STERNBERG

1. Aim and assumptions
   1. Aim: how subjects search short-term memory for probe in recognition task
   2. Stage theory: cognitive processes unfold in discrete stages, RT reflects sum
2. Method
   1. Computer screen: memory set of 2, 3, 5 letters, blank screen, probe
   2. Probe: single test letter, present or absent, respond yes/no, quality distortion
3. Search types: when searching for probe in STM
   1. Serial or parallel: for serial, RT increase w. set size (draw), parallel (draw)
   2. If serial: self-terminating (stop at match) or exhaustive (entire set), self-terminating display lower RT slope (search terminate faster)
   3. Unmasking: during encoding or comparison
   4. Hypotheses (Sternberg’s results): serial-exhaustive search, unmasking during encoding
4. Results
   1. Figure 1: mean RT across set size for test letter and masking conditions
   2. Unmasked: sig. main effects of set size and test letter, no interaction -> serial exhaustive (
   3. Figure 2: possible interaction, serial self-terminating -> individual differences
5. Results: influence of masking (Figure 3)
   1. Gap between graphs: masked letters demand longer RT; slopes follow same increase
   2. Sternberg: unmasking during encoding -> increase intercept, unmasking during comparison -> increased slope (greater set require further unmasking to be certain)
   3. Unmasking during encoding: confirmed by t-test on fitted lines
6. Results: accuracy (Figure 4)
   1. Sig. main effects: set size, test letter
   2. Sig. interactions: set size and masking, masking and test letter, three-way
7. Criticism
   1. Paradigm: stage theory (stages may overlap/influence)
   2. LTM involvement: combinations triggering semantic/episodic memories, priming
   3. Parallel search: battery analogy
8. Broad perspective: STM capacity, separation by modalities according to research/models