

Newcomb's Paradox

Okay kids, the aliens have landed and they're a Game Show Culture from Alpha Centauri. They claim to be able to read people's minds. They've set up a game at McCarter Theatre, and here's how it works. If you want to participate, they interview you. Then a week later you go up alone on the stage at McCarter, where they've already set up a table and two boxes, A and B. Box A always has \$1000 in it. Box B may have \$1,000,000 or it may be empty. Your only choices:

- 1) Take both boxes.
- 2) Take box B only.

The aliens believe they can predict what you'll do. If they predicted you'll take both boxes, they left box B empty. If they predicted you'll take just box B, they put \$1,000,000 in it. According to the newspapers the aliens are pretty good at predicting. So far one hundred people have chosen both boxes, and they've all found box B empty. So they've won \$1000 each. One hundred other people have chosen just box B, and they've all won \$1,000,000 each.

They've asked me (RAF) to play, and I was interviewed last weekend. This Saturday I'll get to choose. To help me decide, I asked two professors for advice. Here's what they said:

Professor Smith: It's obvious! Everyone who chose just box B got \$1,000,000. Everyone who chose both boxes got only \$1000. Choose box B!

Professor Jones: It's obvious! The money is already set up when you go on stage. Either box B has \$1,000,000 or it doesn't. Either way you'll get \$1000 more by choosing both boxes. Why leave \$1000 lying around? Choose both boxes!

Philosophers, mathematicians and theologians have written hundreds of pages about this paradox since it was invented by William A. Newcomb, a physicist, in 1960. Some of the topics they've touched on have included freedom, free will, "determinism," causality—even particles that move faster than light. If you want to read more, you can look for *Knotted Doughnuts* by Martin Gardner, or try "Newcomb's Paradox" on an internet search engine.

YOUR JOB: Write about Newcomb's Paradox! You can write a letter of advice to me. Let me know if you think one of the professors is wrong, and why. You can also write about what *you* would choose to do. Do some research (and cite your sources!) You might want to consider whether the problem would be different if the aliens were right only 90% of the time, or if the amounts of money were different. What if the audience can see what's in the boxes (but you still can't)? Do you think the story is impossible? Why?

Use your imagination! Have fun!