Monte Hall question revisited (non-Bayes explanation)

Monte Hall Question Revisited

Setting the stage

Contestant POV

Monte Hall POV

Non-Bayes explanation

Monte Hall Question Revisited

Setting the stage

Contestant POV

Monte Hall POV

Non-Bayes explanation

1. Three doors labeled 1, 2, & 3.
2. Behind one of the three doors there is a car.
3. Behind the other two doors is a goat.
4. Monte Hall has a contestant choose a door.
5. Monte then opens one of the remaining doors that reveals a goat.
6. Monte then offers the contestant the ability to choose a different door or keep the door they original selected..
7. The question is, should the contestant keep their original choice, switch to the remaining door or, it doesn't matter.
8. Why?

Monte Hall Question Revisited

Setting the stage

Contestant POV

Monte Hall POV

Non-Bayes explanation

1. Odds are 1 in 3 of picking the door with a car.
2. One of the other doors is opened to show a goat.
3. Offered the chance to change doors or keep initial selection.
4. Now it seems like the odds are 50/50 - keep what I have or change to the other door.
5. What should they do?

Monte Hall Question Revisited

Setting the stage

Contestant POV

Monte Hall POV

Non-Bayes explanation

1. Monte knows which door hides the car.
2. Monte wants to create drama.

Monte Hall Question Revisited

Setting the stage

Contestant POV

Monte Hall POV

Non-Bayes explanation

1. Take Monte Hall's POV
2. How often does the contestant pick the wrong door?

Monte Hall Question Revisited

Setting the stage

Contestant POV

Monte Hall POV

Non-Bayes explanation

1. Take Monte Hall's POV
2. How often does the contestant pick the wrong door?
3. Two-thirds of the time.

Monte Hall Question Revisited

Setting the stage

Contestant POV

Monte Hall POV

Non-Bayes explanation

1. Take Monte Hall's POV
2. How often does the contestant pick the wrong door?
3. Two-thirds of the time.
4. How often is Monte required to make sure HE chooses the door that does NOT have a car behind it?

Monte Hall Question Revisited

Setting the stage

Contestant POV

Monte Hall POV

Non-Bayes explanation

1. Take Monte Hall's POV
2. How often does the contestant pick the wrong door?
3. Two-thirds of the time.
4. How often is Monte required to make sure HE chooses the door that does NOT have a car behind it?
5. Two-thirds of the time

Monte Hall Question Revisited

Setting the stage

Contestant POV

Monte Hall POV

Non-Bayes explanation

1. Take Monte Hall's POV
2. How often does the contestant pick the wrong door?
3. Two-thirds of the time.
4. How often is Monte required to make sure HE chooses the door that does NOT have a car behind it?
5. Two-thirds of the time.
6. Monte knows where the car is.
7. 100% of the time, he will choose the door with a goat behind it.

Monte Hall Question Revisited

Setting the stage

Contestant POV

Monte Hall POV

Non-Bayes explanation

1. Take Monte Hall's POV
2. How often does the contestant pick the wrong door?
3. Two-thirds of the time.
4. How often is Monte required to make sure HE chooses the door that does NOT have a car behind it?
5. Two-thirds of the time.
6. Monte knows where the car is.
7. 100% of the time, he will choose the door with a goat behind it.
8. Therefore, two-thirds of the time, the remaining door has a car behind it.