Two Maintenance Mechanisms:
Evidence from Delayed Recall
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Two mechanisms of short-term maintenance:
- rehearsal by phonological loop
- attentional refreshing by focus of attention

Evidence that they are independent: Hudjetz & Oberauer, 2007; Camos & Barrouillet, 2006

Different effects for long-term retention?
Attention is key for transfer into LTM (Phaf & Wolters, 1993)

Rehearsal: Efficient at short-term but not at long-term
Refreshing: Efficient at short and at long-term

General Method
1- WM span task: 8 series of 5 words to be recalled in each condition & immediate recall after each series
2- Distracting Task: Counting backward by 3s starting with a 3-digit number during 1 minute
3- Delayed Recall: Recall of the 40 words at the end of each condition

Exp. 1
n = 24

Parity Judgment

Pace per Digit

Response, p < .0001
Key = 48%
Oral = 37%
Pace, p < .0001
Fast = 57%
Delay, p < .0001
Immediate = 78%
Delayed = 15%

Delay x Pace, p = .04
Delay x Response, p < .0001

Exp. 2
n = 24

Parity Judgment

SRT

Response, p < .0001
Key = 55%
Oral = 45%
Task, p < .0001
SRT = 58%
Parity = 43%
Delay, p < .0001
Immediate = 78%
Delayed = 23%

Task x Response, p < .01
Ceiling effect in SRT

Recall

Pace = 1000 ms per digit/dot

Immediat recall

Parity judgement in Exp. 1 & 2
Rehearsal and refreshing are two independent mechanisms of maintenance at short term.

Only refreshing allows the maintenance of verbal memory traces at long term, through either the increasing of their level of activation by the focus of attention or the strengthening of the binding between features by an elaborative or redintegration mechanism.

Delayed recall