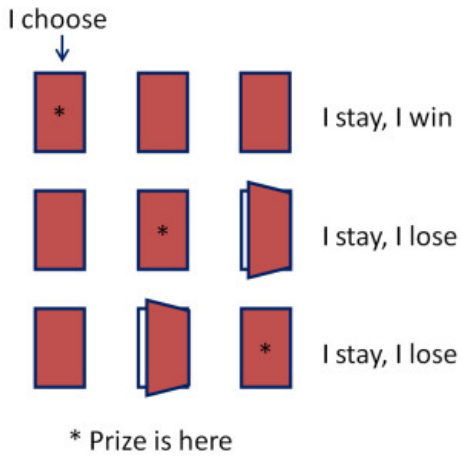
‘No, you choose for me': The Monty Hall dilemma with pigeons

In the Monty Hall Dilemma (MHD), three doors are presented to human subjects with a prize behind one. Participants choose one door but before opening it, one of the unchosen doors is shown to not have the prize.The participant can then choose to stay with the door originally chosen or switch to the remaining unchosen door. As it turns out, the optimal strategy is to switch because two thirds of the time the unchosen door will have the prize (see the figure).What makes this task difficult is subjects do not understand that the person who opens the unchosen door knows where the prize is and always opens a door without the prize. As Marilyn vos Savant wrote in Parade magazine “no other problem comes close to fooling all people all of the time”.



We found that under similar conditions pigeons do not show this suboptimal behavior with the Monty Hall task. And pigeons choose optimally even when they have to work harder to make their initial choice (i.e., they have to peck 20 times rather than just once). Other researchers have found that humans are more likely to switch their choice if the initial choice was made for them. That is, when they did not feel a personal commitment to the door initially chosen. In the present experiment we asked if pigeons’ decision to switch would be affected by making the initial choice for them.

Surprisingly, we found that the pigeons were actually less likely to switch if the initial choice was made for them than if they made the initial choice. The results of these experiments indicate that pigeons are not sensitive to some of the factors that are responsible for humans’ tendency to choose suboptimally and furthermore, they are better able to assess the relative probabilities of staying versus switching when they make their own initial choices.

Thomas R. Zentall
University of Kentucky,
Lexington, USA

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