n-Back Test

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1 What we did

Used psychopy to create an n-back test, based off of "Matt's miscellaneous PsychoPy code"

2 What we want to do

Actually process some code

3 some code

```
def makeMatches(in_list,trials=5,
                threshold=0, n_back=2,
                keep_list_stats=True, verbose=False):
    '''Creates the matches in a given list.if a random number is greater than threshol
    then match the letters at positions [idx] and [idx-n_back]
    in_list: list of letters, strings, etc
    threshold: type(float) in range(0,1)ld
    keep_stats: Bool: will output a list with information on
    the matches (position, character) and their frequency
verbose: Bool: prints information about the lists for immediate viewing
    '''
```

```
    out_list = [i for i in in_list]
    list_stats = []  # list holding the character and positions it was matched at
    num_matches = 0
    for idx, char in enumerate(in_list):
        if idx > 1:
            if (random.random() > threshold):
                out_list[idx] = in_list[idx-n_back]
                list_stats.append([(idx, idx-2), char]
                                  ) if keep_list_stats else None
                num_matches += 1

    real_match_rate = num_matches / (len(in_list) - 2)

######################
# create trial list #
######################

n_trials = 15
match_frequency_threshold = 0.5
alphabet = [i for i in "ABCDEFGHIJKLMNOPQRSTUVWXYZ"]
initial_letters = [random.choice(alphabet) for i in range(n_trials)]

trial_list = makeMatches(initial_letters,n_trials,
                         threshold=match_frequency_threshold, keep_list_stats=False)
```

4 some useful stuff

4.1 latex-preview-mode

This lets you preview your report as you make it (in latex)

```
C-c C-e l l
open file.tex
edit text as you please
#+BEGIN_SRC emacs-lisp
  (use-package latex-preview-pane
    :ensure t
    :config
    (latex-preview-pane-enable)
```

```
    )
#+END_SRC
```