Handout 8 Puzzles about Conditionalization & Maximizing Utility II RATIONAL CHOICE

Stuck in Hell

Jones dies and goes to purgatory, which is...well...pretty so-so. One day the devil comes to him and makes him an offer: "if you spend just one day in hell, you can spend two days in heaven". Since heaven is about as good as hell is bad, Jones thinks this is a pretty good deal, and accepts. After his horrible day in hell is over, the devil comes to Jones again: "wait just a second, I've got another offer: one more day in hell and you'll get *an extra* two days in heaven." After reflection Jones accepts. The problem is, the devil keeps coming back with those "good" offers, and Jones spends eternity in hell. Were any of Jones' choices irrational? If so, which one? If not, what went wrong?

Sleeping Beauty

The following puzzle challenges our understanding of how to change our beliefs in response to a special kind of evidence: evidence about where you are and what time it is.

Beauty is put in an experiment where she will be put to sleep on Sunday, and woken up briefly on Monday. Later that day a fair coin is tossed. If it lands heads, Beauty leaves. If it lands tails, Beauty will be put to sleep and her memory erased. She'll wake up again, in indistinguishable circumstances, on Tuesday. After a short spell, she'll be asked to leave.

Beauty goes to sleep. When she wakes up, what credence should she allot to the coin's landing heads? To its being Monday?

Newcomb's Puzzle

Scientists have designed a machine that scans you before you enter a testing facility room and will try to predict your behavior inside. In the room you'll find an opaque box and a clear box. You are given the option of either taking just the opaque box, or both the opaque and the clear box. The clear box always contains \$1,000. The opaque box contains \$1,000,000 just in case the predictor predicts you'll take *just* the opaque box. In the past the predicator has been nearly infallible. What should you do?