

Applying Cognitive Psychology Methods Activity 5: Decision-Making

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Evaluation Questions

1. Describe each task. What did you do in each? How does each represent what we have learned about decision-making. (10 pts)

Solution.

- **For the Wisconsin Card Sorting Task,**
- **For the Iowa Gambling Task,** the goal was to choose between either cards *A*, *B*, *C*, or *D* to maximize the amount of money earned. Cards *A* and *B* awarded \$100, and cards *C* and *D* awarded \$50. However, cards *A* and *B* also had a penalty of \$250 whereas *C* and *D* had a penalty of \$50.

Given only the information that *A* and *B* had higher payouts, it would appear that choosing either of them would be the most advantageous. However, due to the added factor of receiving a penalty (with probability of 50%), it turned out that choosing only *C* and *D* would generate the most money in the long run.

This task addresses a lot of the concepts we have learned about decision-making. Such as:

- (a) *Availability heuristic*: events that come easiest to mind are seen as being more probable. In this case, the higher payouts of *A* and *B* were more salient than the penalties, leading to participants being more likely to choose them.
- (b) *Confirmation bias*: the tendency to search for, interpret, and remember information in a way that confirms one's preconceptions. For example, while I was playing, I did not realize that the rewards for each card were fixed. I hypothesized that choosing the cards in a specific order would reduce the chance of getting a penalty. This led me to make *illusory correlations*—the appearance of a nonexistent relationship.

My hypothesis caused me to completely ignore the fact that the rewards were fixed and that the penalties were random.

2. How did you employ attention and working memory in each of these tasks? Make sure to include specific components of working memory. What does this tell us about how decision-making, attention, and working memory work together? (16 pts)

Solution.

- **For the Wisconsin Card Sorting Task,**
- **For the Iowa Gambling Task,**

3. How does the Iowa Gambling task demonstrate the impact of affect (emotion) and risk on decision-making? (8 pts)

Solution.

4. For each task, identify and describe one bias OR heuristic described in class or in your book that impacted your ability on the task. Make sure to include how the bias or heuristic specifically impacted you on the task. (12 pts)

Solution.