Discussant

Mieke Verfaellie
Boston University Medical School, Boston, USA

Summary Abstract:
Most clinical and research investigations of memory focus on consolidation of information over relatively brief intervals of time (i.e., minutes, hours). However, in everyday life we are most interested in retaining experiences for much longer periods of time (days, weeks, years). Studies in cognitive psychology demonstrate that the survival of an engram is influenced by a variety of factors including contextual aspects at time of initial learning, the age of an event, frequency and distribution of exposure to the memory over time and, of course, the amnestic capacity of the learner. In the current symposium we examine the durability of new memories as well those from the past. Presentations focus on medical factors, such as epilepsy and stroke, that result in acceleration of memory loss. The longevity of old memories is examined in relation to age-related decline and the onset of dementia. Findings from these studies enhance our understanding of the cognitive and neural underpinnings of consolidation and, hence, they inform our ability to remember our past.
Keyword 1: amnesia
Keyword 2: memory disorders

Keyword 3: cognitive neuroscience

---

1 Forgetting and its Measurement: Do Patient Groups differ?

Michael D Kopelman
King's College, London, United Kingdom

Objective: The intricacies and difficulties in measuring forgetting rates, both in healthy participants and in clinical patients, have been intensively investigated since the 1970s. In recent years, there has been a revival of interest in 'long-term' forgetting rates, particularly in transient epileptic amnesia (TEA) and temporal lobe epilepsy (TLE), and some 'old' lessons have had to be re-learned.
Participants and Methods: Studies of long-term forgetting in patient groups will be reviewed, together with variables that influence different patterns of forgetting. In particular, I will report findings from two recent studies of TLE, as well as other related investigations.
Results: Studies indicate that an impairment in memory 'acquisition', rather than differences in 'long-term' forgetting, appear critical in amnesic disorders, sometimes associated with differences in 'early' forgetting on recall memory measures only. An exception may be the effect of seizures, whether in consequence of epilepsy or ECT, which sometimes, but not always, appears to accelerate forgetting rates. Another important finding has been the pronounced variability in forgetting rates, both between individuals within a patient group and within individuals tested on separate occasions, making inferences from single-case studies problematical.
Conclusions: Findings will be interpreted in the light of these observations.

Categories: Memory Functions/Amnesia
Keyword 1: amnesia

---

2 Long Term Forgetting for News Events: Does Event Frequency Matter?

Margaret G O'Connor
Harvard Medical, Boston, Massachusetts, USA

Objective: Health providers frequently probe patients' recall of current and/or remote news items to determine the extent of memory loss. Impaired memory for transient events (i.e., in the news for a circumscribed time) may provide information regarding the onset of cognitive impairment. We utilized the Transient News Events Test (TNET) to explore how memory changes over time in older adults with cognitive impairment (CI) and non-cognitively impaired (NCI) individuals. We hypothesized that CI individuals would demonstrate reduced memory for transient events. We investigated the role of semantic and episodic memory on TNET performance.
Participants and Methods: Participants completed the TNET as part a comprehensive neuropsychological evaluation. Analyses included t tests to evaluate group differences for TNET performance, and correlations between

https://doi.org/10.1017/S1355617723009670 Published online by Cambridge University Press

TNET and neuropsychological measures, including episodic and semantic memory tests.
Results: NCI adults demonstrated better memory than CI participants for TNET items. The NCI and CI groups did not differ regarding memory for remote items; however, CI participants had worse memory for recent items. There was a significant association between TNET performance and capacity for episodic and semantic memory in people with CI. In the NCI group, the TNET was associated only with episodic memory.
Conclusions: Findings support the use of news events to assess remote memories in older adults. Novel remote memory measures broaden the scope of memory assessment far beyond what is feasible within traditional neuropsychological assessment and provide insight into the onset of memory changes. Results enhance understanding of memory decline in older adults with cognitive impairment.

Categories: Memory Functions/Amnesia
Keyword 1: amnesia

3 Towards Detecting a Pre-clinical Signature of Dementia: Accelerated Forgetting in Healthy Older Samples - Implications for Methodology, Future Ageing Studies and Early Identification of Dementia

Ashok Jansari
University of London, London, United Kingdom

Objective: Accelerated long-term forgetting (ALF) has been reported in healthy older individuals, and is a possible early marker for risk of developing Alzheimer's disease (AD). The Verbal Associative Learning & Memory Test (VALMT; McGibbon & Jansari, 2013) addresses methodological weaknesses in existing clinical tests and has detected ALF in epilepsy within an hour. We used VALMT to investigate learning and forgetting in healthy older participants.
Participants and Methods: Older (60-69yrs) and Younger (19-31yrs) participants were compared. Using VALMT, unrelated word-pairs were learned to criterion, then cued-recall was tested at delays of 5, 30 and 55 minutes. Unique pairs were tested at each delay. Subjective memory complaints data were gathered, and the Wechsler Memory Scale Logical Memory test (WMS-LM; a standard clinical measure) was administered.
Results: VALMT identified a significant difference in delayed recall between Younger and Older groups by 55 minutes (d = 1.32). While 'fast-learning' Older participants scored similarly to Younger participants, 'slow-learning' Older participants were impaired at all delays. Forgetting rates suggested degradation of memory starts during early synaptic consolidation rather than later system-level consolidation. Increased subjective memory complaints were associated with reduced VALMT scores. By contrast, WMS-LM failed to identify significant differences between any groups, and did not correlate with memory complaints.
Conclusions: We conclude VALMT may be better able than WMS-LM to identify subtle impairments in healthy older adults within a single clinical visit, and VALMT results better reflect subjective experience. Older slow-learners forget faster and report more subjective memory complaints, which may indicate a group at risk of developing AD.

Categories: Memory Functions/Amnesia
Keyword 1: amnesia

4 Accelerated Long-Term Forgetting in Patients with Cerebrovascular Disease

Roy PC Kessels
Radboud University, Nijmegen, Netherlands

Objective: Long-term forgetting rates may be more sensitive for detecting memory decrements compared to short-delay memory assessments (e.g., after 20-30 minutes). To date, much research has been performed on accelerated long-term forgetting (ALF) in epilepsy patients, but research in other patient groups is lacking. ALF may be promising in the field of cerebrovascular disease, as many of these patients experience cognitive complaints, yet do not show impaired performances on neuropsychological assessments.
Participants and Methods: Here, I will present empirical findings on ALF in individuals after a TIA/minor stroke (n=30) and after stroke (n=91) using short- (20-30 min) and long-delay (1-week) memory testing.

https://doi.org/10.1017/S1355617723009670 Published online by Cambridge University Press