Dual Task Faces - Similarity Ratings Experiment - Code Instructions

Order of the blocks:

1. **runExp1_training**
2. **runExp1_MvsNM**
3. **runExp1_centralSOA**
4. **runExp1**

1. Description of Scripts used in the Experiment

runExp1_training.m*: Training script to be executed first in the experiment. Presents instructions, trials and collects responses. Random order of each of the types of blocks: Match vs No Match (MvsNM; using confidence ratings), central single-task, peripheral single-task (similarity ratings); with the dual-task training block always coming 4th. Saves all responses and settings in the structures TR and Cfg. Makes use of the scripts Exp_Parameters1_training.m, DrawResponseScreen1.m, and getMouseResponse.m.

runExp1_MvsNM.m*: Match vs No Match block script to be executed in the experiment. Faces are either a 'match' (same gender) or 'no match' (different gender) and the peripheral SOA adjusts via QUEST during this block. **NO** similarity ratings are used here, only confidence ratings for match or no match. Presents instructions, trials and collects responses. Saves all responses and settings in the structures TR and Cfg. Makes use of the scripts Exp_Parameters1_MvsNM.m, DrawResponseScreen1_MvsNM.m, and getMouseResponse.m.

runExp1_centralSOA.m*: Central single-task script to be executed in the experiment to setup the central task SOA. This script automatically repeats if the participant did not achieve a central SOA < 350 ms via QUEST. Presents instructions, trials and collects responses. Saves all responses and settings in the structures TR and Cfg. Makes use of the scripts Exp_Parameters1.m, DrawResponseScreen1.m, and getMouseResponse.m.

runExp1.m*: Main script to be executed in the experiment. Runs both the peripheral single-task for *similarity ratings* and the dual-task condition (similarity ratings for peripheral task) in a randomised order. Presents instructions, trials and collects responses. Saves all responses and settings in the structures TR and Cfg. Makes use of the scripts Exp_Parameters1.m, DrawResponseScreen1.m, and getMouseResponse.m.

All versions of these scripts do the same:
Exp_Parameters1.m*: Sets all the experimental parameters for the task and initializes QUEST (if used these blocks). The main structures used are Gral (General), Cfg (Configuration), and TR (Trials, contains all of the participants' responses).
DrawResponseScreen1.m*: Makes use of the definitions set up in Exp_Parameters1.m to draw a response screen depending on the current trials condition
getMouseResponse.m: Called in all versions of the "runExp1" scripts to collect the participants' mouse clicks.

2. How to use the code

Session 1:
1. Training

Type in command line: runExp1_training

- Subject_No: 01
- Subject_ID: ER
- Session: 1

- Run: 0

➔ This will run 4 blocks (order of the first 3 are randomized): Match vs No Match, central single-task, peripheral single-task (similarity ratings) and the dual-task. Note: 16 trials per task = 64 trials total

Session 1:
2. Match vs No Match

Type in command line: runExp1_MvsNM

- Subject_No: 01
- Subject_ID: ER
- Session: 1
- Run: 1

➔ This will run 64 trials of the Match vs No Match condition using confidence ratings. QUEST updates the peripheral SOA on a trial-by-trial basis depending on participant accuracy

Session 1:
3. Central SOA (central single-task)

Type in command line: runExp1_centralSOA

- Subject_No: 01
- Subject_ID: ER
- Session: 1
- Run: 2

➔ This will run 64 trials of the central single-task condition using confidence ratings. QUEST updates the central SOA on a trial-by-trial basis depending on participant accuracy

Session 1:
4. Main Experiment (both peripheral single-task and dual-task blocks)

Type in command line: runExp1

- Subject_No: 01
- Subject_ID: ER
- Session: 1
- Run: 3

➔ This will run 64 trials of the peripheral single-task condition using similarity ratings and 64 trials of the dual-task condition (using peripheral similarity ratings). The order of these 2 blocks is randomised. QUEST loads previously estimated SOAs for both the central and peripheral tasks – **SOAs are stationary** in both of these blocks

For Session 2
Repeat the above except
add an extension to the Subject_ID
(e.g. "ER" = "ER_b")