**-Neural basis of attention:** bilateral network of **Frontal Eye Fields** (FEF), **intraparietal sulcus** (IPS) and superior parietal lobule (LPL) - **neglect**

-**Dorsal** (where) and **ventral** (what) **streams** of visual processing

**Posner cueing task:** Validity and endogenous/exogenous -> disengagement, movement, engagement

**Imperfect selectivity:** One-sample t-test difference mean targets for 2T4D displays and 2 (maximum possible)

-Significant **difference between mean targets and 2** -> imperfect selection

-Bottom-up processes interject distractors into consciousness

**Table 1**: Attentional weight and sex differences

-Only one significant difference between M and F: **Windex is higher for F**: attention weight left -> same sample issue

-Looking at the entire sample, attention was weighted left

**Left-weighted attention:** Cultural? Reading? **Adelman et al ->** parallel reading – **still used to orienting top left first**

-**ADHD** = Have a higher α due to limited **attention inhibition**

-**100 ms temporal window for sensory modalities** to affect each other (visual illusion, Shams)

**Conclusion:** More letters reported with longer display times

-Distractors reduce accuracy in partial report trials: **α>0** and **fewer targets in 2T4D than full report** 150 ms display

-*C* and *K* are correlated (**possible neural overlap**)

-Attention is weighted slightly left: **Windex > 0.5**

**Fig. 3**: **Correlation of C and K ->** participants with higher processing speed (C), also have a higher VSTM capacity (K)

- Correlation of age and α -> **older = poorer selection**

-**Typical age correlations** with other TVA parameters were **not found** -> may be due to **sample**

-**According to TVA, parameters are independent and should not correlate** -> overlapping neural bases? ->

-**Todd & Marois**: IPS/IOS does VSTM encoding and retention

**Fig. 2:** TVA plot for FP19205

-*C* ~45 follows slope in datapoint for t0

-t0 is about 15 ms

-K is slighty above 3 items

**Fig 1**: Correctly reported letters at various display times

-Longer **display time -> more targets** reported -> sig. effect

-**Diminishing gains** for reported targets longer display times (200ms) -> **limiting factor goes from *C* to *K***

-**2T4D (150ms): Reports more than half** of targets -> good but imperfect selection.

-2T4D: Fewer correctly reported letters than same display time for full-report -> **distractor influence**

**Hypothesis**: Accuracy increases with display time

-Correlation between C and K parameters

-TVA-parameters correlated w/ age and unaffected by sex

-**Flawed selection**: distractors lower correct reported letters

-Windex = 0,5, **no spatial bias in target recall**

**Method:** Computer-based paradigm with both **whole-report and partial-report**, 9 blocks of 27 trials

-**Counter-balanced colours for** targets and distractors

-Fixation 1000 ms -> up to 6 letters 10-200 ms -> letters masked 500 ms -> **report** **targets**

**TVA:** which visual stimuli reach conscious awareness

-TVA views visual attention as a **race between input/stimuli** which can be **influenced by executive functions** by favouring targets and increasing the likelihood that they make it first to the **finish line**

**Parameters**

-K: Capacity of VSTM

-C: Processing speed

α: Selectivity – measures the ratio of distractors to targets (0-1, 0 = perfect selection)

T0: Perceptual threshold at which stimuli are noticed (ms)

Windex: Attentional weight of display (0-1, 0.5 = balanced)