The old TV game show "Let's Make A Deal" hosted by Monty Hall,

presented a contestant with 3 doors. Behind one door was a fabulous prize.

Behind the other two doors were worthless consolation prizes.

After a contestant selected a door (say #1), Monty would then reveal what was behind one of the two unchosen doors (say #2).

The door Monty opened would always contain a worthless consolation prize. Monty would then ask the contestant

"Before I open the door you selected (#1),

do you want to switch your door for the one remaining door (#3),

or do you want to keep your door?"

The contestant would then either switch doors (#1 for #3)

or keep their door, and then Monty would open the door that the contestant had chosen.

Should the contestant switch doors or keep the original one?

Intuition convinces most people that, regardless of the removal of one door, you now have a choice between 2 doors, giving them a 50% chance of winning.

Most contestants will keep the original door

to avoid the regret (in case they lose)

that would result from mistrusting their original intuition.

The answer is that the odds are 2-1 in favor of ... switching doors!

[https://en.wikipedia.org/wiki/Monty\_Hall\_problem#Solutions\_using\_conditional\_probability\_and\_other\_solutions](https://en.wikipedia.org/wiki/Monty_Hall_problem%23Solutions_using_conditional_probability_and_other_solutions)

If the explanations you have read for the "Monty Hall" problem seem confusing,

try this simple two-part explanation that I designed:

1) The only way to win if you keep your door

is if you chose the winning door initially:

this happens 1/3 of the time.

2) The only way to win if you switch doors

is if you chose a losing door initially:

this happens 2/3 of the time.

So you double your chances of winning ... by switching doors.

This is an excellent example of Bayes' Theorem,

which, when translated from math jargon into English,

states that prior events must be taken into consideration

when computing future probabilities.

In the Monty Hall problem,

you must consider the removal of one of the doors.

[https://en.wikipedia.org/wiki/Monty\_Hall\_problem#Vos\_Savant\_and\_the\_media\_furor](https://en.wikipedia.org/wiki/Monty_Hall_problem%23Vos_Savant_and_the_media_furor)

The various explanations that have been given,

which explain why you double your chances of winning by switching doors, have caused many thousands of well-educated people to write angry letters in rebuttal.

Intuition is powerful in the human species.

Intuition can lead us to marvelous discoveries,

but if not guided properly by rational thinking skills,

intuition can also lead us to false conclusions;

and when combined with an inflated ego,

it can prevent us from admitting when we are wrong.

A great way to identify these ego-controlled people

is to pose my proof in the form of 2 questions,

which will force them to prove it themselves.

Yet after they have answered the questions,

forcing an admission, what will some of those people do?

They will ignore their own admission,

and then they will begin presenting their own "solution"

to prove that the odds are even and that they weren't wrong.

Don't let them get away with that. Don't allow yourself to get covered in bullshit just because they refuse to admit that they were wrong.

<http://en.wikipedia.org/wiki/Law_of_non-contradiction>

The "Law of non-contradiction" which is one of the 3 foundational laws of logic, states that two or more contradictory statements

cannot both be true; in the same sense; at the same time.

The 2 statements in my proof are true. There is no escape.

Therefore, until they can disprove the solution above, their solution is irrelevant.

That's because the law of non-contradiction ... will not allow it.