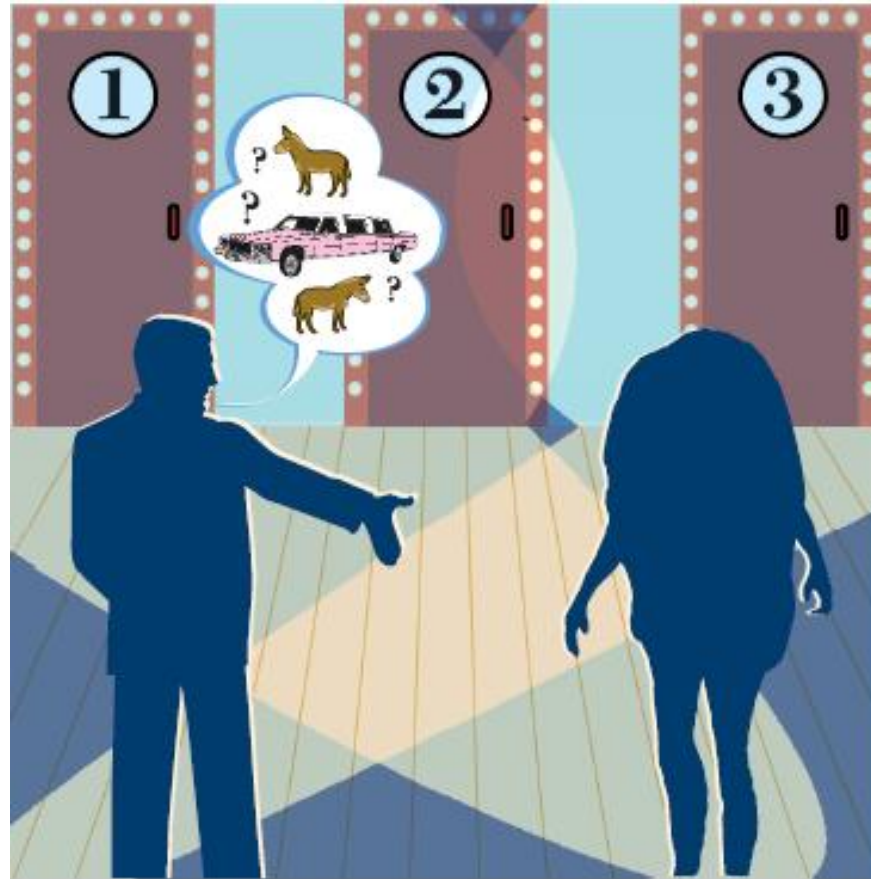


# Story 7. Let's Make A Deal



**“Let’s make a deal!” Monty Hall enthuses to the gentleman dressed as a giant singing raisin. The gleeful raisin, whose name is Warren Piece, is ready to wheel and deal as Monty Hall explains the game. “Behind one of these three doors is the Cadillac of your dreams. It is as long as a train and comes complete with a Jacuzzi. Of course, if you spend too much time in the Jacuzzi, your skin will wrinkle, but hey, you’re a raisin, your skin’s already wrinkled.” Monty Hall continues by warning that, “Behind the other doors, however, are two other modes of transportation: two old pack mules. They don’t come with Jacuzzis, although given their exotic odor, you may want to give them a bath.” Of course, the crowd is laughing and applauding, just as the studio sign instructs.**

**Monty sums it up: “So, there are three closed doors. Behind one is a luxurious car, and behind the other two are mules. Now comes the moment of truth. What door do you pick?” The audience erupts, “Take Door Number 1, take Door Number 1!!” “Door Number 2, Door Number 2!!” “Door Number 3’s the one. Choose 3.” Poor Warren Piece looks around at the crowd, confused and nervous. He considers Door Number 1, then 2, then 3. Finally Monty prompts, “Okay, Warren, which do you want?”**

**The raisin-clad Warren shouts, “Okay, okay, I’ll take Door Number 3, Door Number 3.” As Monty Hall quiets the overly excited audience, he tells Warren, “I’ll tell you what I’m going to do. I’m going to show you what’s behind one of the doors you didn’t pick. Let’s take a look at what’s behind Door Number 2.” With that, Monty Hall turns to the Vanna White of the 1960s and says, “Please show us what is behind Door Number 2.” The door dramatically swings open, the audience erupts, and Warren breathes once more—behind Door Number 2 is a mule! Monty, knowing where the mules are, always opens one of the mule doors first.**

**Monty continues, “We now see that the Cadillac is not behind Door Number 2. You guessed Door Number 3. I’ll tell you what I’m going to do. If you want, I’ll let you change your mind and choose Door Number 1 instead. It’s up to you. Do you want to stick to your original choice, or do you want to switch?” The audience goes nuts. “Stick, stick,” yell half. “Switch, switch,” advise the others. What to do, what to do?**

**We now invite you to add your voice to the cacophony—although you need not shout. What should Warren Piece do? Should he switch choices, stick to his original guess, or does it not matter? Here a classic TV game show raises the question: How can we accurately measure the uncertain?**

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## Nudges:

- Suppose the raisin's initial guess was wrong. What would be the result if he were to change his answer?
- Suppose instead of three doors, there were ten doors. After Warren Piece guessed Door Number 3, suppose Monty Hall opened eight of the remaining doors and all had mules. Should our raisin switch in that game? Why?