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Visually-Guided Reward-Biased Behavioral Task

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Abstract

A protocol describing the visually guided, reward-biased saccade task monkeys were trained on in the original study: Schwerdt et al. 2020, *Sci. Adv.*

Troubleshooting

Behavioral Task

- 1 Monkeys performed a programmed eye movement task in which they would first fixate on a central cue displayed on a monitor in front of them for a fixed duration chosen from a range of 1.2 - 3 s (National Institute of Mental Health, National Institutes of Health, VCortex).
- 2 The central cue would then extinguish while a second target appeared on the screen's periphery, where the monkeys would have to saccade to and fixate for another 4 s before receiving a reward.
- 3 Whether the second target appeared to the left or right of the center cue was associated with whether successful completion of a trial would result in either a big or small reward. The second target's location/reward-size association would swap after 15 to 45 trials or 50 to 100 trials.
- 4 The reward was a liquid food mixture (355 ml of Plus Nutrition Shake Vanilla, 355 ml of water, blended with two large bananas, and eight biscuits) delivered via a mouthpiece located near the animal's mouth at small and large reward volumes of 1.5 and 2.8 mL or 0.1 and 0.3 mL, respectively.
- 5 Monkeys had a large reward probability of either 50% or 25% and an intertrial interval length of a fixed 7.5 s or a fixed value of 5 to 15 s per session. Subjects would perform between 500 and 1200 individual trials per recording session.