BOOK REVIEWS

JASON ROSENHOUSE, **The Monty Hall Problem, The remarkable story of math's most contentious brain teaser**, xii+194 pages, Oxford University Press, Oxford, 2009.

The modern variant of the Monty Hall problem was originated from the American television game show *Let's make a deal*. The name comes from show host Monty Hall. Suppose you are given the choice of three doors. Behind one door is a car; behind the others, goats. You pick a door, say No. 1, and Monty Hall, who knows what is behind the doors, opens another door, say No. 3, which has a goat. He then says to you, 'Do you want to pick door No. 2? Is it to your advantage to switch your choice?'

The motivation for writing this attractive book was Marilyn vos Savant's case. The famous columnist (being then the holder of the world's highest I.Q.) of the magazine *Parade* wrote an article in 1990 on the above brain teaser with a correct, clear but surprising heuristic solution. Afterward she received about 10 000 letters whose 92 percent expressed disagreement. The long controversy was resolved when vos Savant recommended to make Monte Carlo experiments: the results convinced the public. Rosenhouse looks for the mathematical, philosophical, and social reasons for the above phenomena. He shows the equivalence of Monty's problem with Bertrand's box paradox, and with the prisoner's dilemma, and with some brain teasers for job interviews. Interesting generalizations of Monty's problem are given. The epistemological explanation of the misunderstanding can be the fact that the frequentist approach to elementary probability problems is much more convincing than the logical one. One of the social reasons may be that people do not trust magazine article, when the matter is on a simple, exact, but counterintuitive mathematical statement.

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