by lower reward rates, increased spatial bias, increased win-stay, and decreased lose-shift biases, suggesting perseveration in choice patterns. Preliminary genetic analyses show that DRD2 genotype mediated the effect of DA treatment on performance in saccade trials, whereby those with greater D2 receptor density (T/T) showed improved performance OFF medication compared to ON. Although the PD group did not show deficits in button-press trials, COMT genotype mediated the effect of DA treatment on task performance, whereby those with high activity COMT genotype (val/val) showed improved performance OFF medication compared to ON, and the converse was true for those with low activity genotypes (met/met). Understanding the role of genetic polymorphisms in patients' responses to DA medication could lead to individualized treatment to optimize cognitive function.

1-G-17 Neural Correlates of Strategic Interactions: a Single Brain Network Implements the Updating of Both Game and Player Information.

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STUDY'S OBJECT: Most of real life interactions are repeated, rather than isolated, encounters. Such repeated strategic interactions are modeled in game theory (GT) as repeated (or stochastic) games, where the players play a sequence of the same (or different) single-shot game. The theory of repeated games assumes that players choose actions in a game according to strategies. Game theorists have formalized possible strategies for distinct economic games (Finkelstein & Whitley, 1981) and previous experimental studies have identified strategies that humans adopt in different repeated interactions (Fudenberg, Rand, & Dreber, 2012). The aim of this study is to characterize the neurobiological basis of the encoding and processing of critical game variables during strategic playing where either the game or the opponent player (i.e., strategy) may change during the interaction. METHODS: Forty-two participants played a stochastic game while undergoing functional magnetic resonance imaging (fMRI). The game was defined by two parameters: the continuation probability (i.e., the probability of changing the current partner) and the probability of changing the stage game. Thus, during game playing subjects could stay with the same player and game as in the last round or they could change either the player or the game. Participants played with six virtual players (resembling the behavior of real people in analogous situations) two different stage games: the Prisoner's Dilemma (PD) and the Battle of the Sexes (BoS). At the beginning of each trial, information about the opponent player (i.e., one of the six virtual players) and the game to be performed (either PD or BoS) was shown on the screen, followed by a delay in which the participant had to represent all pieces of information and make a choice. Finally, feedback about the choices made by both players was displayed on the screen. The fMRI data from the phase where the information about the player/game was displayed were analyzed. By contrasting trials in which the player (game) changed and trials in which the player (game) remained the same as in the previous round, we aimed to identify brain regions that implement the updating of player (game) information. RESULTS: Preliminary results show that the same brain regions are involved in updating information either about the game or the player. This common network comprises the precuneus, the inferior frontal gyrus, the premotor cortex, and the anterior cingulate cortex. CONCLUSION: These findings suggest that a single brain network implements the updating of both game and strategy information during strategic playing.

1-G-18 A Neuroeconomics Approach to Addressing Common-Pool Resource Problems

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