

COGNITIVE APPROACH

Topic 1: Cognitive processing

Content: Models of memory.

Key Idea: There is a correlation between cognitive processes and human behaviour.

KEY STUDY: *Glanzer & Cunitz (1966). Two storage mechanisms in free recall.*

Links to:

- **Biological Approach:** HM's case study (Milner, 1966; Corkin, 1997) provides evidence for the existence of separate memory stores.

Background

Demonstrated that the U-shape of the serial position curve (described as a 'bimodal serial position curve') is caused by two separate stores for short-term and long-term memories. This supported the MSM.

Aim

To investigate the serial position effect as evidence for there being two separate stores of memory: short-term memory and long-term memory.

Participants

46 males who were all enlisted in the US army.

Procedure

Each participant was individually shown 15 lists each containing 15 words. There were three conditions of the independent variable:

- Immediate recall after being shown the list.
- Recall after a 10-second interference task (the Brown-Peterson technique of counting backwards from a given number in threes).
- Recall after a 30-second interference task as outlined above.

The words were never shown in the same order per condition so that each participant received a different set of lists and a different sequence of delay conditions.

Results

Participants in the immediate recall condition showed the expected 'U' curve of the serial position effect i.e. more items recalled from the beginning and the end of the list. Participants in the 10-second delay condition showed a similar primacy effect to the immediate recall group but much less of a recency effect. The biggest difference between the immediate recall and the 30-second delay condition was that the primacy effect was high for both groups but the 30-second delay condition showed that the recency effect had disappeared with fewest items recalled from the end of the list out of all the conditions.

Conclusion

By preventing rehearsal with a 30-second interference task items from the end of the list have not been rehearsed in the STM (which does happen with items earlier on the list) so cannot pass into

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the LTM and so the recency effect is prevented. In other words, there appear to be two separate memory stores at work.

Evaluation of Glanzer & Cunitz (1966)

Strengths

- ✓ This is a well-controlled lab experiment with standardised procedure which makes it high in reliability.
- ✓ The results of the study support Atkinson & Shiffrin's (1968) multi-store model of memory.

Limitations

- X The sample cannot be generalised to females or males who do not fit the demographic i.e. male and within the age range of army recruits.
- X The procedure lacks ecological validity due to the artificial conditions in which it was conducted.

Reference

Glanzer, M., & Cunitz, A. R. (1966). Two storage mechanisms in free recall. *Journal of Verbal Learning and Verbal Behavior*, 5(4), pp. 351-360.