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# HOW TO IMPROVE YOUR ODDS OF WINNING A LUXURY CAR

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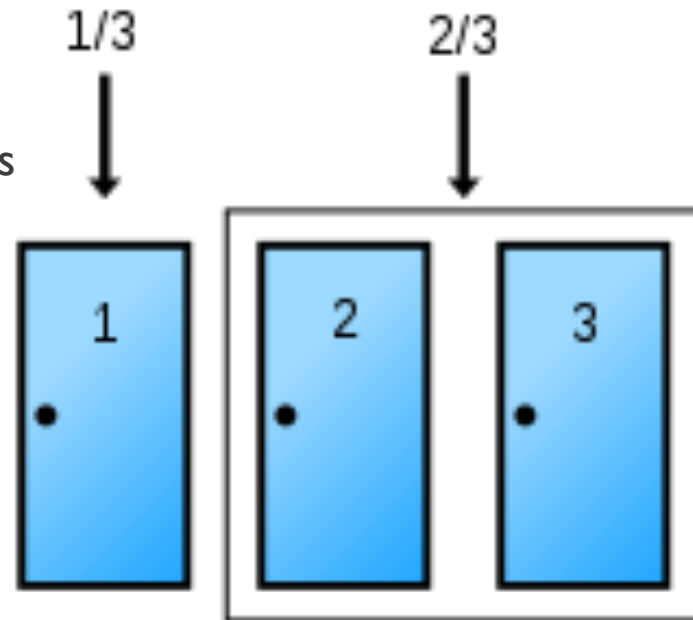


# CLAIMS FOR THIS PARADOX

- "... no other statistical puzzle comes so close to fooling all the people all the time"
- "...even Nobel physicists systematically give the wrong answer, and ... they *insist* on it, and they are ready to berate in print those who propose the right answer."

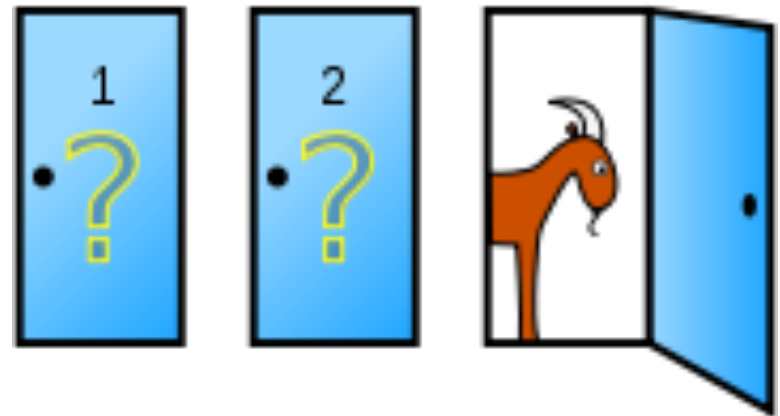
# THE CHALLENGE

- A Game Show Host present 3 Doors
- Behind one is a Luxury Car
- Behind the other two are Goats



# THE CHOICE

- The Host allows you to choose a Door
- You pick, say, Door 1 [but it's not opened]
- The host [knowing what's behind each Door] opens Door 3, which has a Goat



# THE OFFER

- He then asks, "Do you want to pick Door 2 instead?"
- You really want to win that Luxury Car
- Can you improve your chances by switching?

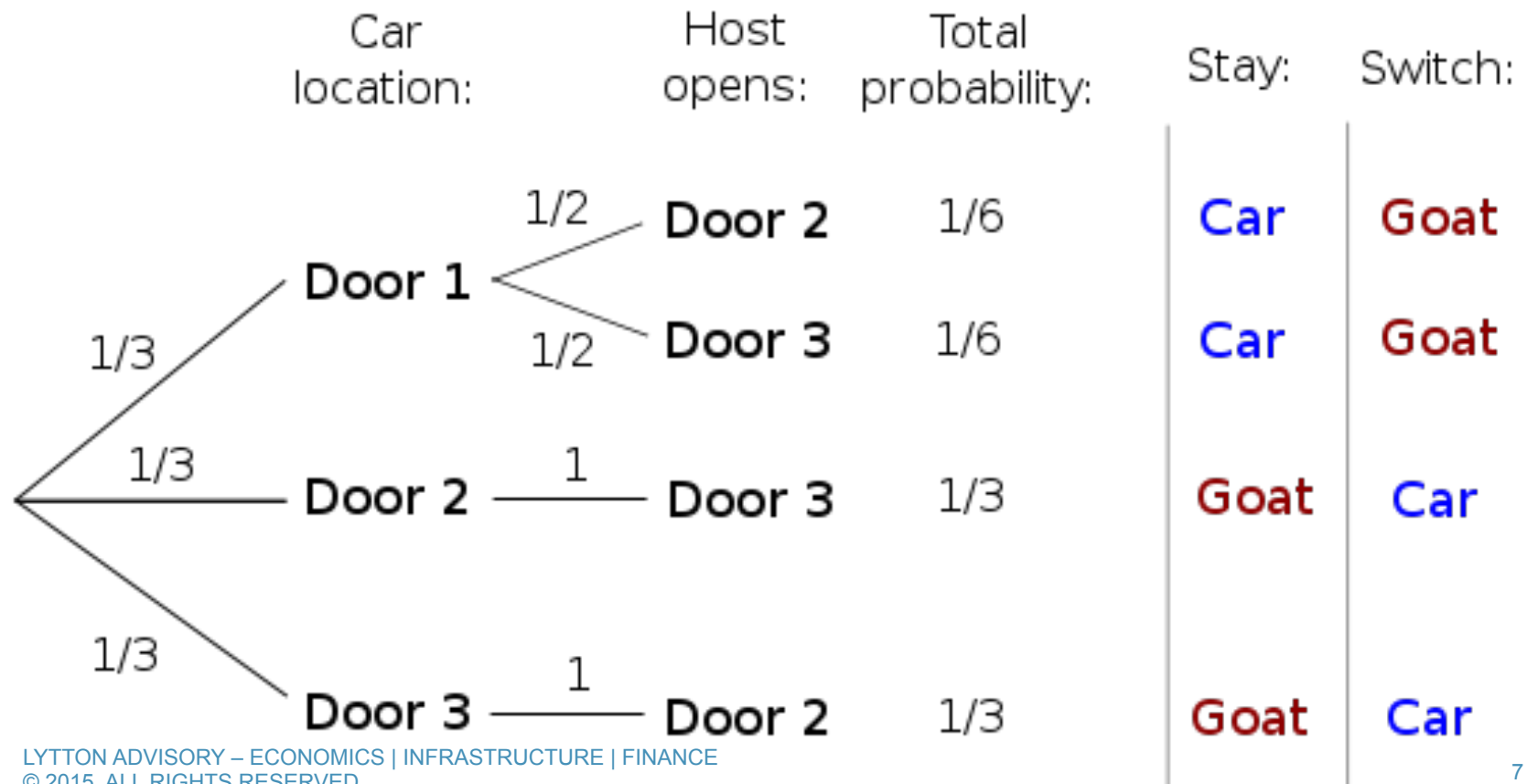


# YES!

- You have a better chance of winning the luxury car by switching doors.

# A DECISION TREE

(ASSUMING THE PLAYER HAS PICKED DOOR 1)



# THINK LARGE

- Suppose there were a million doors
- Your first choice is a million to one
- Suppose the Host kindly opens 999,998 for you, leaving the one with the prize
- Who would keep their first choice rather than open 999,999 doors?
- Isn't switching a better strategy?
- Irrespective of whether  $N=3$  or  $N=1$  million



# ABOUT LYTTON ADVISORY

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- We cover capital investment decisions, from inputs to regional strategic planning and development, to project feasibility and implementation. We have worked directly in or alongside dozens of organisations. We also bring our experience into larger multi-disciplinary teams to deliver an expansive suite of skills to clients.
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