

A voting Game

This is not a game we are going to formalize, you are asked to analyze it on the basis of the general knowledge you have acquired on strategic interactions.

There are three candidates a, b, c and three voters 1, 2, 3. The winner is the candidate who gets more votes *and* if all votes are different the winner is the candidate player 1 has selected. Votes are cast independently and simultaneously.

Preferences of the three voters for the three candidates are described in the following table:

1	2	3
a	c	b
b	a	c
c	b	a

where for example voter 1 likes a best, then b then c - and so on. Who is going to win this election?

A plausible presumption is that player 1 will surely vote a , because: if the others cast the same vote they determine the winner so a is as good as any other choice, while if they cast different votes the winner is player 1's choice and in this case a is strictly better than the other alternatives.

Predict the winner under this assumption. Is there an equilibrium where player 1 votes b and b wins?