

Spoken Recognition Memory

▼ Spoken Recognition Memory

▼ phases in log record

▼ phase 0 - WAIT_FOR_USER

- trans out on key press to PREP

▼ phase 1 - PREP

- trans out on timer to SOUND

▼ phase 2 - SOUND

- trans out on timer to RESPONSE

▼ phase 3 - RESPONSE

- trans out on key press to DELAY

▼ phase 4 - DELAY

- trans out on timer to next PREP or loops at end

▼ beh table values

- stTime is start of phase 1
- endTime is start of phase 2
- promptTime is start of phase 3
- firstResp is time of key press from start of phase 2
- keyEarly is true when key is pressed prior to prompt at start of phase 3

▼ trial analysis

- needed starting at s37e10sr

▼ reconfigured for SpringReport

- have to ensure that SpringReport jar is at the end of the list as it contains some other older code
- confirmed in s34e2sr that results agree with older sliceInfo.txt files

▼ s55e4sr had two experimental sessions due to Dr. Smith interruption

- log 2 has invalid first and 11th trial as pair and two incomplete trials on end
- log 3 had two incomplete trials at end
- some duplicated stimuli between these two experiments
- use log 2 as is longer

▼ very negative d' , key likely reversed for several experiments

- s35e4sr - notebook says patient reversed keys, so changed jKeysNew
- s53e9sr - reversed jKeysNew for calculation

- 752 of 2073 invalid trials are due to keyEarly

▼ neural analysis

▼ length of word varies from 401 - 1460 ms

- main parts of word start between 100-200 ms into recording
- variable amounts of effective silence at end of recordings

▼ computing points of power in sound recordings

- recordings are .wav files
- tuneR R package to load sample values from .wav
- some of the recordings have very high frequency oscillations near end, such as with a 's' sound
- soundTimes variable contains lengths of sounds

- earliest valid key responses are at 437 ms

▼ spike count values

- can use endTime (start of phase 2) + firstResp to align to key press, if desired.
- ▼ would need additional time point, perhaps called promptTime, to output end of phase 2 (start of phase 3) if we want to align that way
 - have promptTime in trialInfo.txt now for all experiments and is in the beh dataframe as built

▼ can then load .Nse and fet and clu to compute actual counts

- countsRelPhase.R function to do this
 - ▶ countsRelPhaseAllClusters.R loops over all clusters given in df and performs counts relative to specified time column
- look at fixed interval, say 200-1000 ms, and determine fraction of trials where this contains a response

▼ how to generate counts

▼ with Java program

▼ counts for crm and srm up through s35e4sr were generated with PictGameAnalysis.trialCountsReporter

- and that based counts on phase1TimeSlices

▼ FixedTrialIntervalCountsReporter works for counts based on phase1

- this needs to be generalized perhaps so can be over-ridden to provide other phase
- possibly most recently used for RK — check this

• new TrialCountsReporter in SpokenCrmAnalysis based on AbstractPhaseIntervalCountsReporter

- in R - countsRelPhase.R can do this

▼ counts relative to end of sound

- `endTime + soundEndTime`