Abstracts in the order of presentation

Keynote 1: Friday, October 9, 2009 10.15

Developing investigative linguistics as a forensic science.

Dr. Tim Grant, Aston University, Birmingham

This talk examines the development of investigative linguistics from two perspectives; the first is a historic perspective tracing the discipline in the UK from its development in the 1960s, and its use in defense cases and Courts of Appeal, to more current applications in investigations leading to prosecution. The second perspective examines the variety of investigative and legal contexts in which linguistic analysis may be useful. These contexts range from intelligence work for counter-terrorism and offering investigative advice to the police, to the provision of evidence in the civil courts and for criminal defense and prosecution. Both perspectives will be exemplified using case examples and it will be shown that as the discipline has developed techniques to provide more certain and more scientific evidence, the contexts in which forensic linguistic analysis can be usefully applied have grown.

Session 1 Witness Psychology: Friday, October 9, 2009 11.30

Examining what Finnish legal professionals focus on when evaluating the quality of expert testimony

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Helsinki University Central Hospital / Child Forensic Psychiatry Center

Agnetha Reite, Pekka Santtila

Åbo Akademi/Psychology

Expert testimony in court can have enormous effects on peoples’ lives and should, therefore, be of the best possible quality and understood correctly. It can be assumed that there are problems with the evaluation of expert testimony in Finnish courts as legal professionals in Finland do not get sufficient guidance on how to assess such evidence. However, no previous empirical research has been conducted on the subject. The aim of the present study was to examine what legal professionals in Finland perceive as important criteria when evaluating the quality of expert testimony, and how they interrogate experts in psychology and psychiatry to determine the reliability of their testimony. Using a questionnaire 102 legal professionals were asked to rate seven reliability criteria of expert evidence and to write down questions they would ask experts in five hypothetical court cases. Results showed that legal professionals considered the expert’s experience and the evidence’s error rate and general acceptance to be the most important reliability criteria of expert evidence. The questions the participants would have asked in the hypothetical cases were often categorized as questions about error rate and the expert’s experience. However, the participants mostly asked questions that could not be related to any of the potential reliability criteria, and many of the participants simply asked what the statements were based on. The results indicated that Finnish legal professionals are not necessarily well equipped to evaluate expert testimony. More research is needed in this area and future projects will be discussed.
Eyewitnesses’ recall correctness and metacognitive realism for forensically central and forensically peripheral information

Farhan Sarwar*, Carl Martin Allwood, Åse Innes-Ker

Institution for Psychology, Lund University

The kind of contents of the encoded information affects how an eyewitness will remember it afterwards. What kind of information is more vulnerable to forgetting and distortion is an important question at various stages of the forensic process. This research investigates if people’s accuracy and metacognitive realism depends on the kind of information they are asked about. The distinction between forensically central information (mainly the action details of an event) and forensically peripheral information (mainly the descriptive details of the persons and objects in the event) are at the focus of this research. A within-subject design was used. The within-subject factor was the 2 kinds of information investigated (forensically central and forensically peripheral). Forensically central information concerns the actions details about the event and forensically peripheral information concerns the descriptive details of the persons and objects in the event. Participants were shown a short film of a staged kidnapping of a woman. After 10 minutes of filler task the participants were given a questionnaire about the film. The questionnaire consisted of 63 questions about the film. Each question had three answers whereof one was correct. The questions were about central and peripheral details. An 11-point confidence scale (0 to 100) was used to assess the participant’s confidence about each answer. Preliminary results showed that the participants’ responses to two types of questions differed significantly in their accuracy, confidence and calibration and over-/underconfidence and in their ability to separate correct and incorrect memories by means of the level of their confidence judgments. The results will be presented and their implications discussed.
The child verbal competence effect in court: A comparative study of Field Investigative Interviews of Children (FIIC) in Child Sexual Abuse cases.

Trond Myklebust*
Norwegian Police University College
Roald A. Bjørklund
Department of Psychology, University of Oslo

In child sexual abuse cases videotaped field investigative interviews of children (FIIC) is considered to be the evidence-in-chief, primarily because no other evidence is typically available. In the cases that should be judged by the courts in the Nordic countries, the videotaped FIIC is presented to court as a substitute for the child victim being questioned and cross examined by the members of the court during the trial. A review of several studies indicates that factors related to the questions and competence of the interviewers, and the age and gender of the interviewed child, all affect the FIIC. In the present study we have analysed if some of the often sited variables affecting FIIC also affects the outcome as judged by the prosecutors or the courts. One hundred FIIC in Child Sexual Abuse cases were divided into one of the three legal outcomes: (i) insufficient evidence to proceed (IEP); (ii) convictions; or (iii) acquittals by the court. Among the interviewed girls older than 10 years, there were no cases of acquittals and the convicted cases were overrepresented. Analysis of variance (ANOVA) revealed a significant main effect on the three FIIC outcomes on the length of the children's answers. Post hoc analysis showed that only the children's response to open questions was found to be the main difference between the three outcomes. The responses to these open questions were 1.9 and 2.3 times longer in the convicted cases compared to acquittals and IEP. Possible explanations for the result will be discussed.

Children’s truthful and deceptive testimonies: Effects of increasing the cognitive load

Emma Roos af Hjelmsäter*, Sara Landström, Pär Anders Granhag
University of Gothenburg

The ‘imposing cognitive load’ approach to deception detection, developed by Aldert Vrij and colleagues (2006), suggests that lying is a more cognitively demanding task than telling the truth. It also proposes that by introducing cognitively demanding interventions during an interview the cognitive load will be enlarged and the differences between liars and truth-tellers will be even more pronounced. This experimental study explores this cognitive approach by investigating how children’s ability to provide truthful and deceptive testimonies is affected by an increased cognitive load. Forty-two children (12-13 year olds) were interviewed about two events; one self-experienced (truthful) and one made-up (deceptive) event. Half were interviewed about the events in a regular interview setting. The other half played a game designed to increase cognitive load while being interviewed. Preliminary results, in the ongoing data collection, show that the children in the cognitive load condition performed better—they gave a fuller account in the free recall phase and answered more questions—than did the children in the regular condition. Moreover, the children performed better when interviewed about the second event than when interviewed about the first event. However, our preliminary analyses do not show any difference between the children’s deceptive and truthful accounts. Thus, the study does not show support for the ‘imposing cognitive load’ approach. The theoretical implications and practical applications will be discussed.
The aim of this presentation is to review the frequency, nature and impact of expert psychiatric and psychological evidence in the Supreme Court in Iceland over a seven-year period (2001-2007). All cases listed on the Supreme Court Website between 2001 and 2007 were identified and the judgments were carefully screened for relevant information and entered on to a specially designed coding sheet. There were 3,367 cases listed on the Website during the seven-year period. Psychiatric and psychological evidence was considered in 213 (6.3%) cases (2.7% and 4.2% for the two disciplines, respectively), with only 10% cases involving reports from both disciplines. The Supreme Court accepted and relied upon the psychiatric and psychological evidence in 78% of cases. Psychological evidence was more common than psychiatric evidence in appeal cases, but this pattern was reversed in complaint cases. The role was different for the two disciplines with psychiatrists focusing on violent offenders, diminished responsibility issues, restraining orders, and mental state examinations and diagnosis, whereas psychologists were more commonly involved in custody disputes, witness credibility assessments and the assessment of victims sex offenders. Psychiatrists and psychologists have complementary skills for the assessment of court referrals. Both have a valuable contribution to make and their evidence and recommendations are accepted in the great majority of cases. It is recommended that psychiatrists and psychologists work more closely together on cases where appropriate in order to maximize the quality and effectiveness of their individual contribution.
The relationship between decision making styles and measures of well-being, sleep and work conditions for Swedish investigative police officers

Carl Martin Allwood*, Ilkka Salo
University of Gothenburg and Lund University

This study analyzed the relationship between decision making styles and measures of well-being, sleep and work conditions for investigative police officers (n = 203). Decision making styles were measured by Scott and Bruce’s (1995) General decision making style questionnaire. Well-being was measured by e.g., Satisfaction With Life Scale (SWLS) and Perceived Stress Questionnaire (PSQ). Questions on work conditions included items relating to availability of time for the investigative work, possibilities to plan work, unclear goal formulations, dependence on others and predictability of the outcome of individual investigations. The results showed that high values on the decision making styles Avoidant (tries to avoid making decisions) and Dependent (dependent on advice from others before important decisions) were significantly (p < .01) associated with lower SWLS and lower PSQ. In addition, Dependent decision style was correlated with reported poorer sleep and experienced higher dependence on others in the investigative work. The decision making styles Rational, Spontaneous and Intuitive showed no such correlations. Gender analyses showed that male police officers evidenced higher values on Rational decision making style (“exhaustive information search” and “logical evaluation of alternatives”) and female investigators higher values on Dependent decision making style. In addition, we will present content analyses of police officers’ answers to the questions what they consider to be good decision quality in their investigations and what they consider to be good efficacy in the investigative process.

How to discriminate between true and false intent? Towards a new experimental paradigm

Melanie Knieps*, Pär Anders Granhag
University of Gothenburg

Today there is a large literature on deception detection, but virtually all research within this field is on methods discriminating truthful and deceptive statements about past actions. This is quite remarkable considering the societal value resulting in an increased accuracy detecting criminal intentions (i.e., illegal actions planned, but not yet committed). In this paper we will present the – to our knowledge – first empirical study examining differences between statements expressing true and false intent. The study draws on psychological notions from four different domains (a) current memory research on episodic future thought (assumed to be a core component forming true intentions); (b) social-cognitive research on intent, (c) social-cognitive research on self-regulation and (d) psycho-legal research on suspects’ counter-interrogation strategies. This framework offers theoretically driven predictions on the content-specific trademarks of true and false intent, trademarks to be examined in the current study. To properly study false and true intent we have devised a new experimental paradigm, which accommodates the inherent demands of intent and episodic future thought. The study will conform to this new experimental paradigm, and be a one-factor study (Intent: false vs. true), where ‘Intent’ will be a between-subjects factor (n = 30 cell). The results of this study will be discussed in relation to theory and its usefulness for applied settings.
The usual and the unusual suspects: Level of suspicion and counter-interrogation tactics

Pär Anders Granhag, Franziska Clemens*, Leif A. Strömwall

University of Gothenburg

The present study investigates counter-interrogation strategies (different tactics applied by the suspect to successfully withstand the interrogation and appear in a convincing manner) with respect to guilty mock-suspects’ disclosure of crime relevant information. Specifically, we examined to what extent the disclosure of information was moderated by (a) the suspects’ criminal experience (experienced vs. naïve), and (b) the degree of suspiciousness directed towards the suspect (high vs. low). The experienced suspects (N = 45) were former criminals. The naïve suspects (N = 45) were undergraduate students of the University of Stockholm. The participants had to imagine that they were guilty of a crime and called in by the police for an interrogation (either highly or slightly suspected). The participants were asked to write down freely where they were and what they did during the time of the crime and they were asked to answer either yes or no to crime-specific questions. Experienced (vs. naïve) suspects volunteered less self-incriminating information in the initial free recall phase. When asked crime-specific questions, naïve (vs. experienced) suspects admitted having committed more actions fitting with the crime under investigation. Furthermore, experienced suspects’ willingness to report information was not affected by the degree of suspicion, whereas naïve suspects in the high-suspicion (vs. low-suspicion) condition were more willing to report information. This study advances the knowledge on guilty suspects’ counter-interrogation strategies. Our finding that naïve and experienced suspects’ willingness to disclose information differed results in a note of caution with respect to the overuse of naïve suspects in deception detection research.

A Narrative Action System for Offender Profiling and Understanding Criminal Style in Sexual and Violent Crime: Theoretical Advances in Investigative Psychology

David Canter, Donna Youngs*

International Research Centre for Investigative Psychology, University of Huddersfield

Offender Profiling lacks any strong theoretical basis. A Narrative Action System (NAS) Model of Criminal Differentiation that underpins variations in offending style across and within different forms of crime is therefore presented. This model is relevant to all stages of the criminal justice system from investigative inferences through to the treatment of offenders. A generic basis for differences in offending style is proposed in terms of different forms of criminal narratives integrated with Shye’s Action System modes. This produces 4 modes of offending action: The Professional’s Adaptive Adventure; The Hero’s Expressive Quest; The Victim’s Integrative Irony and the Revenger’s Conservative Tragedy. Inference processes have their roots in the various pathways to crime; a) aspects of an individual’s cognitive or dispositional characteristics, b) their interpersonal interactions or c) sub-cultural and social learning processes or d) the emotional characteristics of the individual. These pathways reflect the four action modes of Narrative Action System. Therefore each mode of the Narrative Action System model offers a framework for considering different inference processes; a different mechanism whereby actions can relate to characteristics. Different forms of inferences will be most productive depending on the particular NAS mode of the offending actions. The NAS Inference Model provides then a generic basis for developing deductions about offenders from information about their offending; an integrated model of crime differentiation and criminal inferences.
Criminal Narrative Roles

Maria Ioannou
International Research Centre for Investigative Psychology, University of Huddersfield

As part of the development of explanations that link criminal actions to offender characteristics (the ‘Profiling Equations’ at the heart of Investigative Psychology) a narrative approach first outlined by Canter (1994) was used. To explore the narratives implicit in the roles offenders acted out whilst committing a specific crime they remembered well. To develop this framework 120 incarcerated offenders, convicted for a variety of crimes, indicated, on a forced choice questionnaire, their crime related roles. The results were subjected to Smallest Space Analysis (SSA), a non-metric multidimensional scaling procedure. Four distinct criminal narrative roles that reflect Frye’s (1957) four story forms (Mythoi) were identified: Adventurer, Professional, Revenger and Victim. Further analysis showed that different subsets of crimes are more likely to be associated with different narrative roles. In broad terms, Adventurer and Professional were found to be associated with property offences while Revenger and Victim were found to be associated with crimes against the person. Theoretical, methodological and practical implications are discussed.

Exploring the Relationships Between Behavioural and Spatial Features of Sex Offence Series

Laura Hammond
International Research Centre for Investigative Psychology, University of Huddersfield

Representing the nexus of two core strands of Investigative Psychology research, the present work explores the relationships between the behavioural and spatial attributes of crime series committed by 101 prolific sex offenders. Five key behavioural styles of offending are identified, which closely map onto the five-fold typology of sex offending proposed by Canter and Heritage (1990). Differences between these groupings in terms of the spatial and geometrical patterning of offences are examined, and theoretical postulations as to the psychological processes underlying these spatio-behavioural patterns are offered. Theoretical and practical implications are considered in detail throughout, with particular reference to the use and value of geographical profiling as a decision support tool in serial sex offence investigations.
Keynote 2: Saturday, October 10, 2009 10.00

How best to obtain evidence from vulnerable witnesses using video parades.

Prof. Amina Memon
Royal Holloway College, University of London

In this talk I will present findings from recent studies conducted in the UK using a novel method of obtaining eyewitness evidence from young and elderly witnesses. Using a new video identification system (VIPER) I will discuss how reliable evidence can be obtained with VIPER witnessing conditions are poor (brief exposure) and when the identification is made difficult (appearance change, identification of other race).

Session 3: PhD projects 11.15

Studying the neurobiological signatures of deceptive communication by the combined methods of EEG and TMS.

Inga Karton*, Talis Bachmann
University of Tartu

The topic of lying and concealing as well as identifying lying has a long and versatile history, which focuses on both the evolutionary factors of lying and the signs of lying -- identifiable verbal and non-verbal cues to deception and lie. There are several methods to detect lying. Historically, experimental works have concentrated on: (i) the “lie detector” (instrumental diagnostics of emotional stress, polygraph testing); (ii) the ERP method. As the most up-to-date method the recording of oscillatory processes of the brain by EEG or MEG method can be used. The last method is associated with studying the processes that put the brain in the mode of operation, i.e., inducing consciousness. The aim of the present work is to study the brain signatures following lying and deceptive communication. The following statements were set as hypotheses: (1) The brain EEG oscillatory bioelectrical responses to critical stimuli differ from the responses to non-critical stimuli and (2) there exist cortex areas, which, when functionally exhausted by TMS, change the degree of expression of the EEG signatures of deceptive communication. Experimental method will be used to test the hypotheses; the necessary equipment is available in the perception and consciousness laboratory of the Estonian Centre of Behavioural and Health Sciences. The author has planned to: (1) measure the EEG oscillatory processes; (2) study the effect of exhausting the brain areas by TMS on oscillatory processes measured by EEG; (3) test whether there are corresponding effects on behavioural expression of deception. More specifically, the exhausted brain is measured in the circumstances, where the participant has to distinguish between the critical and neutral stimuli (a version of the “guilty knowledge test”). By the time of submitting the abstract the experimental study issuing from the second and third hypotheses has been initiated. The study focuses only on the effect of previously applied rTMS in the behavioural experiment, where the participant can freely choose, whether to lie or tell the truth.
Strategic use of evidence: Detecting past and future criminal actions

Franziska Clemens*, Pär Anders Granhag, Leif A. Strömwall

Department of Psychology, University of Gothenburg

In principle, a lie-catcher can face one of the following four situations: (1) Having some sort of evidence speaking to the suspect’s guilt/discussing past actions; (2) Having some sort of evidence speaking to the suspect’s guilt/discussing future actions (intent); (3) Having no evidence speaking to the suspect’s guilt/discussing past actions; and (4) Having no evidence speaking to the suspect’s guilt/discussing future actions (intent). Virtually all deception research deals with situation (3). The fact that situation (1), (2), and (4) are under-researched can not be explained by that they do not occur in legal and security settings. In fact, they do occur quite frequently. Hence, in the current PhD project I will focus on situation (1) and (2). Specifically, I will systematically examine the effects of the Strategic Use of Evidence technique (SUE-technique) when used in order to detect deception with respect to past and future actions (intent). In addition, I will investigate the strategies used by guilty and innocent suspects in order to appear credible. The main objective is to gather constructive knowledge on how diagnostic cues to deception can be elicited by interviewing strategically (with respect to the information at hand). In addition, this project will advance the knowledge on suspects’ counter-interrogation strategies.

The Snake in the Grass paradigm as an implicit measure of sexual interest.

Anna Bäckström*, Pekka Santtila

Psychology Department, Åbo Akademi

The PhD thesis will be on the subject of evolutionary psychology and sexuality. At the moment, we are considering several different directions, and doing some preliminary literary searches to decide which one seems most worth while. Everything is quite rudimentary at the moment, but the plan will take form during the summer and fall, in time for the meeting in October. Ideas about possible experiments will be presented.
The effect of patriotism on different race face recognition

Kaarel Rundu*, Kristjan Kask
University Nord, Tallinn

Studies have shown that own-race faces are more accurately recognised than other-race faces. The potential benefit of examining the cross-race effect (CRE) may be to improve the recognition of both own- and other race faces and therefore reduce the impact of CRE on identification. The present study will examine the effects of two characteristics, patriotism and biased stereotypes, on the recognition of different race faces. The participants will be presented two photos of Afro-American and Caucasian faces. For some participants the faces are presented with no name tags (no stereotype condition), for some participants with Estonian names (Estonian stereotype condition) and for some participants with Russian names (Russian stereotype condition). Next participants fill in the Patriotism Scale by Kosterman and Feshbach (1989) and finally they are presented with two lineups (target present or absent / simultaneous or sequential lineups).

A cognitive behavioural group treatment for adults with ADHD and antisocial behaviour: Two studies on treatment effectiveness

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Psychological treatment opportunities are few for adults with ADHD. International guidelines advocate medication as the first-line treatment but recommend CBT in groups as an additional intervention. Few studies have however been conducted on treatment effectiveness. Studies have also shown strong relationship between ADHD and various antisocial problems and between ADHD and specific personality traits. Finally, studies have shown an association between personality disorders and low treatment effectiveness. The main aim is to measure treatment effectiveness of a group CBT for adults with ADHD and also for those with co-morbid antisocial/behaviour problems. This will be done in two studies. One study is a randomized controlled study (N=100) at a psychiatric hospital and the other a pilot study (N=20) at a state prison. In the hospital study participants are randomized to either an experimental condition (n=50) receiving group treatment and medication or a control condition (n=50) receiving treatment as usual and medication. In the prison study participants receive only group CBT. Measures are self-report scales and independent evaluations. Primary outcome variables are changes in ADHD symptoms and severity. Various secondary outcome variables are measured. Measures are gathered at baseline, at the end of treatment and at three month follow-up. It is hypothesised that group CBT will be associated with significant reduction in ADHD symptoms and severity. This association is expected for various secondary outcome measures. It is also hypothesised that treatment outcome will be associated with specific personality traits. Finally it is expected that strong traits of antisocial personality will reduce the effectiveness of the psychological treatment.
The Westermarck-hypothesis: Mechanisms mediating human incest aversion

Jan Antfolk*, Pekka Santtila

Åbo Akademi University

More than a century ago Edward Westermarck suggested the negative evolutionary consequences of incest to be the ultimate mechanism generating human incest aversion. As the proximate mechanism he suggested childhood proximity. Westermarck did not mean this just to include only biological kin, but also non-biological kin (Westermarck, 1891). Incest aversion, the general lack of sexual attraction between family members, has thus been explained as a function of co-habitation in childhood. As the hypothesis is impossible to test experimentally, other, indirect, approaches have been taken. It has been supported by anthropological and archival research (McCabe, 1983; Spiro, 1958; Wolf, 1995; Wolf & Huang, 1979). It has also been shown that the presence of siblings and the number of siblings correlate with more harsh moral judgments of incest (Bevc & Silverman, 1993; Lieberman, Tooby, & Cosmides, 2003). Some sort of kin-recognition mechanism is supposed to mediate the incest aversion, and both facial similarity (DeBruine, 2005) and olfactory mechanisms (Weisfeld et al., 2003) have been tested, suggesting that both can affect sexual attraction. Some limitations to the interpretation of these results will be discussed alongside a presentation of a series of experiments aimed to shed more light on the Westermarck-hypothesis. The ultimate aim of the project is to increase the understanding of the mechanisms mediating human incest behavior.