**Task instruction**

**Important note:** Human faces that were used for the study were replaced by cartoons here.

**START OF THE INSTRUCTION AS IT APPEARED:**

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**INSTRUCTIONS FOR RESPONSIBILITY GAME**

**Overview of the study**

Three individuals previously were paired together in groups of two and completed a minitask for several rounds. The minitask required them to work together as a team. Each time, the two individual received feedback about their performance. In this experiment, you will see each team’s performance for several rounds. The individuals’ contribution to the minitask was different. Some were more competent than others. Their competence also varied from round to round. Even though you cannot see each individual’s contribution to their teamwork, your task is to learn their ability in the task.

Therefore, your task is:

* First, indicate which individual is more responsible for the outcome of their teamwork.
* Second, indicate your estimate of each individual’s performance in the task from time to time.

Each individual is assigned a photo from a public face database in order to keep their identity anonymous.

**Task**

There will be three blocks in total. In each block, there will be 72 rounds (see the structure of the task in Figure 1).

A diagram of a block

Description automatically generated with medium confidence

Figure 2

In each round, you will first observe the outcome in the middle of the screen which was the result of the individuals’ teamwork. A vertical score frame is devised to represented the outcome of the individuals’ teamwork (Figure 2). The bottom end of the score frame indicates the minimum score that the teams could have achieved (which is marked by min). The top end of the score frame indicates the maximum score that they could have achieved (which is marked by max). A horizontal line in the middle of the frame indicates its midpoint. A green bar inside the frame indicates the score that a team has achieved.

As you can see in Figure 2, the score frame on the left side shows an amazing outcome because the green bar is near the maximum point. The right one shows a very poor outcome because the green bar is near the bottom of the score frame. Sometimes the outcomes are neither great nor terrible. For example, the one in the middle shows a mediocre outcome because the green bar is near the midpoint.

A picture containing diagram, screenshot, line, plot

Description automatically generated

Figure 3

Then, you will be presented the photos of the two individuals in the team (Figure 3). One individual’s photo will be shown to you first either on the left (see example 1 in Figure 3) or right side (see example 2 in Figure 3) of the score frame and then after a few seconds the second individual’s photo will be shown on the other side. Then, you will be asked to decide which individual is more responsible for the outcome you just observed. You can choose the characters shown on the left or right sides by pressing the left and the right buttons, respectively. Your payment at the end of the experiment will depend on how well you predict the individual who was more responsible for a good or a bad outcome.

A screenshot of a cartoon of a person's face

Description automatically generated

Figure 4

Once the task begins, you will be periodically asked to rate different individuals’ score/competence in the task. To do that, you will be shown an individual’s photo. Right below the photo, there is a tool to rate the presented individual’s score. As mentioned before, in each round, you see an outcome which is the result of two individuals’ teamwork. Individuals vary in their ability in the task. However, their performance might change from round to round due to natural fluctuation as they completed the minitask over several days. Therefore, it is important for you to track each individual’s score and do your rating based on that.

Your rating will be based on a scale ranging from min score to max score (seeing the rating scale and an example individual’s photo in Figure 4). Select your own answer by moving the scale using left and right buttons and lock your answer with the middle button on the response box. Moving the cursor all the way to the utmost left means that you think this individual is very poor at the task. However, moving the cursor all the way to the utmost right means that you think the individual is very competent at the task. The initial position of the cursor is always in the midpoint. You should move the cursor to where you think best describe the individual’s performance. Not moving the cursor will result in a severe loss of bonus payment.

A cartoon of a person with glasses

Description automatically generated

Figure 5

**Experimental Procedure**

You will complete the whole task in the fMRI scanner. The task will take around 60 minutes. We will also take a high-quality image of your brain during which you do not have to do anything but stay still in the scanner.

At the end of the task fMRI, you will be presented with images of different characters one after another. While at this stage you do not need to do anything, but you need to pay attention to the images that appear on the screen (Figure 5). Please keep your eyes on the fixation point during the interval between different images. At times, you will be asked to indicate the character which was just presented (Figure 6).

A cartoon of a person's face

Description automatically generated

Figure 6

A screenshot of a cartoon of two people

Description automatically generated

Figure 7

**Important note: in order to avoid gender bias in the social comparisons, we have chosen female and male characters for female and male participants, respectively.**

**Please let me know if you have any questions regarding the experiment.**

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**END OF THE INSTRUCTION**