(on in my mailbox ahead of time)

Exercise 1 (24 pts.) The following questions are about the reading "Ideal Agents Brave the Newcomb". Answer them in about 1-2 sentences apiece.
(a) Why would Carl be willing to go along with-nay, be willing to pay to be a part of -Eve's strange variant of the experiment?
(b) Why would Carl be unwilling to go along with Eve's variant of the Newcomb after the predictor has scanned him?
(c) Why, before he is scanned by the predictor, might Carl (badly) not want to be told how the coin toss landed?
(d) Why might Eve not want to know by looking, or from Carl, whether there is $\$ 100$ in the opaque box?

Exercise 2 (26 pts.) Bert and Ernie need to coordinate their choices on A or B, but there are two probems. First Bert prefers to coordinate on A, whereas Ernie prefers B. Second: they have no way of planning what to do ahead of time. They have to choose without communicating or knowing what the other does. The payoffs look like this:


Sadly, no choices here are dominated (or weakly dominated) for either Bert or Ernie. But...
(a) [16 pts.] Suppose both Bert and Ernie know that Bert (but not Ernie) has two dollars in his pocket and a lighter. Bert has the option of burning this money (for no reason) in front of Ernie before they choose. If he burns it, this counts as a loss of 1 'util' for Bert. Now Bert and Ernie are in a new strategic situation. Bert has four choices: burn the money and choose A, don't burn and choose A, burn and choose B, or don't burn and choose B. Ernie really has four choices too: choose A whether or not Bert burns, choose B whether or not Bert burns, choose A if and only if he burns, choose B if and only if he burns. Write out the $4 \times 4$ table for this game (with the choices in the order I listed).
(b) [6 pts.] If you've done (a) right, some options will be strongly or weakly dominated. Use the method of iterated elimination of weakly dominated options. List which options weakly dominate each other, in the order that they do so in the deletion process. Say, for example, "Column 1 weakly dominates Column 2. Then Row 4 weakly dominates. . .etc."
(c) [4 pts.] Something surprising should have happened in (b). In a paragraph, comment. For example, does this result make sense? If so, why? If not, why not?

