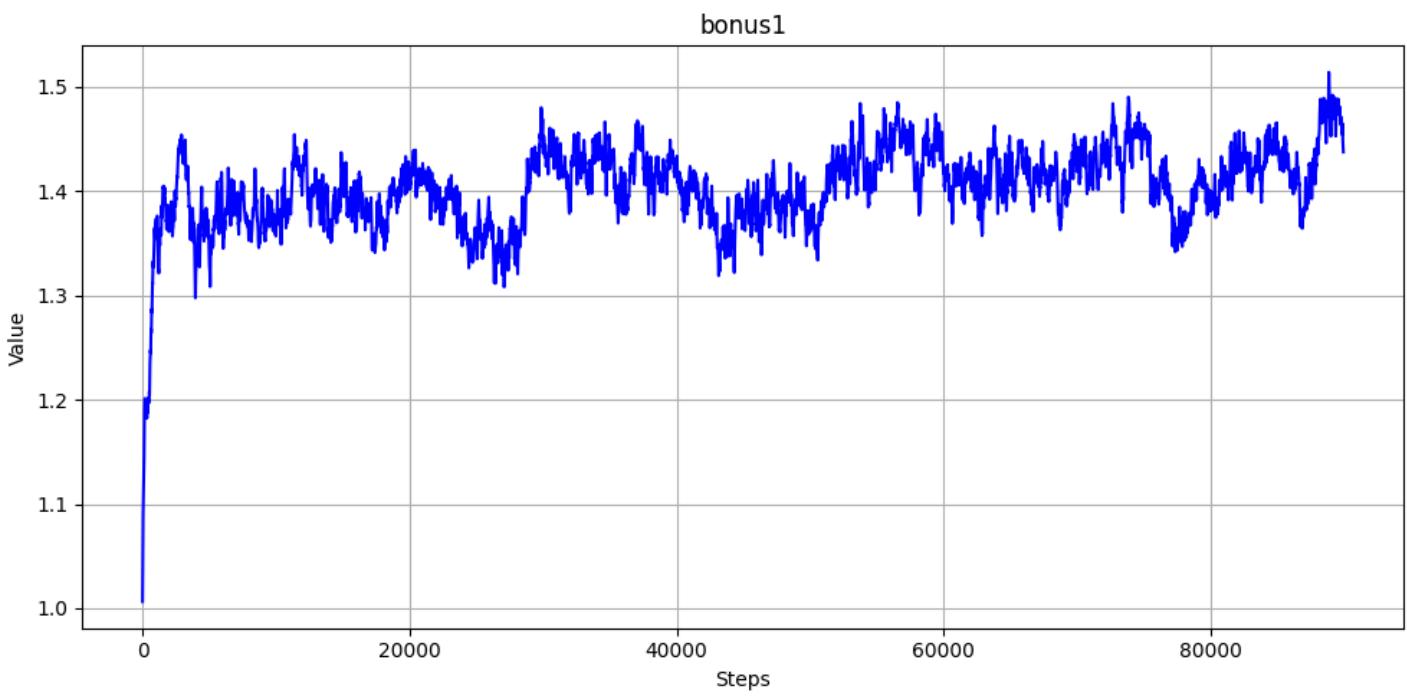
average: 0.05

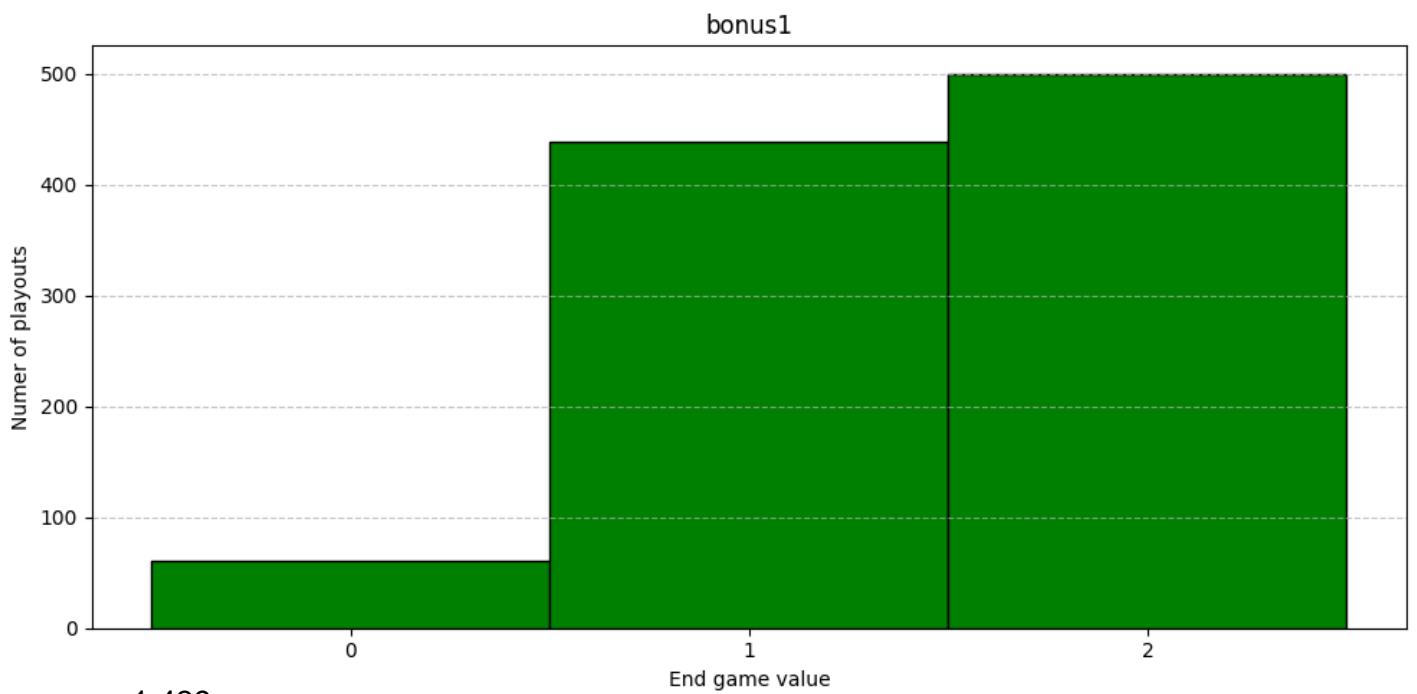




average: 0.355

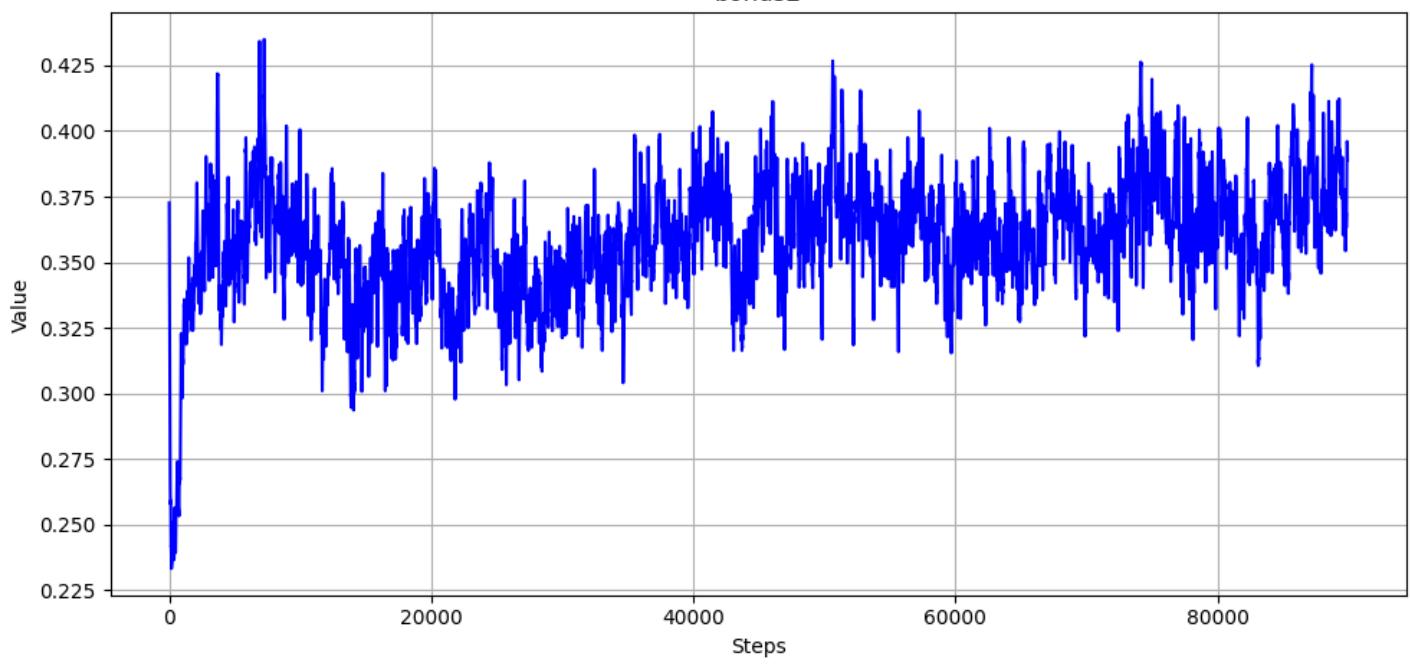
Bonus 0, SKY. requires to have 3 towers with a 10 card. 0 means that the bonus was not taken at the end of the game. 1 that it was taken by player 1. 2 that it was taken by player 2. SKY has been used by the machine learning agent for the entire training, and its usage has been trending upward for most of it. Only 30% of games have SKY being claimed, but it is seems to be working as intended, and with more time to train would have been used even more





Bonus 1, ROMANCE. requires to have a 10. 0 means that the bonus was not taken at the end of the game. 1 that it was taken by player 1. 2 that it was taken by player 2. Romance has been consistently used more than 95% of the games for most training, and it is still even trending upward. Working as designed.

bonus2

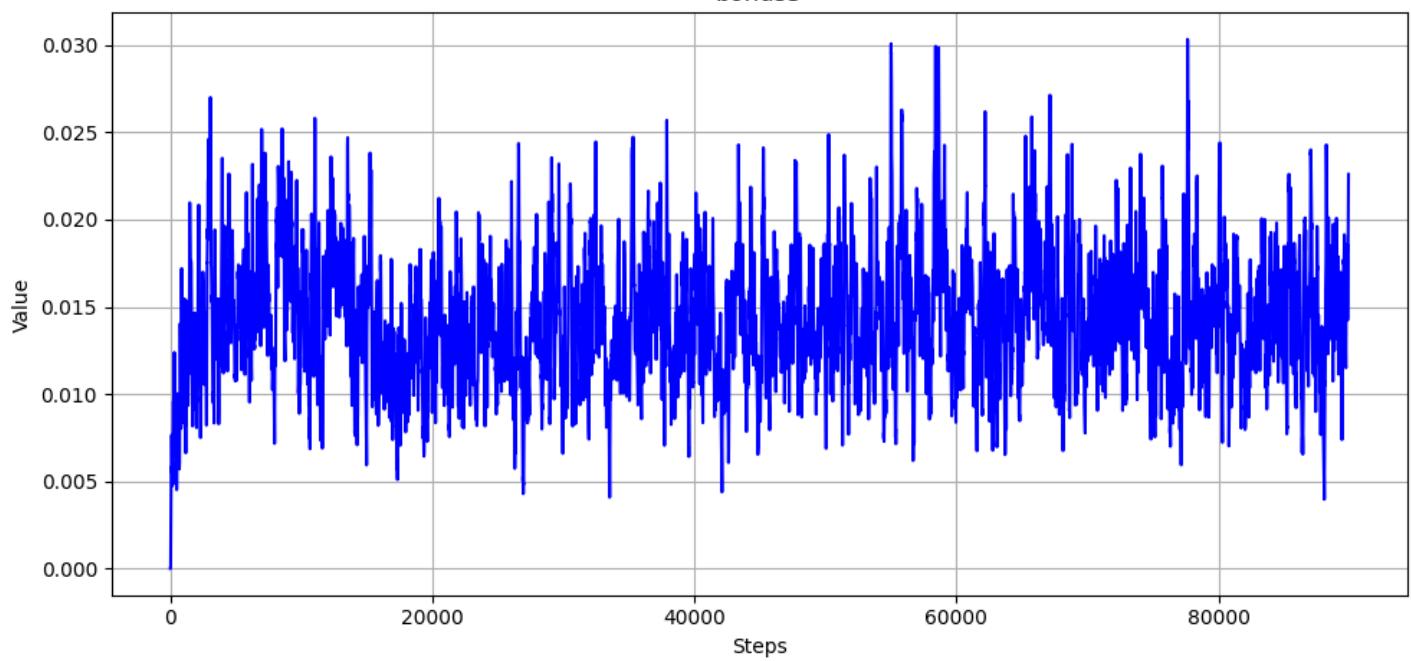


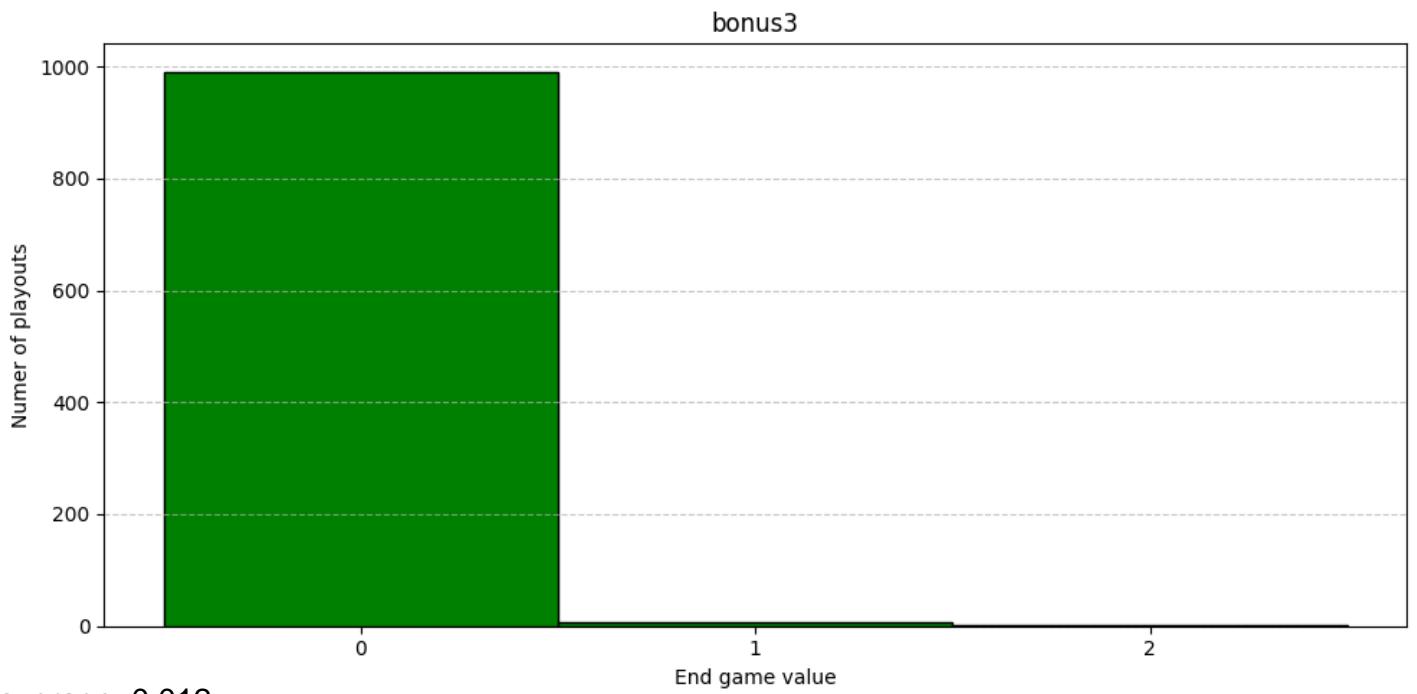


average: 0.353

Bonus 2, LUCKY. requires two sents of three cards. 0 means that the bonus was not taken at the end of the game. 1 that it was taken by player 1. The training has been mostly stable. The initial surge shows that the network understand what the bonus is, but does not seems to value it much. When it can occasionaly get it, it will do so, but does not build strategies around it.

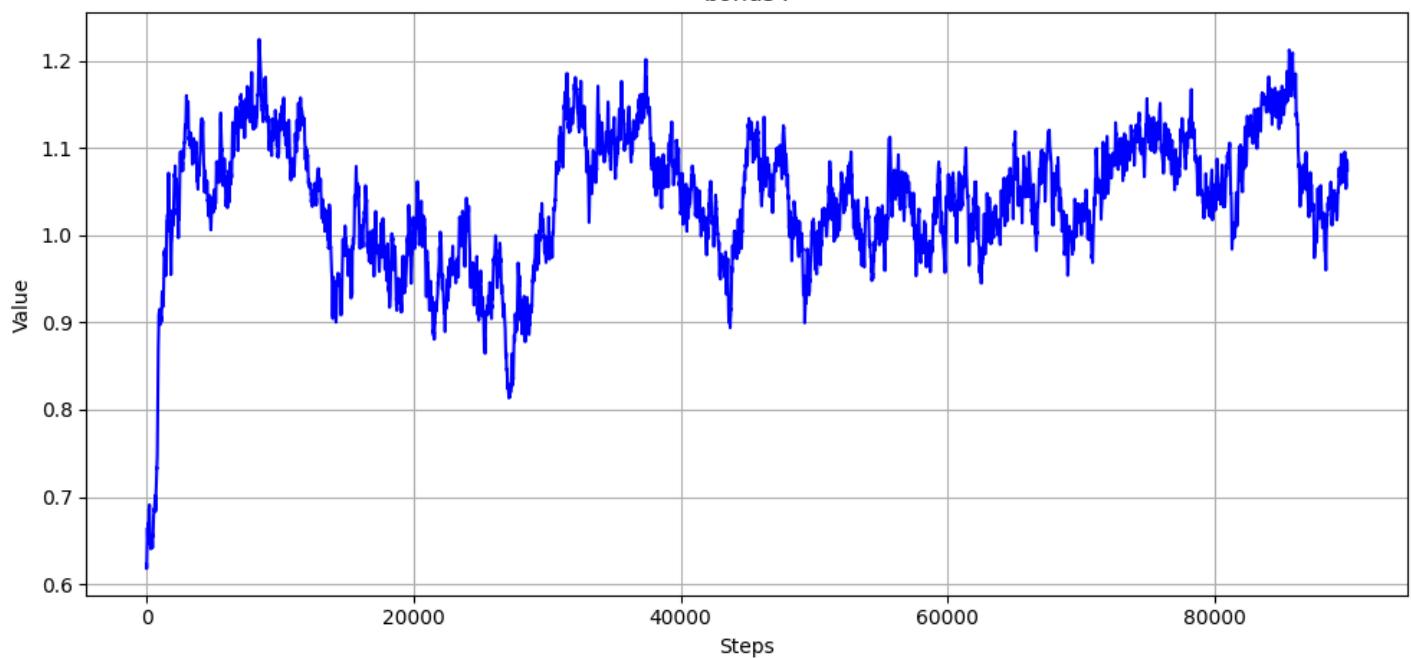
bonus3

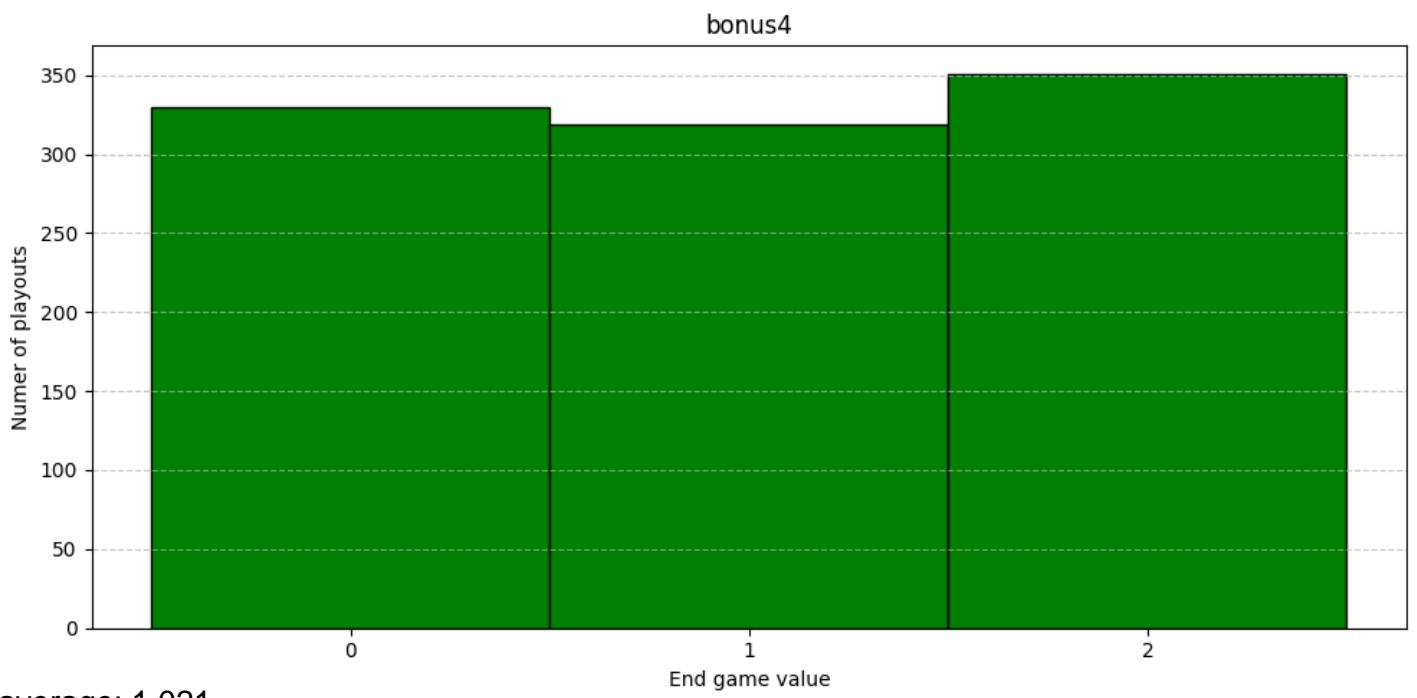




Bonus 3, BIG BEN. requires four 5 value cards, or five 4 value cards. 0 means that the bonus was not taken at the end of the game. 1 that it was taken by player 1. The training has been stable. The initial surge shows that the network understand what the bonus is, but does not seems to value it at all. It seems that the network really does not wish to invest 4 identical cards in the same tower, or that the opponent can easily counter the strategy when it notices the opponent doing so.

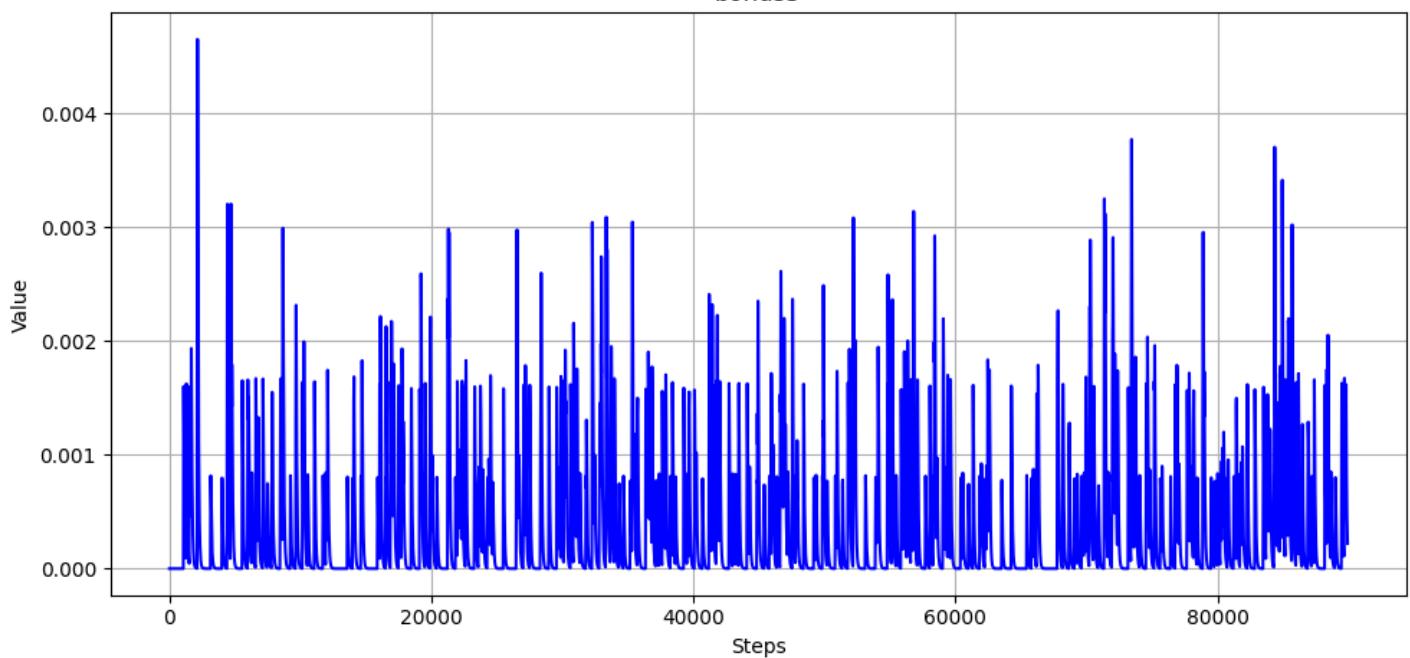
bonus4

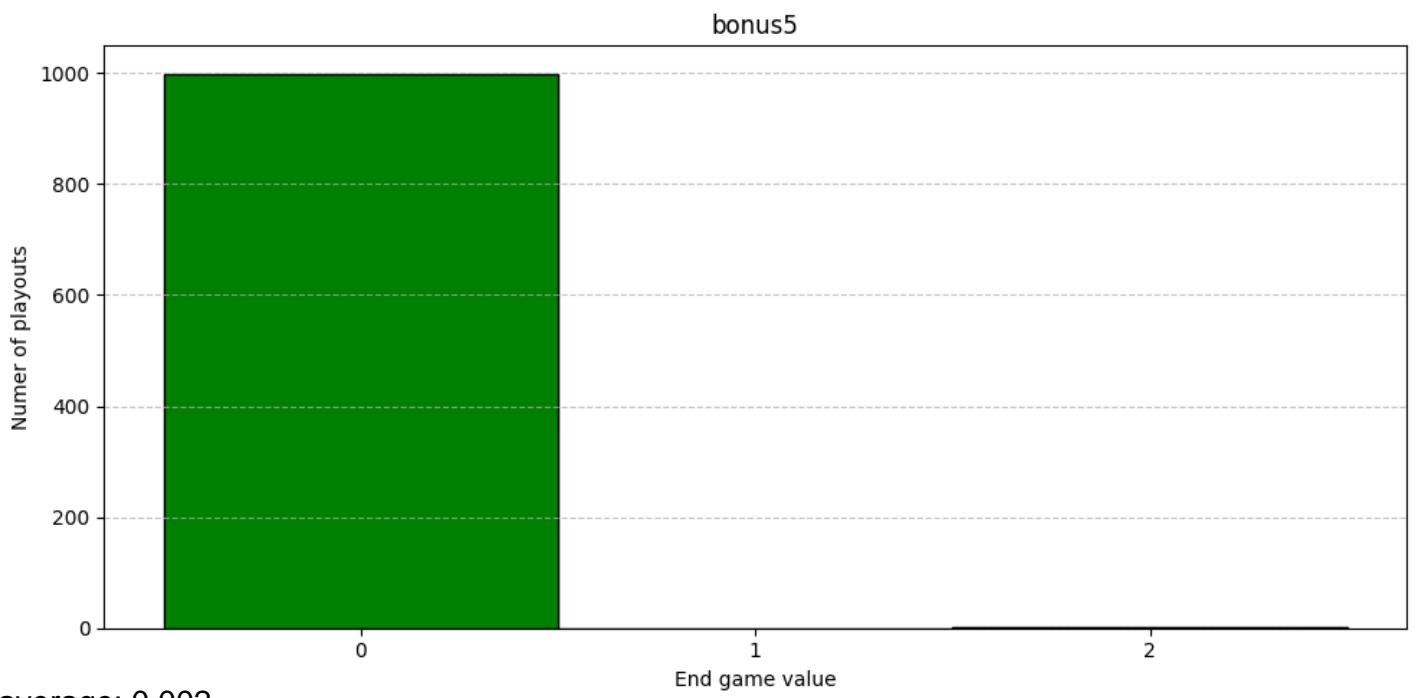




Bonus 4, DEMOLITION. demolish a tower with 5 or more cards. 0 means that the bonus was not taken at the end of the game. 1 that it was taken by player 1. The training has been mostly stable. The initial surge shows that the network understand what the bonus is, and uses it in 60% of games. Seems to be working as designed.

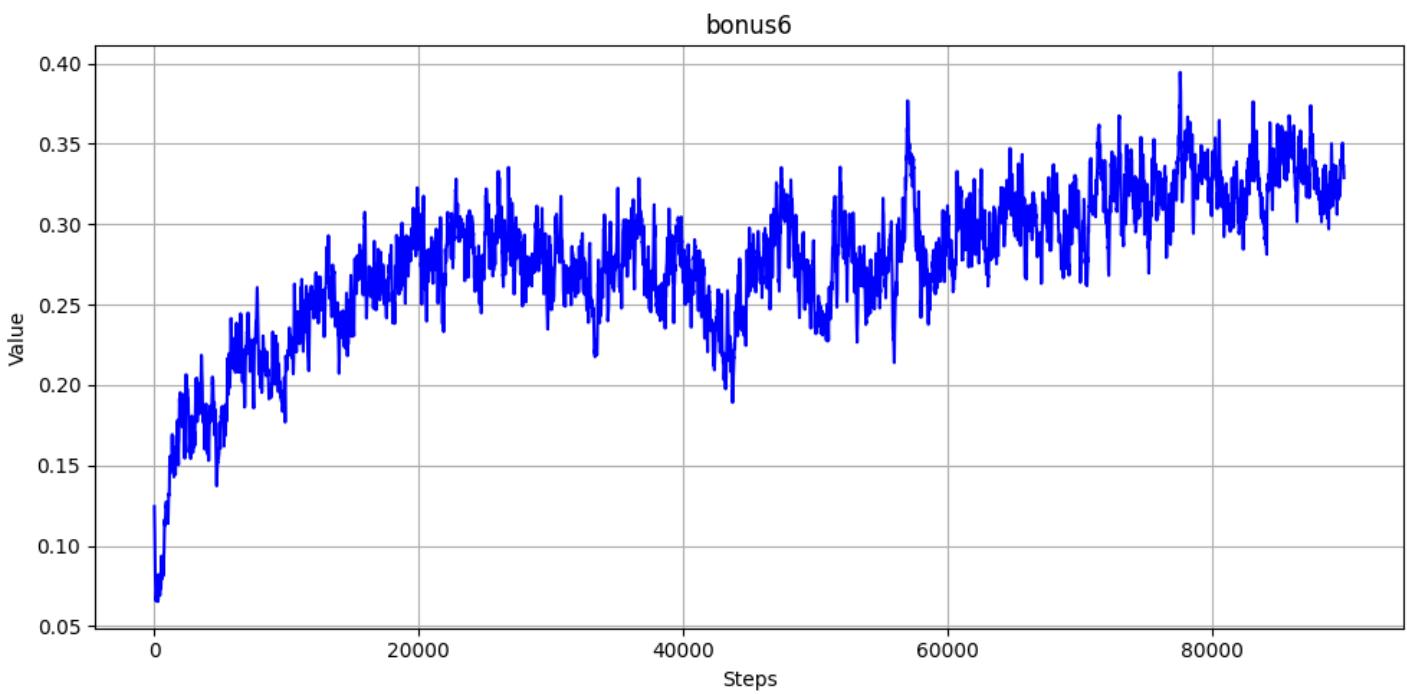
bonus5

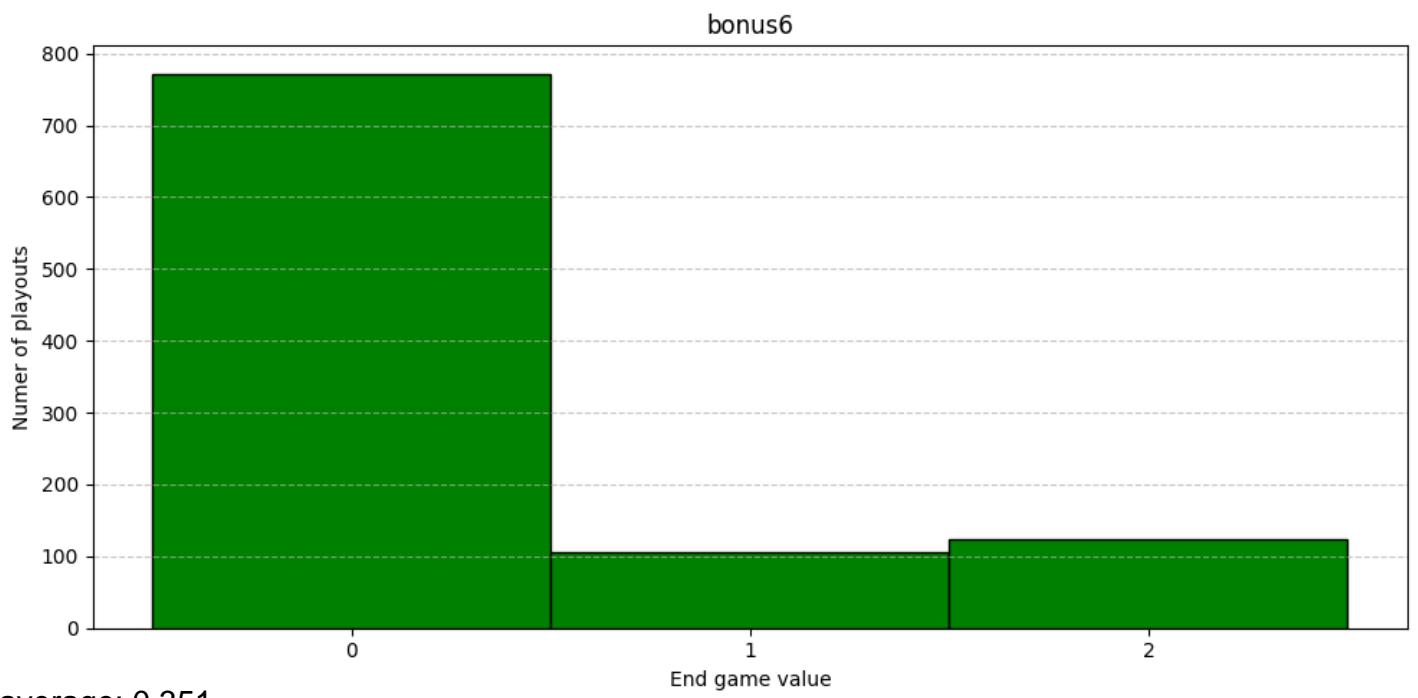




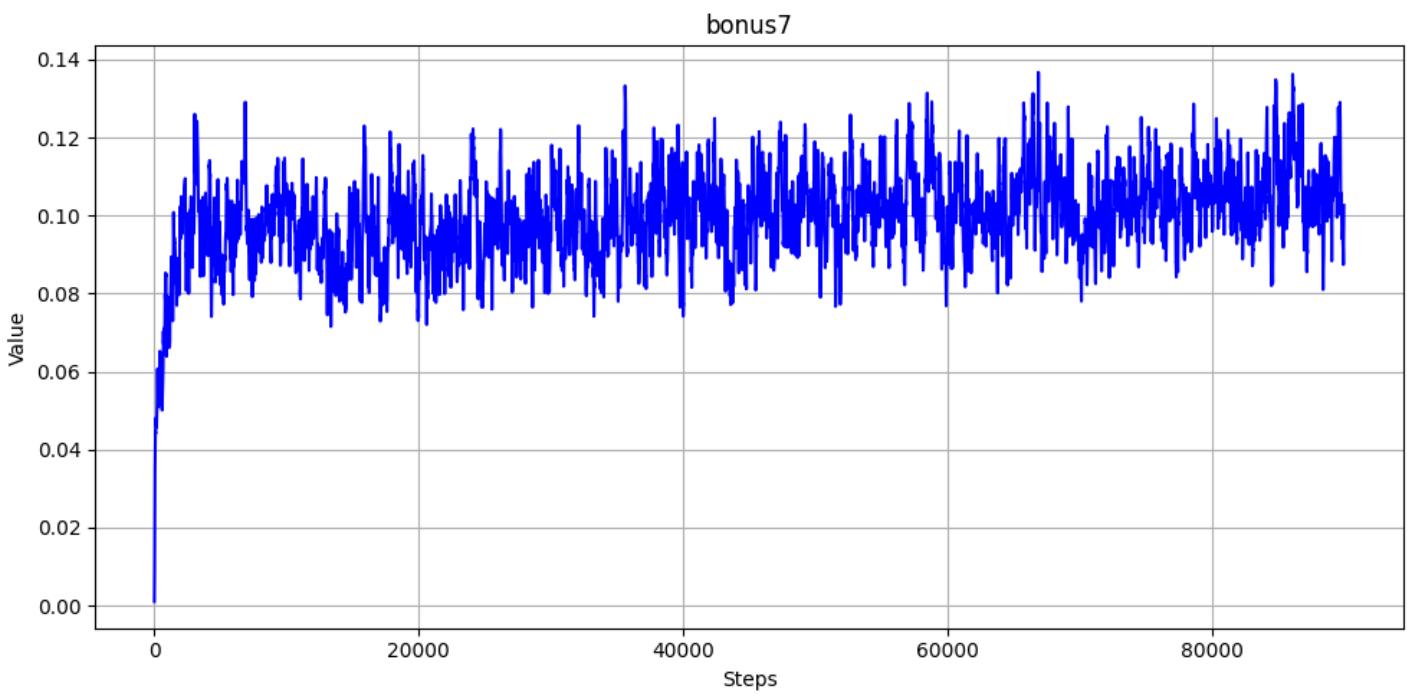
average: 0.002

Bonus 5, PERFECT. requires a tower in descending order from 6 to 1. 0 means that the bonus was not taken at the end of the game. 1 that it was taken by player 1. The time graph never moves consistently away from 0. The training has compleatly failed. The network never managed to learn what to do with it in the training time allocated to it. The graphs should be ignored and no insight can be gained from them.

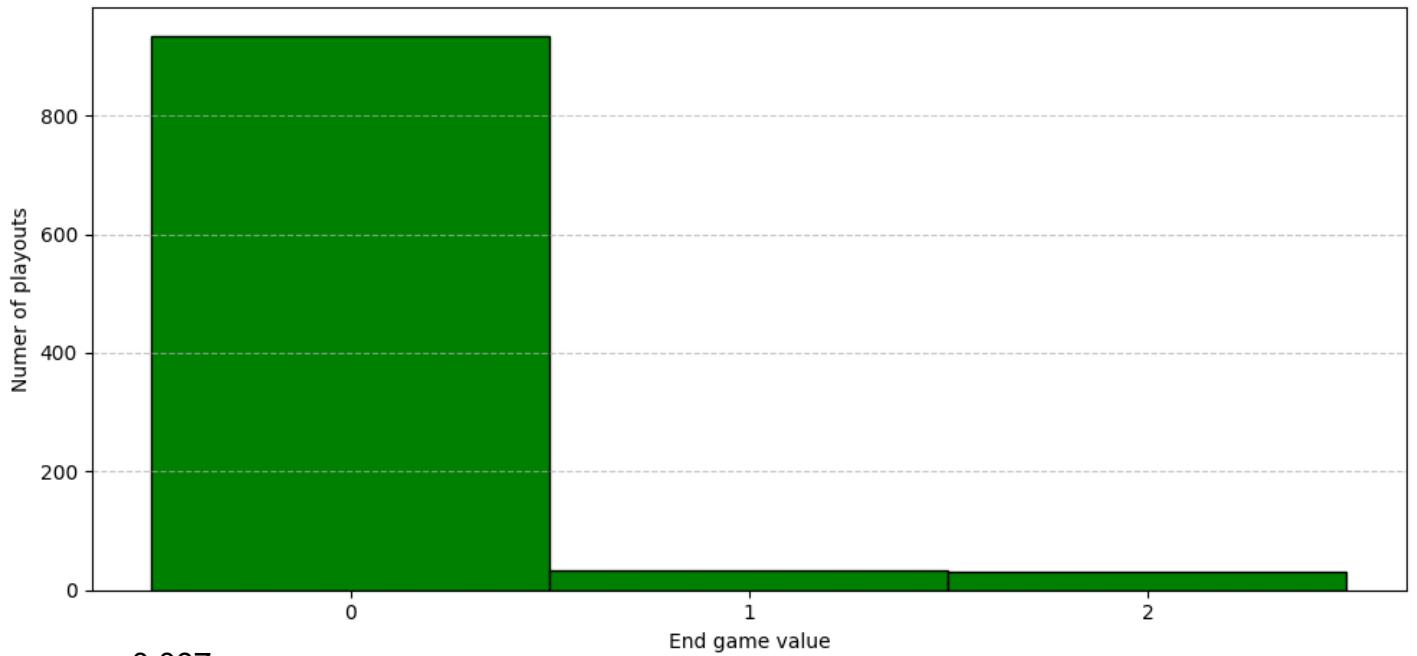




Bonus 6, TYCOON. requires to build two towers in one turn. 0 means that the bonus was not taken at the end of the game. 1 that it was taken by player 1. The graph has been trending upward for the whole training. At end of the training only 20% of game have used this bonus, but if the more time was allowed to train, more games would have done so.

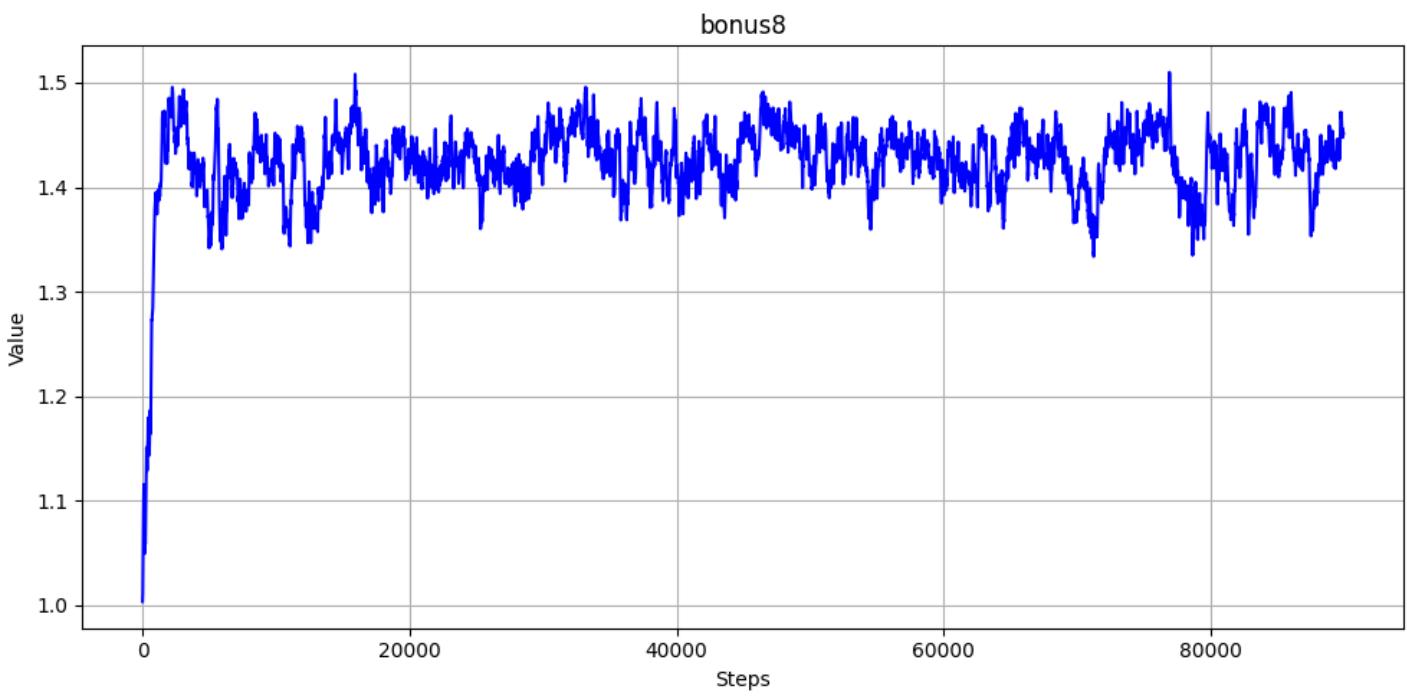


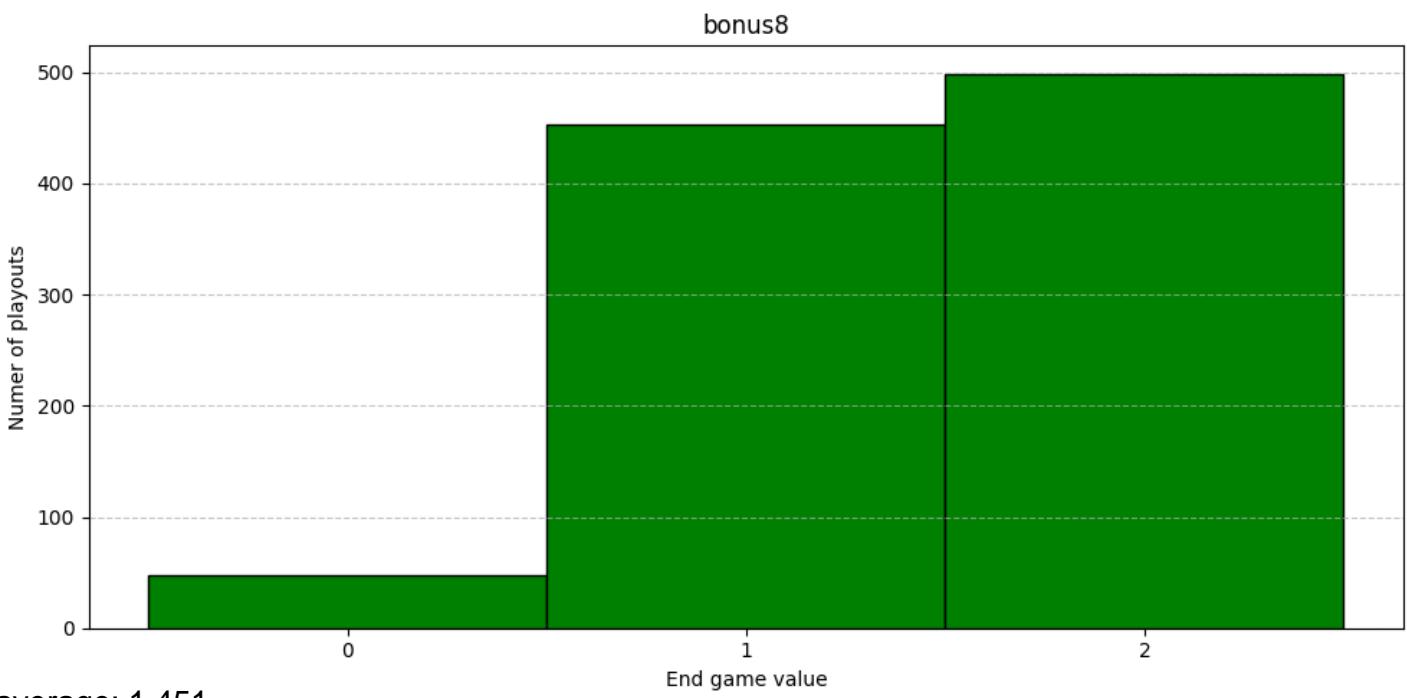
bonus7



average: 0.097

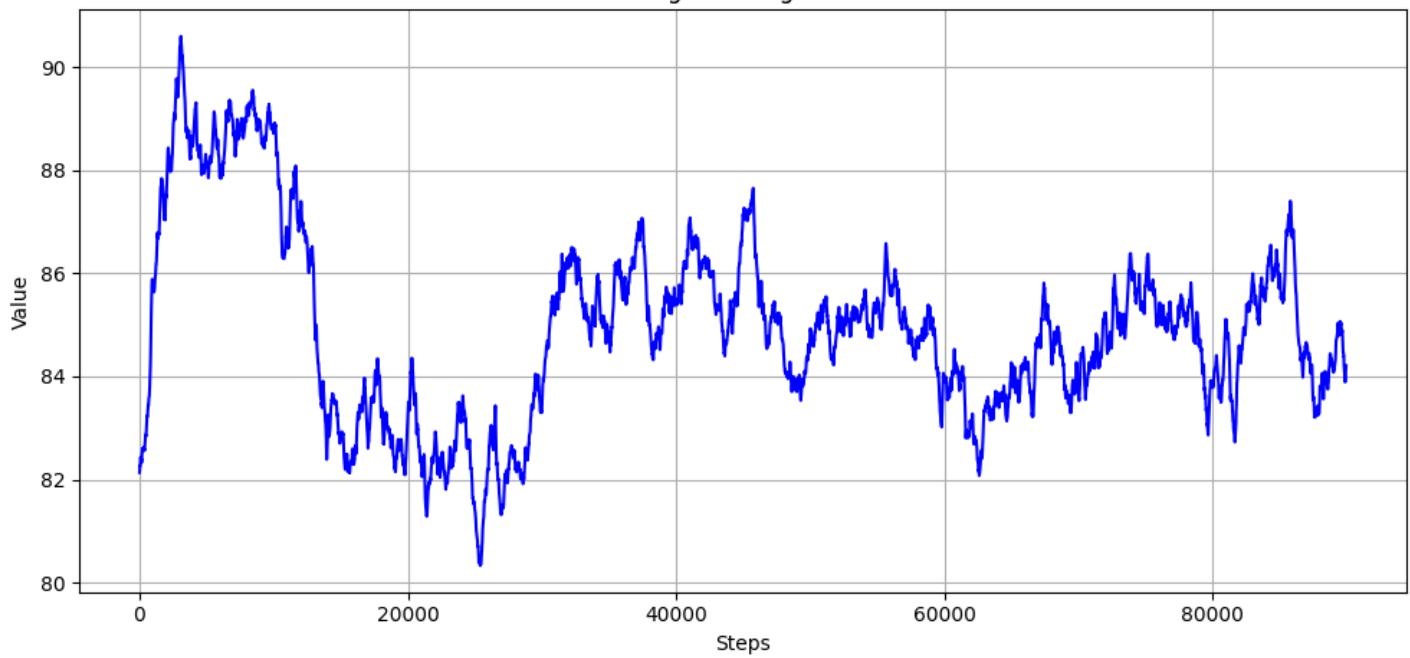
Bonus 7, TRIPLES. requires to have a tower with 3 sevens. 0 means that the bonus was not taken at the end of the game. 1 that it was taken by player 1. The training graph has been stable. At end of the training only 15% of game have used this bonus. It seems the network does not value the commitment of using 3 high value cards in the same tower.



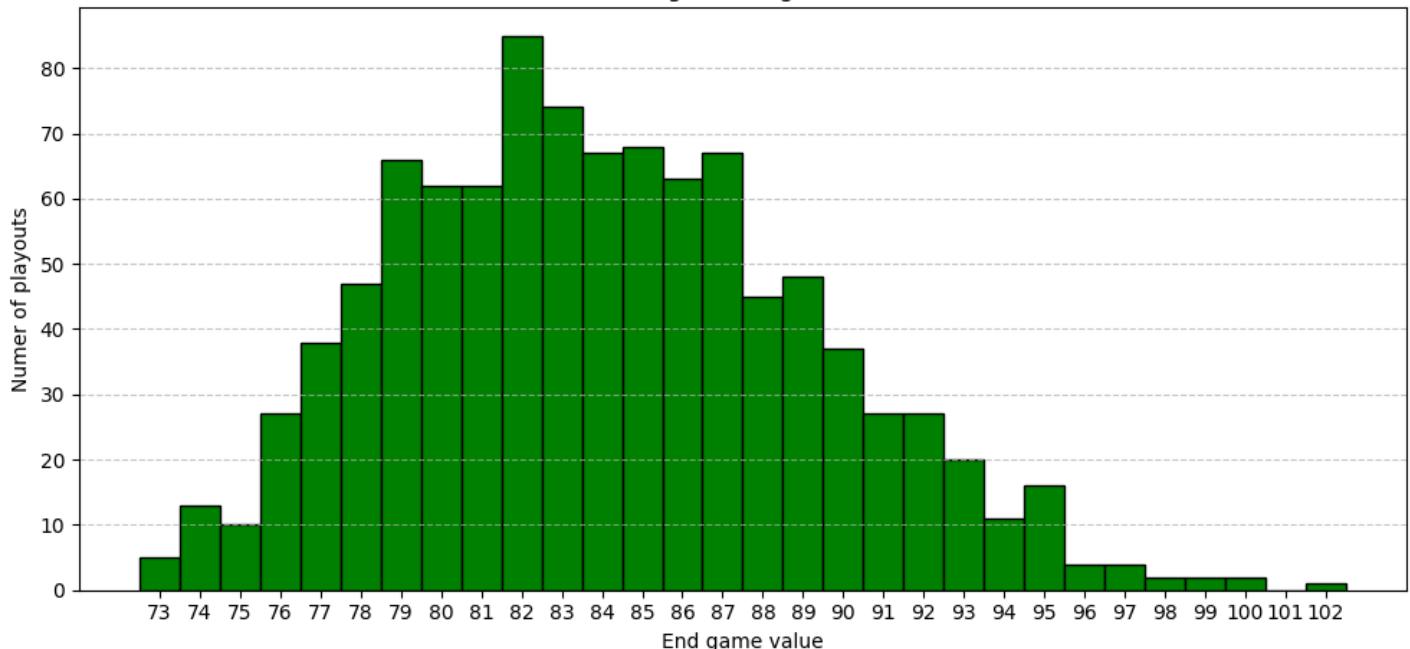


Bonus 8, STAR. requires to have 0 cards in hand. Stable training with high play rate.

game length



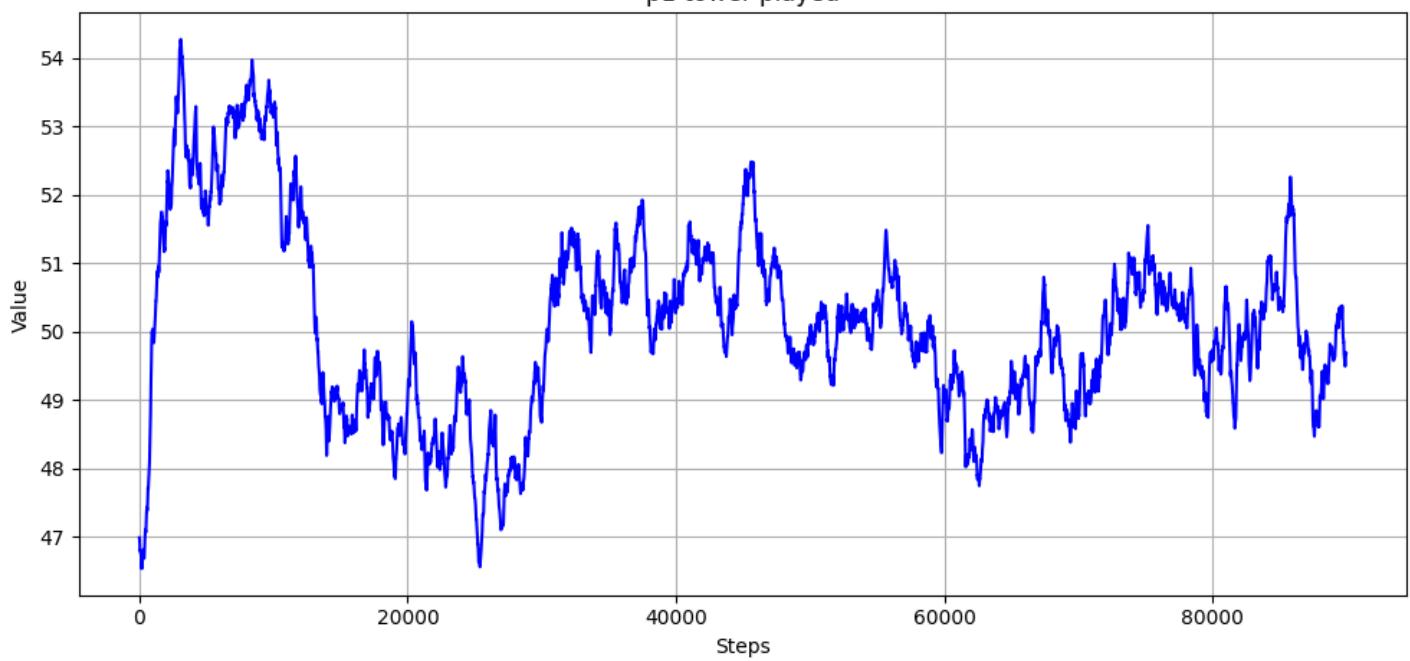
game length



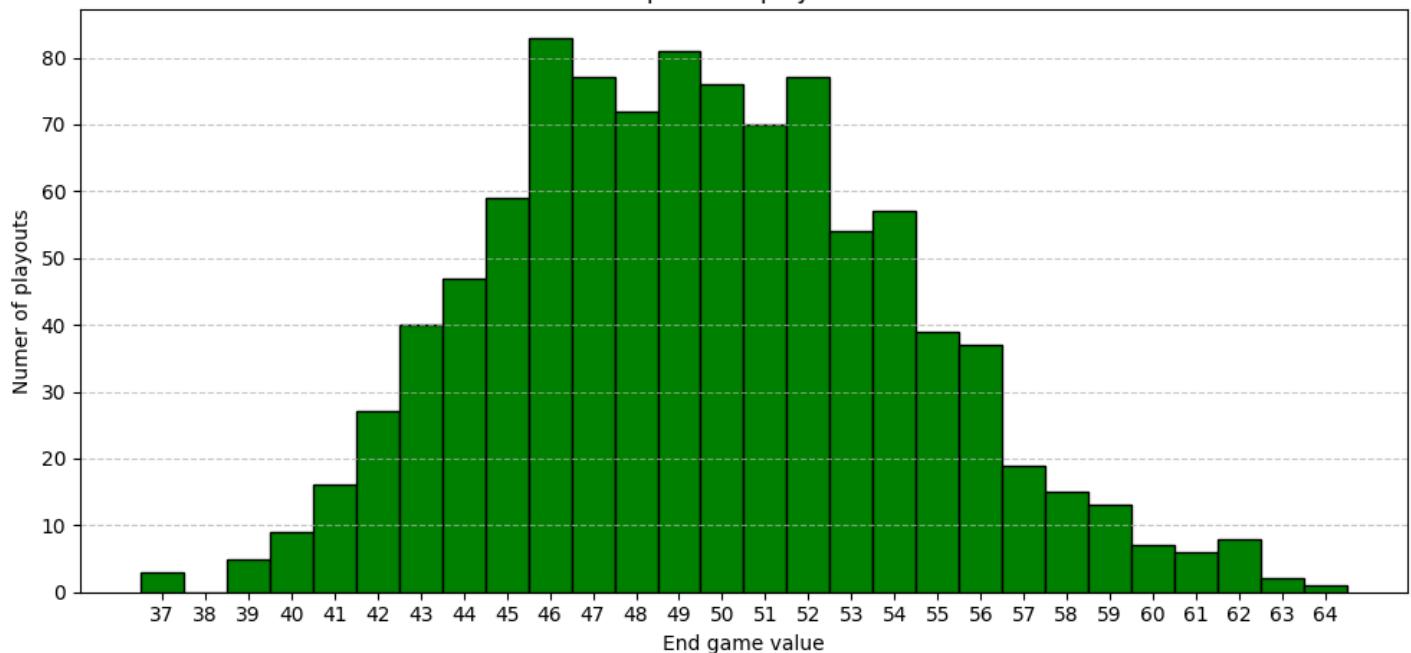
average: 84.069

The number of times players passed their turn.

p1 tower played

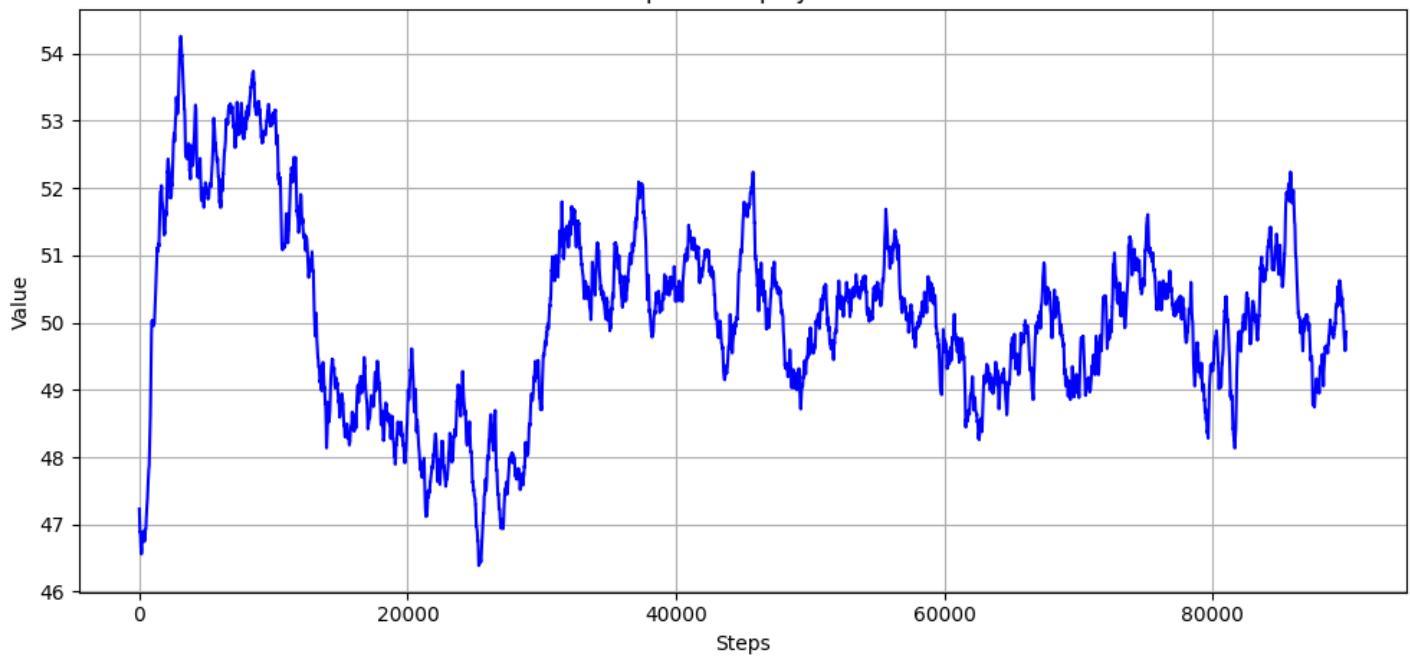


p1 tower played

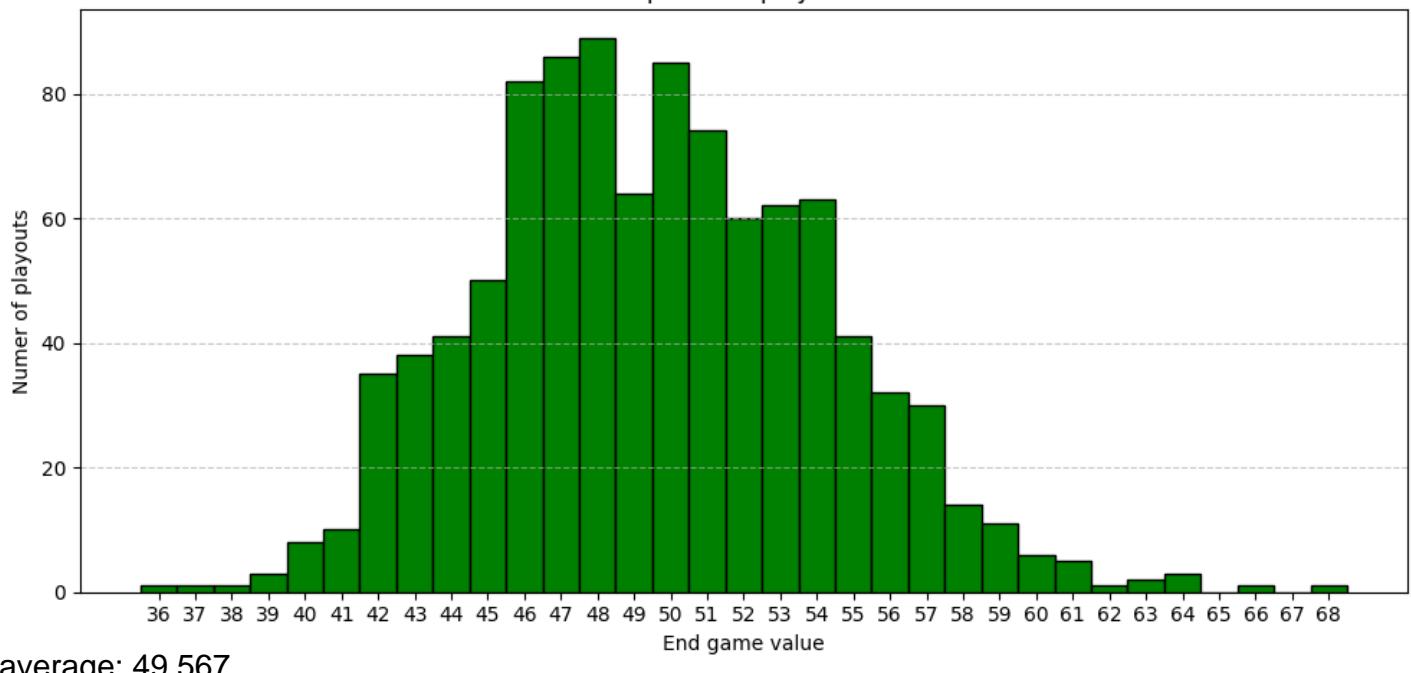


average: 49.484

p2 tower played

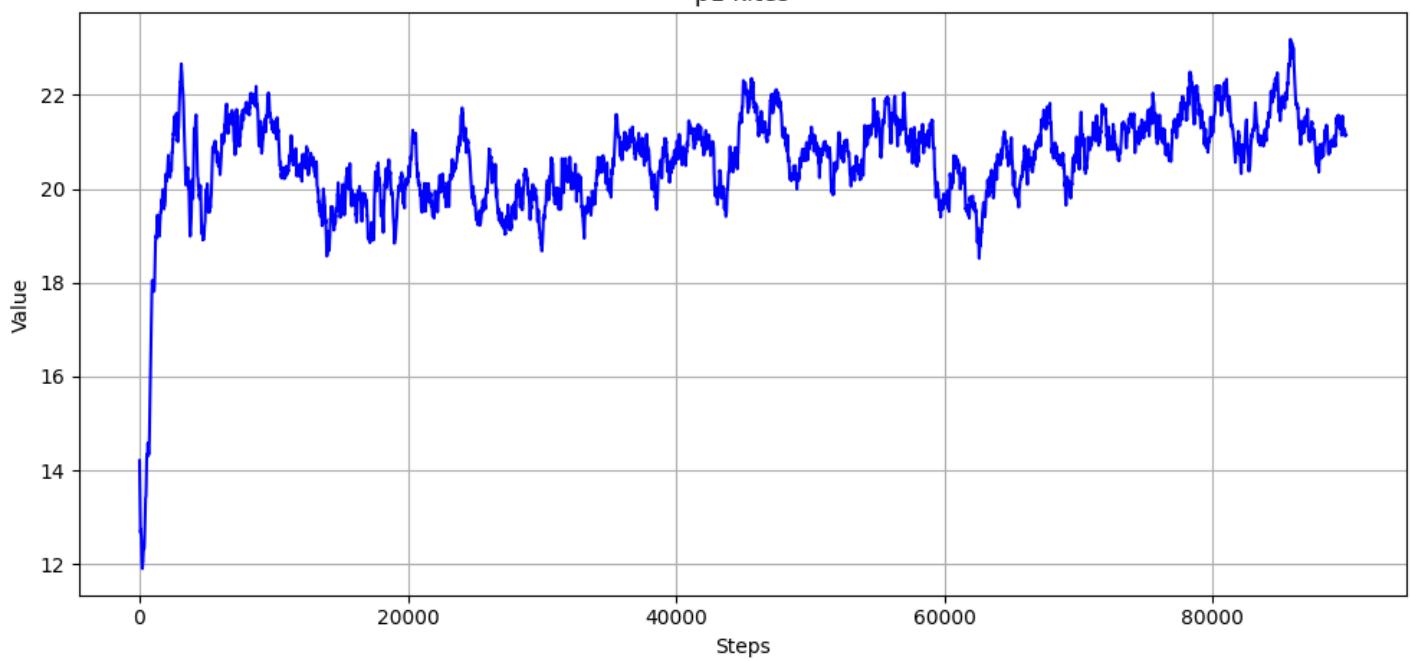


p2 tower played

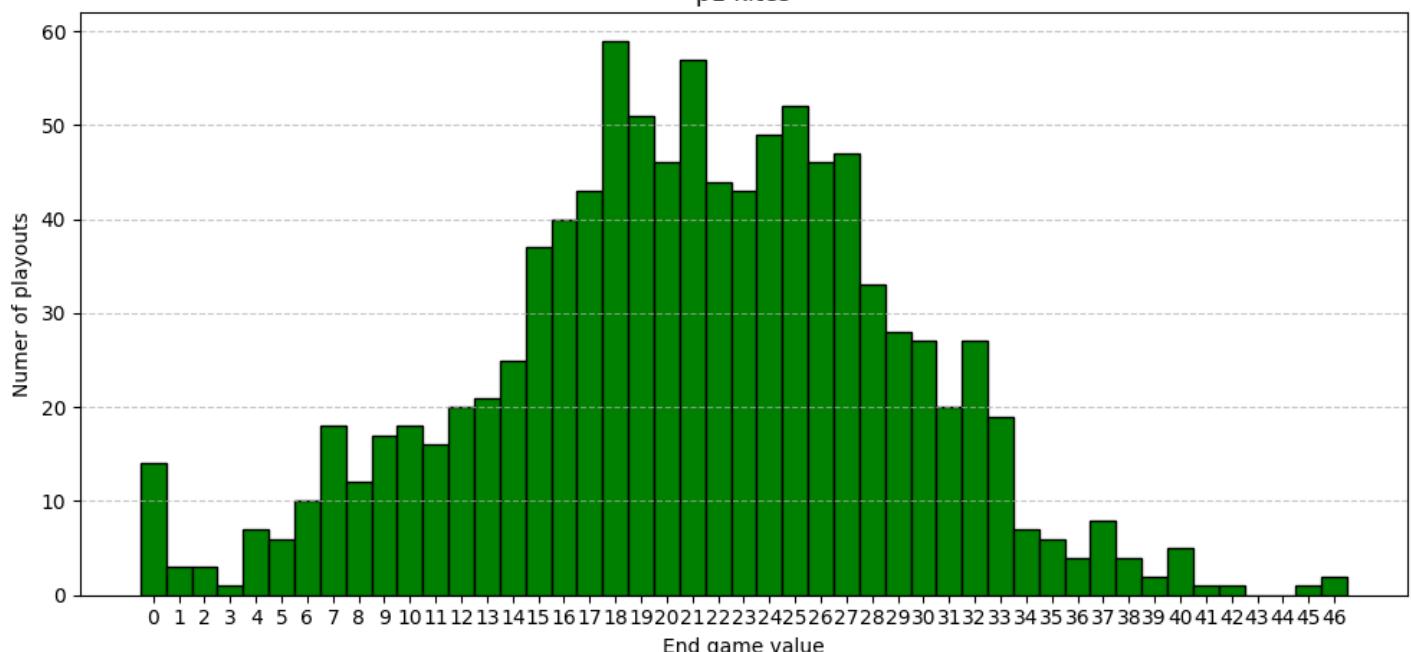


average: 49.567

p1 kites



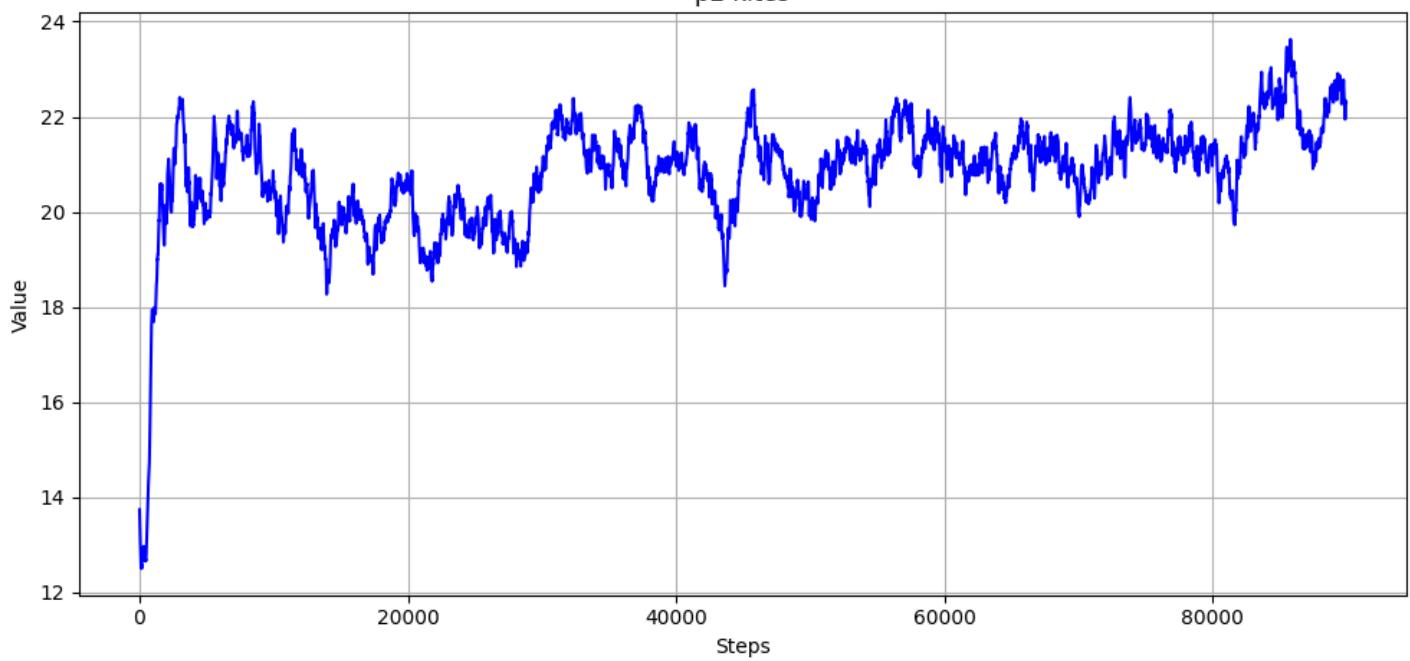
p1 kites

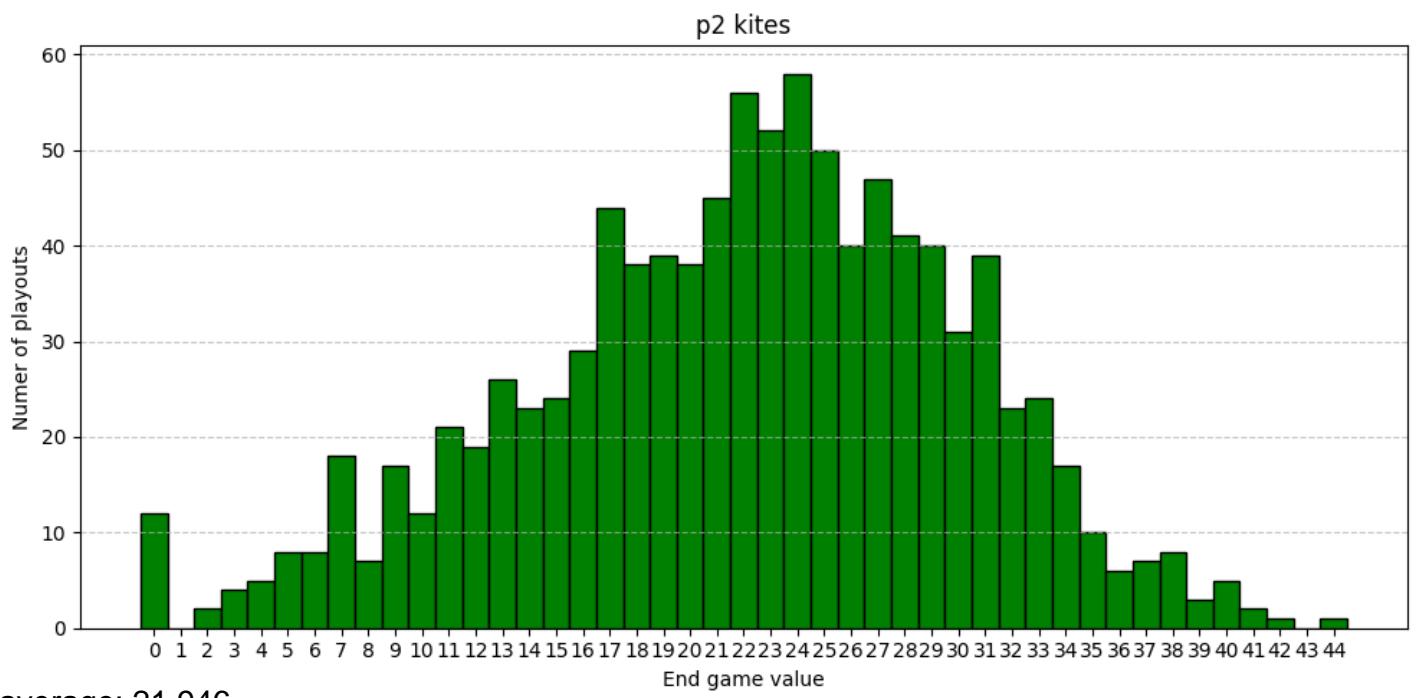


average: 20.891

quantity of kites accumulated by player 1 at the end of the game

p2 kites

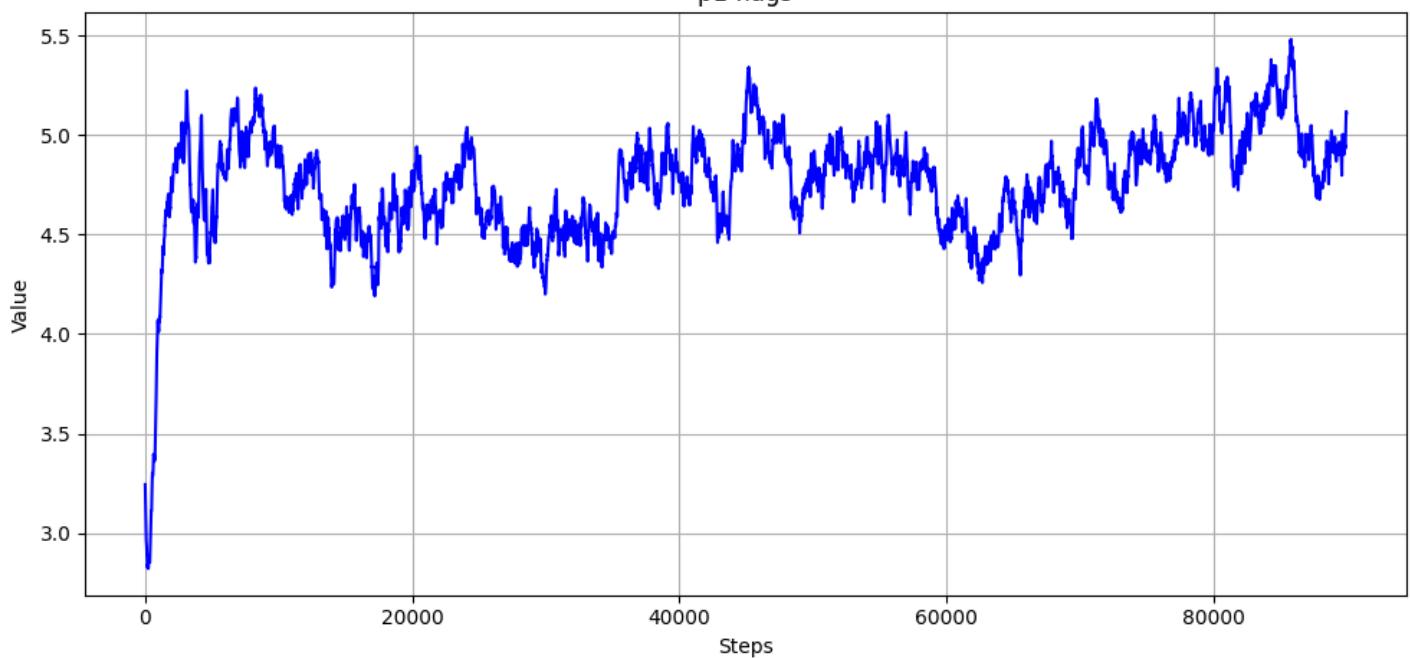




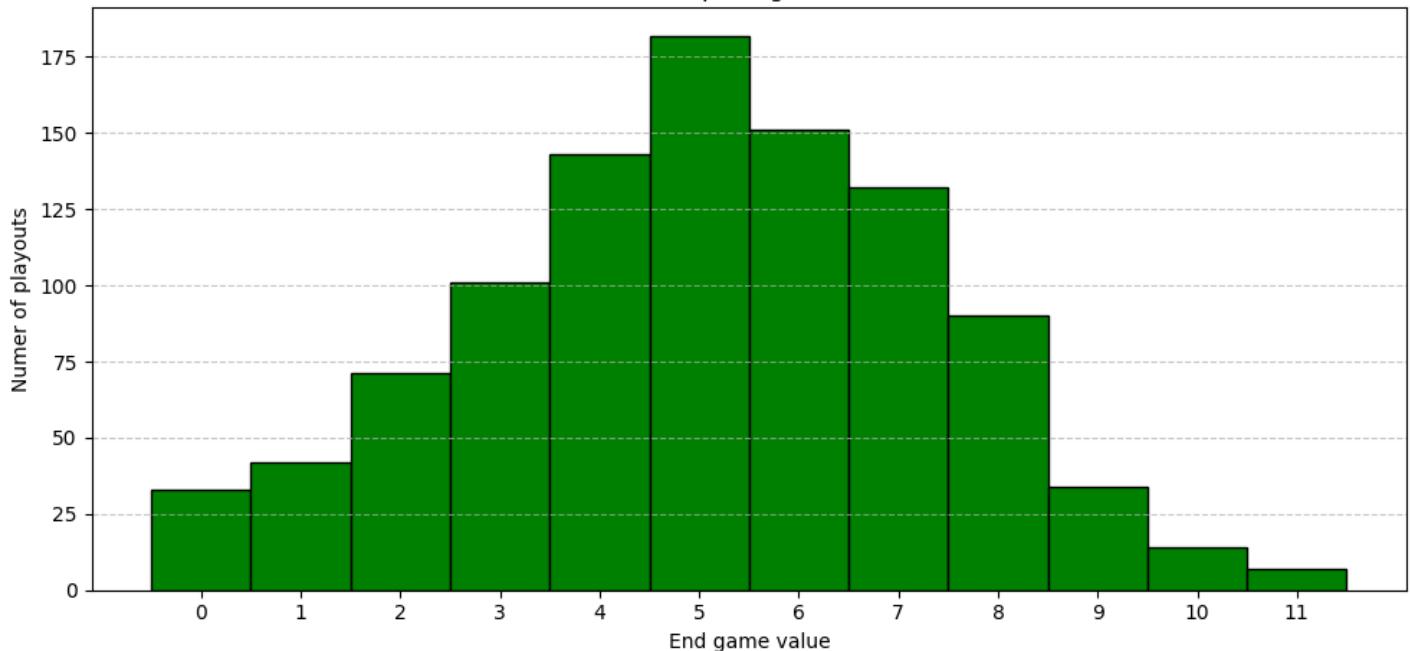
average: 21.946

quantity of kites accumulated by player 2 at the end of the game

p1 flags

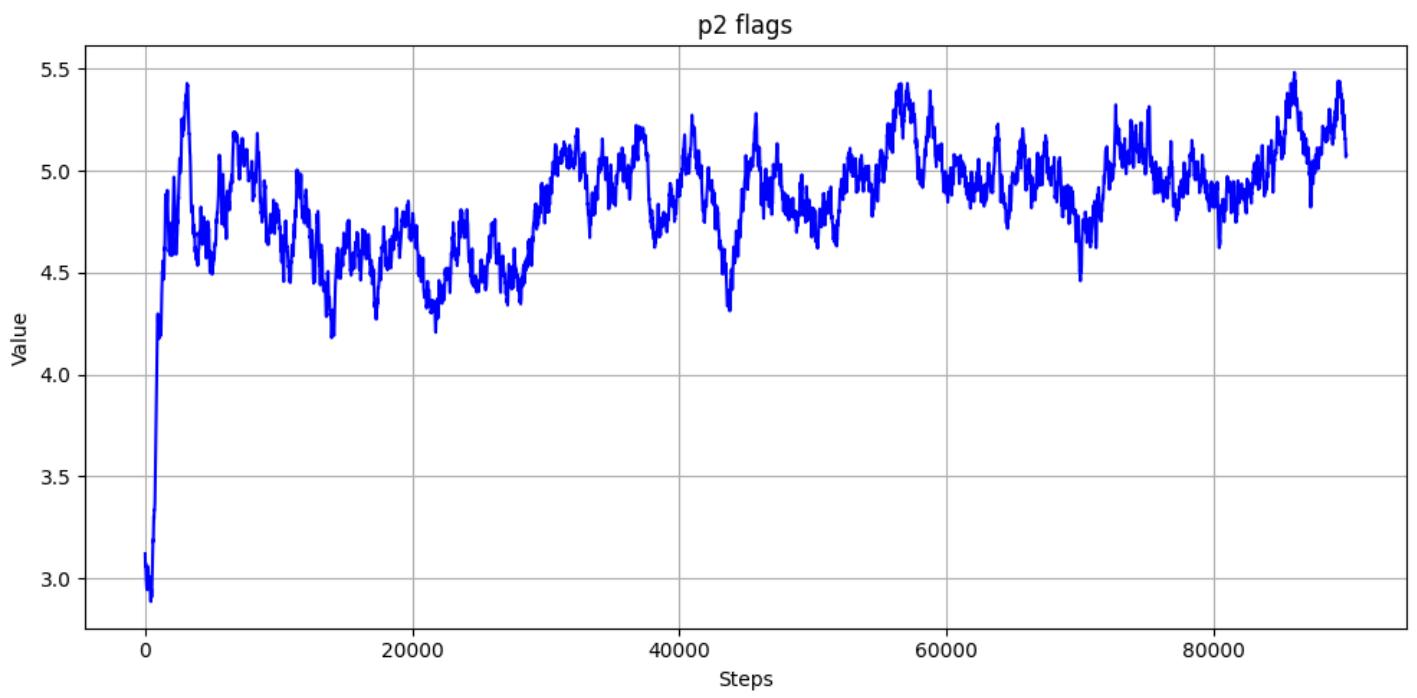


p1 flags

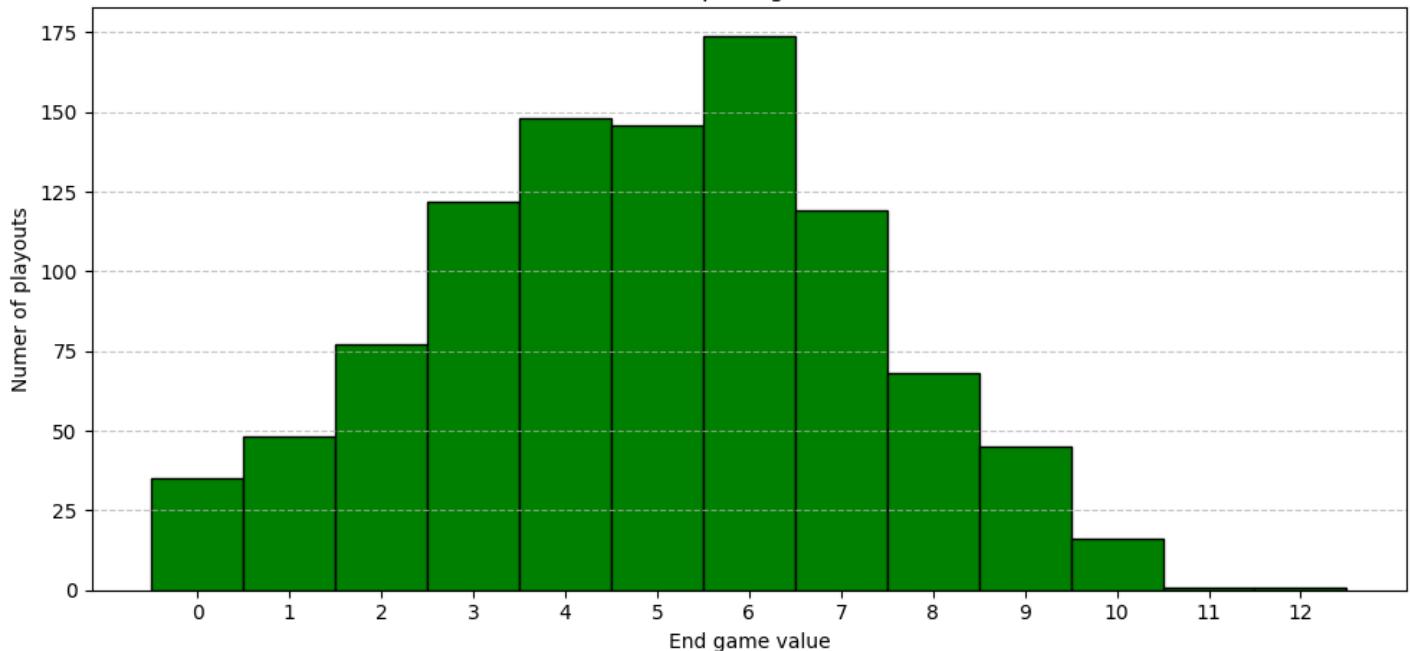


average: 5.042

quantity of flags accumulated by player 1 at the end of the game



p2 flags



average: 4.899

quantity of flags accumulated by player 2 at the end of the game