Data Pre-Processing Protocol

This pre-processing protocol will result in data that includes only 56 trials for each participant (there were up to 72 collected for some participants for the purposes of the original study). Data will be extracted only for eye movements that began within 4000ms of the trial period, though fixations will not be trimmed. This is because the full duration of the fixation will be treated as a genuine eye-movement, as long as the fixation began before the end of the 4000ms stimulus presentation. This means that some fixation durations averages may exceed 4000ms (if participants made very few fixations and focused for a long time).

1. Load the data into DataViewer
2. Import templates (saved in Attempt 3 - > DataViewer Templates)
    - TRIALID (4000ms)
    - csAOI (area of interest for CSs)
    - Reports_all (to extract same variables for each report)
    - Preferences_Aug8 (to ensure that fixation maps will be the same colour palette each time)
        i. and double check that in the Data Filters tab, trimming final fixation is **not** ticked.
3. Add a variable that includes all participants (Analysis -> Trial Variable Manager)
4. Group the viewing session by the 'all participant variable'
5. Apply the csAOI template to all participants
6. Select trial background image for all as the black stimulus background
7. Group the viewing session by recording session
8. Remove excess trials for each participant
    - Trial 1 if there are 57 trials
    - Trial 1 and 58-73 if there are 73 trials
    - Trial 57-72 if there are 72 trials
    - Do not remove any if there are 56 trials
9. Run reports
    - Fixation report
    - Saccade report
    - Interest area report
    - Trial report
    - Sample report
    - Aggregate event statistics report
    - Aggregate interest area report
    - Time course binning analysis
        i. Make sure this is set to bin interval of 4000ms, and maximum number of bins as 4. And that calculation of the proportion of samples in each interest area is set to 'across all on-screen samples'
10. Combine the reports into an excel file
11. Check the data for quality. Look out for:
    - drift
    - potentially poor calibration
    - lack of eye movements
    - trials without eye movements
12. Save overlay images for participants that may need to be excluded, or for those who are particularly well calibrated to the AOI.
13. Create variable for early and late extinction (Analysis -> Trial Variable Manager)
    - Call it 'ext' and comment that early extinction will be labelled as 8, and late extinction will be labelled as 9.

- Make sure each participant is assigned values for correct trials (Analysis -> Trial Variable Value Editor)

14. Group the viewing session by condition (trial)
15. Run reports again
    - Aggregate event statistics report
    - Aggregate interest area report
16. Add the reports into the same excel file as previously
17. Create fixation maps as follows:
    - Condition 3
    - Condition 4
    - Condition 5
    - Condition 6
    - Condition 7
    - Diff map: 4 & 5 (this will compare CS+ and CS- in acquisition)
    - Diff map: 6 & 7 (this will compare CS+ and CS- in extinction)
    - Diff map: 4 & 6 (this will compare acquisition and extinction for CS+)
    - Diff map: 5 & 7 (this will compare acquisition and extinction for CS-)
        i. With the following fixed maximum values:
            1. Fixation Duration
                a. Individual condition:
                b. Difference maps:
            2. Fixation Count
                a. Individual condition:
                b. Difference maps:
18. Group the viewing session by condition (trial) and extinction type (ext)
19. Run reports again
    - Aggregate event statistics report
    - Aggregate interest area report
20. Add reports to same excel file as previously
21. Create fixation maps as follows:
    - Condition 6:8
    - Condition 6:9
    - Condition 7:8
    - Condition 7:9
    - Diff map: 6:8 & 6:9 (this will compare early and late extinction for CS+)
    - Diff map: 7:8 & 7:9 (this will compare early and late extinction for CS-)
    - Diff map: 6:8 & 7:8 (this will compare CS+ and CS- in early extinction)
    - Diff map: 6:9 & 7:9 (this will compare CS+ and CS- in late extinction)
        i. With the following fixed maximum values:
            1. Fixation Duration
                a. Individual condition:
                b. Difference maps:
            2. Fixation Count
                a. Individual condition:
                b. Difference maps:
22. Remove the following participants (classed as ‘definitely remove’: these will likely affect **all** DV data, i.e. fixation duration, no. fixations, and saccade amplitude – see ‘Participant Exclusion and Good AOI Data Identification Protocol’ file):
    - 2, 74, 101, 102, 110.
23. Repeat steps 14-21.