**Unit 3.2.8 – Beware of Monty Hall**

*You are on a game show and given the choice of whatever is behind three doors. Behind one door is a fantastic prize (some examples use a car, others use cash) while behind the other two doors is a dud (some examples say a goat, others say it's just empty). You pick a door. Then the host opens one of the other two doors to reveal a dud. But here's the wrinkle: the host now gives you the opportunity to switch your door. What should you do?*

Assuming that the items behind the doors do not change on reselecting the doors a second time, I must consider that the probability of choosing the winning door the second time around is greater given the condition that I have already chosen one of the dud doors. Since there are three doors, only one of which is the winning one, I know that the one I selected I a dud and therefore in selected from the remaining two doors, the chances of selecting the winning one go from 1/3 in the first try to ½.

Let’s discuss the Wikipedia example.