09:00 – 10:00

Auditorium

Elizabeth Marsh - 'Acquiring misconceptions: The role of knowledge neglect'

Why do many students think Toronto is the capital of Canada and the yen is the currency of China? This talk will focus on one way that such errors enter the knowledge base, through knowledge neglect. Knowledge neglect occurs when students have the requisite knowledge stored in memory, and yet fail to recognize a contradiction of that knowledge. Knowledge neglect is observed across a variety of situations, including when learners fail to detect inaccuracies in fictional sources or notice incorrect presuppositions in questions. Importantly, knowledge neglect has implications for later memory. Reading errors increases their later rated truth value (an illusory truth effect), and leads them to be produced as answers to general knowledge questions. Surprisingly, focusing attention on the incorrect information, activating prior knowledge, and warnings all have no effects or even ironically increase the acquisition of false knowledge. Practical implications for building a critical learner will be discussed, as well as theoretical issues involving comparisons of different types of memory errors.

10:00 – 10:15

Break Coffee/tea/water (provided)

10:15 – 11:55

Papers and Symposia

Room 1

What happens to our memories when we lie?: New directions for research in memory and deception
Chair: Donna Li

The study of deception has been a major focus on applied psychological research in recent years, with particular focus on the detection of deception in legal settings. This symposium, more specifically, focuses on how active imagery and processing associated with the act of deception can affect the memory of the liar. Despite having obvious practical and theoretical implications, this question has received surprisingly little attention until now. In this session, researchers from Australia, UK and USA will describe their novel research designed to address this issue. The research presented employs a range of paradigms, studying memory for autobiographical events, mock crimes and for videos, and measures the impact of deception on a variety of measures, including timing, consistency and accuracy. Together, the studies point to an interesting and complex relationship between deception and memory. The findings suggest that deception may limit access to the original memory and that this effect is moderated by the context of the lie. Further, it is possible that a better understanding of the interaction may lead to improved techniques for the detection of deception. The symposium will end

with a discussion led by Amina Memon, which will consider practical and theoretical implications of this work.

D. Polage - Telling lies makes the truth less certain

The current experiment investigated whether consistency and timing of lies influences autobiographical event memory. Seventy-three participants rated the likelihood that events happened to them before age ten and were then interviewed and prompted to either tell the truth, alternate truth/lying, or lie about the events in two sessions. On day two, participants again rated the likelihood of the events. Results showed that memory for the truth became more uncertain after lying and shifted towards the lied-about response for both made-up affirmations and denials. Therefore, lying may result in memory change for the liar. Psychology and law applications will be discussed.

Cheryl Hiscock-Anisman - Differential recall enhancement, ACID, and deception

56 students participated in a "realistic memory experiment". Each group was told to investigate and remember everything, and not get caught to win $5. Deceivers were told to steal a wallet. Before being interviewed all Ps were told to report completely. In addition Deceivers were told to hide the wallet theft. All were eligible for 2 $100 prizes for "most convincing stories," and given a week to plan. Investigation followed the ACID process of interviewing and assessment. Mnemonics improved honest recall and hindered deception. 92% of statements were accurately classified (# of detail, # words, ttr, admission of potential error).

Donna Li & Richard Kemp - Do lies become truths over time? An experimental investigation of the impact of deception on memory

In two experimental studies of the effect of lying on memory, participants watched a videotaped robbery, before truthfully or deceptively answering questions about the event. After a delay of either 15 minutes (Experiment 1; *N=62), or* one week (Experiment 2; *N=76)*, participants attempted to recall the film accurately. Liars tended to make more errors than truth tellers, but these errors typically involved new confabulations rather than details that they had made up as part of their lie. That is, liars did not come to believe their own lies. The practical and theoretical implications of these findings will be discussed.

K. Colwell, C. K. Hiscock-Anisman, M. R. Evans, A. Kansinally, G. Stanley, & J. Clayton - Differential recall enhancement (DRE): The interaction among interviewing, memory, and deception.

Honest respondents benefit from mnemonics; deceivers do not. This Differential Recall Enhancement (DRE) improves the ability to detect deception. 60 undergraduates provided an honest or deceptive statement about an interaction with authority. Statements were elicited using the Reality Interview, which triggers DRE. Dependent measures were the number of details added at each stage of the interview. Honest respondents added

significantly more detail during the mnemonics. This allowed for a 91.7% classification accuracy. The increase in detail shows the interaction between interviewing, memory, and deception. Each statement was unique, unlike the typical lab design where everyone describes the same event.

Discussant: **Amina Memon**

Room 2

New frontiers for the functions of autobiographical memory
Chair: Theodore Waters

Psychologists have proposed that autobiographical memory serves at least three basic functions: to define self, facilitate and maintain social relationships, and direct future behavior. Early research has found substantial initial support for the self, social, and directive functions of autobiographical memory. In this symposium, we highlight several promising new directions for research on the functions of autobiographical memory. Across papers, we examine: the extent to which the functions of autobiographical memory vary across culture and across the lifespan; the links between the functions, autobiographical narrative, and psychological well-being; and the possible extension of the current scope of the functions of autobiographical memory to include an updating function. Results suggest that culture, developmental time period, and life events have a significant influence on the use of autobiographical memory to serve specific functions. Further, the use of certain autobiographical memories to serve the self function may result in improved psychological well-being, and that failures in the updating function may contribute to a loss of a stable sense of self across time and relationships.

Nicole Alea & Susan Bluck - A Tale of two Cultures: The Functions of Autobiographical Memory in Young and Older Adults

The study examined age and cultural differences in the use of autobiographical memory (AM) to serve self-continuity, social-bonding, and directive functions. American (*n* = 292) and Trinidadian (*n* = 181) young and older adults completed the Thinking About Life Experiences Scale (TALE; Bluck & Alea, 2011). Across both cultures, older adults report using AM less frequently to serve all functions. Cultural differences, however, did emerge: Trinidadians endorse the self-continuity and directive functions of AM more than Americans. Effects were robust: controlling for demographic variables such as gender, and sociocultural differences in education and perceived health, did not affect findings.

Burcu Demiray Batur & Alexandra M. Freund - The Self-enhancement Function of Autobiographical Memory Across the Adult Life Span

Two studies examine the self-enhancement function of autobiographical memory by exploring the relation of one's age and self-esteem to the subjective temporal distancing of their memories. Two lifespan samples recalled memories of achieving and failing in significant goals, and rated how temporally distant these

memories psychologically felt. In general, participants felt closer to achieved goals than failed goals. In Study 1, increased age was associated with feeling closer to achieved goals (controlling for self-esteem). Study 2 examines the impact of a self-esteem manipulation on temporal distancing (ongoing). Results are discussed in relation to positivity effect in aging and goal orientation (Freund, 2006).

Tilmann Habermas & Christin Köber - Does Autobiographical Reasoning Support Self-continuity?

The most important self-function of autobiographical remembering is considered sustaining a sense of self-continuity. Besides the mere act of remembering a past experience, self-continuity may also be more actively reconstructed across biographical ruptures and turning points by autobiographical reasoning. To date, a sense of self-continuity has never been empirically tested neither in relation to autobiographical remembering nor to autobiographical reasoning. In a lifespan study of life narratives we test the contribution of autobiographical reasoning to a self-reported sense of self-continuity concurrently and longitudinally across eight years, and explore whether it is specific to times of biographical change.

Theodore Waters & Robyn Fivush - Relations between Narrative Coherence and Psychological Well-being: Moderation by Function Served

It has been a broadly held assumption in psychology that the ability to construct a coherent account of personal experience is in some way related to healthy psychological functioning. We tested this assumption by examining relations between narrative coherence of personally significant autobiographical memories and psychological well-being. Further, we tested the potential moderation of the relation between coherence and well-being by assessing the functions served by those memories (self, social, and directive). Results confirmed that the ability to construct coherent autobiographical narratives is related to psychological well-being, especially when the memories served a self-defining function.

Ira Hyman, Alexandra Roach, & Sarah Drivdahl - The Updating Function of Autobiographical Memory-Keeping the Self Located in Time, Place, and Relationships

Autobiographical memory is constantly being updated. Through updating, the self is changed and modified. The updating of autobiographical memories is evidenced in long term recency effects in which cues trigger recollections of more recent autobiographical episodes. Updating is also clear in relationship memory transformations in response to changes in relationship status: Currently dating individuals have more dynamic memories than individuals recalling previous relationships. Failures in memory updating may also contribute to confusion experienced by individuals with Alzheimer's disease. Without updating, people become lost in their memories and fail to track the self in time, place, and relationships.

Qi Wang - The Autobiographical Self Online

Internet technology provides a new means of constructing autobiographical memory and identity in the modern era. The telling of personal life stories is now open to the public, with the intension of soliciting feedback from others. We present a study in which college students recalled autobiographical memories in either an online blog environment or a private diary environment. Participants also completed a series of personality measures such as extraversion, disclosiveness, and need for relatedness. Preliminary analyses showed that online memories exhibited distinct characteristics compared with offline memories, and personality traits sometimes moderated the differences.

Room 3

Testing and memory
Chair: Gregory Franco

For nearly 75 years, research has repeatedly demonstrated the mnemonic benefits of taking a test. In this symposium, we discuss some relatively new and less-documented effects of testing on memory. These findings can be loosely categorized into two topics. First, we present research showing that the construction of a test itself biases people's confidence in their memory, and in their predicted performance on future tests. Second, we present research showing that when people take a test, they allocate more attention when learning future information—particularly when they expect to be tested again. These studies have implications for eyewitness testimony, eyewitness memory, and learning within the classroom.

Yana Weinstein, Kathleen B. McDermott, Adrian W. Gilmore, & Karl K. Szpunar - Testing during Study Insulates against the Buildup of Proactive Interference: The Role of Text Expectancy

We examined the hypothesis that interpolated testing in a multiple list learning paradigm protects against proactive interference by sustaining test expectancy. Participants were either tested on all lists or only the last (5th) list, and were either warned or not that a test would definitely be occurring on the last list. We thus independently manipulated test expectancy both via consistent testing, and via instructions. As a manipulation check, half of our participants indicated the perceived likelihood of receiving a test on each studied list. Our results suggest that testing protects against proactive interference in part via maintaining attention during encoding.

Gregory Franco & Maryanne Garry - The Order of Items on a Test Affects People's Predictions about Future Test Performance

The order of items on a test can make people overestimate or underestimate their performance. We used a similar approach to determine the effect on people's estimates about their performance on a similar future test. People who took a test with items arranged from the easiest question to the hardest were overconfident in their future

performance; those who took a test with items arranged from the hardest to the easiest were underconfident. These biased estimates of performance have implications for decisions about studying.

Robert B. Michael, Gregory Franco, Eryn J. Newman, & Maryanne Garry - The Order of Items on a Memory Test Affects Eyewitness Confidence

Post-event questions influence eyewitness reports. But does the mere order in which those questions matter? We asked subjects to watch an event, and then asked them non-misleading questions about that event. The questions appeared in one of two orders: easiest to the hardest, or hardest to easiest. Although order had no effect on actual test performance, subjects who saw hardest questions first were more pessimistic about their performance and were less confident as eyewitnesses. These results have implications for the ways in which eyewitness memory is tested.

Ayanna Thomas, John B. Bulevich, & Leamarie Gordon - Testing Potentiates New Learning in the Misinformation Paradigm

Taking a test prior to receiving misleading information enhances misinformation susceptibility (Chan Thomas & Bulevich 2009). In the present study we tested the hypothesis that taking a test leads participants to differentially allocate attention to the post-event learning. We tested this attention allocation hypothesis by measuring reading time of post event information. Participants who took a test before misinformation spent more time reading sentences that included misleading details as compared to participants who did not take the initial test. Thus initial testing enhanced learning of the misinformation.

Discussant: **Andrew C. Butler**

Matt Jones,Lindsay S. Anderson, Alice F. Healy, & Lyle E. Bourne Jr. - Representation and Processing of Response Distribution Feedback in Group Learning

The type of feedback available with group learning (e.g. classrooms) is richer than with individual learning. In addition to the correct answer instructors can present the group response distribution. Incongruent distributional feedback "when the most popular response is incorrect"may make that answer more salient (impeding learning) or may highlight popular misconceptions (improving learning). We found incongruent feedback hurts posttest performance on questions a student initially gets wrong but on questions the student initially answers correctly the probability of subsequently responding with the popular incorrect answer is reduced. These results have implications for effective usage of distributional feedback in classrooms.

Room 4

New challenges in the detection of concealed information
Chair: Kristina Suchotzki

Investigating whether a suspect possesses crucial crime knowledge is a promising alternative to methods aiming to detect

deception. During a Concealed Information Test (CIT), questions referring to crime details are presented with several response alternatives. Whereas for an innocent suspect all alternatives are equal, only the guilty suspect shows an orienting response towards the correct answer. Unlike most deception detection methods, the CIT is based on a sound psychological theory and its validity has been investigated empirically. However, adaptations of the paradigm, the development of advanced neuroscientific methods and changing security threats created new challenges. The present international symposium addresses a few of these challenges. Results regarding the question whether changes of the CIT paradigm also affected the underlying mechanisms will be presented as well as an approach for increasing the sensitivity of the reaction time-based CIT. Continuous recording of skin conductance will be discussed as an alternative to discrete recordings and the psychophysiological CIT has been examined in the challenging situation where crime-related information shared by a group of suspects is unavailable to the investigators. Additionally, the CIT has been combined with fMRI, to compare suspects possessing only abstract crime knowledge with innocent but informed suspects.

Kristina Suchotzki, Bruno Verschuere, & Geert Crombez - The Contribution of Response Conflict to the Three-item CIT Effect

Four experiments were conducted to examine the role of response conflict (RC) in the three-item-CIT. RC was manipulated within-subjects. In the standard-CIT condition, participants were instructed to acknowledge recognition of target items, but deny recognition of probe and irrelevant items. In the reversed-CIT condition, they were instructed to deny recognition of target items, but acknowledge recognition of probe and irrelevant items. We expected the probe-irrelevant difference to be smaller in the reversed-CIT condition compared to the standard condition. Error and reaction time results were mixed, indicating a need for more research on the contribution of RC in this paradigm.

Ernst Noordraven & Bruno Verschuere - Predicting and Increasing the Sensitivity of the Reaction Time-based Concealed Information Test

Current lie detection works in some individuals but not others. Here, we investigate whether we can statistically predict the accuracy of the Concealed Information Test (CIT). We examined the CIT´s potential by, (1) its sensitivity on an unrelated set of autobiographic questions and (2) by using mock crime Target-Irrelevant differences. The mock crime CIT discriminated (ROCa = .87) between the criminal intent and control condition. Target-Irrelevant differences, but not autobiographical questions, successfully screened out individuals and increased the CIT´s accuracy (ROCa = .95). Our study provides preliminary evidence that we can predict for whom the CIT is likely to work.

Ewout H. Meijer - Continuous Psychophysiological Measurement during a CIT

Typically, Concealed Information Tests (CITs) use responses elicited by several discrete stimuli such as weapons or locations. The research question addressed in the current study is whether the CIT rationale can also be applied using a continuous recording of skin conductance. Participants received information about the location of an upcoming ambush on a money car on route from Jerusalem to Tel Aviv. Next, the participant was shown an animation of this route on a map. During this animation, skin conductance was continuously recorded. The extent to which the location could successfully be derived from the continuous data will be discussed.

Gershon Ben-Shakhar, Dafna Zidenberg, Assaf Breska, & Nurit Gronau - Psychophysiological Detection of Concealed Information shared by Groups: An Empirical Study of the Searching CIT

We examined whether the CIT can be applied to situations where crime-related information shared by a group of suspects is unavailable to the investigators. Twenty one groups of 4-6 participants planned one of two crimes (kidnapping or bank robbery). Groups chose 5 critical items (e.g., the bank's location), each out of a fixed set of 6 alternatives. Then, the CIT was administered individually and participants were tested on both crimes (they were "guilty" in one crime and "innocent" in the other). Electrodermal differentiation efficiency was significantly greater than chance, but somewhat lower than that obtained with the standard CIT.

Matthias Gamer - Using fMRI to Reveal Concealed Crime-related Knowledge

This study used a Concealed Information Test in conjunction with fMRI to determine whether neuroimaging methods outperform autonomic measures in critical situations where suspects have only abstract knowledge or where innocents became aware of crime related details. Our data show that the pattern of neural activity was comparable between participants who only planned and those who actually carried out a mock crime. However, similarly enhanced activity was also observed in innocents who were exposed to crime related details in a neutral context before. Results will be discussed with respect to other possible advantages of fMRI techniques in this domain.

Michelle Mattison, Coral J. Dando, Thomas C. Ormerod, & Melissa Allen - Sketching to remember: Assisting Children with Autistic Spectrum Disorder to Access Justice

For adult witnesses and victims of crime the Mental Reinstatement of Context technique (MRC) is an effective mnemonic. However for both typically developed children and people with Autism Spectrum Disorder (ASD) the MRC technique is less effective. We investigated the efficacy of a modified MRC with 45 ASD children matched to typically developed children. After having witnessed a mock crime participants were

interviewed using our modified Sketch Reinstatement of Context (SRC) the traditional MRC or a Control. The SRC technique was most effective improving participant's remembering without a concomitant increase in intrusions. Our findings are reported and discussed.

Room 5

Chair: Sue Sherman

Kristy Nielson Arousal-induced Modulation of Memory Consolidation in the DRM paradigm

We examined the effect of arousal induced after learning on false recognition in the DRM paradigm. 130 subjects studied and recalled six DRM lists, then watched an arousing or neutral video. Delayed recognition showed arousal participants had better retrieval and significantly less false memory. Sensitivity measures (A') showed good distinction of studied items from unrelated foils, but poor distinction of lures from studied words. Yet, through modulation of memory consolidation, arousal significantly improved sensitivity to studied words vs. lures. The effect was associated with less liberal responding (B'') by the arousal group when distinguishing studied words from lures.

Isabel Lindner, Cécile Schain, René Kopietz & Gerald Echterhoff Observation deflation: Reduced false memories of self-performance after observing actions by an out-group versus in-group actor

Observing another person performing an action can lead to a false memory of having performed the action oneself: the observation-inflation effect. We examined social conditions of this self-other confusion specifically whether the effect depends on the observed actor's group membership. Group-membership was manipulated based on physical appearance that is complexion of the actor's hands (fair-skinned for the in-group vs. dark-skinned for the out-group actor). False memories were significantly reduced when the actor was from the out-group (vs. in-group). These findings are discussed in light of social-neuroscience studies demonstrating the impact of an observed person's group membership on motor simulation.

Sue Sherman False Memories can increase over time – Comparing the 'better' and 'lesser' DRM lists

False memories (FM) for non-presented words can be created using the Deese-Roediger-McDermott (DRM) paradigm by presenting lists of associated words. FM is more persistent than correct memory but rarely demonstrates an actual increase over time except with specific non-standard stimuli. One possibility is that standard DRM lists display ceiling FM effects. We present 2 experiments comparing performance over time of DRM lists which elicit higher (better lists) and lower (lesser lists) levels of FM. In both experiments the 'lesser' lists demonstrated an increase in FM over time whilst the 'better' lists demonstrated a constant level of FM across time.

Sarah Garner, & Mark L. Howe False Memories from Survival Processing Make Better Primes for Problem-Solving

Research has demonstrated that participants remember more survival-related information and information that is processed for its survival relevance and that this results in more false memories although ones that are adaptive in priming insight-based problems. Importantly false memories for survival-related information facilitate problem solving more than those for other types of information. The present study explores this survival advantage using an incidental rather than intentional memory task. Results showed: CRATs were primed by false memories in this incidental task; this effect was greater for participants rating items for survival than moving; processing items for survival improved overall problem solving performance.

Samantha Wilkinson & Mark L. Howe I hear I forget. I do I remember: Self-generation is the key to false memory priming success

False memories in particular negative false memories are more successful at priming related insight-based problem solutions (i.e. Compound Remote Associate Task; CRAT) than true memories following a one-week delay. One factor that may account for this advantage is the self-generation effect; false memories are self-generated whereas true memories are other-generated (experimenter presented). The current research showed that self-generated information (especially when it was negative) was more effective at priming solutions than other-generated information following a one-week delay. We conclude that false memories are more effective primes following a delay because they are self-generated.

Rochelle Cox, **Jocelyn Elliott & Amanda J. Barnier** Confabulation during a hypnotic Fregoli delusion

In this paper we used hypnosis to model Fregoli delusion which is the belief that strangers are familiar people in disguise. We gave subjects a hypnotic suggestion that a confederate was somebody they knew in disguise and then asked the confederate to enter the room. We tested subjects' beliefs about the confederate's identity and challenged those who displayed a delusion. Many high hypnotisable subjects misidentified the confederate and confabulated to support their belief. These subjects also maintained their delusion when challenged. We discuss subjects' ability to re-interpret conflicting information and the strengths and limitations of our approach.

11:55 – 13:30

Room 1

Break & Workshop in Cognitive Science

13:30 – 15:00

Papers and Symposia

Room 1

New findings in the realm of adaptive memory: Proximate and Ultimate Mechanisms

Chair: Henry Otgaar & Mark Howe

Although much knowledge exists about which mechanisms underpin our memory system, less is known about why our memory evolved and which functions it had to address. However, to completely grasp all intricacies of our memory system, knowledge about its functional role is essential. Recently, evidence is accumulating that our memory has been carved to process information relevant for survival purposes (Howe & Otgaar, in press; Nairne & Pandeirada, 2008). These studies show that our memory works superior when participants have to process stimuli for survival value. To date, however, it is unclear which processes are involved in this survival processing advantage. In the present symposium, novel findings will be highlighted regarding the mechanisms underlying the survival function of memory.

Presenter 1 (Otgaar) will provide novel evidence about developmental trends in the evolutionary foundation of memory. Presenter 2 (Kroneisen) will describe whether adaptive memory effects are caused by distinctiveness by using a concurrent working memory task. The third presentation (Bell) will discuss new findings regarding memory of cheaters. Presenter 4 (Howe) will explain whether different survival scenarios lead to superior retention. Finally, a synopsis will be provided about the findings described in this symposium (Toglia).

Henry Otgaar, Mark L. Howe, Tom Smeets, & Sarah Garner - Developmental trends in adaptive memory

The main objective of the current experiments was to test developmental trends and possible proximate mechanisms (elaboration and distinctiveness) in the evolutionary foundation of memory using different types of stimuli and paradigms. In three experiments, we found unequivocal evidence that memory is sensitive for the processing of survival-relevant information in both children and adults. Furthermore, we found that survival processing increased false memory propensity. Collectively, our results evidently show that the survival processing advantage is developmentally invariant and that certain proximate mechanisms (elaboration and distinctiveness) underlie these developmental trends.

Meike Kroneisen, Jan Rummel, & Edgar Erdfelder - Working memory load eliminates the survival processing effect

Nairne et al. (2007) discovered a robust memory advantage for word-material processed in a survival-related encoding context. Kroneisen and Erdfelder (2011) argued that it is not survival processing per se that facilitates recall but the richness and distinctiveness with which information is encoded. Hence, when participants are asked to provide relevance ratings about words, they need sufficient working memory capacity to process information elaboratively. To test this hypothesis, we combined both the typical survival-processing task and a control task with a concurrent working-memory task. In line with our predictions

the survival-processing advantage diminished under dual-task conditions.

Raoul Bell, Axel Buchner, Meike Kroneisen, & Trang Giang - Remembering cheaters: How adaptive is memory for reputational information?

Theories in Evolutionary Psychology claim that social exchange is supported by cheater detection modules. Given that reciprocal strategies in social exchange rely heavily on memory, it has been argued that people should be especially good at remembering cheaters because doing so would help them to avoid social exploitation. Inconsistent with these assumptions, memory for social exchange partners depends on people's expectations. Information that is incongruent with people's expectations is remembered best. Focusing on expectancy-incongruent information may represent a more flexible, general, and hence more adaptive memory strategy for remembering social information than focusing only on cheaters would.

Mark L. Howe & Emma Threadgold - Adaptive memory: It's just not ancestral anymore

The *adaptive memory effect* refers memory enhancement when information is processed for its relevance to survival. Howe and Derbish (in press) have argued that this superior effect is due to the distinctiveness or elaboration of survival-related scenarios. This paper presents an experiment where participants rated information for their relevance to ancestral or non-ancestral scenarios in terms of fear, disgust, and cheating. The results indicated that recognition did not depend on ancestral relevance. Like a growing body of research, our findings demonstrate that ancestral relevance is neither a necessary or sufficient condition for adaptive memory effects.

Discussant: **Mike Toglia**

Room 2

Clinical cognition: Interpretation of Ambiguity in Negative Emotional States
Chair: Paula Hertel

A variety of cognitive biases characterize emotionally disordered states, whether those states be induced or acquired naturally. Our symposium addresses biases in the interpretation of ambiguous real-world situations, along with their possible consequences for later cognitive and affective measures. In the vein of depressive states, we describe the outcomes of training dysphoric students to make positive interpretations (Koster & Everaert), the consequences of taking a "big picture" perspective for later reactions to failure (Rude & Miller), and the effects of the induction of sad mood on interpretation tasks (Woud, Vrijsen, Fitzgerald, & Becker). Salemink reveals successful attempts to train socially anxious adolescents to look on the bright side. The symposium begins with a description of results from a longitudinal study. Becker, Woud, Zhang, and Margraf provide the first evidence for the ability of negative interpretation bias to predict panic disorder. These experiments all illustrate the application of methods from cognitive psychology in the service of

understanding mechanisms central to clinically relevant cognitive phenomena.

Eni S. Becker, Marcella Woud, Xiao Chi Zhang, & Jürgen Margraf - Interpretation bias as a predictor of the onset of panic disorder

Cognitive models of panic disorder postulate that misinterpretations of ambiguous, threatening material is a maintaining factor. Do those biases precede the development of the disorder? Using data from a longitudinal epidemiologic study we looked at the predictive power of biased interpretations. An interpretation questionnaire including two types of ambiguous scenarios (panic-related, general threat-related) was administered. Panic-related interpretation bias as well as a more general threat bias were predictive for the onset of a panic disorder. This is the first study showing a relationship between interpretation bias and the development of panic disorder.

Elske Salemink - Looking at the bright side of life: Modifying Threat-Related Interpretations in Adolescents

In adults, interpretive biases associated with social anxiety can be modified using Cognitive Bias Modification procedures. The current study examined whether this training has similar effects in adolescents and what factors moderate the effectiveness of training. Unselected adolescents were randomly allocated to either a positive interpretation training or a placebo-control condition. Results revealed that the training was successful in modifying interpretations and these effects were most pronounced in the more vulnerable individuals (strong threat-related interpretive bias and low executive control). No effects on state anxiety were observed.

Stephanie S. Rude & Janna V. Miller - Training big picture appraisal

Participants were trained to appraise in terms of the "big picture," viewing situations in terms of a larger context, or in terms of personal attributes (see Watkins, Moberly, & Moulds, 2008). Participants read and imagined themselves as the central character in 64 vignettes (half positive; half negative) that differed between conditions only by a final word or phrase that included a to-be-completed fragment. Interpretations on a transfer task were consistent with training, and participants in the big picture as compared to personal-attributes training showed lower emotional reactivity (negative mood) to a failure induction.

Ernst H. W. Koster & Jonas Everaert - The direct and indirect malleability of depression-related interpretive bias

Although the empirical evidence is mixed, it is believed by many that depression is associated with a stable tendency to interpret ambiguous information in a negative, depression-congruent way. Methods are now available to modify interpretations of ambiguous scenarios but, surprisingly, little work has examined whether it is possible to modify depression-related interpretive bias. We examined whether it is possible to train dysphoric students to generate more

positive interpretations. In Study 1 we provided a direct training of interpretive using methods used previously with anxiety. In Study 2 we examined whether training attention towards positive information influences interpretive bias.

Marcella L. Woud, Janna N. Vrijsen, Daniel A. Fitzgerald, & Eni S. Becker - Mood reactivity and cognitive vulnerability: The effects of a mood manipulation on the interpretation of ambiguous depression-relevant information

There is much evidence showing that depressed individuals interpret ambiguous information negatively. There is little evidence, however, regarding the causal role of such interpretation biases. Therefore, the present study investigated the effect of a mood manipulation on the occurrence of negative interpretation biases in a healthy student sample: First, participants received ambiguous open-ended scenarios and categorized probes disambiguating the scenarios as either grammatically correct or incorrect. Second, participants listened to auditory presentations of ambiguous stimuli and had to select the word they thought they heard. This presentation will give an overview of the results of these two information processing tasks.

Room 3

Monitoring and control of memory reports
Chair: Nathan Weber

The accuracy of memory reports in many real-world situations depends on more than encoding and retrieval of information; Accuracy is heavily dependent on decisions about which memories will be reported. Students decide which SAT questions to answer and witnesses judge which information to report to police. This symposium presents research investigating a variety of potential influences on the ability of rememberers to adaptively monitor and control the reporting of their memories. Our first two papers investigate effects on monitoring (confidence) and subsequent control (report/withhold decisions): Hanczakowski, Zawadzka, and Higham discuss the impact of implausible multiple-choice alternatives and Pansky and Goldsmith investigate the effect of initial item difficulty on metacognitive ratings and decisions about subsequent items. Our next papers focus on multiple-choice decisions where *none of the above* is a possible answer. Perfect and Weber explore participants' ability to adaptively use a don't know option in answer-present versus answer-absent trials, and Weber and Molloy examine the impact of varying the cost of errors on participants' decisions to choose an answer (or not) and to report (or withhold) their decision. Finally, Reid and Weber present an examination of the role of informativeness in witness' decisions about the level of detail to report.

Maciej Hanczakowski, Katarzyna Zawadzka, & Philip Higham - The dud-alternative effect and subjective confidence

The dud-alternative effect is the finding that the addition of implausible

alternative(s) to multiple-choice questions increases, rather than decreases, confidence in the plausible alternatives. Two explanations have been offered: the contrast account, whereby the focal alternative is perceived to have more supporting evidence when contrasted with the duds, and the perceptual-similarity account, whereby inclusion of duds makes the focal alternative subjectively more similar to a representation in memory. We present data from an associative-recognition paradigm that distinguishes between these accounts. We also examine the effect of duds on report/withhold decisions and “don’t know” responding.

Ainat Pansky & Morris Goldsmith - Metacognitive effects of initial question difficulty on subsequent memory performance

We examined the influence of initial item difficulty on confidence in answers to subsequent items, affecting the tendency to report rather than withhold those answers on a free-report general-knowledge test. A set of target questions of intermediate difficulty was preceded by a set of either difficult or easy questions. Whereas forced-report performance was unaffected by initial question difficulty, a predicted *metacognitive contrast effect* was found to affect free-report performance: When preceded by the relatively difficult questions, answers to the target questions were more confidently held and hence more likely to be reported, yielding a larger number of correct reported answers.

Timothy Perfect & Nathan Weber - None of the above

Previous studies of memory report control have focused entirely on positive memory decisions. Little attention has been given to negative memory decisions such as the decision that none of the options available provides an acceptable response. In our study, participants answered questions in free- and forced-response format, choosing from a set which always included "none of the above" as an option (that was correct 50% of the time). For answer-present trials, free-report accuracy exceeded forced-report, but this was not seen for answer-absent trials. People seem unable to judge when "none of the above" is the right answer.

Nathan Weber & Charlotte Molloy - A new take on not knowing versus knowing not

Lineups differ from most multiple-choice tests as the correct answer can be “none of the above”. Consequently, a free-report lineup requires participants to use two decision criteria: one regarding whether to choose from (or reject) the lineup and a second regarding the decision to volunteer or withhold an answer. We used a face recognition mini-lineup task and manipulated false alarms versus misses as the more costly errors. Despite a large impact on choosing rates in forced-report, the cost-of-error manipulation showed no effect for free-report. Participants appeared to use “none of the above” as “don’t know” when not free to withhold.

Nicole Reid, Neil Brewer & Nathan Weber - Why do eyewitnesses withold

information? The role of informativeness in grain size choice

Eyewitnesses frequently withhold coarse-grained (general) information from their memory reports. Literature suggests that this occurs to maximise informativeness (i.e., the proportion of fine grained, specific, details). We manipulated informativeness to test the hypothesis that coarse-grain withholding would be driven by informativeness. Results indicated that coarse-grain information continued to be withheld even when it was the most informative option. This suggests that informativeness may not be driving coarse-grain information withholding or that existing conceptions of informativeness differ from what participants actually do. A new measure of informativeness and its relationship with grain size choice will be discussed.

Room 4

The cognitive psychology of deception
Chair: Evelyne Debey

Previous research has shown that lying is associated with more prefrontal activity than truth telling, and comes with a cognitive cost in errors and reaction times (RTs). This suggests that being truthful is the ***default mode*** and that lying requires executive control, such as response inhibition, to overcome the dominant truth response. This symposium comprises five talks that support the involvement of executive control in deception. The research that is discussed in the first talk shows that individual differences in executive functioning predict performance in the RT-based Concealed Information Test. In a second talk, studies will be presented that found evidence for the role of response inhibition in lying by plotting the cognitive cost of lying in RTs as a function of response speed. A third talk will discuss the innovative way of tracking arm movements to reveal the competition effect when overcoming the truth response. A fourth talk demonstrates that in response to opportunities for dishonest behavior, both dishonest behavior and the activity of the prefrontal control network can be predicted by reward sensitivity in the ventral striatum. The final talk will point out that the cognitive costs of lying are malleable through extensive training.

George Visu-Petra, Mihai Varga, Laura Visu-Petra, & Mircea Miclea - Executive functions involved in deception: An individual differences perspective

A growing body of research points to the involvement of executive functions in deceptive behavior. We adopted an individual differences approach, identifying individual strengths and weaknesses in executive functioning, and relating them to the efficiency of deception assessed in the RT-based Concealed Information Test. The first two studies revealed that distinct executive functions (inhibition, shifting, updating) were related to deception efficiency as a function of the type of stimuli (verbal vs. visual-spatial). A third study, using visual stimuli, revealed the important role of individual differences in processing speed in explaining the relationship between deception speed and executive functions.

Evelyne Debey, Bruno Verschuere, Richard Ridderinkhof & Jan De Houwer - Delta plots reveal the role of response inhibition in lying

Lying takes more time than truth telling. Because lying involves withholding the truth, this 'lie effect' may be due to the time-consuming process of response inhibition. We investigated this hypothesis using the delta-plot method, in which differences between conditions are mapped as a function of reaction time. Delta plots prototypically have a positive slope, but tend to level off when inhibition is involved. This leveling-off is more pronounced in people with better inhibitory control abilities. In line with our hypothesis, the delta plot of the lie effect leveled off for slow responses, but only in participants with better inhibition skills.

Nicholas Duran, Nicholas Duran, Maryam Tabatabaeian, & Rick Dale. The temporal unfolding of response competition during deception

Reaction time measures provide only indirect evidence of the competition effects involved in overcoming a truth bias during deception. To avoid this limitation, we employ a novel approach that captures the moment-by-moment changes of arm movements during deceptive responding. Properties of these movements, such as the velocity, acceleration, entropy, and curvature towards a "truth" response option, allow new insights into the nature of response competition. Here, we examine movement signatures across task conditions hypothesized to make deception more or less difficult, including the time given to prepare a deceptive response, and whether deception contradicts semantic versus autobiographical knowledge.

Nobuhito Abe - Neural reward sensitivity predicts dishonest behavior

In this talk, I will present functional neuroimaging data showing that neuralreward sensitivity is an important determinant of dishonesty. Subjects undergoing functional magnetic resonance imaging completed a monetary incentive delay task, used to measure reward sensitivity in the ventral striatum, and an incentivized prediction task, offering real and repeated opportunities for dishonest gain. Reward sensitivity in the ventral striatum predicted both dishonest behavior and the engagement of the prefrontal control network in response to opportunities for dishonest gain. These results elucidate the cognitive and neurobiological determinants of dishonest behavior.

Bruno Verschuere - Learning to lie: Effects of practice on the cognitive cost of lying

Cognitive and neuroscience models of deception hold that truth telling constitutes the dominant response, and that deception always comes with a cognitive cost. Empirical support for these assumptions comes from studies showing that sporadic, unprepared lies bring about a cognitive cost. Many lies, particularly high stake lies, are repeated lies. In a set of studies, we investigated the effect of practice on the cognitive costs of lying. The cognitive costs of lying appear malleable, with frequent lying making

lying easier. For extensively trained questions, practice effects persist after training.

Ting Ting Chung & Enrique Mu - A New Approach to Eyewitness Identification: Pairwise Presentation and the Analytic Hierarchy Process

Presenting police line-up for eyewitness identification using either simultaneous or sequential presentation of suspects remains problematic because the error rate is still rather significant. This study examines the feasibility of applying the Analytic Hierarchy Process (AHP) framework to eyewitness identification by presenting the police line-up in a pairwise fashion. Over 80 participants were instructed to identify the criminal suspect they witnessed in a videotaped crime scene simulation 48 hours ago. Preliminary results show that eyewitness screening based on levels of logical consistency with pairwise presentation leads to a significantly higher rate of correct identification in comparison to the sequential condition.

Room 5

Chair: Richard Kemp

Martin A. Safer, Nell B. Pawlenko, Ryan Murphy, Richard A. Wise & Brett Holfeld Demonstrating a teaching aid for improving jurors' assessments of eyewitness accuracy

The Interview-Identification-Eyewitness (I-I-Eye) teaching aid directs jurors to attend to how law enforcement interviewed eyewitnesses and conducted identification procedures before considering other eyewitness factors during a crime. In two experiments after viewing the I-I-Eye or control aids participants read a trial transcript about a criminal case that contained either strong or weak eyewitness evidence. Only the I-I-Eye participants demonstrated sensitivity to this evidence by rendering more guilty verdicts in the strong versus the weak case. The I-I-Eye teaching aid provides a framework for analyzing eyewitness testimony that may improve jurors' and legal professionals' assessments of eyewitness accuracy.

Kathy Pezdek, Daphna Ozery & Benjamin Marsh The flexibility of the cross-race effect for bicultural individuals

Does cultural priming moderate the Cross-Race Effect (CRE)? Participants were Latino Americans considered to have a bicultural self; they identify with their ethnic group (Latino) and their nationality (American). They were primed to focus on either their Latino or American self and then viewed Latino and White faces. A recognition memory test followed. Those primed with their Latino self exhibited the CRE with higher face recognition accuracy for Latino than White faces; those primed with their American self were equally accurate recognizing Latino and White faces. The categorization of in-group and out-group faces is not a fixed automatic process.

Daisy A. Segovia, Eryn J. Newman & Maryanne Garry More evidence, less guilty

Information that is easily retrieved from memory is often categorized as familiar frequent and true. Researchers have manufactured this feeling of easy retrieval in the lab and found that it can lead people to mis-categorize information as credible familiar and true when it is not. One situation where we might be influenced by the ease of retrieving information is in the courtroom. We investigated whether recalling either 3 or 20 pieces of evidence affected jurors' decisions in a mock armed robbery trial. Results showed that recalling more pieces of evidence elicited lower ratings in guilt confidence and shorter prison sentence recommendations.

Beth Richardson, **Paul Taylor, Brent Snook & Craig Bennell** Interpersonal Behaviour and Interviewee Cooperation

Interpersonal behavior plays a key role in interviewee cooperation. We examined how interpersonal behaviour specifically the amount of verbal mimicry between a police interviewer and interviewee is related to interviewee cooperation. 65 Canadian police interviews ending in either confession or no confession were analysed for the degree of function word matching between interviewer and interviewee. Confession was more likely when the interviewer led the mimicry behaviour than when reverse patterns were shown. The research highlights the need for interpersonal training to extend beyond traditional methods of active listening and the cognitive interview.

Nina Westera, Mark Kebbell & Becky Milne Is the story lost in the detail? Perceptions of live and video-recorded adult rape complainant evidence

Previous research suggests that playing the complainant's video-recorded police interview to the jury in the courtroom is likely to provide significantly more detail about the issue of consent and what happened during the commission of the alleged offence than eliciting evidence-in-chief live. Lawyers however are reluctant to use video-evidence citing concerns that long narrative responses in police interviews have less impact when compared to sound bite responses traditionally elicited by legal questioning. A series of experimental studies examined how contrasting the level of detail and interview formats of video-recorded and live evidence-in-chief influence perceptions of simulated rape complainant testimony.

Richard I. Kemp, Angus Yu & Emily Chew Lost in translation: Interviewing witnesses in a non-preferred language may result in retrieval induced forgetting

Interviewing witnesses soon after an event can result in more complete recall and affords some protection from memory contamination leading to suggestions that first-responders should interview witnesses immediately on arrival at an event. However the language used in the initial interview may not be the preferred language of the witness resulting in an incomplete report which could lead to Retrieval Induced Forgetting. We report two studies. As predicted participants whose initial recall was in their second language subsequently had

poorer memory for the event even when the second interview was in their preferred language. Practical and theoretical implications are discussed.

15:00 – 15:15

Break Coffee/tea/water (provided)

15:15 – 16:25

Papers

Room 1

Chair:

Mike Rinck, **Anke Klein, Rian Bakens, Rianne van Niekerk, & Eni Becker** - Automatic Interpretation Bias in Children with Symptoms of Generalized Anxiety Disorder

We used an Auditory Interpretation Task (AIT) to investigate automatic interpretation biases in children with GAD symptoms. In this AIT, two words that differ by a single phoneme are "blended" and presented auditorily, such that perceivers hear one or the other word, but neither both nor a blend. One word was always neutral, and the other word was positive, GAD-related, spider-related, or general-fear-related. In total, 223 children performed a multiple-choice version of this AIT, and 226 children an open-ended version. The multiple-choice version revealed a specific interpretation bias: Children with GAD symptoms showed more negative interpretations of GAD-related word blends.

Bridget Irvine & Rachel Zajac - Preparing children for cross-examination: Can children generalise from practice questions to the real deal?

Research suggests that the negative effect of cross-examination-style questions on children's accuracy can be reduced with a brief intervention involving practice and feedback. We examined how overlap between practice questions and cross-examination questions influences intervention efficacy. Children aged 6-11 years experienced a unique memory event and were then interviewed with analogues of direct-examination and cross-examination. Prior to cross-examination some children were given practice answering cross-examination-style questions about a video and feedback on their responses. We manipulated the overlap between the practice questions and the subsequent cross-examination questions. Regardless of overlap the intervention increased children's cross-examination performance relative to controls.

Celine van Golde & Pauline Howie - Retrieval-induced forgetting for events

When people are repeatedly asked to retrieve the same information related facts can be inhibited and therefore â€˜forgottenâ€™ a phenomenon known as Retrieval-induced Forgetting (Anderson Bjork & Bjork 1994). Current study assessed whether RIF would occur when children (7 years) participated in pirate-themed activities and were questioned about them either immediately or one week later. RIF was found and was

independent of time condition. Included measures of working memory did not predict the size of the RIF effect but with working memory controlled for there was some evidence of the predicted association between inhibition and RIF. Implications will be discussed.

Jacqueline de Nooijer, T. van Gog, F. Paas, & R.A. Zwaan - When Left Is Not Right: Handedness Effects on Learning Object-manipulation Words Using Pictures with Left or Right-handed First-person Perspectives

According to the Body Specificity Hypothesis reading an action word leads to creating body specific mental simulations of this action. Left and right-handers should therefore make different mental simulations. We investigated whether seeing a picture with a left-handed right-handed or bimanual perspective which either matches or mismatches the participantsâ€™ mental simulation would differentially influence left and right-handers in the number of object-manipulation words they learned from an artificial language. We found that right-handers but not left-handers recalled less word definitions when the picture mismatched their own mental simulation. These results are in line with theories of embodied cognition.

Room 2

Chair: Lynn Watson

William Lorber, Eric Read Larson, Liliana Pezzin, Emily McGuire, Erin McGinley, & Timothy Dillingham - Relationships between PTSD related arousal, depression, and cognitive complaints

Psychopathologically related arousal's influence on memory and cognition is not well understood. This study investigated relationships between cognitive complaints, PTSD and depression hypothesizing that PTSD related arousal but not depression would relate to cognitive complaints. Measures were completed of PTSD, depression and the Cognitive Failures Questionnaire, which assesses complaints about memory and other cognitive aspects. Regression analysis indicated that PTSD-related arousal and depression-related somatic symptoms were related to cognitive complaints. Results indicated that these clinical symptoms with physiological components may influence cognitive functioning by consuming attentional capacity. It is also possible that these symptoms promote the search for other symptoms.

Lynn Watson & Dorthe Berntsen - Negative life-events in childhood are associated with higher levels of psychopathology

Two robust findings within memory research are the reminiscence bump and that positive events are rated as central to life-story. We investigated these findings in high and low PTSD symptom groups. 1040 participants between 20-69 completed the Centrality of Events Scale (Berntsen & Rubin, 2006) for their most positive and negative memories and dated

these events. The reminiscence bump for positive events was present in both groups. For negative life-events there was a significant trend that the high PTSD group reported high numbers of childhood events. The high PTSD group also reported negative events from childhood as most central.

Seema L. Clifasefi, Brian D. Ostafin, Katie Witkiewitz, Joel Grow, & Sarah Bowen - Using the tortoise to stop the hare: Trait mindfulness moderates the relation between response inhibition and post-treatment alcohol use

Previous studies have shown that individuals with poor response inhibition are susceptible to substance-related impulses a risk factor for addiction. Mindfulness (paying attention in the present moment) has been proposed as a potential moderator between impulsivity and behavior. To test this hypothesis 117 participants with alcohol use problems completed baseline assessments including measures of alcohol use trait mindfulness and response inhibition (go-nogo task) prior to taking part in one of three 8-week relapse prevention interventions. Poor response inhibition predicted frequency of alcohol use and this relation was moderated by individual differences in mindfulness.

Karen Salmon,Charlotte Gutenbrunner, Samuel Ponniah, Paul Jose, & Rebecca Burson - The Relationships amongst Overgeneral Memory Depression Inhibitory Control and Rumination in Children

Overgeneral memory (OGM) the tendency to report general memories when asked to recall a specific event is associated with depression but little is known about the causal mechanisms. We examined the relationship between OGM and depressive symptoms in a community sample of 246 youth (10-14 years). OGM was positively associated with increased depressive symptoms and although rumination and inhibitory control mediated this relationship when both were simultaneously entered inhibitory control became non-significant. It is possible that in a feedback loop OGM promotes rumination and depletes cognitive resources available for inhibitory control further increasing rumination and resultantly depressive symptoms.

Room 3

Chair: Sandra Buratti

Maryanne Garry, **Robert B. Michael, Eryn J. Newman, Matti Vuorre, & Geoff Cumming** - On the (non)persuasive power of a brain image

The finding that a brain image makes accompanying information more credible (McCabe & Castel 2008) has captivated scholars in many disciplines. But when our attempts to build on this effect failed we instead ran a series of systematic replications of the original study's comprising ten experiments and nearly 2 000 subjects. When we combined the original data with ours in a meta-analysis

we arrived at a more precise estimate of the effect determining that a brain image exerted little to no influence. The persistent meme of the influential brain image should be viewed with a critical eye.

Carol A. Vazquez, Nathan Earl & Cecelia Lillard - Do Principles of Evolutionary Psychology Affect Iconic Memory?

Evolutionary psychology (EP) criticizes cognitive psychology for ignoring how cognition is constrained by hardwired evolutionary mechanisms tied to mating behavior. Emphasizing factors such as attractiveness and gender they report evidence that evolutionary principles do influence cognition. EP experimental tasks however are not based on traditional cognitive paradigms. In our Sperling task letter matrices were superimposed over pictures used in previous EP research. If gender and attractiveness automatically affect cognition iconic memory could be boosted or disrupted depending on the type of face presented. While the Sperling effect was replicated EP factors of gender and attractiveness did not influence performance.

Sarah Fletcher & Nathan Weber - It's all a bit too familiar: Recollection and the positive-negative difference in predictors of recognition accuracy

Confidence and response latency consistently predict accuracy for positive but not negative eyewitness recognition decisions. To test the explanation that this reflects neglect of recollection in negative decisions we set participants a recognition task that was known to require recollection in addition to familiarity. Further we manipulated participants' time to respond and therefore their ability to use recollection. Results demonstrated that both confidence and response latency were stronger predictors of accuracy for negative decisions in conditions allowing recollection supporting the theory. Implications for the role of different evidence bases in eyewitness decisions will be discussed.

Sandra Buratti & Carl Martin Allwood - The effects of advice and "try more" instructions on improving the accuracy of confidence judgments

This study investigated whether participants have the ability to improve the accuracy of their confidence judgments and if advice and "try more" instructions can help participants become even more accurate. The participants (n = 220) made confidence judgments of their answers to 50 recall questions on a video clip. After this they were asked to try to increase the accuracy of their confidence judgments by modifying those they believed to be the least accurate. The participants managed to increase the accuracy of their confidence judgments. However neither the advice nor the "try more" instructions further improved their accuracy.

Room 4

Chair: Alice Healy

Alice F. Healy, Vivian I. Schneider, Blu McCormick, Deanna M. Fierman, Carolyn

J. Buck-Gengler, & Immanuel Barshi - How Much is Remembered as a Function of Presentation Modality?

Three experiments tested the widespread claim that students remember 10% of what they read 20% of what they hear 30% of what they see and 50% of what they see and hear. The task used to test this claim involved receiving and following navigation instructions. When there were differences between single modalities they conformed to the order but not the magnitudes specified in the claim. However information presented in two modalities did not yield better memory than information presented twice in one modality. Also practice had an overwhelming effect. Thus the widespread claim should not be treated with any credibility.

Angela R. Birt, Emad E. Talisman, Sarah Fanning, & Emma M. Ells - The Effects of Bilateral Saccadic Eye Movements on Memory for Emotional Scenes

Performing saccadic bilateral horizontal eye movements (SBHEM) while awake before retrieval can enhance episodic memory. To test whether an optimal time for SBHEM exists 145 participants visually tracked either a horizontally moving dot or photographic scenes (positive negative neutral) either before during or after encoding during retrieval or control. Overall dâ€™ recognition scores were highest before encoding and lowest during encoding and during retrieval with effects especially pronounced for negative scenes. dâ€™ scores also varied according to individual differences such as emotional regulation. Methodological variations and applications of findings to the effects of SBHEM and emotion on memory are discussed.

Carla MacLean, **Don Read, & D. Stephen Lindsay -** Investigating Investigators: Tunnel Vision and Investigation Protocol.

The current study explored confirmation bias (i.e. tunnel vision) in the industrial investigation specifically the impact of a Cause Analysis (CA) Chart as a debiasing intervention. Workplace accident investigations play an important role in preventing future accidents by determining direct and contributing causes. A common investigation protocol is the CA Chart that requires that investigators select from a number of substandard act/condition options whereas other protocols encourage a more open-ended approach. Our findings indicated that participants who used the CA Chart demonstrated significantly less bias than those in control. The relevancy of these findings to the literature will be discussed.

Kate A. Houston, C. A. Meissner, & J. R. Evans - Developing a Psychological Model of Interrogation

Controversies over the use of interrogation methods by U.S. law enforcement highlight the need for an evidence-based understanding of the mechanisms which drive a suspect to confess. Several theories have been proposed to explain the psychological

processes leading to confession though few have been supported by empirical data. We present a meta-analysis of interrogation studies which assessed social cognitive and affective factors leading to confession. Our findings suggest that current theories vary in their ability to predict true and false confessions and we offer a conception based upon internal and external psychological processes that influence guilty and innocent suspects respectively.

Room 5

Marlene Abadie, L. **Waroquier & P. Terrier** Gist memory in the Unconscious Thought Effect

The Unconscious Thought Effect (UTE) refers to an improvement in complex decision-making following distraction. This finding has often been interpreted as evidence of unconscious thinking. In two experiments we provide initial evidence that the UTE is accompanied by an increase in gist memory and demonstrate that the cognitive demands of the distraction task moderate its effect on decision-making and gist memory: only the completion of a low-demanding distraction task improves complex decision-making and enhances gist memory. These findings suggest that the UTE occurs only if cognitive resources are available and that it is accompanied by enhanced gist memory.

Daniella Karidi, P. G. Rendell & S.G. Zecker Adults with ADHD and prospective memory

Adults with ADHD commonly report prospective memory (PM) failures. Researchers have proposed that PM failures are related to difficulties in Executive Function (EF) which are among manifestations of ADHD. It is unclear to what extent EF is involved in PM difficulties in adults with ADHD. Eighteen adults with ADHD and 20 controls performed the Virtual Week task and EF was assessed. Adults with ADHD demonstrated fewer correct PM responses across all task types. Results suggest that not all EF measures are vital mechanisms for PM and importantly working memory was an essential aspect of PM across and beyond attention.

Chiara Mirandola, Nunzia Losito, Simona Ghetti & Cesare Cornoldi Negative events don't always protect from memory distortion: the case of children with nonverbal learning disability.

This study investigated whether children with nonverbal learning disability (NLD) who suffer from emotional difficulties would be more vulnerable to emotional false memories compared to both children with typical development and with dyslexia. Participants were tested on a recognition memory task which included previously seen and unseen photographs of common episodes. Embedded among the photographs depicting each episode there was the effect of an action "either emotional or neutral " whose cause was presented only at recognition. Results showed that children with NLD produced a higher proportion of causal errors associated with negative events compared to the other groups.

Pilar Andres, Laura Pérez, Concepción Padilla, & Fabrice Parmentier Attentional networks and exercise: Greater improvement on executive control

The aim of this study was to test the hypothesis that chronic physical exercise improves attentional control in young healthy participants. We compared the performance of physically active and passive participants in the Attentional Network Task (Fan et al., 2002), which allows for the assessment of the three attentional networks: executive, orienting and alert. The results showed a significantly better control of interference in the executive network (RTs and errors) and a smaller benefit of spatial cues (orienting network) in the active participants. There was, however, no difference between groups in the alerting network. These results suggest that exercise can improve executive control in healthy young participants, adding to evidence gathered in children, older adults and certain clinical populations. These results have potential practical implications for health authorities and the general public by strengthening the view that exercise, beyond its physical health benefits, also has effects on cognitive functioning.

16:40 – 17:40

Auditorium

Dorthe Berntsen - "Involuntary and voluntary remembering of trauma: Key assumptions of Posttraumatic Stress Disorder (PTSD) evaluated in the light of autobiographical memory research"

According to a prevalent view, autobiographical memory of trauma victims is disturbed in at least two ways. Victims of trauma have intrusive, involuntary recollections of the traumatic event. At the same time they have difficulties voluntarily remembering important parts of the event—a feature known as dissociative amnesia. These characteristics are not just observations made by PTSD researchers. They are also included as PTSD-symptoms in the DSM-IV (American Psychiatric Association, 2000) as well as in the proposed revision in DSM-V. In my talk I will challenge both of these interrelated ideas. First, an accumulating amount of evidence contradicts the idea of involuntary remembering being a special medium for stressful and negative material by demonstrating that emotional stress at encoding enhances both involuntary and voluntary recall. Second, studies based on the Centrality of Event Scale (CES) consistently show robust positive correlations between PTSD symptoms and the accessibility and centrality of the traumatic memory for life story and identity. Third, little evidence supports the idea that trauma memories are inherently fragmented. I conclude that key assumptions of PTSD should be reconsidered in the light of recent findings in the autobiographical memory literature.

17:30 – 19:00

16th floor

Poster Session 1 + Drinks

See abstracts on SARMAC website