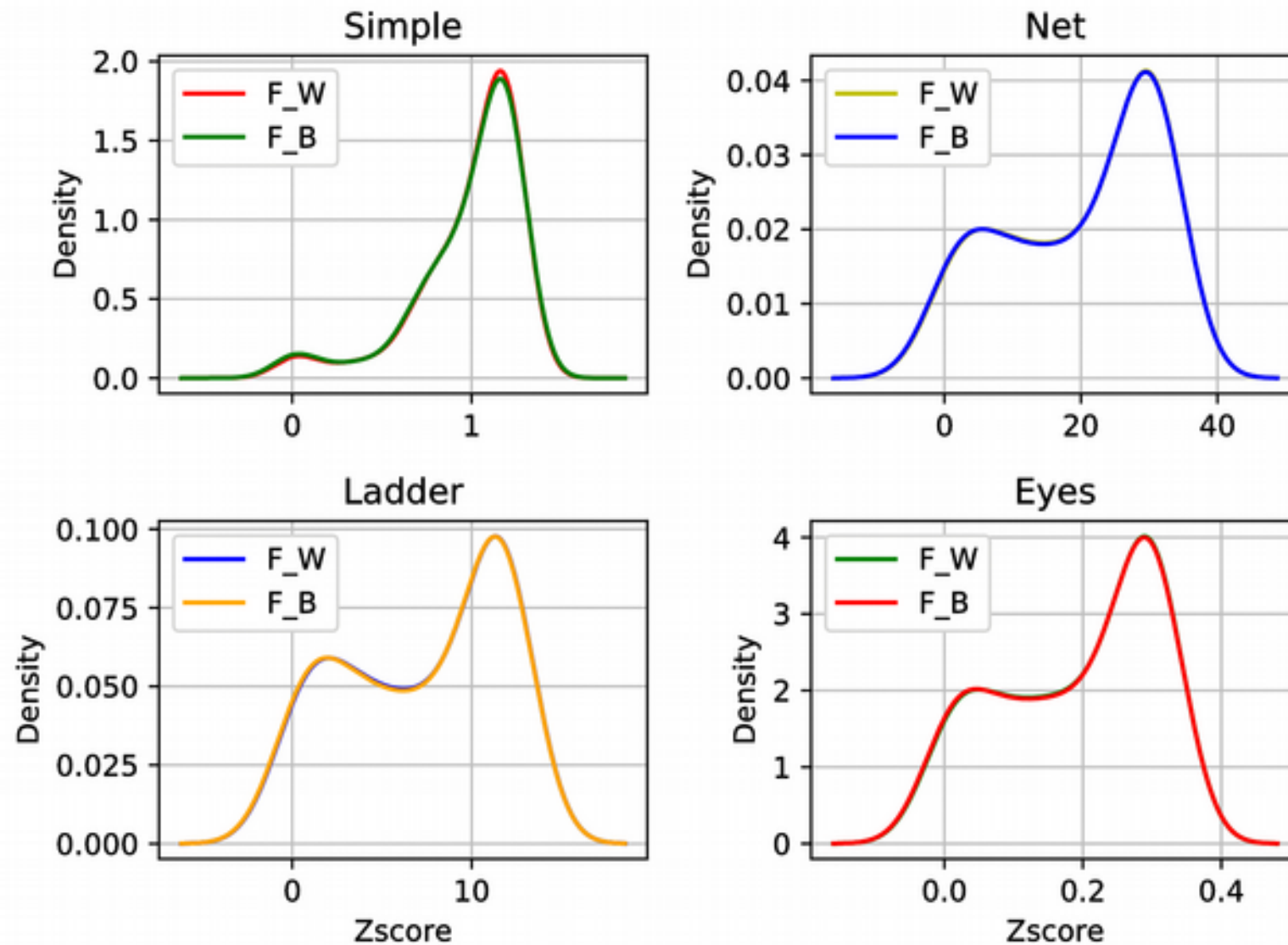
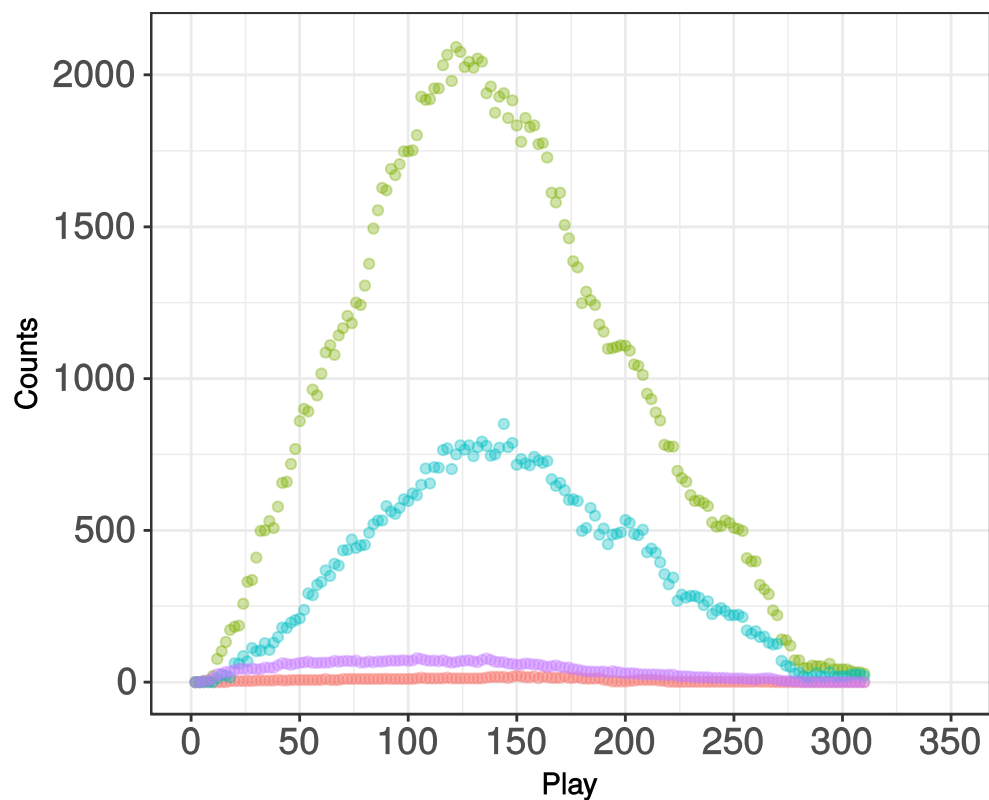


Supplementary figure 1. A scatter plot showing the number of times a strategy used as the different games progresses. The x axis shows the moves or plays in the historical games of Go database.



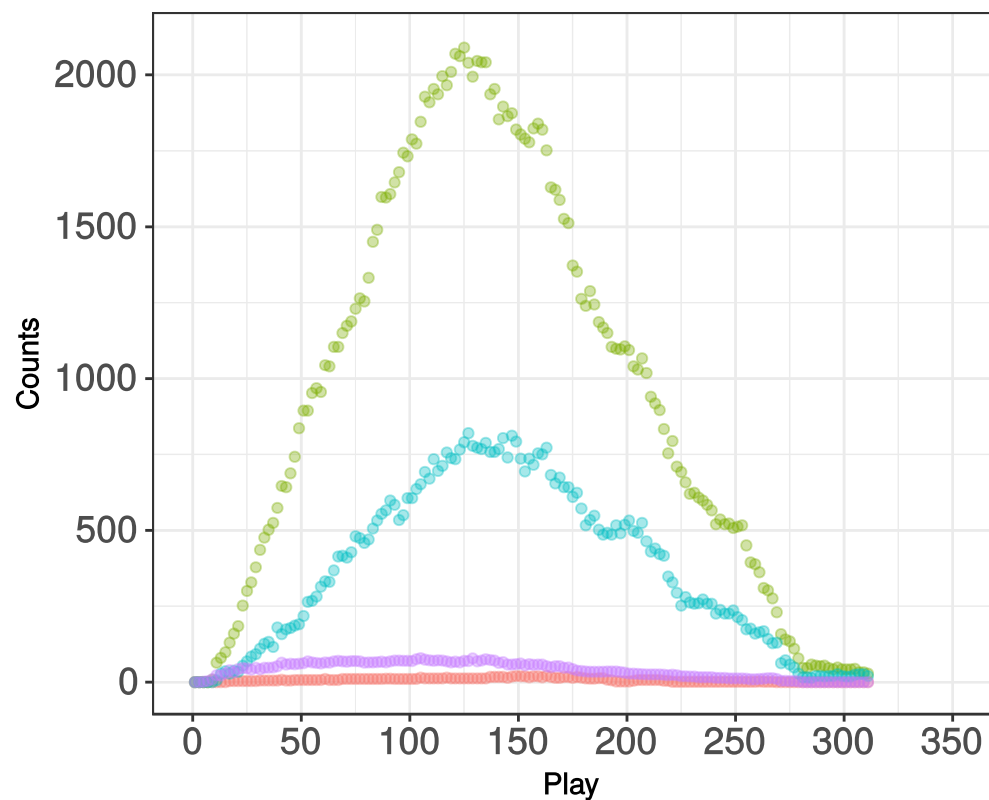
Supplementary figure 2. Density plots of the frequency of distribution against the Z score for the strategies used by black and white players in the pool of historical professional games.

White player AlphaGo Tournament



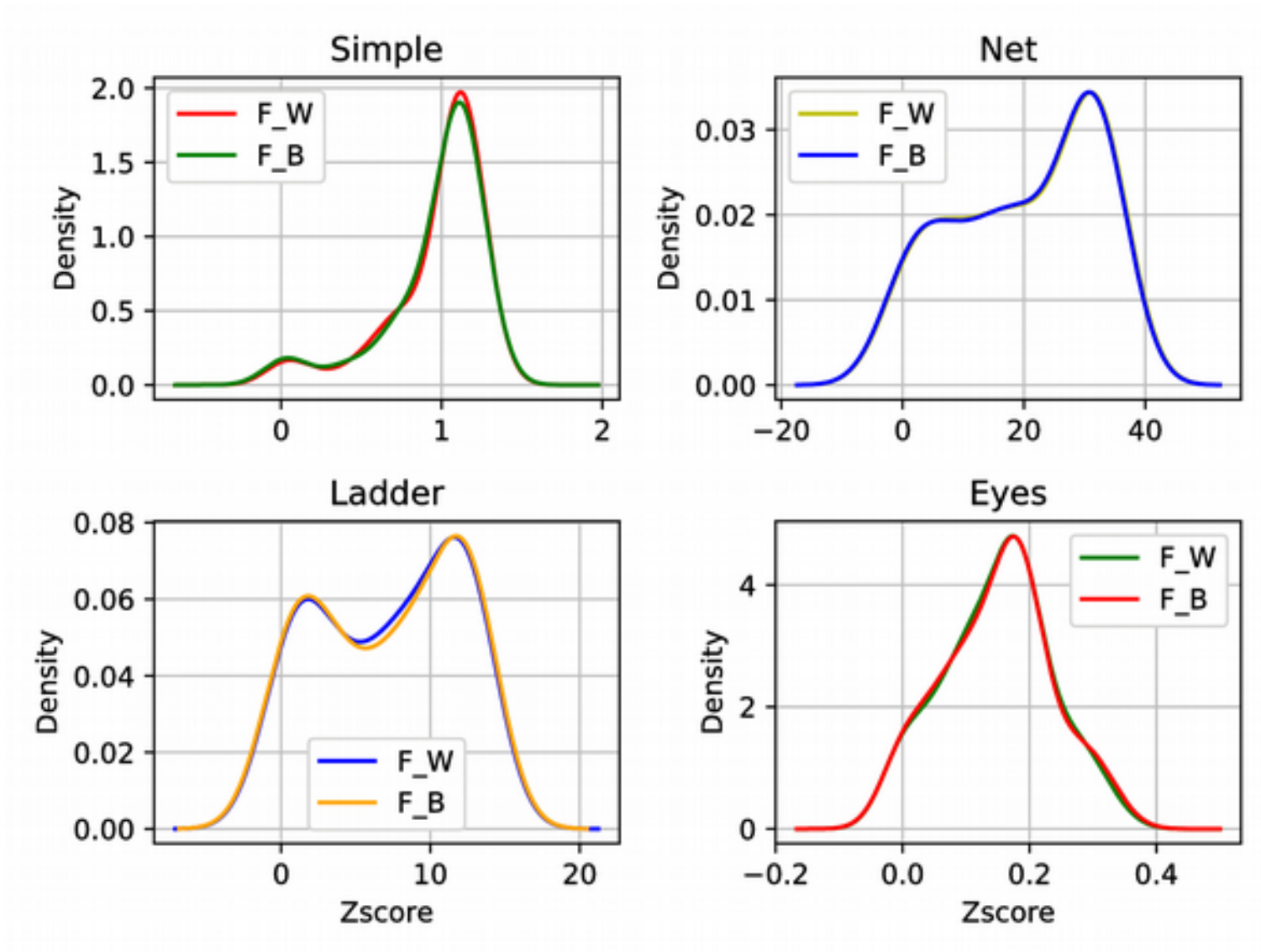
● eye ● net ● ladder ● simple_liberty

Black player AlphaGo Tournament

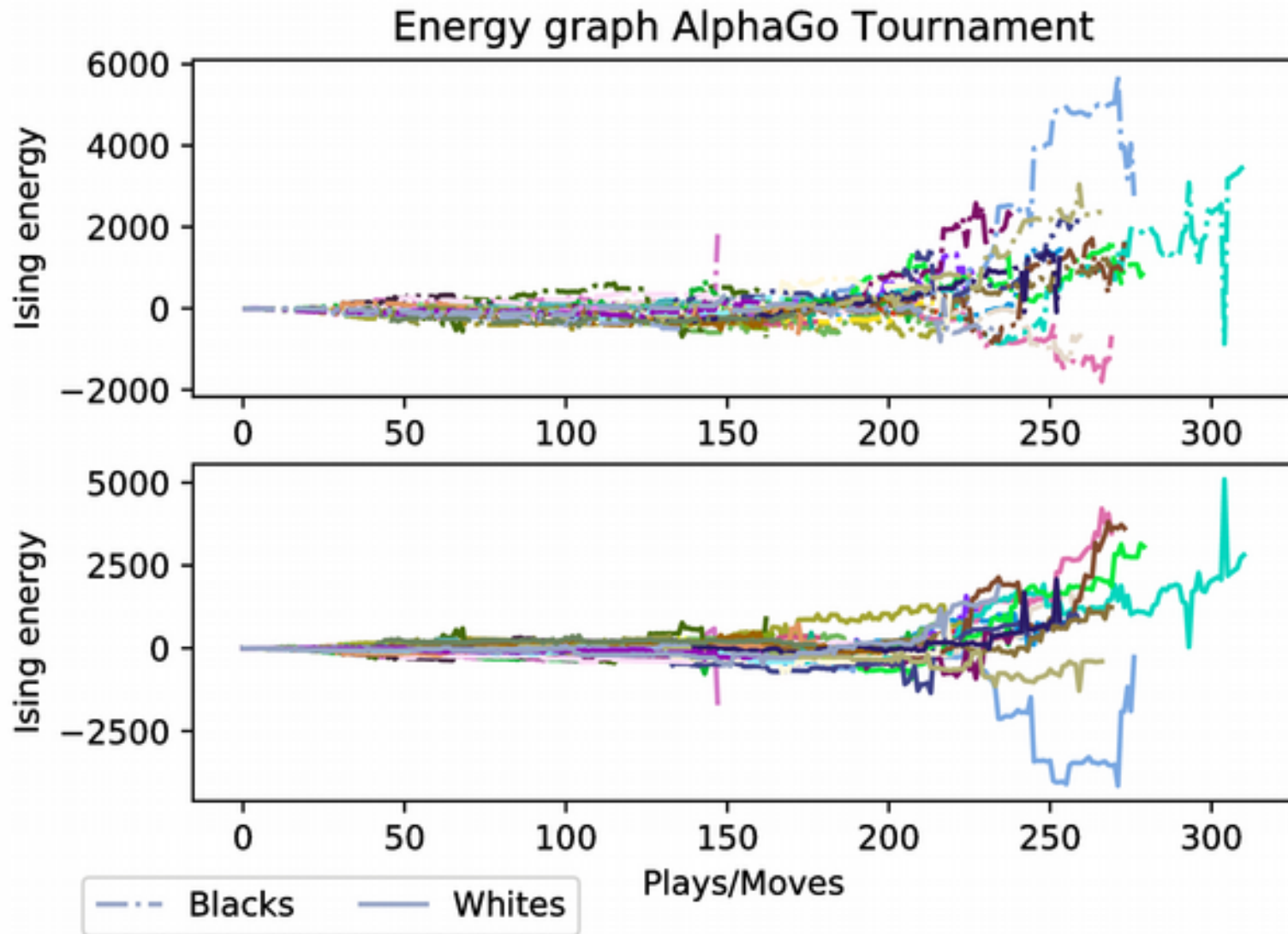


● eye ● net ● ladder ● simple_liberty

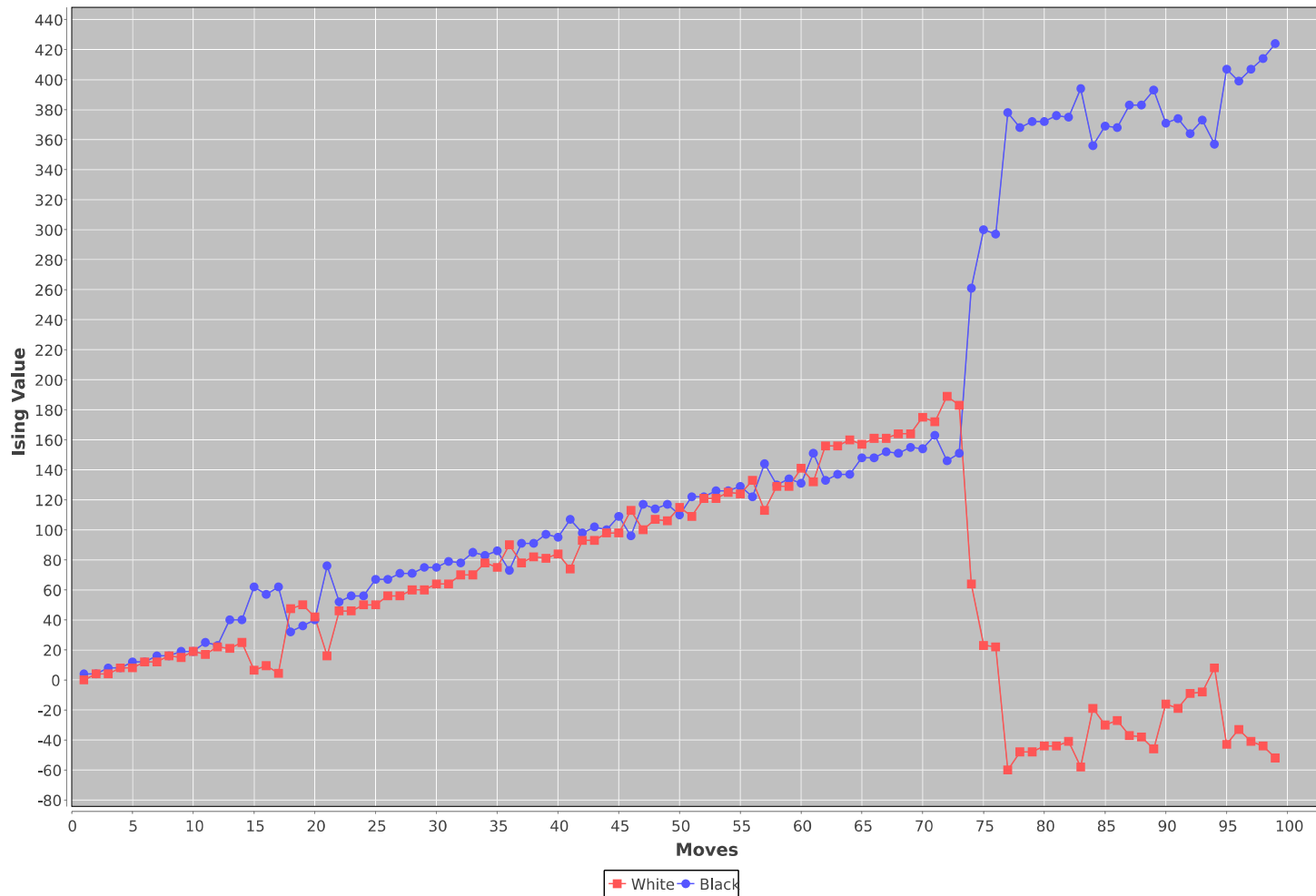
Supplementary figure 3. Count of the different tactics used in the AlphaGo tournament showing the counts as the game progress given in the x axis as play/movs done by the player.



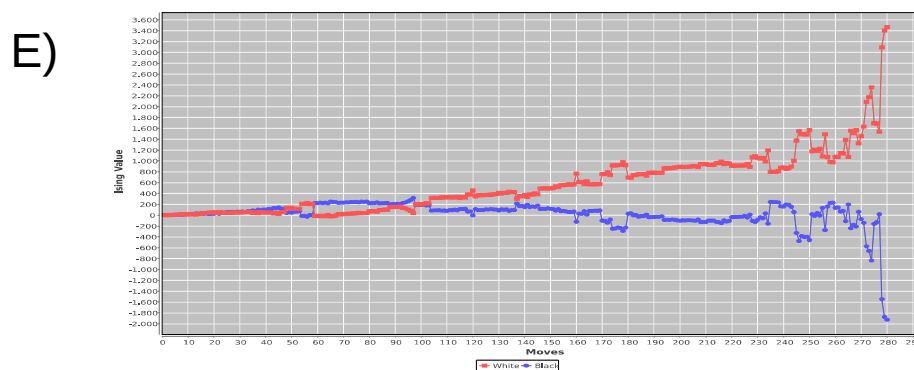
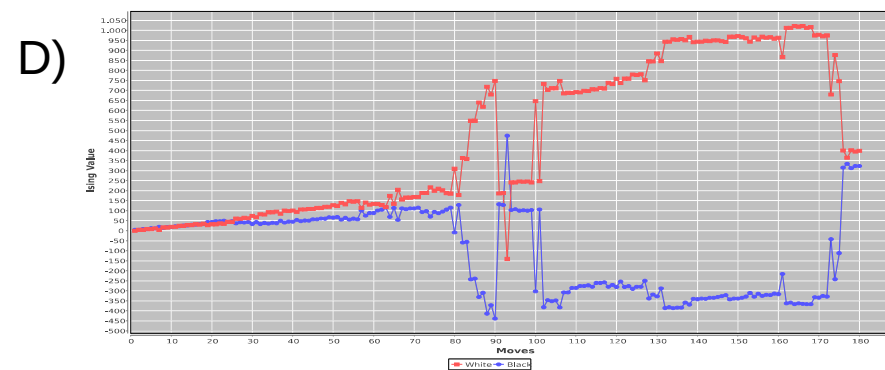
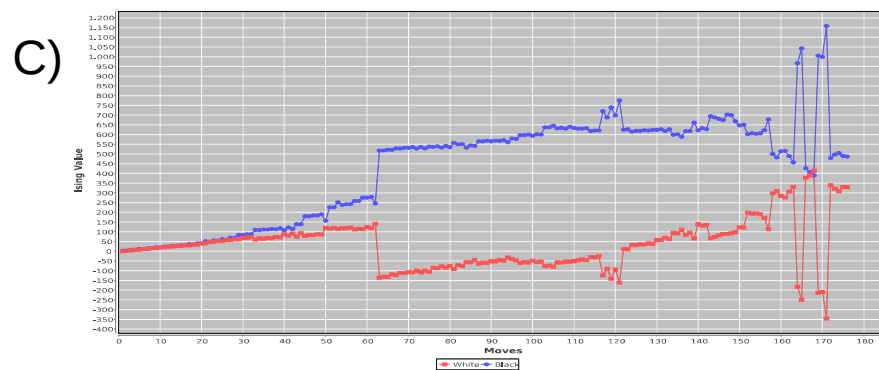
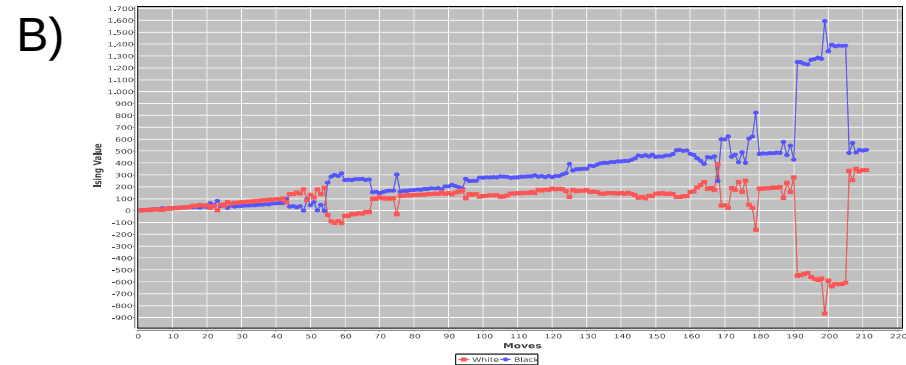
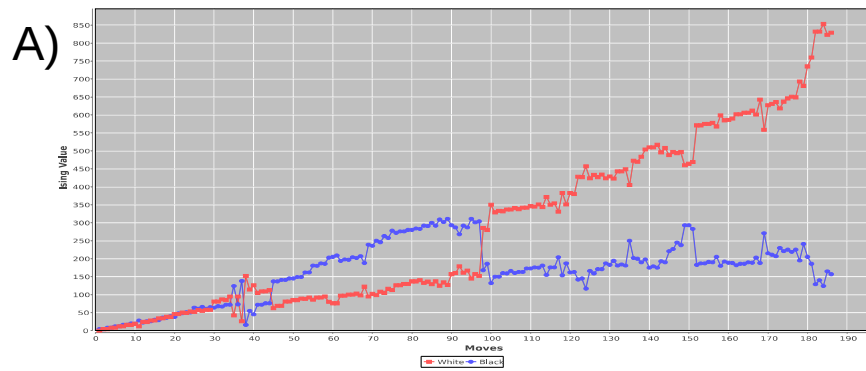
Supplementary figure 4. Density plots of the frequency of distribution against the Z score for the strategies used by black and white players in the AlphaGo tournament..



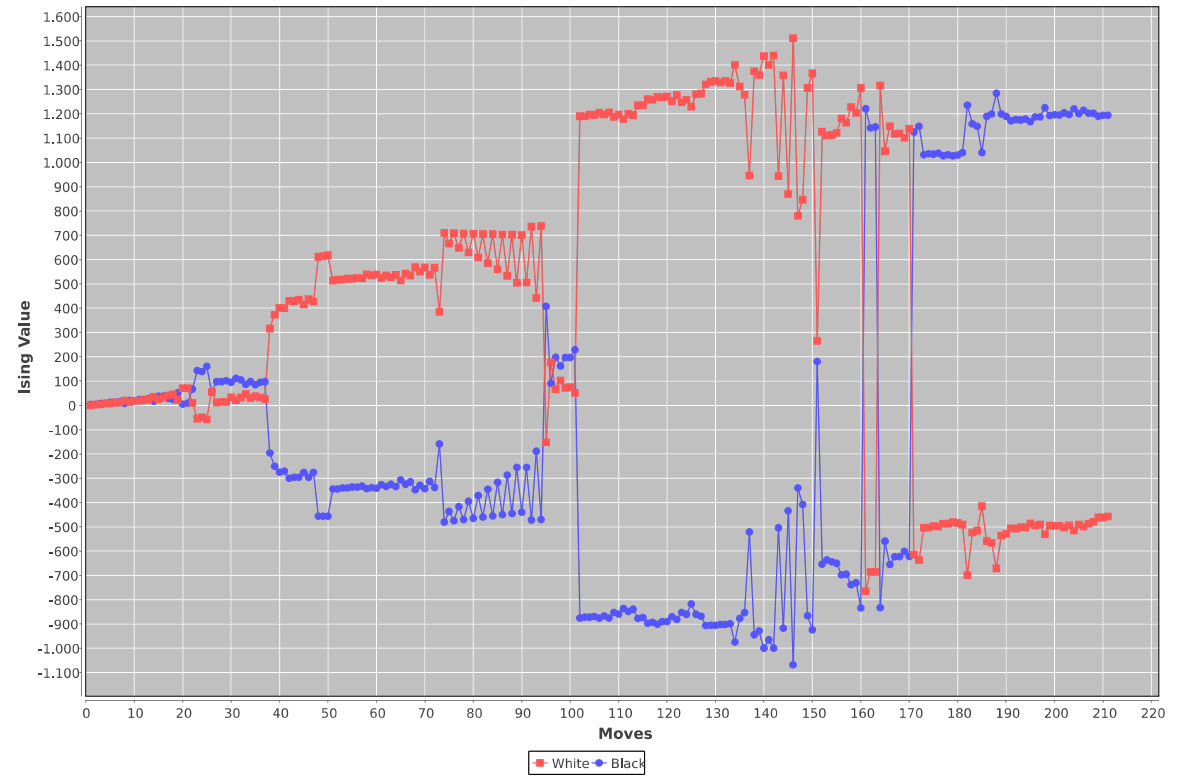
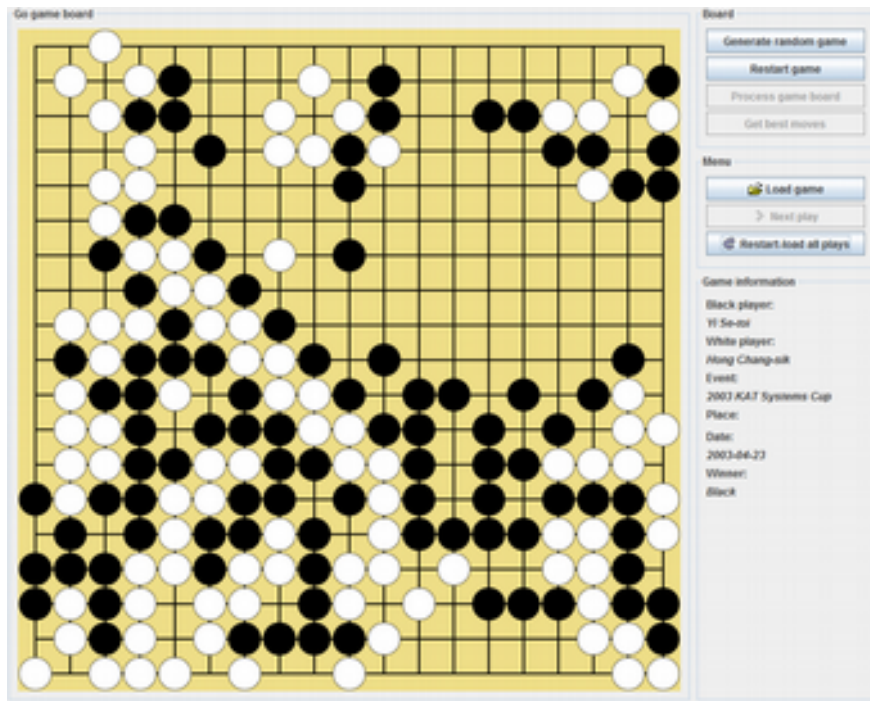
Supplementary figure 5. Ising energy plot of the white and black players. Here, there is no separation if the player is human or AlphaGo machine. The plots are basically mirror images since the game usually is at balance until one of the players gains more terrain over the other. The breaks in the balance are observed as the phase changes in the plot.



Supplementary figure 6. L. Changho plays black versus R. Suhang with whites, in Korean League 2014. Closed fight happens from move 1 to 70, so stone's strength is similar there. At move-state 73 a phase transition occurs and strength for blacks becomes greater as in more negative than for whites until the game end. According to energy function calculus the strength of black stones is 424 and for the white player is -51, likewise result reported. The black-whites balanced dominance breaks by the phase transition favor to black.



Supplementary figure 7. Ising analysis of the specific games at the Top tournament of AlphaGo 2017. A) AlphaGo vs Gu Li. B) AlphaGo vs Zhou Ruiyang. C) AlphaGo vs Chang Hao. D) AlphaGo vs Shin Jinseo. E) AlphaGo vs Cho Hanseung. For the official results please see <https://deepmind.com/research/alphago/match-archive/master/>.



Supplementary figure 8. The winner S. Masao played black versus Fujisawa playing white. From moves 50 to 160 the strength of the groups is quite separated, in move 166 – 170 the separation is reduced but, from then until game end black is ever strengthen. No phase transition happens.