



CON AMORE

Center on Autobiographical
Memory Research

Travelling in time

The construction of past
and future events across
domains

Programme

Conference venue:

Aarhus Institute of Advanced Studies (AIAS)

Høegh-Guldbergs Gade 6B

DK-8000 Aarhus C



CON AMORE - CENTER ON
AUTOBIOGRAPHICAL MEMORY RESEARCH
DEPARTMENT OF PSYCHOLOGY
AND BEHAVIOURAL SCIENCES
AARHUS UNIVERSITY



Danmarks
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Danish National
Research Foundation



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Welcome to Aarhus!

DEAR CONFERENCE PARTICIPANT

We are very happy to host this international conference on Travelling in time: The construction of past and future events across domains. Together we will explore a variety of perspectives on mental time travel, including social, cultural, clinical, comparative and cognitive perspectives.

The last decades have spurred an abundance of research on the ability to remember events from the past and imagine events in the personal future. This ability to mentally travel through subjective time is considered important, not only in its own right, but also in relation to other mental processes, such as planning, self-regulation, identity, mind wandering and creativity. Researchers have studied the neural basis and behavioral characteristics for mental time travel, as well as how this ability is affected by age and various mental disorders. This research has not been limited to humans. There is evidence that non-human animals possess at least some capacity to remember events in their past and plan their future. Furthermore, related processes take place at a collective level, when nations or other communities are commemorating their past and envisioning their future. We believe that there is a need for bringing different approaches to mental time travel closer together, and explore the ways in which different fields may enrich and challenge one another conceptually as well as methodologically.

At this conference some of the most outstanding researchers and scholars in these areas present their key findings and particular perspective on the conference topic. In addition, we have two poster sessions in which excellent researchers from many different countries present some of their most recent findings concerning remembering the past and (or) imagining the future. We are very pleased to see so many different perspectives of mental time travel being brought together at one conference. We look forward to some stimulating and thought provoking days.

We recognize that there are many conferences in the world, and that we are privileged to have you here. Thank you for coming to Aarhus. We hope you will enjoy your stay.

THE CONFERENCE COMMITTEE

Dorthe Berntsen
Annette Bohn
Adam Congleton
Müge Özbek Akçay
Kirsten Pedersen
Katrine Willemoes Rasmussen
Sinué Salgado

About the programme

The programme

The conference programme consists of eight keynote presentations and two poster sessions.

Each keynote presentation reviews and discusses findings in a particular area of the conference theme. A 60 minute time slot is scheduled for each keynote presentation, including 15-20 minutes for discussion. Keynote presenters are kindly asked to leave time for discussion.



The poster sessions

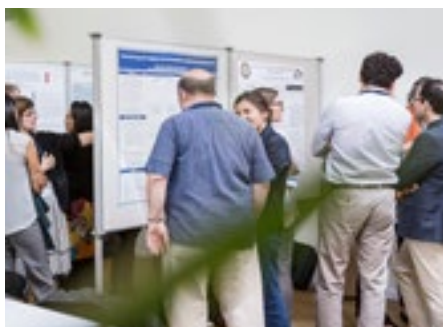
The poster sessions are scheduled after lunch Wednesday and Thursday. There will be coffee and tea available during the poster sessions.

In order to allow plenty of time to discuss the posters with the presenters, the poster sessions are scheduled for 1.5 hours. Poster presenters are expected to be present at their poster during the scheduled session.



The social programme

A ticket for the ARoS Aarhus Art Museum tour is included in your conference bag. A conference dinner ticket is included for those who have signed up and paid.





Programme overview

22 JUNE

08.15-08.45

AIAS Hall

Registration and coffee

08.45-09.00

The AIAS Auditorium

Welcome, Dorthe Berntsen

09.00-10.00

The AIAS Auditorium

Keynote speech, Michael J. Kane,
University of North Carolina at
Greensboro:

**Individual Differences in Executive
Control and Mind Wandering**

10.00-11.00

The AIAS Auditorium

Keynote speech, Rick H. Hoyle,
Duke University:

**The Essential Role of Chronesthesia in
Self-Regulation: Forethought and
Self-Reflection**

11.00-11.30

AIAS Hall

Coffee break

11.30-12.30

The AIAS Auditorium

Keynote speech, Michael J. Beran,
Georgia State University:

**Future-Oriented Cognition in Nonhuman
Primates**

12.30-13.30

The Aarhus School of Dentistry

Lunch

13.30-15.00

AIAS Hall

Poster session I and refreshments

15.00-16.00

The AIAS Auditorium

Keynote speech, Arnaud D'Argembeau,
University of Liège:

**The Role of Autobiographical Know-
ledge in Episodic Future Thinking**

16.00-17.00

AIAS Hall

Transport to ARoS Aarhus Art Museum

17.00-18.30

ARoS Aarhus Art Museum

Mental Time Travel in Art
and Reception

19.00-

ARoS Aarhus Art Museum

Conference dinner

23 JUNE

09.00-10.00**The AIAS Auditorium**

Keynote speech, William Hirst,
The New School for Social Research:
**Remembering a Collective Past and
Imagining its Future**

10.00-11.00**The AIAS Auditorium**

Keynote speech, James V. Wertsch,
Washington University in St. Louis:
**Narrative Templates in Collective
Memories and Futures**

11.00-11.30**AIAS Hall**

Coffee break

11.30-12.30**The AIAS Auditorium**

Keynote speech, Brian Levine,
University of Toronto:
**Autobiographical Memory:
Consciousness of the Subjective Past in
Brain Disease and in Health**

12.30-13.30**The Aarhus School of Dentistry**

Lunch

13.30-15.00**AIAS Hall**

Poster session II and refreshments

15.00-16.00**The AIAS Auditorium**

Keynote speech, Emily A. Holmes,
University of Cambridge and
Karolinska Institutet:
**Flashbacks and Flashforwards: Mental
Imagery in Emotional Disorders**

16.00-16.30**The AIAS Auditorium**

Panel discussion

16.30-**The AIAS Auditorium**

Thanks and goodbye, Dorthe Berntsen

Keynote presentations



Michael J. Beran

Georgia State University (USA)

FUTURE-ORIENTED COGNITION IN NONHUMAN PRIMATES

Do nonhuman animals remember their past and anticipate their future? This question has featured prominently in comparative cognition research. I will discuss two areas of research with nonhuman primates that may reflect a future-oriented perspective in those species: self-control behavior and prospective memory. Self-control occurs when an individual waits to obtain an objectively more valuable outcome rather than taking a less valuable outcome more immediately. Nonhuman primates and other animals show varying degrees of self-control, suggesting that they may anticipate future rewards and may even structure present behavior in ways that help them obtain those future rewards. Prospective memory involves forming future intentions, encoding those intentions, and then retrieving and activating those intentions at the

correct time. Chimpanzees show evidence of this type of future-oriented process in a variety of tasks. Both areas of research converge on the idea that other species show evidence of future-oriented cognitive processes that are likely relevant to mental time travel.



Arnaud D'Argembeau

University of Liège (Belgium)

THE ROLE OF AUTOBIOGRAPHICAL KNOWLEDGE IN EPISODIC FUTURE THINKING

Episodic future thinking—the ability to mentally simulate specific events that might happen in one's personal future—has received much theoretical and empirical attention in recent years. Important progress has been made in understanding the representational systems supporting this ability, with current evidence showing that episodic and semantic memory provides the sources of information for constructing specific representations of possible events. It is unlikely, however, that the mental simulation of specific events is sufficient in order for the imagined episodes to be subjectively perceived as belonging to one's personal future. In this talk, I will present behavioral and neuroimaging evidence showing that autobiographical knowledge (e.g., personal goals and general expectations about one's life) also contributes to the con-

struction and organization of episodic future thoughts, and enhances the subjective sense of “pre-experiencing” imagined events. These findings suggest that episodic future thinking not only involves event simulation, but also the contextualization of imagined situations within higher-order knowledge about the self and one's life.

Keynote presentations



William Hirst

Clinton Merck and Meymune Topcu
The New School for Social Research (USA)

REMEMBERING A COLLECTIVE PAST AND IMAGINING ITS FUTURE

The Spanish Philosopher George Santayana averred, “Those who do not remember the past are condemned to repeat it.” This dictum is reflected in the recent psychology work that establishes that the way people remember their past influences the way they imagine their future. The extant psychological work does not, however, address Santayana’s concerns, in that it focuses almost exclusively on autobiographical memory, rather than semantic or more to Santayana’s point, collective or historical memories. In this talk, we summarize recent work that explores the extent to which the psychological work on episodic simulation applies to the semantic and collective domains. We discuss the ways it extends and possible limitations on extensions.



Emily A. Holmes

University of Cambridge (UK) and Karolinska Institutet (Sweden)

FLASHBACKS AND FLASHFORWARDS: MENTAL IMAGERY IN EMOTIONAL DISORDERS

Emotional, intrusive memories “flash upon the inward eye” causing distress across mental disorders. They can flash back to the past or flash-forward to the future. Intrusive memories of trauma, in their most extreme form “flashbacks”, are the hallmark of post-traumatic stress disorder (PTSD). “Flashforwards” to future suicidal acts or manic pursuits occur in bipolar disorder.

Flashbacks and flashforwards take the form of mental imagery. Mental imagery recruits similar brain areas to perception, enhances memory and learning, and has a powerful impact on emotion.

We discuss two areas introducing an imagery approach to psychological

treatment innovation via experimental psychopathology.

- Imagery vividness can be dampened by imagery-competing tasks. After experimental trauma, using a cognitive blockade of memory reactivation plus the computer game “Tetris”, reduced the frequency of intrusive memories. Brief cognitive task protocols may provide a “cognitive vaccine” after trauma.
- We have hypothesized that bipolar disorder is characterised by an excessive use of mental imagery. Tackling such imagery may help improve overall mood stability.

Keynote presentations



Rick H. Hoyle

Duke University (USA)

THE ESSENTIAL ROLE OF CHRONESTHESIA IN SELF-REGULATION: FORETHOUGHT AND SELF-REFLECTION

Self-regulation encompasses an array of processes and strategies by which people manage their pursuit of goals. Of central importance in self-regulation is the capacity to accurately forecast opportunities and obstacles and learn from prior experiences related to the pursuit of specific goals. Through forethought, effective self-regulators develop plans and strategies that take into account anticipated barriers and affordances. Through self-reflection, they draw on remembered experiences from prior instances of goal pursuit, finding motivation in the affect that arises from subjective evaluations of goal-directed behavior. I review research on forethought and self-reflection in self-regulation, with a specific focus on accuracy and bias in forecasts and

memories related to the pursuit of goals. I highlight differences between effective and ineffective self-regulators in the strategic use of mental time travel in the management of goal pursuit.



Michael J. Kane

University of North Carolina at Greensboro (USA)

INDIVIDUAL DIFFERENCES IN EXECUTIVE CONTROL AND MIND WANDERING

Does the regulation of thought draw on the same cognitive abilities as the regulation of external distraction, action, and memory? This talk will review a program of laboratory, classroom, and daily-life research in which my colleagues, students, and I have explored normal and atypical variation in mind wandering, its complex and context-dependent relationship with executive control and memory abilities, its possible costs for reading comprehension and conceptual learning from lectures, and its possible benefits for creative and future-oriented thinking.

Keynote presentations



Brian Levine

University of Toronto (Canada)

AUTOBIOGRAPHICAL MEMORY: CONSCIOUSNESS OF THE SUBJECTIVE PAST IN BRAIN DISEASE AND IN HEALTH

Reconstructing events from one's personal past reflects an advanced state of consciousness that is engaged in future as well as past imagining. This talk will describe the neural correlates of this capacity in neurological patients with selective impairments in autobiographical memory, in healthy adults with multimodal brain imaging, and in individuals with depression and post-traumatic stress disorder, including a group of individuals experienced a life-threatening plane crash. Although it is self-evident that individual differences in autobiographical capacities exist, there is little research on this topic. Our group and others have identified normal individuals with extraordinary high or low autobiographical re-experiencing capacities. I will describe current re-

search on measuring individual differences in different autobiographical capacities, including correlates with personality, neuroimaging findings, neuropsychological findings, and genetics.



James V. Wertsch

Washington University in St. Louis (USA)

NARRATIVE TEMPLATES IN COLLECTIVE MEMORIES AND FUTURES

Just as ideas about “life scripts” have been useful in the study of individual autobiographical memory, the notion of “narrative template” can provide insight into how collectives understand the past—and also envision the future. Such templates are schematic representations shared by members of collectives such as modern nations. In addition to serving as cognitive means for understanding the past and future, they provide a foundation for mobilizing political sentiment, including negative sentiments toward others. These claims will be explored in the case of a narrative template that has been used extensively over the last two centuries about Russia’s special mission for humankind. The interpretations generated by this narrative template sometimes surprise

members of other “mnemonic communities,” but in Russia they are widespread, both in the public at large and among political leaders. These views reflect general ways of understanding events from the past in ways that view Russia as both victim and victor over alien enemies, and they are behind renewed discussions of “Eurasianism” that place Russia at the center of a grand civilization of the future.

ARoS reception

Wednesday 22 June 17.00

Time travel at ARoS

The social programme offers participants a free guided tour and a reception at ARoS Aarhus Art Museum on 22 June 2016.

The programme starts at 5 pm in the lecture theatre at the museum with half an hour's lecture on the theme "Mental time travel in art". After the lecture, the ARoS guides will provide a virtual time travel through the history of art in the museum's galleries and exhibitions. Finally, we will all meet up for cocktails after the guided tour.

ARoS Aarhus Art Museum

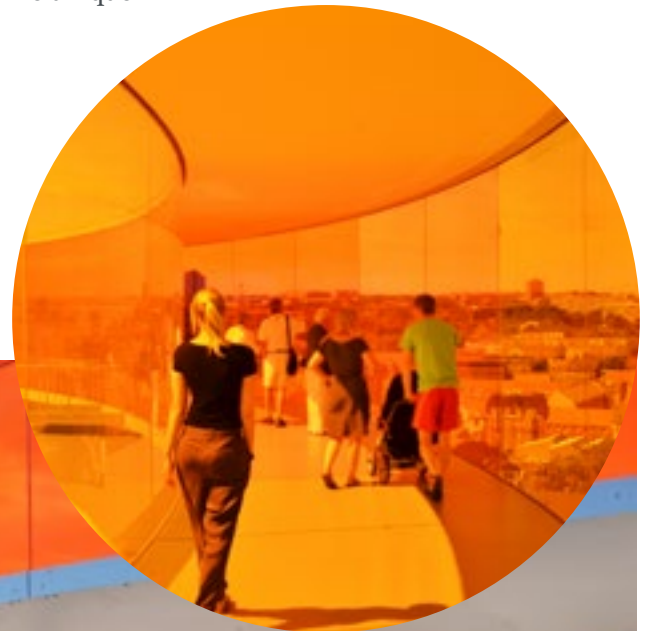
ARoS Aarhus Art Museum is one of Europe's largest art museums and is situated in the heart of Aarhus. The

striking architecture is created by Schmidt Hammer Lassen architects, and the building is 17,700 square meters offering an extensive collection comprising 1,100 paintings, 400 sculptures and installations, 200 art videos and over 7,000 drawings, photos and graphics.

The museum was founded in 1859, but the present building was inaugurated in 2004. In 2011, the spectacular Your Rainbow Panorama opened on top of the museum. The unique

project was created by Studio Olafur Eliasson, Berlin, and has since then become a significant landmark of the city of Aarhus.

We look forward to welcoming you to ARoS Aarhus Art Museum!



Photos: Visit Aarhus



Overview of poster session I

Wednesday 22 June 13.30 - 15.00

Clinical Aspects of Mental Time Travel I

- 101 The role of the contents of autobiographical memories in the genesis and maintenance of depression. **Cláudio**
- 102 Post-partum depression and autobiographical memory: A longitudinal project. **Aydin, Gülgöz, & Kaya**
- 103 Self-continuity across time in schizophrenia: An exploration of phenomenological and narrative continuity in the past and future. **Allé, D'Argembeau, Schneider, Potheegadoo, Coutelle, Danion, & Berna**
- 104 Mentalization and life stories among patients with borderline personality disorder (BPD) and a control group. **Lind, Thomsen, Bøye, Heinskou, Simonsen, & Jørgensen**
- 105 Autobiographical memories and future imaginings in severe health anxiety: A comparison with obsessive-compulsive disorder and healthy controls. **Gehrt, Frostholm, Obermann, & Berntsen**
- 106 The longitudinal course of post-traumatic-stress symptomatology and functional impairment after the 2011 Oslo bombing. **Solberg, Birkeland, Blix, Hansen, & Heir**
- 107 Mental time travel, life story coherence and cultural life scripts in youth with anxiety disorders. **Ramsgaard, Bohn, & Thastum**
- 108 Past and future autobiographical thinking during depression. **Watson, Johannessen, Niziurski, del Palacio-González, & Berntsen**

Social & Collective Aspects of Mental Time Travel

- 109 Collective future thinking: Specificity, phenomenal characteristics, perceived agency and group identity. **Topcu & Hirst**
- 110 Engaging in remembering together with others: Is collaboration at test always detrimental for memory performance? **Abel & Bäuml**
- 111 Getting to know you: Relationships on agency, communion, and redemption in couples' personal and vicarious life stories. **Panattoni & Thomsen**
- 112 Culture is associated with the disruptions of autobiographical memory following bereavement. **Xiu & Maercker**
- 113 A cross-cultural investigation of self and national appraisals. **Fagin & Hirst**
- 114 Memories of vulnerability: A crossroad for individual and historical effects. **Dasoki, Morselli, & Spini**

Phenomenological, Functional, & Qualitative Aspects of Mental Time Travel I

- 115 Language as a reflection of mental time travel. **Derczynski**
- 116 Mental time travelling during the design process. **Inie**



- 117 Examining the phenomenology and functions of episodic memories, counterfactual thoughts, and future simulations. **Özbek, Bohn, & Berntsen**
- 118 Within-person variability in the relation between mental time travel and mood: An experience sampling study in everyday life. **Demiray Batur, Martin, Hernández, Yavuz, & Arnrich**
- 119 Bittersweet moments in time: Comparing older and younger adults' mixed emotional memories. **Enz, Talarico, & Pillemer**

Cultural Life Script, Life Stories, & the Reminiscence Bump

- 120 Explorations in extensions of, and variations within, the youth bias. **Koppel & Berntsen**
- 121 Characteristics of most important, happiest, saddest, and earliest autobiographical memories. **Tekcan & Boduroğlu**
- 122 Perception of future goals: Middle East versus Scandinavia. **Ottsen, Koppel, Johannesen, & Berntsen**
- 123 The experienced life script: The influence of living non-transitions on happy memories. **Spini, Dasoki, & Morselli**
- 124 Life story memories in a non-WEIRD population: The Ik of Uganda. **Bohn, Willerslev, & Meinert**
- 125 From the personal to a culture: Characteristics of events in life stories versus the cultural life script. **Umanath, Eagle, & Berntsen**
- 126 Autobiographical memories of important life story events in Mexico, Greenland, China, and Denmark. **Zaragoza Scherman, Salgado, Shao, & Berntsen**
- 127 Portuguese cultural life script, reminiscence bump, attachment and event centrality, through the analysis of life events. **Costa, Alcobia, & Cláudio**

Cueing & Retrieval in the Context of Mental Time Travel I

- 128 Involuntary intrusions and voluntary memory of trauma films: Dissociable routes to consolidation? **Lau-Zhu, Henson, & Holmes**
- 129 Shaping the future by selectively retrieving: Manipulating memory accessibility impacts imagination of the future of climate change. **Merck & Hirst**
- 130 Repeated assessment of repeated events: Dancing in time. **Ece & Gülgöz**
- 131 Recall of events: Comparing memory for real and virtual experiences. **Niven & Logie**
- 132 Tracking dating-strategies of past and future personal events. **Ben-Malek, Berna, & D'Argembeau**
- 133 On this day: How social media reminders of past events influence the present. **Talarico**
- 134 Visual perspective during retrieval influences subsequent accuracy of memories for events. **Marcotti & St. Jacques**



Overview of poster session II

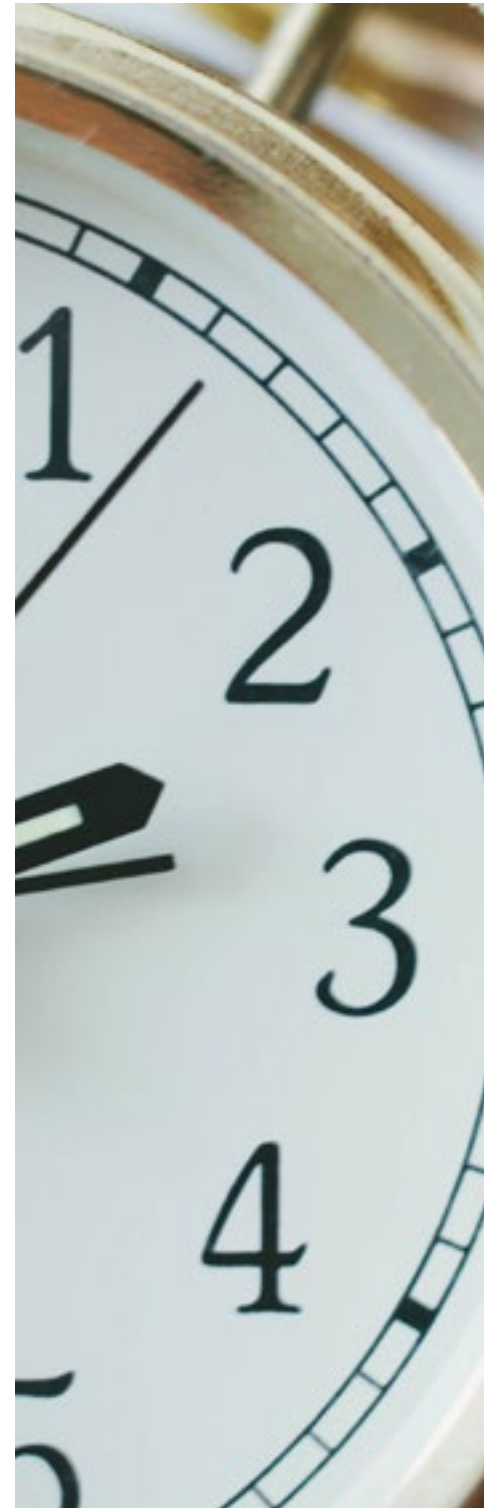
Thursday 23 June 13.30 - 15.00

Clinical Aspects of Mental Time Travel II

- 201 Self-focused thinking is associated with the imagination of positive future events in people with schizophrenia. **Ricarte, Del Rey, & Latorre**
- 202 How implicit and explicit memory could be affected following obsessive compulsive disorder. **Mahabadi, Asadi, Asgari, Oreyzi, & Delavar**
- 203 Changes in perceived centrality of anxious events following cognitive behavioural therapy for social anxiety disorder and panic disorder. **O'Toole, Watson, Rosenberg, & Berntsen**
- 204 The launching and ensnaring effects of construing a traumatic event as central to one's identity and life story. **Blix, Birkeland, Solberg, Hansen, & Heir**
- 205 Tell me about yourself through mental time travel: Comparison of self-defining memories and projections of depressed patients and healthy controls. **Wagener, Thirion, Pitchot, & Blairy**
- 206 Involuntary memories in depression: Is there a negativity bias? **Niziurski, Watson, Johannessen, & Berntsen**
- 207 Loss of positive bias in spontaneous mental imagery frequency in dysphoric relative to non-dysphoric individuals. **Ji, Murphy, MacLeod, & Holmes**
- 208 Narrative identity in female patients with remitted bipolar disorder. **Pedersen, Straarup, & Thomsen**

Developmental & Comparative Perspectives on Mental Time Travel

- 209 The influence of distinctiveness and cues on long-term memory of a food hiding event in chimpanzees, bonobos and orangutans. **Lewis, Call, & Berntsen**
- 210 Eighteen-month-olds' memory for movies with or without a meaningful storyline. **Sonne, Kingo, & Krøjgaard**
- 211 By-passing strategic retrieval: Experimentally induced spontaneous episodic memories in 35- and 46-month-old children. **Jensen, Krøjgaard, Kingo, & Berntsen**
- 212 Does small children's implicit and explicit long-term memory conflict? **Kingo, Sonne, & Krøjgaard**
- 213 How similar are the lifespan distributions of memories for famous songs and famous faces? **Zimprich & Wolf**
- 214 Higher arousal by the young and for public events of young age. **Gülgöz, Öner, Ece, Kamiloğlu, Gürdere, & Aytürk**
- 215 Extending the self into the future: Age doesn't matter. **Salgado & Berntsen**



Phenomenological, Functional, & Qualitative Aspects of Mental Time Travel II

- 216 Mental time travel in vulnerable youths compared to a control group. **Villadsen & Bohn**
- 217 "Momnesia" effects in mental time travel: Do pregnant women remember their pasts and imagine their futures differently than non-pregnant women? **Holmberg & Bohn**
- 218 The distribution and the functions of word-cued autobiographical memories. **Wolf & Zimprich**
- 219 Conversational time travel: A naturalistic observation study. **Demiray Batur & Martin**
- 220 Locating memories in time and space. **Öner & Gülgöz**
- 221 Everyday involuntary memories are associated with greater emotion regulation than voluntary memories. **del Palacio-González, Berntsen, & Watson**

Self, Identity, Meaning-Making, & Well-Being

- 222 How and why do we extract meaning from our personal future? An exploratory online study on autobiographical reasoning. **Ernst & D'Argembeau**
- 223 Life story coherence and psychological health in high school students. **Holm & Thomsen**
- 224 Writing life stories increases self-esteem: An experimental study. **Thomsen, Steiner, & Pillemer**
- 225 The memories we would keep, and the memories we would delete. **Burton-Wood, Strange, Rasmussen, & Garry**

Cueing & Retrieval in the Context of Mental Time Travel II

- 226 Investigating the influence of emotion on event memory. **Congleton & Berntsen**
- 227 Cueing autobiographical memory retrieval in people with dementia: Do museum-based reminiscence sessions promote well-being in people with dementia? **Overgaard, Erlingsson, Davenport, Mason, Galani, & Berntsen**
- 228 Neural mechanisms of visual perspective on the construction and elaboration of autobiographical memory retrieval. **Iriye, Marcotti, & St. Jacques**
- 229 Are involuntary memories increased or decreased by trigger warnings? **Sanson, Garry, & Strange**
- 230 Environmental retrieval support in dementia: Object-cued recall improves autobiographical memory retrieval in Alzheimer's disease patients. **Kirk & Berntsen**
- 231 Gender differences in involuntary memory for emotionally negative scenes. **Staugaard & Berntsen**



Poster session I

Wednesday 22 June 13.30 - 15.00

Clinical Aspects of Mental Time Travel I

101 The role of the contents of autobiographical memories in the genesis and maintenance of depression

Victor Cláudio
ISPA-Instituto Universitário, Lisbon, Portugal

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Support in a cognitive framework, we relate the characteristics, classifications and contents of memories evoked in two groups with emotional disorders - major depression and panic- and one group without psychopathology. We used Autobiographical Memory Task (Cláudio, 2004), compose by 30 nouns - 10 Positive, 10 Negative, 10 Neutral. We evaluate 42 subjects with a major depression diagnostic; 28 subjects with panic disorder diagnostic; 51 subjects without psychopathological disorder. The results demonstrate the existence, in depressed subjects, of a predominant processing, retention and recall of negative information. Our results also showed that we cannot focus on depressive memory deficits in only one way, since there is a variability associated with the depression's severity. We believe that the onset and maintenance of depression is intimately related to the information encoding process and later recall, given the negative contents of the self's schemas. This factor could also lead to vulnerability for depression.

102 Post-partum depression and autobiographical memory: A longitudinal project

Çağla Aydın^a, Sami Gülgöz^b and Burcu Kaya^c
^aSabancı University, Istanbul, Turkey
^bKoç University, Istanbul, Turkey
^cBoğaziçi University, Istanbul, Turkey

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One of the alterations of autobiographical memory observed in depression is the loss of specificity of memories. Existing designs in the literature do not permit causal inferences concerning the relationship between depression and lack of ABM specificity because they involve formerly or currently depressed participants. This project focuses on post-partum depression (PPD) which provides a natural advantage to characterize this relationship. By following up women two times prior to, and two times following childbirth -which is supposed to trigger depression in roughly 15% of women-, the study aims to track the changes in the specificity of (1) remembering the past, and (2) imagining the future while studying the role of other factors, such as anxiety, executive function, attachment styles and risk factors like SES. The research is currently in the preliminary stages and feedback for the later stages of the study will be sought from the CON AMORE community.

103 Self-continuity across time in schizophrenia: An exploration of phenomenological and narrative continuity in the past and future

Mélissa C. Allé^a, Arnaud D'Argembeau^{b,c}, Priscille Schneider^{d,e}, Jevita Pothegadoo^a, Romain Coutelle^{a,d}, Jean-Marie Danion^{a,d,e} and Fabrice Berna^{a,d,e}
^aINSERM U-1114, Université de Strasbourg, Strasbourg, France
^bDepartment of Psychology, Cognition and Behavior, University of Liège, Liège, Belgium
^cCyclotron Research Centre, University of Liège, Liège, Belgium
^dHôpitaux Universitaires de Strasbourg, France
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Disorders of the self are a core symptom of schizophrenia, but still poorly understood. We have investigated two complementary aspects of self-continuity across the time, namely phenomenological and narrative continuity, in 27 patients with schizophrenia and 27 matched controls. Participants were firstly asked to narrate a story of their life including important and specific past events, and then asked to imagine a narrative of their future life containing imagined future events. The memory vividness of these life-events and the proportion of self-event connections in the narratives were used as a measure of phenomenological and narrative continuity, respectively. Our results showed that the difficulty for patients to construct vivid representations of personally significant events was observed in both temporal directions, past and future. Patients' ability to establish explicit connections between personal events and attributes of self in life narratives was also impaired, but only in the case of past narratives.

104 Mentalization and life stories among patients with borderline personality disorder (BPD) and a control group

Majse Lind^a, Dorthe Thomsen^a, Rikke Bøye^b, Torben Heinskov^c, Sebastian Simonsen^c and Carsten René Jørgensen^d
^aCenter on Autobiographical Memory Research, Department of Psychology and Behavioural Sciences, Aarhus University, Denmark
^bDepartment Q, Aarhus University Hospital Risskov, Denmark
^cPsychotherapeutic Center Stolpegård, Copenhagen, Denmark
^dDepartment of Psychology and Behavioural Sciences, Aarhus University, Denmark

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Several studies have shown that patients with BPD have mentalization difficulties (Fonagy et al., 2007) and less coherent autobiographical memories and life stories (Adler et al., 2012; Jørgensen et al., 2012). However, the relation between mentalization and coherence in life stories has not yet been examined in patients with BPD and this was the aim of our ongoing study. 30 patients with BPD and 30 controls will participate in the study. Mentalization is assessed using both self-report and performance measures (Empathic Quotient, Toronto Alexithymia Scale-20 and Mayer, Salovey, Caruso Emotional Intelligence Test). Life stories are assessed by having participants describe up to 10 chapters and rate causal coherence of these chapters. We expect that patients with BPD will show poorer mentalization and less causally coherent life stories compared to the control group. Furthermore, we expect that a lower ability to mentalize will be related to less coherent life stories.

105 Autobiographical memories and future imaginings in severe health anxiety: A comparison with obsessive-compulsive disorder and healthy controls

Tine Bennedsen Gehrt^{ab}, Lisbeth Frostholt^b, Marie-Louise Obermann^c and Dorthe Berntsen^a

^aCenter on Autobiographical Memory Research, Department of Psychology and Behavioural Sciences, Aarhus University, Denmark

^bThe Research Clinic for Functional Disorders, Aarhus University Hospital, Denmark

^cClinic for OCD and Anxiety Disorders, Aarhus University Hospital, Denmark

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Severe health anxiety is a disorder characterized by exaggerated rumination with intrusive worries about harboring a serious illness and a persistent preoccupation with one's health. Previous research has shown that patients with severe health anxiety report experiencing recurrent distressing images when anxious about their own health. These images are mostly future oriented and concerned with themes of death and illness. The present study investigates different characteristics of two types of past and future events in patients with severe health anxiety, a clinical control group comprised of patients with obsessive compulsive disorder and a group of healthy controls. Participants identify past and future everyday events as well as anxiety related past and future events, and rate these events on different characteristics such as vividness, valence and event centrality. This study is among the first to systematically investigate different characteristics of autobiographical memory in patients with severe health anxiety.

106 The longitudinal course of post-traumatic-stress symptomatology and functional impairment after the 2011 Oslo bombing

Øivind Solberg^a, Marianne Skogbrott Birkeland^a, Ines Blix^a, Marianne B. Hansen^a and Trond Heir^{ab}

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The link between posttraumatic stress symptomatology and functional impairment over time in individuals exposed to terrorism is little understood. Post-traumatic stress symptomatology was assessed 3 times in 1 year increments (T1, T2 and T3) following the Oslo bombing 22nd of July, 2011, in directly (n=256) and indirectly exposed (n=2218) Government employees. Intrusions at T1 strongly predicted all symptom clusters at T2 for the directly exposed group. For the indirectly exposed group, dysphoric arousal at T1 was strongly linked to symptom clusters at T2, particularly emotional numbing, which also seemed to be the main driver behind prolonged stress at T3, for both groups. Functional impairment was associated with dysphoric-arousal and emotional numbing in both groups. For directly exposed individuals, memories of the traumatic incident and the following intrusions appear to fuel the development of their post-traumatic stress symptomatology.

107 Mental time travel, life story coherence and cultural life scripts in youth with anxiety disorders

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The ability to remember one's personal past and imagine one's future serves important social and life defining functions like maintaining identity. Here, 34 youths diagnosed with anxiety disorders (age 10-17) and 34 community based controls wrote about their past weekends, their past and future life stories, and generated cultural life scripts. Replicating findings from non-clinical samples, past life stories were longer, and contained more negative events and fewer life script events than future life stories in both groups. Different from earlier findings the anxiety group had less coherent past and future life stories than the control group. Weekend stories did not differ in length and coherence between groups, suggesting that differences in life story coherence are not due to differences in general narrative ability. The control group mentioned more life script events in their future life stories indicating that they see their future more "normative" than the anxiety group.

108 Past and future autobiographical thinking during depression

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The way we imagine future life-events and remember past events is strongly influenced by our mental health. In the present study individuals with a formal diagnosis depression and a non-depressed control group were asked to recall and describe two important autobiographical memories and two important autobiographical future thoughts. Participants were asked to describe their memories and rate them on a variety of characteristics. Finally participants described a typical life story within Danish culture. The event descriptions and qualities of life-events will be compared across groups and discussed in terms of clinical and more general cognitive theories of autobiographical memory.

Social & Collective Aspects of Mental Time Travel

109 Collective future thinking: Specificity, phenomenal characteristics, perceived agency and group identity

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This poster will summarize findings from two studies. The first study revealed that individuals do not only imagine specific future events that involve themselves but can also imagine specific future events that involve their family or their nation. There were, however, certain differences between collective and autobiographical future thinking. Individuals imagined a less specific future for their nation compared to their self and their family. Perceived agency is found to be a factor that could explain this difference. When individuals attribute more agency to other people, they remember their own and their family's past in a more specific way which lets them to imagine a more specific future. This is not the case for the nation. In the second study, we further explore the effects of perceived agency. We also investigate whether group identification and entitativity can play a role in determining the specificity of future imaginations for the nation.

110 Engaging in remembering together with others: Is collaboration at test always detrimental for memory performance?

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Recall is reduced in collaborating compared to nominal groups, formed of the non-redundant responses of individually working subjects. Such collaborative inhibition arises due to disrupted retrieval strategies, parallel to how part-list cues at test have been suggested to decrease performance. Yet, recent studies suggest that part-list cueing can also be beneficial, namely in situations in which access to the original encoding context is impaired and needs to be reinstated. Here, we examined collaborative and nominal group recall when access to the encoding context was manipulated. Collaborative inhibition emerged when context access was intact (after a 5-min delay in Exp. 1; after a remember cue in Exp. 2), but not when context access was impaired (after a 24-h delay in Exp. 1; after a forget cue in Exp. 2). The results show that collaborative remembering is not always detrimental, suggesting certain parallels (but also differences) between part-list cueing and collaborative remembering.

111 Getting to know you: Relationships on agency, communion, and redemption in couples' personal and vicarious life stories

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Building on recent findings by Thomsen and Pillemer (under rev.) of structural and emotional parallels between personal life stories and vicarious life stories, i.e., the life story representations we have for others, this study in progress investigates relationships in agency and communion themes and redemption sequences between personal and romantic partner vicarious life stories. Methods: 102 participants (51 couples), cohabitating for at least 11 months, individually completed two "Life Story Interviews" (McAdams, 2008), one about themselves and one about their partners, as well as the Dyadic Adjustment Scale to measure relationship closeness. Quantitative coding of agency and communion themes revealed significant positive correlations between personal and vicarious themes, with agency moderated by closeness. A similar pattern of results is expected for redemption sequences, along with higher redemption scores in personal life stories, indicating self-enhancement bias.

112 Culture is associated with the disruptions of autobiographical memory following bereavement

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To investigate whether and how culture influences disruptions of autobiographical memory as a psychopathological function of prolonged grief disorder, we conducted a cross-cultural comparison (Study 1) and further identified the role of value orientations (Study 2). 33 Chinese and 30 Swiss bereaved parents who lost their child within 10 years completed an Autobiographical Memory Task and self-reported scales to obtain the severity of prolonged grief and traditional versus modern value orientations. Study 1 showed cultural difference in which more severe PG was associated with higher negativity of memory characteristics for the Chinese sample, and higher positivity of particular characteristics for the Swiss sample. Study 2 exhibited that value orientations exerted moderating effects in the memory disruptions associated with prolonged grief in both samples. These findings suggest considering the role of cultural contexts and culture-related personal traits in the psychopathological process of prolonged grief.

113 A cross-cultural investigation of self and national appraisals

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Previous research has shown that our memories often become skewed to create a positive representation of self (Walker et al., 2003). According to temporal self-appraisal theory (TSAT; Ross & Wilson, 2003) individuals are more likely to disparage past selves so as to boost positive self-regard in the present. This seems to be a largely “westernized” phenomenon to date (Ross et al., 2005). The groups we belong to can also serve to boost positive self-regard (Castano & Dechesne, 2005). The current study attempted to cross-culturally replicate previous self-appraisal findings, and to extend into the study of collective (i.e., national) appraisals. Results indicated that in most nations self-appraisals were skewed in line with the expectations of TSAT. As for the national appraisals, more developed nations showed a “nostalgia effect,” while less developed nations show the opposite trend. Implications for our representation of self and the collectives we belong to are discussed.

114 Memories of vulnerability: A crossroad for individual and historical effects

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Autobiographical memory is the result of several effects that interact and alternate with each other: period effects (historical events), chronological age effects (avoidance of negativity), biographical age effects (developmental task), and the interaction among them (critical age). Until now, these effects on autobiographical memory have been studied separately and negative memories have been less investigated than positive ones. We test the influence that these effects have on memories of vulnerability with 65 years old and over participants of the Vivre / Leben / Vivere survey in Switzerland. Vulnerable memories were collected using a life calendar (N=3080). Results confirm all these effects and their interaction: the oldest people are less likely to remember their lives as vulnerable, but during the Second World War the youngest elderly report less vulnerability. Finally, the older were people at the time of WWII, the more likely they are to report this as a vulnerable period.

Phenomenological, Functional & Qualitative Aspects of Mental Time Travel I

115 Language as a reflection of mental time travel

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The ability to describe time is crucial for effective communication. It is used to describe causality, to plan and to relay stories. Our perception of time is reflected by its reification in language. Similarly, we know that language affects our thinking and perception. Therefore, the various tense and aspect systems across human languages, each with commonalities and variances, reflect both universal and cultural impressions of time in an empirical and measurable way. Models exist for time in language that roughly match proposals for human understanding of time. For example, Reichenbach proposes tense and aspect as a composition of three conceptual temporal points – event time, speech time, and a reference time; this is borne out by statistical evidence in corpora. Through examples and data-driven study, this poster shows that language is an important resource for studying mental models of time.

116 Mental time travelling during the design process

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This poster explores how the ideating designer mentally travels through time. Designing is an inherently creative activity, which requires the ability to form original, novel ideas while evaluating their feasibility in regard to future implementation. The poster presents the findings from two qualitative studies of designers in practice (one of a designer working individually, and one of designers working in a group), proposing a framework for identifying and mapping the temporal aspects of idea generation. To piece together an idea, the creative mind trifurcates between past experience and feelings, present activators and stimulation, and imagination and predictions about the future. Mental time travels across these temporal domains ultimately comprise the associations that form ideas, and the quality of the design process is thus greatly influenced by the capability of the designer's mental time machine.

117 Examining the phenomenology and functions of episodic memories, counterfactual thoughts and future simulations

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Recent research examined similarities and differences between mental time travel into the past and future. Episodic counterfactuals have been understudied compared to episodic memories and future simulations. Here, phenomenology as well as functions (Harris, Rasmussen, & Berntsen, 2013) of the most important episodic memory, counterfactual thought, and future simulation were compared in 60 undergraduates (48 women and 12 men; $M_{age} = 21.10$, $SD_{age} = 1.51$). Results showed that people remember past events with clarity, imagine alternatives to past events (counterfactual thoughts) with lower emotional intensity, and imagine the future most positively. Moreover, a heightened ruminative use of counterfactuals is evident, although reflective and social uses are prominent for all events. The ability to imagine alternatives to past events seems to some extent similar to both remembering the past and imagining the future, although there are slightly different general uses.

118 Within-person variability in the relation between mental time travel and mood: An experience sampling study in everyday life

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We examined how thinking about the personal past versus future is associated with mood in everyday life. Using a smartphone application, we signaled participants seven random times a day for ten days and asked them what they were thinking about at that moment. Thirty young adults rated how much their thoughts were focused on their personal past and future, and rated the qualities of their thoughts (i.e., emotional valence, voluntary versus involuntary retrieval, relevance for personal goals). Participants also rated their current mood. Analyses are ongoing, which involve multilevel modeling that fits with the hierarchical nature of the data (memories and future-related thoughts nested within individuals over time) and that can tease apart between- and within-person variability in the relation between mental time travel and mood. Findings will be discussed in terms of a process-level understanding of how mental time travel and well-being are associated within individuals.

119 Bittersweet moments in time: Comparing older and younger adults' mixed emotional memories

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Autobiographical memory researchers have extensively studied memories of singularly positive or negative events, but relatively little is known about memories that are emotionally mixed, or bittersweet. In this exploratory study, younger and older adults recalled three bittersweet events from their lives. For each memory, participants described the event, listed the emotions they experienced, and rated independently how positive and how negative their emotions were at the time of the event (in the past) as well as while recalling the memory (in the present). In addition to discussing any between-group differences in memory content or types of emotions, analyses will focus on the differences between at-the-time and in-the-present ratings of emotion. These results will inform our understanding of mixed emotional experiences over time.

Cultural Life Script, Life Stories, & the Reminiscence Bump

120 Explorations in extensions of, and variations within, the youth bias

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The **youth bias** refers to the widely-held expectation that important public events are most likely to occur in one's adolescence or early adulthood. It represents an irrational cognitive bias reflecting the general focus on adolescence and early adulthood in human cognition. In the present research we tested, across several studies, a number of conceptual and methodological variations on the youth bias. Our core findings include, first, that the youth bias extends to other types of age-independent events (e.g., getting hit by lightning), though with some variation on the basic effect; second, that it is robust to methodological manipulations such as changing the order of the response options; and, third, that people generally report they are not drawing on their own personal life in responding to the youth bias query. Taken together, these findings both illustrate the robustness of the youth bias and reveal telling shifts in the effect.

121 Characteristics of most important, happiest, saddest, and earliest autobiographical memories

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To date there has been considerably little nationally representative data investigating quantitative and qualitative aspects of autobiographical memories. We asked a nationally representative Turkish sample ($n = 1200$) to report their **most important, happiest, saddest and earliest** autobiographical memories and to rate them across a number of phenomenological variables (e.g., vividness, centrality to self). Lifespan retrieval distributions revealed a bump only for positive (but not negative) most important memories and for happiest (but not saddest) autobiographical memories supporting the life script account of the bump. Analysis of the themes in memories (e.g., achievement, relationship) showed that the majority of most important, happiest and earliest memories had achievement and relationship focus whereas saddest personal memories typically contained life-threatening events. Interestingly, except for earliest memories, most achievement and relationship memories were related to familial events, hinting at the dominance of the Turkish familial identity.

122 Perception of future goals: Middle East versus Scandinavia

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Expectations of control put forth by societal norms impose a constant influence on goal perception. To examine the influence of culture on perception of personal goals, 124 Middle Easterners and 128 Scandinavians rated their perceived locus of control, generated goals and evaluated goal characteristics. Findings show several cultural and gender differences, most notably in perceived locus of control, unhappiness despite goal achievement and adherence to cultural life script. Many differences were qualified by interactions, suggesting that Middle Eastern men deviate from Middle Eastern women and Scandinavians of both sexes. The Middle Eastern men demonstrated greater ambivalence regarding goal achievement and a positive association between internal and external control. Goals generated by Middle Eastern men also showed a greater overlap with their imagined future events, which were largely represented by life script events. These findings suggest that Middle Eastern men experience a greater responsibility for the fulfilment of culturally defined goals.

123 The experienced life script: The influence of living non-transitions on happy memories

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The aim of this study is to investigate whether what was experienced by individuals status influences the reminiscence bump of happy memories. Culturally shared representations of transitions –the Cultural Life Script - explain the reminiscence bump of positive events. We test here a complementary Experience Life Script hypothesis, which hypothesize that the individually experienced life course has a direct impact on the reminiscence bump. We hypothesize that for individuals who don't live these transitions (marriage, birth or getting a first job) the reminiscence bump is absent. Happy memories were collected using a life calendar (N=3080) on a population aged 65 to 105 in Switzerland. Results show that for participant who did not marry and without children the bump is much less marked. Moreover, birth and marriage have a significant impact on the bump. Transition to a first job had a significant impact at the interindividual level.

124 Life story memories in a Non-WEIRD population: The Ik of Uganda

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Autobiographical memory research is usually conducted with so-called WEIRD (Western Educated Industrialized Rich Democratic) populations. Also cross-cultural studies usually compare equally well-educated populations. Here, seven most important life story memories were collected from 79 Ik (22% female, $M_{age}=41.8$; $SD=17.2$), a hunting and subsistence agriculturalist, mostly illiterate population in northern Uganda. Participants dated their memories and rated them on valence. Memories of this Non-WEIRD population showed important differences to life story memories usually found in WEIRD populations: 1) participants recalled a higher percentage of negative memories, 2) many memory descriptions included a reference to a specific year, and 3) only 25% of memories were strictly personal. Most memory descriptions dealt with the impact of good or bad harvests, and political or military conflicts on personal lives.

125 From the personal to a culture: Characteristics of events in life stories versus the cultural life script

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Not all events are born equal. Some are deemed highly important and are even part of the Cultural Life Script (CLS). However, not all **personally** important events align with the CLS, including events that are widely experienced. To address this issue, we devised a set of novel self-report measures, tapping three theories related to life stories: defining aspects of the CLS, attributes of "good" life-stories, and characteristics of transitional events. Collecting an American sample, we contrasted CLS events with other commonly experienced life-story events on these measures. CLS events are not decisively defined by their emotional valence or how much they are valued/celebrated. Rather, their transitional nature and contribution to the coherences of telling one's life story distinguish CLS events from other personally important life-story events. Interestingly, actual experience of the events versus a lack thereof strongly affected the way in which people rated the events.

126 Autobiographical memories of important life story events in Mexico, Greenland, China, and Denmark

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Individuals often think and talk about autobiographical memories of important life events that occurred in their personal past. What kind of personal life events do individuals from different cultures think and talk about? In this study, researchers asked 565 adult participants from Mexico, Greenland, China, and Denmark to recall seven autobiographical memories of important personal life story events. In addition, participants indicated how often they think or talk about the reported events. The common important life story events recalled by participants from all four cultures were having children, getting married, attending college, having a job, experiencing someone's death, traveling, and getting a divorce. Results showed cross-cultural differences (or the lack thereof) in the percentage of participants that recalled each life event as well as in the ratings for how often they think or talk about each event.

127 Portuguese cultural life script, reminiscence bump, attachment and event centrality, through the analysis of life events

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The present research studies the relation between Portuguese cultural life script and life events, and its distribution across lifetime. It also studies the relation between both types of events, events centrality and attachment. We applied the Life Scripts Questionnaire, Life Events Questionnaire, Adult Attachment Scale (AAS) and Centrality of Event Scale (CES) to 186 subjects. Our results indicate that: (1) the life events recalled are similar to cultural life script events; (2) There's a reminiscence bump to positive life events; (3) there's a relation between overlapping life events and cultural life script events, and attachment; (4) stronger overlap between life events and cultural life script events are associated with lower CES scores; and (5) There's a relation between attachment style and events centrality. We discuss the results stressing out cultural life script's importance in information processing and recall of life events, as well as on its emotional repercussion.

Cueing & Retrieval in the Context of Mental Time Travel I

128 Involuntary intrusions and voluntary memory of trauma films: Dissociable routes to consolidation?

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Involuntary, intrusive memories of psychological trauma are the hallmark symptom of clinical post-traumatic stress. Intrusive memories of trauma films (i.e. experimental trauma) are selectively disrupted by a cognitive task procedure applied during the time window of memory consolidation of the trauma films. However, the same procedure appears to leave voluntary recognition intact, challenging standard theories of episodic memory consolidation. Here, two experiments (unpublished) explored the mechanisms of such selective intrusion effect by devising novel measures of film memory. Results indicated that the cognitive task procedure disrupted self-reported intrusive memories both outside and within the laboratory. The modulation of memory 'intrusiveness' without compromising the memory itself is ethically desirable and clinically promising. Nevertheless, such findings are again not accounted for by standard consolidation theories – do they need revision to accommodate intrusive emotional memories?

129 Shaping the future by selectively retrieving: Manipulating memory accessibility impacts imagination of the future of climate change

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This study weaves together retrieval-induced forgetting and imagination of the future and applies them to a pressing social issue, climate change. In the experiment, participants studied four short lists of facts that either endorsed or refuted the existence of climate change. They were then asked to reread redacted versions of two of the lists. The selective reading of the redacted lists induced forgetting for related, unmentioned material. It also shaped the way people imagined the future of climate change, with further analyses indicating the effect on imagining was due to selective forgetting rather than selective practice. Manipulating accessibility to information stored in memory can shape the way one imagines the future.

130 Repeated assessment of repeated events: Dancing in time

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The aim was to examine autobiographical memory for repeated life events in a longitudinal design. For that aim, 36 dancers (18 male; Mage = 21.97, SD = 2.93) reported their memories for a dance competition both on the competition day and one year after the competition. They responded to several questions about the competition and further evaluated event characteristics of their reported memories such as importance, emotional valence and intensity. In autobiographical research, participants usually evaluate these characteristics retrospectively for the time of encoding. In this research, we had a chance to compare the immediate reports of event characteristics (collected on the day of the event) with the retrospective reports after one year. Results demonstrated significant differences in immediate versus retrospective reports of event characteristics in different directions over one year. Findings are discussed with respect to the application of retrospective reports of event characteristics in autobiographical memory studies.

131 Recall of events: comparing memory for real and virtual experiences.

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Characterizing memory for personally experienced events often relies on assessment of recall consistency and volume of reported detail across two different time points (initial and subsequent review). We investigated a means for comparing event memory with recordings of experienced events - specifically, whether a virtual environment can provide episodic-rich experience and recall. 24 participants spent 15 minutes navigating a museum exhibit; 24 participants did the same in a detailed virtual reality replica of the exhibit. Subsequent recall of this event was analysed by trained coders using the Autobiographical Interview scoring technique (Levine et al., 2002). Comparable ratings of recall between environments suggested equally episodically rich event-based memory after exploring a virtual or a real world environment. Consequently, virtual environment exploration may be a means by which to move beyond consistency-focused analyses in testing event-based memory, providing opportunities to investigate effects of time as separate from those of post event review.

132 Tracking dating-strategies of past and future personal events

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While many studies have investigated memory for the times of past events, little is known about the cognitive mechanisms that are used to locate future events in time. The purpose of this study is to compare the use of various strategies used for dating past and future events. Participants were first asked to generate 10 past and 10 future events, and then to think aloud as they estimate when each event had occurred or would occur. We will analyse the combination of the strategies used to date past events and compare it to the ones used to date future events. We expect that participants will mostly refer to specific events (playing the role of temporal landmarks) and to life periods to estimate dates, both for past and future events. Furthermore, we will analyse the relationship between dating-strategies and other characteristics of events (e.g. vividness, emotions, visual perspective).

133 On this day: How social media reminders of past events influence the present

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One use of social media sites (e.g., Facebook™) is to describe daily activities. An individual's history of postings, then, becomes a personal archive of past events. This ought to provide a rich, ecologically-valid data source for autobiographical memory investigators. Furthermore, several services now exist (e.g., Timehop™) that cull social media histories to re-present previous postings. These reminders typically take the form of "on this day in the past..." therefore providing temporal information in addition to the content of the post itself (i.e., the image and/or text that was originally recorded). Several questions can be addressed by harnessing these services for scientific inquiry: Are these reminders effective in bringing to mind autobiographical memories? If they are, do those memories influence current emotions? current behaviors? and does delay have any effect? Answers to these questions from a small-scale pilot study and suggestions for future work will be presented.

134 Visual perspective during retrieval influences subsequent accuracy of memories for events

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Memories can be retrieved from multiple visual perspectives (i.e., own eyes, observer), but how this impacts subsequent memories is unresolved. In the current study, we examined how the visual perspective taken during retrieval influences the accuracy of subsequent memories across 3 separate sessions. In session 1, participants performed 24 lab-based events (e.g., make playdoh and create a beach scene). One week later, in session 2, participants were asked to repeatedly retrieve 1/3 of the events while taking an own eyes or observer perspective. Two days later, in session 3, participants were given a surprise memory test consisting of a series of short-answer questions about all of the events they had performed in session 1. We found that repeated retrieval of memories from an observer perspective reduced the overall accuracy of memories when compared to retrieval from an own eyes perspective, or due to time alone (i.e., baseline).

Poster session II

Thursday 23 June 13.30 - 15.00

Clinical Aspects of Mental Time Travel II

201 Self-focused thinking is associated with the imagination of positive future events in people with schizophrenia

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People with schizophrenia show higher difficulties in imagining specific future events than in retrieving specific past events. Imagining a positive future is important in developing social functioning skills. Thus, detection of variables to encourage the generation of prospective imagery in schizophrenic patients may be valuable. Causes of impairment in imagining future events for schizophrenia are focused on emotion, memory resources and cognitive mechanisms. This research assessed depression symptoms, verbal fluency and self-focused thinking in addition to the future thinking task in 89 stabilized schizophrenic patients. The number of future events imagined by patients was associated with verbal fluency but not with depression scores. Furthermore, positive future events were associated with self-focused thinking while negative future events were not associated with self-focused thinking. These results suggest that training in self-focused thinking may help schizophrenic patients to increase the construction of positive future images.

202 How implicit and explicit memory could be affected following obsessive compulsive disorder

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The present research was aimed at the investigating implicit and explicit memory deficits following obsessive-compulsive disorder. The research sample comprised of 20 patients with OCD and 20 normal participants who were selected randomly. They were assessed by recall test for explicit memory and word completion test for implicit memory. The data was analyzed by SPSS. The analysis of ANOVA, have shown that OCD patients had biases toward threatening word in implicit memory; however, they had no biases in explicit memory. Having no biases in explicit memory indicating that OCD patients attempted to avoid the semantic extension of threatening word. However their biases in implicit memory may be due to deficits in primary and automatic processing of memory which is prior to being conscious, but in the latter periods of processing – encoding and retrieval- the biases will have not being happened.

203 Changes in perceived centrality of anxious events following cognitive behavioral therapy for social anxiety disorder and panic disorder

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The purpose of the present study was to explore the impact of cognitive behavioral therapy (CBT) on perceived centrality of negative autobiographical memories in participants with social anxiety disorder (SAD) or panic disorder (PD). Twenty-nine individuals with SAD and ten individuals with PD were asked to recall and rate four negative autobiographical memories before and after a course of CBT. Twenty-eight healthy controls (CTRLs) were asked to do the same before and after a 3 month period. As hypothesized, results showed a decrease in perceived centrality following CBT. The changes in perceived centrality did not correspond to the extent to which the negative autobiographical memories had been of explicit focus in therapy. The correlational nature of the study prevents establishing the causal relationship between changes in perceived centrality and psychopathology, and future studies should explore such mechanisms.

204 The launching and ensnaring effects of construing a traumatic event as central to one's identity and life story"

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Construing a traumatic event as central to one's life story and identity is associated with posttraumatic stress. We examined the longitudinal relationship between centrality of event and trajectories of posttraumatic stress. Data from Ministerial employees were collected ten months, two years, and three years after the 2011 Oslo bombing (N = 259). Using structural equation modeling, the launch and the snares hypothesis were tested. We found support for the launch hypothesis; higher levels of event centrality ten months after the attack were associated with higher levels of posttraumatic stress across time. We also found support for the snares hypothesis; higher levels of centrality ten months and two years after the bombing were related to higher levels of posttraumatic stress, beyond what could be anticipated based on the individual's general trajectory. This suggests that event centrality can influence the overall trajectory, and may also have additional time-specific effects, on posttraumatic stress.

205 Tell me about yourself through mental time travel: Comparison of self-defining memories and projections of depressed patients and healthy controls

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Since depressed patients (DP) experience difficulties in mental time travel, this study compares the characteristics of self-defining memories (SDM) and self-defining future projections (SDFP) between DP and healthy controls (HC) (specificity, meaning-making, emotional valence). Since DP suffer from disturbances in their self-definition, this study also compares the prevalence of SDM and SDFP per life domains such as life-threatening events, family relationships, employment and hobbies. To reach these two aims, 19 DP and 17 paired HC reported SDM and SDFP in life domains (data collection is still ongoing). Preliminary results indicate that DP recall less integrated SDM and SDFP than HC. DP also present more contamination sequence in SDM than HC. DP report less SDM and less SDFP related to employment and less SDM related to hobbies than HC. Preliminary results highlight significant differences between DP and HC for which experimental and clinical implications will be discussed during the conference.

206 Involuntary memories in depression: Is there a negativity bias?

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Cognitive theories of depression predict that those who are depressed will show a biased processing of emotional material (Gotlib & Joormann, 2010). Using an adapted version of an experimental paradigm developed by Berntsen, Staugaard, and Sørensen (2013), the present study investigated involuntary memories for negative, neutral, and positive stimuli. Involuntary memories, which come to mind spontaneously, are common in everyday life and notably positive (Berntsen, 2009). However, a negative memory bias is often found in depressed populations (Mathews & MacLeod, 2005). Therefore, the present study investigated the potential effect emotion has on involuntary memory by comparing memory performance of a clinically depressed group to that of a healthy control group. This study is the first, to our knowledge, to test involuntary memory using a controlled experimental design with a clinical population.

207 Loss of positive bias in spontaneous mental imagery frequency in dysphoric relative to non-dysphoric individuals

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Mental imagery has the capacity to simulate the perceptual, physiological and emotional correlates of real life experience (cf. Ji, Burnett Heyes, MacLeod, & Holmes, 2016), enabling individuals to re-live past experiences and pre-live future ones. Researchers have implicated mental imagery-based thinking in mood disorders, such as depression. While depressed individuals retrospectively report experiencing high levels of negative imagery in daily life, experimental research is lacking. Two studies investigated the frequency of spontaneously occurring task unrelated thoughts in dysphoric and non-dysphoric individuals during an attentional vigilance task. Thought mode (imagery vs. verbal), valence (negative, positive, neutral) and temporal orientation (Exp 2 only) were assessed. We hypothesised a negative mood-congruent effect on off-task thinking, whereby the dysphoric group would experience a higher relative frequency of negative versus positive imagery and verbal thoughts compared to the non-dysphoric group. Results supported our hypothesis. Implications of mental imagery thinking's impact on mood disturbance are discussed.

208 Narrative identity in female patients with remitted bipolar disorder

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A coherent life narrative integrates inconsistent ideas, events and other elements of a person's life in a way that allows continuity in individual identity across different contexts (McAdams, 1996; 2008). This study-in-progress aims to examine characteristics of the life narrative in relation to self-continuity in female outpatients diagnosed with bipolar disorder. 15 female outpatients with bipolar disorder in remission and a healthy control group identify past and future chapters in their life story and rate the emotional valence of the chapter along with the chapters' connections to the self. In addition, participants complete the Self-Concept Clarity Scale (Campbell et al., 1996), Satisfaction With Life Scale (Diener, 1985) and Positive And Negative Affect Scale (Watson et al., 1988). We hypothesize that individuals diagnosed with bipolar disorder will be less able to integrate positive and negative material in life stories and that this will be associated with lower self-concept clarity and well-being.

Developmental and Comparative Perspectives on Mental Time Travel

209 The influence of distinctiveness and cues on long-term memory of a food hiding event in chimpanzees, bonobos and orangutans.

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Chimpanzees can form long-term memories for events. In human memory, distinctive events are more easily recalled than common events, and recall is better when features at encoding and retrieval match. We aimed to investigate if the same occurs in three great ape species. Thirty-three apes witnessed either a distinctive or familiar food cache being hidden. Two, ten or fifty weeks later (between-subjects) the apes returned to the room where the event occurred and discovered a piece of the hidden food on the ground. Preliminary results suggest that upon discovering the food, subjects searched the hiding location equally often in both food conditions after two weeks, but more often in the distinctive food condition after ten weeks. Controls did not search. Additionally, changing a feature at retrieval (the experimenter ID) did not negatively affect searching rates. These findings replicate and extend those on long-term memory of chimpanzees.

210 Eighteen-month-olds' memory for movies with or without a meaningful storyline

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A recent study from our lab showed that 18-month-olds remember cartoons of simple narratives across two weeks (blinded, 2015). The present study investigated whether the storyline or perceptual details were important for memory. 64 18-month-olds were tested with identical cartoons varying whether the storyline was evident. Half of the infants watched the cartoons from the recent study (Normal condition), the other half watched Pixelized versions (number of pixels reduced by 98% covering up the narrative but leaving perceptual details, e.g., color, the same). The infants were presented with one cartoon from one of these versions for a total of 4 times, 2 weeks later they were presented with the familiar cartoon and the novel cartoon from the same version (Normal or Pixelized) two times while being eye-tracked. Results showed that only the infants in the Normal condition remembered the cartoon, thus suggesting that the storyline is important for memory.

211 By-passing strategic retrieval: Experimentally induced spontaneous episodic memories in 35- and 46-month-old children

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Most parents have experienced their preschool child having spontaneous episodic memories, that is, verbally reported memories of past events that come to the child almost out of the blue. Until recently such memories had only been observed outside the lab. By means of a new paradigm we here report experimentally induced spontaneous memories of a unique event experienced one week earlier in 35- and 46-month-old children (N=110). At the first visit, half of the children experienced a Teddy event and the other half experienced a Game event. At the second visit the children's spontaneous utterances were recorded while waiting. The results revealed that the children talked spontaneously about the unique event experienced previously. Age showed no systematic effect on spontaneous episodic recollection, but there was a clear effect of age on subsequent control questions requiring strategic retrieval. The results support the idea of involuntary episodic remembering developmentally preceding strategic recall.

212 Does small children's implicit and explicit long-term memory conflict?

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Small children's long-term memory is typically investigated by either non-verbal/implicit memory tests or by explicit/verbal tests. This study investigated 18-, 33- and 39-month-olds (total N=120) implicit and explicit memory for short movies with a simple narrative after 6 months retention. Memory was tested by both eye-tracking (in the visual paired comparison paradigm) and by explicit verbal questioning, and these measures were compared with each other and with the children's productive vocabulary at encoding and test. Both implicit and explicit memory increased with age. The oldest participants (39-months) showed clear memory for the movies in both the implicit and explicit domains, the 33-month-olds only showed marginal explicit memory whereas the 18-month-olds showed no memory in any domain. Vocabulary was correlated with implicit memory at 39 months, explicit memory at 33 months but none of these at 18 months. This pattern is compatible with an interpretation assuming a diminishing implicit/explicit memory-conflict.

213 How similar are the lifespan distributions of memories for famous songs and famous faces?

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Lifespan distributions of memories for public events, read books, famous songs, and famous faces show certain regularities. Most prominently, events, books, songs, and faces from one's youth and early adulthood are more frequently recognized relative to life periods before and after---contrary to what one would expect based on typical forgetting curves. This and similar findings are typically based on aggregate data, that is, data combined across individuals, which makes it hard to determine if and to what extent memory distributions for different stimuli coincide. Based on an individual-differences approach, in the present study we modeled individual differences in location and scale of the memories for famous songs and famous faces. In a sample of 110 older adults who generated approx. 14'000 data points, we found that the correlations between locations in distributions was $r = .60$, whereas the correlation between scales was $r = .56$, implying that individual differences in both distributions share about 35% of variance.

214 Higher arousal by the young and for public events of young age

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Arousal during recollection of events may provide cues to processes underlying encoding and retrieval. In this study participants from ages 18-25, 40-55, and 60-75 were presented with public events and were asked whether they knew or remembered these events. Depending on their response, they were asked semantic knowledge questions and episodic memories related to the event. During this time, skin conductance measures were taken to measure physiological arousal. The results showed no difference in arousal between episodic and semantic remembering and no relationship between physiological arousal and self-reports of arousal and emotional intensity. Physiological arousal decreased with increases in memory age, age of respondent, and age at experience. When arousal for the same events were compared the younger group showed higher arousal. There was not only increased arousal for the events experienced in bump years but also a general tendency for increased arousal for events experienced in younger ages.

215 Extending the self into the future: Age doesn't matter

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This study examined the temporal distribution of future self-images generated by a large representative sample of Danish adults from 18 to 70 years of age. Although previous research has shown a strong negative correlation between future time perspective and age, our results showed that participants concurred on a surprisingly short future horizon, dating their future self-images within the first five to ten years from their present, irrespective of any demographic factor. The findings are in accordance with temporal construal theory and suggest that future self-images might serve an adaptive emotional and behavioral self-regulatory function regardless of age. The findings are discussed in a life span developmental perspective.

Phenomenological, Functional & Qualitative Aspects of Mental Time Travel II

216 Mental time travel in vulnerable youths compared to a control group

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Generally, little is known about mental time travel (MTT) in youths, and specifically, in vulnerable youths. Here, most important memories and future thoughts in vulnerable youths (n=34) were compared to a control group (n=36). Participants recalled 5 important memories and imagined 5 important future events. Scales on depression (GDS Short Form), PTSD symptoms (PCL) and on the centrality of an event for life story and identity (CES) were administered. Participants rated events on various phenomenological variables. Earlier findings on differences between memories and future thoughts were replicated with future events being rated as less vivid, more important, more positive and containing more cultural life script events than the past. Vulnerable youths scored significantly higher on depression- and PTSD symptoms, and rated their memories higher on the CES. Further, they showed a higher level of pre-experiencing future events and mentioned fewer life script events in their futures than the control group.

217 "Momnesia" effects in mental time travel: Do pregnant women remember their pasts and imagine their future differently than non-pregnant women?

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Pregnancy and memory impairments have been linked anecdotally as "momnesia" or "baby brain", thought to be caused by the hormonal surges and immunosuppression during pregnancy. The aim of the study was to collect specific autobiographical memories and future scenarios from pregnant and non-pregnant participants, and to investigate, whether/how autobiographical memories and future scenarios of the pregnant women differ from a non-pregnant control group. Both groups filled out a questionnaire asking them for 4 specific memories and 4 specific future scenarios, and to rate these memories and future scenarios on questions derived from the Autobiographical Memory Questionnaire (AMQ; Rubin, Burt, & Fifield, 2003). Further, both groups completed a recall and recognition tests and a self-evaluation of their memory abilities.

218 The distribution and the functions of word-cued autobiographical memories

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Studies examining the lifespan distribution of autobiographical memories (AMs) robustly show that the memory distribution deviates from a standard forgetting curve by showing an increase in the number of AMs from participants' adolescent and early adult years (reminiscence bump). According to an identity-formation account, experiences from one's youth, that is, the time in which individuals are expected to form an independent identity, remain highly accessible throughout the lifespan because of their ongoing relevance for the self. Apart from this self-function, AMs may serve directive and social functions. In the present study, we examine whether the frequency of using word-cued AMs for self-, directive, and social functions differs between the reminiscence bump and more recent years depending on the valence of AMs. Analyses are based on a total of 5598 AMs generated by 149 adults aged between 50 and 81 years in response to 51 emotional neutral cue words.

219 Conversational time travel: A naturalistic observation study

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This study examined mental time travel in daily life conversations using a naturalistic observation method: Electronically Activated Recorder (EAR). EAR is a portable audio recorder that periodically records brief snippets of ambient sounds and speech. Using the iEAR application of iPhone, we examined how much, how and why older adults talk about their past versus future in everyday life. Forty healthy older adults (above age 60) used the iEAR for four consecutive days. Recording occurred every 15 minutes for 30 seconds. Participants' utterances have been coded in terms of temporal focus (personal past, future, present), emotional valence and function (self, social, directive). Preliminary analyses showed that participants talked about their past almost twice as much as their future. Further analyses will compare past- and future-related utterances in terms of their valence and functions. Results will be discussed in relation to the qualities and functions of mental time travel.

220 Locating memories in time and space

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We investigated the relationship between parental attachment and autobiographical remembering of events defining each parent. Based on the idea that attachment patterns act as guides for self-regulation by which related information is processed, we examined recollective features for their role on the link between attachment and psychological distance. Participants (N = 305) completed measures of attachment separately for their mothers and fathers. They indicated the most defining features of their relationship with each parent and reported the most defining event for that relationship. Participants also reported the subjective temporal distance for each memory and located them on a 2-D space. Spatial distance was modulated by visual imagery whereas reliving had a more substantial role in temporal distancing. Avoidance reduced visual imagery and reliving, which further resulted in temporal and spatial distancing of parental memories. Anxiety, on the other hand, increased distancing however; anxiety-related increases in reliving suppressed this effect.

221 Everyday involuntary memories are associated with greater emotion regulation than voluntary memories

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Retrieving personal memories may cause emotional reactions and thus a need for emotion regulation. Further, the interaction between memory retrieval and emotion regulation may have implications for understanding psychiatric disorders. We examined individuals' emotional regulation of everyday involuntary and voluntary memories during dysphoria and non-depression. Twenty dysphoric individuals and 23 non-depressed individuals completed a structured diary where the employment of emotion regulation strategies (brooding, memory suppression, emotional suppression, and reflection) was recorded upon the retrieval of everyday autobiographical memories. Brooding, memory suppression, and emotional suppression were higher for involuntary than voluntary memories of all individuals. Dysphoric individuals showed a heightened employment of emotion regulation strategies in response to both involuntary and voluntary memories. The between-group differences were not accounted for by the individuals' mood preceding memory retrieval or the valence of the remembered events. The implications for understanding involuntary memories in psychopathology will be discussed.

Self, Identity, Meaning-Making, & Well-Being

222 How and why do we extract meaning from our personal future? An exploratory online study on autobiographical reasoning

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While the contribution of autobiographical memory and future thinking to the construction and maintenance of the self is established, little is known about the mechanisms that enable to link personal events to the self. To investigate this issue, we explored the narrative content and functional roles (e.g. self-esteem, life satisfaction) of autobiographical reasoning (AR) applied to past and future personal events. We showed that AR frequently involved the evocation of personal characteristics (e.g. self-images, personality traits) for both the past and the future. However, AR relied more on autobiographical facts and had a higher identity function for past than future events. Conversely, AR included more personal goals, more themes of success/achievement, and a higher life satisfaction for future than past events. Taken together, our findings showed both similarities and differences in the narrative content and functional roles of AR for the past and the future.

223 Life story coherence and psychological health in high school students

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Constructing a coherent life story is critical for psychological health because it helps establish self-continuity, which is vital for normal identity development (McAdams, 1996). In this study-in-progress, we examine how life story coherence is related to psychological health and self-continuity in high school students. 100 students identify chapters and specific events in their life stories and evaluate their causal coherence, by rating the degree to which they are connected to the self in positive and negative ways. Self-continuity is assessed using the Self-Concept Clarity scale (Campbell et al., 1996) while psychological health is assessed using the Symptom Checklist (SCL-90-R; Derogatis et al., 1973) and the Dissociative Experience Scale (DES; Carlson & Putnam, 1993). We expect that less coherence will be associated with less self-concept clarity and higher dissociation levels. Furthermore, we expect that making negative causal evaluations in the life story will be associated with higher ratings of psychopathology.

224 Writing life stories increases self-esteem: An experimental study

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Life stories are a central part of the self and underlie self-continuity. But few studies have experimentally manipulated life stories and measured the effects on self-continuity and other aspects of the self. We asked 90 participants to describe four chapters in their life stories and rate these on emotional valence; a control group of 89 participants described four famous persons and evaluated them emotionally. State self-continuity and self-esteem were measured before and after the manipulation. Participants in the life story condition significantly improved their self-esteem, while self-esteem did not change in the control condition. Results for self-continuity were in the same direction, but did not reach significance. The change in self-esteem was not related to the emotional valence of the chapters. The results show that thinking about life stories can momentarily improve self-esteem and thus provide important evidence that life stories causally affect other aspects of the self.

225 The memories we would keep, and the memories we would delete

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The power to save or erase memories seems like the stuff of science fiction. But given the chance, what kinds of memories would people choose to have on file, and which would people rather delete permanently? To address this issue, we asked people to describe the memory they would save or the memory they would erase. Across two studies, the majority of people's "save" and "erase" were idiosyncratic, rather than events from the cultural life script. Consistent with the literature demonstrating people's reluctance to compromise negative memories, we also found that people were less likely to want to "erase" their negative memories than they were to "save" their positive memories. Our findings suggest that asking people to pinpoint a memory to save or erase encourages them to bypass a top-down search based on cultural "importance," and to instead search for memories that are more personally meaningful.

Cueing & Retrieval in the Context of Mental Time Travel II

226 Investigating the influence of emotion on event memory

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Our memories for events play a vital role in how we interact with and form representations of the world. As these types of memories are reconstructed every time they are retrieved, they can be influenced by a variety of factors, including the emotional valence associated with the event and the manner in which that emotion was elicited. Thus, developing techniques that effectively capture emotion's influence is essential for understanding how event memories are shaped. The present series of studies involved the investigation of emotion using a new experimental paradigm that allowed for greater control over the encoding of event memories than previously possible. Across three experiments, we investigated the influence of emotional valence and emotional elicitation on the recall and accuracy of event memories utilizing this paradigm. The results revealed the important role of emotional elicitation in mitigating previously documented effects of emotional valence.

227 Cueing autobiographical memory retrieval in people with dementia. Do museum-based reminiscence sessions promote well-being in people with dementia?

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The EU-funded 'AHA - Active Aging and Heritage in Adult Learning' project involves 5 open-air museums and 3 universities in Northern Europe, it evaluates the impact of reminiscence sessions in these museums on people with dementia and their caregivers. During a session, 3-4 persons with dementia and accompanying carers visit a recreated historic space from the mid-20th Century, which should coincide with the 'reminiscence bump' amongst the people with dementia. They encounter familiar experiences and objects and will see, hear, taste and smell the past and engage in conversation in the historic setting. We hypothesize that this will promote wellbeing. A wellbeing observation toolkit was used to create questionnaires which capture the perceived impact of the reminiscence session from the perspectives of participants & facilitators. Data from 108 participants (people with dementia and their carers) from across the 5 museums is expected. Analysis is ongoing and preliminary results will be presented.

228 Neural mechanisms of visual perspective on the construction and elaboration of autobiographical memory retrieval

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Autobiographical memories (AMs) can be retrieved from the perspective of one's own eyes or an observer perspective, but the neural mechanisms that contribute to the ability to adopt multiple visual perspectives remains unknown. In the current fMRI study we investigated how visual perspective affects the construction and elaboration phases of AM retrieval. During functional scanning, participants were cued with spatial locations and asked to retrieve specific AMs from a particular visual perspective or to visualise the spatial location. Participants indicated when they had constructed a memory or spatial location and then elaborated upon it for the remainder of the trial. Preliminary fMRI results ($n = 6$) revealed that the precuneus was recruited more when retrieving memories from an observer compared to an own eyes perspective, and also when compared to the spatial control task. Additional analyses will examine phase specific effects of visual perspective on AM retrieval.

229 Are involuntary memories increased or decreased by trigger warnings?

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Trigger warnings are cautionary instructions that summarise negative material a person is about to encounter and warn that it might "trigger" symptoms of distress, or even post-traumatic stress disorder (PTSD)—such as involuntary memories of trauma. These increasingly common warnings are intended to help prevent such unpleasant symptoms, but there is reason to suspect they may instead produce them. For example, when others "talk up" the negative aspects of a traumatic experience, people have more PTSD-like symptoms than when others "downplay" the trauma. If trigger warnings work similarly and "talk up" the negative side of material, they may increase the frequency of involuntary memories. We addressed this possibility by showing negative material to subjects, some of whom had seen a trigger warning beforehand, and then measuring subjects' related involuntary memories. Preliminary data indicate that trigger warnings may be neither harmful nor helpful.

230 Environmental retrieval support in dementia: Object-cued recall improves autobiographical memory retrieval in Alzheimer's disease patients

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The present study examines whether it is possible to optimize autobiographical memory recall in Alzheimer's disease patients by manipulating the sensory richness and concreteness of the memory cues (objects versus their verbal referents) at the time of retrieval. Results demonstrate that Alzheimer's disease patients retrieve significantly more memories in response to object-cued recall, as opposed to word-cued recall, and that these memories score significantly higher in terms of autobiographical content. Results furthermore show increased recollection of memories from within the time of the reminiscence bump. Overall, results suggest that strong and distinctive environmental cueing diminishes the impact of cognitive dysfunction on autobiographical memory retrieval in Alzheimer's disease.

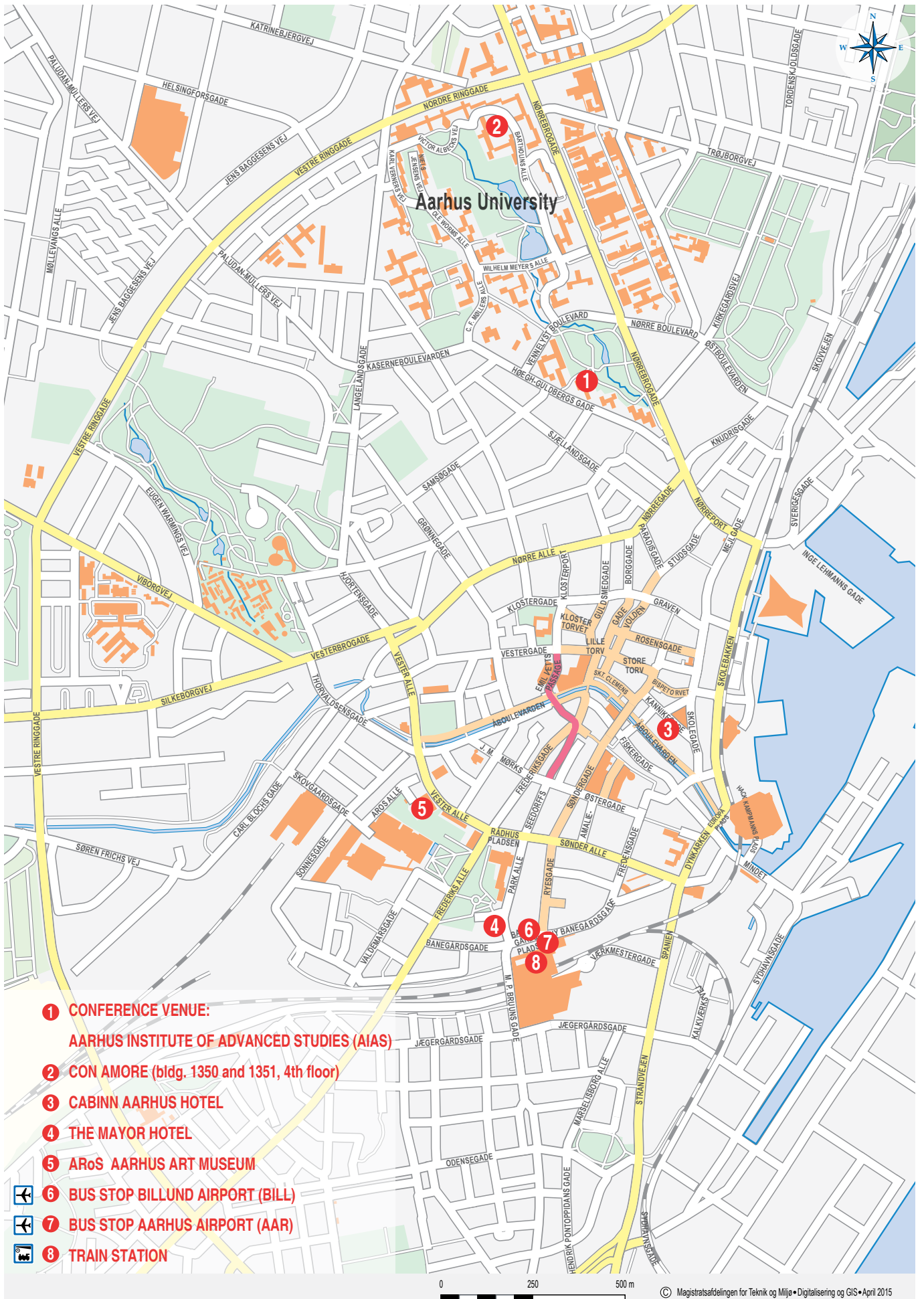
231 Gender differences in involuntary memory for emotionally negative scenes.

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While the effect of gender on everyday autobiographical memory is subtle at best, a consistent finding is that women show superior memory for intense emotional events when voluntarily recalling those events. It is presently unclear if this gender difference also extends to involuntary remembering of emotional events (e.g., intrusions). A high frequency or intensity of intrusive memories for negative emotional events could potentially be a causal factor in the development of posttraumatic stress disorder (PTSD). This could explain why women are at increased risk for PTSD. In the present study, we compared men and women's memory for emotional and neutral scenes while manipulating the intention to retrieve. This meant that participants would either retrieve the scenes voluntarily or involuntarily. While women did not show increased frequency of involuntary memories, they did show increased ratings of intensity. We discuss possible predictors of this gender difference.



- 1 CONFERENCE VENUE:
AARHUS INSTITUTE OF ADVANCED STUDIES (AIAS)
- 2 CON AMORE (bldg. 1350 and 1351, 4th floor)
- 3 CABINN AARHUS HOTEL
- 4 THE MAYOR HOTEL
- 5 ARoS AARHUS ART MUSEUM

- 6 BUS STOP BILLUND AIRPORT (BILL)
- 7 BUS STOP AARHUS AIRPORT (AAR)
- 8 TRAIN STATION

