SPUDM 17

Biennial Conference on
Subjective Probability, Utility and Decision Making

sponsored by the European Association
for Decision Making (EADM)

August 9 - 11, 1999

University of Mannheim
Germany

in cooperation with
Sonderforschungsbereich 504

Contents:

Welcome

On behalf of the organizing committee (Jose Kerstholt, Joop van der Pligt, George Wu and Martin Weber) I would like to welcome you to SPUDM 17, the biennial Conference on Subjective Probability, Utility and Decision Making, sponsored by the European Association for Decision Making (EADM).

The meeting is held in cooperation with the Sonderforschungsbereich 504, a large program project at the University of Mannheim sponsored by the Deutsche Forschungsgemeinschaft (German National Science Foundation). Established in 1997, the Sonderforschungsbereich 504 (SFB 504) forms a research network that links the Departments of Business Administration, Economics and Social Sciences. The research within the SFB 504 concentrates on concepts of rationality, decision making and economic modelling.

I would like to thank the University of Mannheim for contributing administrative and financial assistance and the local organizers (Jutta Bender and Thomas Langer) for their excellent work.

On behalf of the organizing committee I wish you a pleasant stay.

Martin Weber

Scientific Secretariat

For all correspondence concerning the scientific part of the SPUDM conference you should use E-Mail or write to:

SPUDM 17
Sonderforschungsbereich 504
Universität Mannheim
L13, 15
D-68131 Mannheim, Germany
Phone:++49-621-181-3450
Fax: ++49-621-181-3451
E-mail: spudm99@sfb504.uni-mannheim.de

Please pick up further information at our hospitality desk at the Wartburg Hotel on Aug. 8th., 18:00-20:00 or at our conference office at the University of Mannheim, Schloß Ostflügel (Castle Eastwing), first floor, room no. O 138. The conference office is open 8:00 to 18:00 from Monday to Wednesday.

Congress Secretariat

All registration forms, payments and correspondence regarding logistics as well as the optional program should be addressed to:

HAPAG LLOYD / Gruppen und Tagungen
Seckenheimer Landstrasse 170
D-68163 Mannheim
Phone: .++49 621 4188 260
Fax ++49 621 4188 265
Email: mhggt1@compuserve.com

1. Timetable SPUDM 17

Sunday, 8.8.99

13:00 - 17:00	Monster Lake Walk (Buses depart in front of the castle)
18:00 - 20:00	Reception (Hotel Wartburg)

Monday, 9.8.99

Rooms	*O 133*	*O135*	*O142*	*O145*
9:00 - 9:30	Opening (*room S 108*)			
9:30 - 10:30	Plenary Speaker: **Keeney** (*S 108*)			
	*** Coffee Break *****			
11:00 - 12:30 Papers	A1: *Environmental DM*	A2: *Judgm. of Prob./Freq.*	A3: *Economic Applications*	A4: *Intertemporal DM*
	Boehm	**Drews**	**Oehler**	**Gattig**
	Smeesters	**Otten**	**Moran**	**Keller**
	Harms	**Yamagishi**	**Schulz-Hardt**	**Roelofsma**
	*** Lunch Break *****			
13:45 - 15:45 Symposia	B1: *Naturalistic DM in Dynamic Environments*	B2: *Comparison and Conflict in Judgment and Choice*	B3: *Methodological Challenges for Experimental Economics and Psychology*	B4: *Modeling Human Judgment Structure & Process; Possibilities & Limitations*
	Omodei	**Brenner**	**Hertwig**	**Funke**
	Orasanu	**Rottenstreich**	**Bonetti**	**Koele**
	Montgomery	**Koehler**	**Ortmann**	**Smith**
	Brun	**Zakay**	**Starmer**	**Harries**
	*** Coffee Break *****			
16:15 - 17:45 Papers	C1: *Medical DM*	C2: *Judgm. of Prob./Freq.*	C3: *Misc.*	C4: *Support Theory*
	Hodson	**Martignon**	**Wittemann**	**Read**
	Welkenhuysen	**Fiedler**	**Bless**	**Bearden**
	Mumpower	**Sedlmeier**	**Hardman**	**Fox**

Tuesday,10.8.99

8:30 - 10:00 Papers	D1:Misc.	D2: *Strategic/Group*	D3: *Risk Attitudes*	D4: *Framing*
	Nau	**Crott**	**Blais**	**Erev**
	Chapman	**Fischer**	**Hilton**	**Kühberger**
	Brachinger	**Abele**	**Schubert**	**Stocké**
10:00 - 11:30	E: Poster Session *(in front of Conference Office) and **Coffee***			
11:30 - 13:00 Papers	F1: *Consumer Choice*	F2: *Info Seeking/Learning*	F3: *Risk Perception*	F4: *Hindsight*
	Bolger	**Betsch**	**Sokolowska**	**Keren**
	de Groot	**Jones**	**Tyszka**	**Eisenhauer**
	Williamson	**Jonas**	**Weber**	**Pohl**
	*** Lunch Break *****			
14:15 - 16:15 Symposia	G1: *Simple Heuristics That Make Us Smart*	G2: *Anticipated Emotions and Decision Making*	G3: *Aggregation of Opinions and Judgments*	G4: *Intertemporal Choice*
	Goldstein	**Ordóñez**	**Yaniv**	**Jenkins**
	Dhami	**van Dijk**	**Harvey**	**Read**
	Bröder	**Pfister**	**Wallsten**	**Chapman**
	Rieskamp	**Pieters**	**Kameda**	**Siebenmorgen**
	*** Coffee Break *****			
16:30 - 17:30	Plenary Speaker: **Güth** (*S 108*)			
17:45	*** Tram departs to Heidelberg *****			

Wednesday,11.8.99

8:30 - 10:00 Papers	H1: *Misc.*	H2: *Misc.*	H3: *Risk Perception*	H4: *Misc.*
	Budescu	**Bereby-Meyer**	**Bruine de Bruin**	
	Meij	**Lages**	**Hoffrage**	**Butler**
	Harries	**Haberstroh**	**Timmermanns**	**Teigen**
	*** Coffee-Break *****			
10:15 - 11:15	Plenary Speaker: **Wakker** (*S 108*)			
11:15 - 11:45	EADM Business Meeting			
	*** Lunch Break ** (Solar Eclipse at ~12:30)*			
13:45 - 15:15 Papers	I1: *Forecasting*	I2: *Misc.*	I3: *Real World DM*	I4: *Misc.*
	Ayton	**Igou**	**Ranyard**	**Benson**
	McClelland	**Bohnet**	**McLennan**	**Maule**
	South	**Diederich**	**Shanteau**	**Asanov**
	*** Coffee Break *****			
15:30 - 16:00	De Finetti Award Winner: **Dhami** (*S 108*)			
16:00 - 17:00	Plenary Speaker: **Sterman** (*S 108*)			
18:15	*** Buses depart to Wachenburg for Conference Dinner *****			

2. Program

To all participants in regular paper sessions - Please note the time limits:

- Speaker: max. 20 minutes
- 10 minutes for general discussion

Chairpersons are kindly requested to follow and if necessary to rigorously enforce the time limits

---

Sun, 13:00 – 17:00

Walk to Monster Lake, Buses depart in front of the castle at 1 pm.

Sun, 18:00 – 20:00

Reception at the Wartburg Hotel

Mon, 9:00

Address of Welcome at the University (Schloß Ostflügel (Castle Eastwing)), Room S 108.

Mon, 9:30

Plenary Session (Chair: George Wu)
Ralph L. Keeney: *From 'Decisions with Multiple Objectives' to 'Smart Choices',* Room S 108

Mon, 10:30

Coffee

Mon, 11:00

A1: Environmental Decision Making Room O133
(Chair: John Maule)

11:00: Gisela Boehm: *Action Preferences and Characteristics of Environmental Risks*

11:30: Dirk Smeesters: *Exploring the recycling dilemma: intrinsic motivation in mandatory recycling programs*

12:00: Sylvia Harms: *„… and then my car broke down, and I thought: Do I really need a new one?" The influence of context and past behaviour on environmental decision making*

A2: Judgm. of Probability/Frequency Room O135
(Chair: Craig R. Fox)

11:00: Frank A. Drews: *Strategies and accuracy of frequency judgments*

11:30: Wilma Otten: *Indications for a dual-process approach to probability appraisal*.

12:00: Kimihiko Yamagishi: *Proximity, argument recruitment, and probability judgments of occurrence versus nonoccurrence*.

A3: Economic Applications Room O142
(Chair: Peter Ayton)

11:00: Andreas Oehler: *Insider behavior and multi-asset trading in experimental call markets*

11:30: Simone Moran: *The role of integrative initial offers in multi-issue negotiations*

12:00: Stefan Schulz-Hardt: *The Responsibility Effect as an Artifact: Evidence against a Self-Justification Explanation of "Entrapment" and "Escalation of Commitment"*

A4: Intertemporal Decision Making Room O145
(Chair: Daniel Read)

11:00: Alexander Gattig: *Choice anomalies in multi-dimensional discounting of decision consequences: generalising behavioural regularities from risky, intertemporal, interspatial and interpersonal choice*

11:30: L. Robin Keller: *Preferences for Sequences of Long-Term Environmental Consequences*

12:00: Peter H. M. P. Roelofsma: *The Gain/Loss Assymmetry in Intertemporal Choice*

Mon, 12:30

Lunch, University Mensa

Mon, 13:45

B1: Symposium: Naturalistic decision making in dynamic environments Room O133

Organizers: Wibecke Brun, Raanan Lipshitz
Discussants: Tommy Gärling, Raanan Lipshitz

Mary M. Omodei: *Field and Laboratory Approaches to Complex Decision Making*

Judith Orasanu: *Converging Methods for Studying Naturalistic Decision Making in Aviation*

Henry Montgomery: *The psychology of economic forecasting: A possibility for cooperation between JDM and NDM theories?*

Wibecke Brun: *The effect of sleep deprivation on planning performance, risk perception and probability estimation in a simulated resque mission.*

B2: Symposium: Comparison and Conflict in Judgment and Choice Room O135

Chair: Yuval Rottenstreich, Lyle Brenner
Discussant: Peter Ayton

Lyle Brenner: *Comparison, Grouping, and Preference*

Yuval Rottenstreich: *Apples and Oranges: Evaluation, Comparison, and Preference within and across Categories*

Derek Koehler: *Conflict-Based Subadditive Probability Judgments in Classification Learning*

Dan Zakay: *If it comes fast to my mind-it must be correct, the "latency heuristic" as a determinant of overconfidence.*

B3: Symposium: Methodological Challenges for Experimental Economics and Psychology Room O142

Organizers: Ralph Hertwig, Andreas Ortmann
Discussants: Thomas Wallsten, Robin Hogarth

Ralph Hertwig: *Experimental Practices In Economics: A Methodological Challenge For Psychologists*

Shane Bonetti: *Art and Artifice in Experimental Economics: A Defence of Deception*

Andreas Ortmann: *Does Deception Matter? Evidence (Mostly) from Psychology*

Chris Starmer: *Should we trust the dismal scientists in white coats?*

B4: Symposium: Modeling Human Judgment: Structure and Process; Possibilities and Limitations Room O145

Organizers: Clare Harries, Mandeep Dhami
Discussants: John Maule, Nigel Harvey

Joachim Funke: *Dynamic Systems as Tools for Analyzing Human Judgment*

Pieter Koele: *Process Tracing Techniques for Studying Human Judgment*

Philip T. Smith: *Structural Equation Modeling of Human Judgment*

Clare Harries: *: Fast and Frugal Models of Human Judgment*

Mon, 15:45
Coffee

Mon, 16:15

C1: Medical Decision Making Room O133

(Chair: Danielle Timmermans)

16:15: Christine Hodson: *Understanding Organ Donation Decisions: The Role of Belief Salience.*

16:45: Myriam Welkenhuysen: *Women's decisions concerning a predictive genetic test for hereditary breast cancer.*

17:15: Jeryl L. Mumpower: *Inter-Rater Agreement among Psychiatrists in Psychiatric Emergency Assessments*

C2: Judgm. of Probability/Frequency Room O135

(Chair: Maya Bar-Hillel)

16:15: Laura Martignon: *To be a Bayesian or to be fast and frugal. A matter of information formats.*

16:45: Klaus Fiedler: *A Sampling Approach to Biases in Conditional Probability Judgments: Beyond Baserate-Neglect and Statistical Format*

17:15: Peter Sedlmeier: *Associationist Learning as the Basis for Relative Frequency Judgments?*

C3: Misc. Room O142

(Chair: Elke Weber)

16:15: Cilia Witteman: *Mood and multi-attribute decision making.*

16:45: Herbert Bless: *Reliance on the availability heuristic: A question of individuals´ mood?*

17:15: David Hardman: *What effect do rationales have on the solutions to framing problems?*

C4: Support Theory Room O145

(Chair: Derek Koehler)

16:15: Daniel Read: *Subadditivity of intertemporal discount-rates*

16:45: Neil Bearden: *Similarity and Subadditive Frequency Judgments:A Multiple-trace Model*

17:15: Craig Fox: *Ordering Beliefs Over Events*

Tue, 8:30

D1: Misc. Room O133
(Chair: L. Robin Keller)

8:30: Robert F. Nau: *Arbitrage choice theory: beyond preferences and consequences.*

9:00: Gretchen B. Chapman: *What counts as a decision?*

9:30: Hans Wolfgang Brachinger: *Risk Measure under Ambiguity*

D2: Strategic/Group Decision Making Room O135
(Chair: Eduard Brandstaetter)

8:30: Helmut W. Crott: *Effects of a technique to improve normative functioning and output of Groups (INFO) in collective problem solving processes: An analysis of the dynamics and results of groupdiscussions.*

9:00: Ilan Fischer: *The Emergence of Mutual Cooperation in a Simulated Inter-Group Conflict*

9:30: Abele, Susanne: *Why Timing Matters: Differential Effects of Uncertainty about the Outcome of Past versus Current Events*

D3: Risk Attitudes Room O142
(Chair: Robin M. Hogarth)

8:30: Ànn-Renee Blais: *Risk Attitudes: A Domain-Specific Assessment Scale*

9:00: Denis Hilton: *Subconscious priming of risk attitudes*

9:30: Renate Schubert: *Gender Specific Attitudes towards Risk and Ambiguity*

D4: Framing Room O145
(Chair: Herbert Bless)

8:30: Ido Erev: *On the effect of experience on decision making under uncertainty: Loss aversion without reflection, and the reversed certainty (Allais) effect.*

9:00: Anton Kühberger: *A meta-analysis of the Effects of Framing, Probability, and Payoff on Risk Preference*

9:30: Volker Stocké: *Explaining framing-effects as schema activation process - the special case of equality norms*

Tue, 10:00

E Poster Session and coffee (in front of the conference office)

1. Mohammad J. Abdolmohammadi: *The Bayesian Statistical Appraoch in Auditing: A Review of the Application Problems.*
2. Jonathan Aldred: *Intransitivity and Vague Preferences*
3. Ole Boe: *Attention Bias in Integration of Outcomes of Concurrent Decisions*
4. Fergus Bolger: *What determines consumer sentiment?*
5. Richard Breton: *Human Factor Perspective of Reasoning under Certainty in a Command and Control Task*
6. Wandi Bruine de Bruin: *Redistributing fifty-fifty responses*
7. Alexander Gattig: *Temporal discount rates for hedonic and utilitarian goods*
8. David Hands: *Multimodal Quality Assessment: Investigating the relationship between recollective memory and quality judgements*
9. Niklas Karlsson: *The impact of goals and responsibility on escalation and de-escalation*
10. Xiao Luo: *Stable equilibrium in beliefs in extensive games with perfect information*
11. Craig R. M. McKenzie: *The Psychological Side of Hempel's Paradox of Confirmation*
12. Guenter Molz: *The Effect of Information Reliability and Precision on Subjective Probabilities*
13. Mary M. Omodei: *Open Versus Restricted Communication Structures in Team Dynamic Decision Making*
14. Tim Rakow: *Pre-surgical estimation of the risk of early mortality following paediatric heart surgery*
15. Torsten Roensch: *Experimental comparison of desicion rules for multiattribute selection problems*
16. Luba Sapir: *Optimality of various decision rules under partial information*
17. Stefan Schwarz: *Hindsight Bias: Hypothetical Design vs Memory Design*
18. Robert D. Sorkin: *Assessing the Efficiency of Group Decision Making*
19. Christian Steglich: *Goal Hierarchies and Salience Mechanisms in Multiattribute Decision Making*
20. Rickey P. Thomas: *Developing a performance-based measure of expertise in an air traffic control microworld environment.*
21. Danielle Timmermans: *Self care versus the decision to seek professional help*
22. Sandra van Dijk: *Risk perception and informed decision making of women at risk for familial breastcancer.*
23. Daniel Vastfjall: *Anticipated Emotional Outcomes of Decisions.*
24. Ina D. von Haeften: *The golden cascet paradigma: when additional information is given, do people detect that their decisions turn out to be bad?*
25. David J. Weiss: *Inferring Expertise from Judgments*
26. Guido Weisshahn: *Factors influencing decisions in repeated choice problems*
27. Helena Willen: *The "Who am I? Who will I become?" Perspective in Personal Decision Making*
28. Marcel Zeelenberg: *The role of attributions in post-decisional affect*

Tue, 11:30

F1: Consumer Choice Room O133
(Chair: Andreas Oehler)

11:30: Fergus Bolger: *Dual Processes in Consumer Choice*

12:00: Manon de Groot: *The psychology of purchase decisions: The effectiveness of free-trials and money back-guarantees*

12:30: Janis Williamson: *Risk management in consumer insurance decisions*

F2: Info Seeking / Learning Room O135
(Chair: Ola Svenson)

11:30: Tilmann Betsch: *I like it but I can't say why: Feeling based judgment and choice*

12:00: M. K. Jones: *Positive Confirmation Bias in the acquisition of Information*

12:30: Eva Jonas: *Information Seeking in Advisor - Decision Maker Situation*

F3: Risk Perception Room O142
(Chair: Hans Wolfgang Brachinger)

11:30: Joanna Sokolowska: *Acceptance of Unique Risky Events*

12:00: Tadeusz Tyszka: *Risk Taking in Real Managerial Tasks*

12:30: Elke U. Weber: *Predicting risk-sensitivity in humans and lower animals*

F4: Hindsight Room O145
(Chair: Pieter Koele)

11:30: Gideon Keren: *Why are pleasant surprises so surprising?*

12:00: Markus Eisenhauer: *Selective activation as an explanation for hindsight bias*

12:30: Rüdiger F. Pohl: *No reliability of hindsight bias*

Tue, 13:00

Lunch, University Mensa

Tue, 14:15

G1: Symposium: Simple Heuristics That Make Us Smart Room O133
Organizer: Ulrich Hoffrage,
Discussants: Peter Ayton, N.N.

Dan Goldstein: *When More Knowledge Is Worse Than Less*

Mandeep K. Dhami: *Can Justice Be Fast And Frugal*

Arndt Bröder: *Using The "Take The Best"-Heuristic in Probabilistic Inference: Some Do It Sometimes*

Jörg Rieskamp: *The Use of Simple Decision Heuristics: Bounded Rationality And Time Pressure Part of Symposium: Simple Heuristics That Make Us Smart*

G2: Symposium: Anticipated emotions and decision making Room O135
Organizer: Marcel Zeelenberg
Discussants: Terry Connolly, Gideon Keren

Lisa Ordóñez: *Testing the Compatibility Test: How Instructions, Accountability, and Anticipated Regret Affect Prechoice Screening of Options*

Wilco W. van Dijk: *Blessed are they who expect nothing: Lowering expectations as a way of avoiding disappointment*

Rüdiger Pfister: *Temporal Aspects of Regret and Disappointment and their Impact on Choice Behavior*

Rik G.M. Pieters: *Wasting a Window of Opportunity: Anticipated and Experienced Regret*

G3: Symposium: Aggregation Of Opinions And Judgments Room O142
Organizers: David V. Budescu, Nigel Harvey, Thomas Wallsten
Discussants: David V. Budescu, Scott Tindale

Ilan Yaniv: *Weighting the Opinions of Others:*

Nigel Harvey: *Weighting of Advice from Different Sources:*

Thomas S. Wallsten: *Averaging Probability Estimates: Empirical Tests of Two Theorems*

Tatsuya Kameda: *Social sharedness and adaptation: Group decision heuristics*

G4: Symposium: Intertemporal Choice Room O145
Organizer: Jane Jenkins, Daniel Read
Discussant: Peter Roelofsma

Jane Jenkins: *Discounting depends on imagination*

Daniel Read: *Preferences for income and health distributions: A verbal protocol analysis*

Gretchen Chapman: *Intergenerational Discount Rates*

Niklas Siebenmorgen: *Risk perception in the short run and in the long run*

Tue, 16:15
Coffee

Tue, 16:30
Plenary Session (Chair: Martin Weber)
Werner Güth: *(Boundedly) Rational Decision Making and Robust Learning,* Room S 108

Tue, 17:30
Break

Tue, 17:45
Tram departs to Heidelberg (on the east side of the castle). Be in time - the tram cannot wait.

Wed, 8:30

H1: Misc. Room O133
(Chair: Chris Starmer)

8:30: David V. Budescu: *Confidence in aggregated probability judgments*

9:00: Gerard Meij: *Dynamic Decision Making*

9:30: Clare Harries: *The effects of task difficulty and sample size on self-insight in judgement.*

H2: Misc. Room O135
(Chair: Rob Ranyard)

8:30: Yoella Bereby-Meyer: *Learning the contingency between two dichotomous variables*

9:00: Martin Lages: *Intransitivity of fast and frugal heuristics*

9:30: Susanne Haberstroh: *Routine strength and adaptation in recurrent acquisition and disposal decisions.*

H3: Risk Perception Room O142
(Chair: Renate Schubert)

8:30: Wandi Bruine de Bruin: *Verbal expressions of probability: "It's a fifty-fifty chance"*

9:00: Ulrich Hoffrage: *How to Keep Children Safe in Traffic: Find the Daredevils Early*

9:30: Danielle Timmermans: *Communicating individualized risk information to patients: what is the best format?*

H4: Misc. Room O145
(Chair: James Shanteau)

8:30: ****

9:00: David Butler: *Do Non-Expected Utility Choice Patterns Spring from Hazy Preferences? An Experimental Study of Choice 'Errors'*

9:30: Karl Halvor Teigen: *When equal chances are good chances*

Wed, 10:00
Coffee

Wed, 10:15
Plenary Session (Chair: Kerstholt
Peter Wakker: *Using Descriptive Findings of Prospect Theory to Improve Prescriptive Application of Expected Utility* , Room S108

Wed, 11:15
EADM Business Meeting, Room S 108

Wed, **11:45**
Lunch, University Mensa - *** Solar Eclipse at ~ 12:30 ***

Wed, 13:45

I1: Forecasting Room O133
(Chair: Thomas S. Wallsten).

13:45: Peter Ayton: *The hot hand, the hot foot and the gambler's fallacy*

14:15: Alastair McClelland: *Is there a Hard-Easy Effect in the Calibration of Subjective Probabilities? It Depends on how you Define 'Hard' and 'Easy'*

14:45: Fiona South: *Allowing for causal effects in judgmental forecasting from time series.*

I2: Misc. Room O135
(Chair: Katrin Borcherding)

13:45: Eric Igou: *What's important? Or: Order effects in judgment and decision making as a function of conversational rules*

14:15: Iris Bohnet: *More Order With Less Law: On Contract Enforcement and Crowding*

14:45: Adele Diederich: *Conflict and the stochastic dominance principle of decision making*

I3: Real World Decision Making Room O142
(Chair: Ward Edwards)

13:45: Rob Ranyard: *A Comparison of Laboratory Lottery and Equivalent Sports Gambling Choices: The Influence of Real-world Knowledge and Ambiguity*

14:15: Jim McLennan: *Decision-Making by Fire Officers During Emergency Incidents*

14:45: James Shanteau: *A Performance-Based Measure of Expertise: Three Applications*

I4: Misc. Room O145
(Chair: Greg Barron)

13:45: Lehman Benson III: *The Relationship Between Time Constraints and Time Pressure*

14:15: A. John Maule: *Risky Decision Making Under Time Pressure: The Moderating Effects of Strategy and State*

14:45: Artyom A. Asanov: *The stability of human perception of relative criteria importance in different decision methods.*

Wed, 15:15
Coffee

Wed, 15:30
De Finetti Award: Mandeep K. Dhami, Room S 108

Wed, 16:00
Plenary Session (Chair: van der Pligt)
John Sterman: *Complexity or Perplexity: Beyond the Misperceptions of Feedback in Dynamic Decision Making*, Room S108

Wed, 18:15
Buses depart from the hotels (Wartburg and Delta Park) - Conference Dinner at the Wachenburg, Weinheim

---

3. Symposia Abstracts

Symposium B1: Naturalistic decision making in dynamic environments (Mo 13^{45}-15^{45})

Organizer: **Wibecke Brun**; **Raanan Lipshitz**
Discussants: **Tommy Gärling**, **Raanan Lipshitz**

Abstract: This symposium will discuss human decision making in dynamic and/or naturalistic contexts. Allthough the broader goals of NDM and JDM research corresponds fairly well (i.e. to describe and understand conditions for human decision making), one generally find that both theoretical models, as well as methodology, differ substantially between the fields. Can results from studies in naturalistic decision making shed light on traditional JDM models? Will predictions based on JDM models hold in dynamic environments?What is the optimal methodology for decision research? What is the "common ground" for JDM and NDM research? These and related questions will be discussed in the workshop. Results from studies conducted in realistic decision scenarios or real life contexts will be presented and discussed. This workshop will bring together reaserhers with different theoretical backgrounds and methodological preferences, with the hope that sharing perspectives will stimulate researchers to "pick the best from two worlds".

Presentations within the symposium:

Mary M. Omodei, La Trobe University, Melbourne	Coauthors: Jim McLennan & Alexander J. Wearing
Title: Field and Laboratory Approaches to Complex Decision Making	
Abstract: There has been limited systematic investigation into the underlying psychological processes of human decision making in complex natural environments. One reason may be the shortage of methods for either capturing data in field settings or representing these settings in the laboratory. Recent advances, however, in video-camera and computer technology allow the recording of natural decision making in vivo, and the creation of microworlds that simulate the key variables and processes of natural decision making environments. Joining these methods together in a series of studies, we have investigated the effects on performance of different command and information structures, as well as the roles of predictability of the environment, person characteristics, and time pressure. The field observations inform the focus of the experimental studies, and the laboratory findings facilitate the interpretations the field observations. One result is practical 'how to' guidance.	

Judith Orasanu, NASA-Ames Research Center, USA	
Title: Converging Methods for Studying Naturalistic Decision Making in Aviation	
Abstract: Studying naturalistic decision making is fraught with methodological difficulties. This presentation will describe how converging methods contribute to a fuller understanding of crew decision making in the domain of aviation. This effort is driven by four questions: * What kinds of decisions do pilots make? * What is the process by which pilots make decisions? * What factors make decisions difficult or lead to poor outcomes? * What factors are associated with "expert" decision making in aviation? Three methods vary in the degree to which they represent realistic decision contexts and provide experimental control. The three appraches include: -- analysis of archival data (accident and incident reports, videotapes), -- process tracing of crews in simulated flight or field studies, coupled with CTA, and -- traditional laboratory techniques. The first provides rich case-like data about the many kinds of decisions pilots actually make and are a good source of hypotheses about decision processes and eliciting conditions. Full-mission simulation permits control over situations that elicit decision making, available cues, and situational constraints and affordances. Multiple pilots can be observed under nearly identical and highly realistic situations and can be interviewed afterwards. Laboratory techniques are useful for pursuing specific hypotheses that have emerged from use of the other two methods. The advantages and limitations of these three methods will be discussed.	

Henry Montgomery, University of Stockholm	
Title: The psychology of economic forecasting: A possibility for cooperation between JDM and NDM theories?	
Abstract: Annual forecasts of the Swedish economy made since 1970 by the Ministry of Finance were compared with actual outcomes. Correlations between predictions and actual outcomes were fairly high, especially after 1980 (r= .80). However, there were signs of systematic differences between predicted and actual outcomes that invite to be interpreted in terms of an anchoring-and-adjustment bias and an optimism bias. Using these results, as well as related data, I will discuss how naturalistic decision making (NDM) theories focusing on how professionals use their knowledge and judgment and decision making (JDM) theories focusing on cognitive limitations and biases may be combined to understand and improve economic forecasting.	

Wibecke Brun, University of Bergen & Norwegian NAval Academy	Coauthors: Bjørn Helge Johnsen
Title: The effect of sleep deprivation on planning performance, risk perception and probability estimation in a simulated resque mission.	
Abstract: In real life human judgement, planning and decision making are often performed under non-optimal conditions. This presentation discuss the results from an experiment set up to study the effects of sleep deprivation on the quality of planning behavior, risk perception and probability estimation in a simulated search and resque operation. As part of their leadership training, sleep deprived military cadets planned and designed a resque operation aimed at finding a missing soldier. The subjects further gave risk and probability ratings of the planned mission. The quality of the resque plans was evaluated by an external expert.The results was compared to the results from a non-deprived control group.	

Symposium B2: Comparison and Conflict in Judgment and Choice

(Mo 13^{45}-15^{45})

Organizer: **Yuval Rottenstreich; Coorganizer: Lyle Brenner**
Discussants: **Peter Ayton**

Abstract: Suppose you are considering a vacation in Las Vegas; alternatively, suppose you are considering a vacation in either Las Vegas or New York. When both cities are under consideration, the evaluation of Las Vegas will likely include comparisons drawn between it and New York. However, when only Las Vegas is under consideration, such comparisons are much less likely to arise. Thus, a particular option may cast a very different impression when isolated than when compared to other options or when compared to one option rather than another. Similar patterns may arise in the assessment of belief. When making a categorical prediction, for example, making comparisons between the alternatives could affect the belief placed in each alternative. This symposium explores the role of comparisons and conflict in judgment and choice. The topics addressed include when are comparisons more or less likely to be made? How do certain types of comparisons lead to easy judgments or choices while others result in extreme conflict and difficulty? How does conflict affect the degree of confidence in one's judgment? Does conflict have other systematic influences on likelihood judgment? How does the similarity between options influence the type of comparisons drawn? Finally, contrasting the domains of preference and belief, what commonalities and differences exist in the antecedents and consequences of comparisons and conflict?

Presentations within the symposium:

Lyle Brenner , University of Florida	Coauthors: Yuval Rottenstreich and Sanjay Sood
Title: Comparison, Grouping, and Preference	
Abstract: How does the attractiveness of a particular option depend on comparisons drawn between it and other alternatives? We observe that in many cases comparisons hurt: when the options being compared have both meaningful advantages and disadvantages, comparison between options makes each option less attractive. The effects of comparison are crucial in choice problems involving grouped options, because the way in which options are grouped influences which comparisons are likely to be made. In particular, we propose that grouping focuses comparison, making within-group comparisons more likely than between-group comparisons. Consistent with this prediction we observe that grouping hurts: an option is more likely to be chosen when alone than when part of a group.	

Yuval Rottenstreich , University of Chicago	Coauthor: Stijn van Osselaer
Title: Apples and Oranges: Evaluation, Comparison, and Preference within and across Categories	
Abstract: We contrast choice among options belonging to the same category with choice among options belonging to different categories. Options from the same category can be described along a number of shared dimensions. Options from different categories cannot as easily be described along shared dimensions. As a result, choice within and across categories may invoke distinct psychological processes. Confronted with options from the same category, the decision maker may compare the options along each dimension and come to a decision by evaluating which option wins the most and the most important comparisons. In contrast, confronted with options from different categories -- options that share few common dimensions -- the decision maker may form an overall evaluation of each option and come to a decision by comparing these overall evaluations. Thus, within-category choice may proceed by evaluation of comparisons while cross-category choice may proceed by comparison of evaluations. In several studies we observe systematic preference reversals consistent with this account. Evidently, then, the assessment of a particular option depends on whether it is grouped with options from the same or a different category.	

Derek Koehler , University of Waterloo	
Title: Conflict-Based Subadditive Probability Judgments in Classification Learning	
Abstract: People give subadditive probability judgments--in violation of probability theory--when asked to assess each in a set of three or more exclusive hypotheses, as indicated by total probabilities that exceed one. Evidential characteristics that influence subadditivity are investigated using a classification learning task, in which the relationship between the evidence and the hypotheses can be controlled experimentally. Specifically, the degree of conflict present in the evidence is considered as a possible determinant of subaddivity. Results indicate that (a) judgments of probability and of frequency are systematically subadditive even when the judgments are based on cues learned within the experimental context; (b) cue conflict has a reliable influence on the degree of subadditivity, such that higher conflict is associated with greater subadditivity; and (c) judgments in this context are well described by a linear discounting model within the framework of support theory.	

Dan Zakay , Tel Aviv University	
Title: If it comes fast to my mind-it must be correct, the "latency heuristic" as a determinant of overconfidence.	
Abstract: It is hypothesized that when people are asked to state the degree of their confidence in the accuracy of a piece of knowledge which was retrieved from their memory, they do so by making an inference based on some heuristics. One such heuristic which has a high impact on feelings of confidence is the "latency heuristic", according to which people judge their confidence to be higher- the faster a piece of knowledge was retrieved and became conscious. Whereas the latency heuristic might be valid when one really has good knowledge in a relevant knowledge domain, it is false when this is not the case. When some relevant knowledge is not stored in memory or is not accessible, retrieval time is not a reliable indicator of accuracy. Nevertheless,not being able to know whether or not they posses some required knowledge, people apply the latency heuristic regardless of their true knowledge, thereby they find themselves occasionally in states of overconfidence. The reliance on the latency heuristic might partly explain the "hard-easy" phenomenon, since confidence ratings which are based on retrieval latency are correlated with accuracy to a lesser degree when true knowledge does not exist that when it does. In a series of empirical studies the above mentioned hypotheses were supported. The implications of these findings for understanding the differences in overconfidence intensity between " ecological"," non-ecological" and perceptual tasks are discussed.	

Symposium B3: Methodological Challenges for Experimental Economics and Psychology

(Mo 13^{45}-15^{45})

Organizer: **Ralph Hertwig; Andreas Ortmann**
Discussants: **Thomas S. Wallsten, Robin M. Hogarth**

Abstract: Methodological practices are rarely the subject of reflection. More often they are practiced like habits or rituals. Comparing experimental practices across fields can help us to identify and question our own entrenched methodological preferences. This symposium affords researchers from experimental economics and psychology an opportunity to look beyond their disciplinary borders and make such revealing comparisons. Focusing on a domain investigated in both disciplines - behavioral decision making -- the presenters and discussants will examine criticisms levied against the experimental practices in each field. They will also discuss the curious fact that several key variables of experimental design tend to be realized quite differently in economics and psychology, and will consider the costs and benefits of these different realizations for each field. Taking these costs and benefits into account is an important part of evaluating our methodological preferences, some of which -- for instance, the use of deception and performance-contingent payments -- have long been bones of contention.

Presentations within the symposium:

Ralph Hertwig , Max Planck Institute for Human Development

Title: Experimental Practices In Economics: A Methodological Challenge For Psychologists

Abstract: We discuss four key variables of experimental design in research on behavioral decision making in psychology and experimental economics that are generally implemented differently in the two disciplines. On theoretical and empirical grounds, we argue that these different realizations, which concern enactment of scripts, repetition of trials, performance-based payments, and the use of deception, are bound to produce divergent experimental results. Furthermore, we argue that the wider range of experimental practices in psychological research on judgment and decision making reflects a lack of procedural regularity that may contribute to the variability of empirical findings in the field.

Shane Bonetti, University of St Andrews

Title: Art and Artifice in Experimental Economics: A Defence of Deception

Abstract: Experimental economics is a relatively young discipline. What one would hope to find in experimental economics therefore is methodological pluralism, willingness to examine good experimental practice, and preparedness to learn from experimental psychologists. In regard to deception, experimental economics has achieved none of these objectives. Leading experimental economists have suggested a ban on deception, on the basis of a strained analogy with public goods analysis. This paper explores the evidentiary and logical basis for this ban. It is argued that good experimental practice, as well as the balance of the evidence, indicates that this ban is unnecessary and undesirable.

Andreas Ortmann, Bowdoin College

Title: Does Deception Matter? Evidence (Mostly) from Psychology

Abstract: Economist Shane Bonetti (Journal of Economic Psychology, 1998), as well as several psychologists (American Psychologist, 1998), have recently argued that there is little evidence that deception leads to a loss of experimental control and validity. Bonetti concludes that experimental economists' long-standing and widespread proscription of deception is too restrictive, and unduly prevents them from capturing the potential gains of using it. We argue, in contrast, that the available behavioral evidence suggests strongly that experimental economists ought to continue to proscribe deception, and that researchers in psychology ought to reconsider their still widespread use of it.

Chris Starmer, University of East Anglia

Title: Should we trust the dismal scientists in white coats?.

Abstract: It is often argued that economic experiments are artificial in some sense which tends to render the results problematic or uninteresting. I argue that this artificiality critique does not provide a convincing philosophical objection to experimentation in economics. On the other hand, there are serious, and as yet unanswered, questions about the relevance of research programmes in experimental economics for the profession at large. This contribution seeks to probe some of the issues surrounding the relevance and usefulness of experimental research in economics.

Symposium B4: Modeling Human Judgment: Structure and Process; Possibilities and Limitations

(Mo 13^{45}-15^{45})

Organizer: **Clare Harries; Mandeep K. Dhami**
Discussants: **John Maule, Nigel Harvey**

Abstract: The field of judgment and decision making is fragmented and researchers may not be aware of the wider context in which the approaches they predominately adopt can be placed, or the relative utility of different approaches to studying human judgment. The present symposium intends to: (1) present, with empirical examples, four different approaches to modeling human judgment, (2) compare the portrayal of the nature of human judgment using these approaches, for example in terms of the predictability of human judgment, the use of information, and human judges' ability to describe and understand the models of their judgment data, (3) discuss the relative merits and limitations of these approaches in terms of their ability to describe and predict human judgment behaviour, and (4) discuss the compatibility of these approaches. The four approaches are: static or structural, dynamic, process tracing and simple heuristics. We hope that the symposium can provide a basis for discussion between different "groups" of researchers whilst simultaneously allowing researchers to present recent work conducted in the field.

Presentations within the Symposium:

Joachim Funke, Universitaet Heidelberg

Title: Dynamic Systems as Tools for Analyzing Human Judgment

Abstract: For 25 years, researchers in the domain of problem solving have used dynamic systems to analyze how people deal with complex situations. Dynamic systems allow construction of scenarios in which decision making is not restricted to a one-step process but in which decisions are connected over time. Thus, researchers can analyze planning and decision making in the long run and can confront subjects with long-term consequences of their decisions. In my talk I will present examples of this type of research and try to demonstrate how researchers on judgment and decision-making could profit from the use of dynamic systems.

Pieter Koele, University of Amsterdam

Title: Process Tracing Techniques for Studying Human Judgment

Abstract: Human judgment processes are usually considered to be covert, implicit, inconsistent and intuitive. Up to a point, this evaluation depends upon the method used to study such processes. Instead of focussing on the (statistical) relation between input (information) and output (judgment), process tracing techniques try to give an accurate description of the actual information processing that leads to a judgment. In this presentation two well-known process tracing techniques, the analysis of verbal protocols and the information board paradigm, will be evaluated on two criteria: What have they taught us about human judgment processes, and what are their methodological qualities?

Philip T. Smith, University of Reading

Title: Structural Equation Modeling of Human Judgment

Abstract: Structural equation Modeling (SEQ) is a statistical method which can combine several multiple regression equations and factor analyses into a single model. Overall goodness-of-fit statistics can be derived. SEQ is useful at a descriptive level, where complex results can often be summarized in a single visually appealing diagram. SEQ is useful at a theoretical level in helping to disentangle the effects of intervening or confounding variables between a causal variable and its putative effects. These points are illustrated with data collected by my colleagues at Reading on the variables affecting risk assessment by drivers and by food consumers.

Clare Harries, University College London

Title: Fast and Frugal Models of Human Judgment

Abstract: Fast and frugal models describe human judgment processes in terms of simple satisficing strategies that embody the notion of bounded rationality. They suggest that humans do not search through all available information or integrate all relevant information, and are non-compensatory. Unlike commonly used regression models, we argue that these models are psychologically more plausible. We present data comparing fast and frugal and regression models of doctors' decisions to prescribe drugs. Although both models fit the data well, they provide competing representations of doctor's use of information, consistency, agreement and insight.

Symposium G1: Simple Heuristics That Make Us Smart

(Tu 14^{15}-16^{15})

Organizer: **Ulrich Hoffrage**
Discussants: **Peter Ayton, N.N.**

Abstract: This symposium focusses on bounded rationality as the study of fast and frugal heuristics. These heuristics can exploit specific environmental structures to achieve a high degree of accuracy with little computational effort. The "adaptive toolbox" contains the building blocks of these heuristics, and allows one for constructing new heuristics by combining building blocks, and by nesting heuristics into one another. The rationality of these heuristics is not based on internal consistency, but on their success in predicting unknown features of their environment. Fast and frugal heuristics offer an alternative to the widespread interpretation of bounded rationality as optimization under contraints, which pictures minds as equipped with unlimited time, knowledge, and computational might. They also offer a solution to a key problem with the "heuristics and biases": the absence of precise process models. The symposium starts with experimental evidence for the simplest of all heuristics, the recognition heuristic (Goldstein), followed by a comparison of fast and frugal heuristics and multiple regression as tools for modeling inferences in legal decisions (Dhami). Discussant of these talks will be Peter Ayton. The third (Bröder) and fourth talk (Rieskamp) specify conditions under which simple heuristics are used; the discussant is John Payne.

Presentations within the symposium:

Dan Goldstein, Max Planck Institute for Human Development	
Title: When More Knowledge Is Worse Than Less	
Abstract: Is more information better than less for making accurate inferences? I demonstrate cases in which it is not. Such "less is more effects" are shown to arise from a fast and frugal heuristic for inference:the recognition heuristic. Three empirical demonstrations of less-is-more effects are presented, including one in which accuracy decreases as a result of learning in the laboratory	

Mandeep K. Dhami, Max Planck Institute for Human Developmen	
Title: Can Justice Be Fast And Frugal?	
Abstract: Fast and frugal heuristics do not search through all available information, do not integrate all relevant information, and are non-compensatory. They embody the notion of bounded rationality. In the legal context, it is not surprising to find that English magistrates' bail decision making can be described well using such heuristics, because magistrates work within the constraints of limited time, knowledge and cognitive processing capacity. However, fast and frugal heuristics can lead to biases and injustices. In the present paper, the descriptive validity of fast and frugal heuristics will be supported and their prescriptive utility against regression models will be discussed.	

Arndt Bröder, Psychologisches Institut der Universität Bonn	
Title: Using The "Take The Best"-Heuristic in Probabilistic Inference: Some Do It Sometimes	
Abstract: The lexicographic "Take The Best"-heuristic was proposed by Gigerenzer et al. (1991) as a decision heuristic in probabilistic inference. While the simple rule proved to be "boundedly rational" in simulation studies, direct tests of its value as a descriptive behavioral model are missing yet. A regression-based method of categorizing individual strategies is introduced which is intended to overcome methodological shortcomings of behavioral decision research. In two experiments the dispersion of cue validities and the costs of acquiring information were varied. While the former had only a small impact on strategy selection, the latter seems to be an important factor.	

Jörg Rieskamp, Max Planck Institute for Human Development	Coauthor: Ulrich Hoffrage
Title: The Use of Simple Decision Heuristics: Bounded Rationality And Time Pressure	
Abstract: Do bounded rational people use simple heuristics? This should particularly be the case when they are subject to time pressure, a constraint investigated in two experiments. Participants had to select the most profitable company from a group of four. In the first experiment, each decision was time-limited, while in the second, participants could decide at their own speed within a global time limit. In the first experiment, a simple heuristic performed well in predicting choices. For the second, we assume a more frequent use of simple heuristics. This contribution discusses whether and how people make trade-offs between time and accuracy.	

Symposium G2: Anticipated emotions and decision making

(Tu 14^{15}-16^{15})

Organizer: **Marcel Zeelenberg**
Discussants: **Terry Connolly, Gideon Keren**

Abstract: Research in judgment and decision making has increasingly begun to consider the importance of emotions, particularly that of regret and disappointment. Traditionally psychologists have examined regret and disappointment as post-decision constructs, focussing on how regret stems from comparisons of how an obtained decision outcome compares to counterfactual outcomes that could have been obtained had a different choice been made, and on how disappointment stems from comparisons between an obtained decision outcome and a-priori expectations. In contrast, decision theorists have approached these emotions as pre-choice constructs (e.g., Bell, 1982, 1985; Loomes & Sugden, 1982, 1986). These regret and disappointment theories assume that decision makers take into account the possible future feelings of regret and disappointment before they make a decision. The purpose of this symposium is to present empirical tests of these ideas in order to further our understanding of the role of affective aspects of choice. Specifically, although mounting empirical support has become available for the notion that the anticipation of regret influences choice, there is not much knowledge about the process by which this influence takes place. One presentation will discuss the effects of anticipated regret on pre-choice screening (Ordóñez), another will discuss effects of regret on intention-choice consistency (Pieters). Moreover, virtually no empirical research has focused on the effects of the anticipation of disappointment. One talk is focussed specifically on these effects (van Dijk), while another tracks down the effects of regret and disappointment throughout the decision making process (Pfister). All presentations concern new empirical research. Terry Connolly and Gideon Keren will discuss the validity and implications of these findings.

Presentations within the symposium:

Lisa Ordóñez , University of Arizona	Coauthors: Lehman Benson III, Lee Roy Beach
Title: Testing the Compatibility Test: How Instructions, Accountability, and Anticipated Regret Affect Prechoice Screening of Options	
Abstract: Subjects screened a set of jobs, retaining those for which they wished to apply and rejecting those that were no longer under consideration. Subjects were told to consider either the regret resulting from retaining a bad option (regret bad) or the regret from rejecting a good option (regret good). Subjects in the regret bad condition rejected more jobs than in the regret good condition, but not more than subjects in the control condition. As predicted by image theory, the normal screening process appears to be to screen out the bad options rather than screen in the good options. This is demonstrated by screening in the control condition being similar to screening under the reject instructions (Experiment 1) and under regret bad instructions (Experiment 3), since these conditions were shown to focus attention on the bad options.	

Wilco W. van Dijk, Free University of Amsterdam	Coauthors: Marcel Zeelenberg, Joop van der Pligt
Title: Blessed are they who expect nothing: Lowering expectations as a way of avoiding disappointment	
Abstract: The present paper addresses a way in which people can try to avoid disappointment, that is, by lowering their expectations about obtaining a desired but uncertain outcome. It was hypothesized that people lower their expectations about a desirable but uncertain outcome, when two conditions are met. First, self-relevant feedback should be anticipated, and second this feedback should be anticipated in the near future. An experiment in which self-relevance and timing of the feedback about the outcome was manipulated supported the hypothesis. Results showed that participants only lowered their estimates about a test score, when feedback about their test score was self-relevant and anticipated close in time. Implications and functionality of the use of this strategy are briefly discussed.	

Rüdiger Pfister, GMD Darmstadt	Coauthors: Joop van der Pligt, Wilco van Dijk
Title: Temporal Aspects of Regret and Disappointment and their Impact on Choice Behavior	
Abstract: In this study we investigate emotional reactions to real choices across time, from anticipated to experienced to remembered emotions. Participants could earn money by successfully answering one of two general knowledge test: A cautious test, and a more risky test. After choosing a test, participants in the experimental conditions indicated anticipated regret and disappointment for various outcomes, with and without counterfactual information. Next, they carried out their test and received feedback about their obtained outcome. In two conditions participants also received feedback about what their score would be on the alternative test. One week later, remembered regret was assessed and another choice was made. Results show that regret, but not disappointment, is a function of the presence of a counterfactual (better) outcome. Moreover, there was a reasonable correspondence between anticipated, experienced, and remembered regret, and disappointment. Regret and disappointment predicted preference change in accordance with our predictions; i.e., preference change reflected a tendency to prevent the experience of regret, as reflected in moving away from one's initial preference if it had resulted in regret, and disappointment, as reflected in a tendency to be more cautious in future choice.	

Rik G.M. Pieters , Tilburg University	Coauthors: Marcel Zeelenberg
Title: Wasting a Window of Opportunity: Anticipated and Experienced Regret	
Abstract: People who intend to act upon an opportunity that arises are more likely to implement their intentions if they anticipate a high level of regret of not acting. People who intend to choose a specific alternative over others from a set are more likely to implement their intentions if they anticipate a low level of regret of making the wrong choice. These moderating effects of anticipated regret on act- and choice-consistency were found, while accounting for the effects of attitude strength, in a large scale longitudinal study conducted during national elections in the Netherlands. In addition, the results reveal that the regret people experience after the elections is determined by intention-behavior inconsistency and not by the mere action or inaction in the elections.	

Symposium G3: Aggregation of opinions and judgments

(Tu 14^{15} – 16^{15})

Organizer: **David V. Budescu, Nigel Harvey and Thomas Wallsten**
Discussants: **David Budescu, Scott Tindale**

Abstract: Most decisions made by individuals, groups, organizations and societies rely on multiple inputs originating from multiple sources. Thus, a key component in these decision is the aggregation process of the various pieces of information. Consider the following examples: a. A student deciding on which graduate school to attend has to aggregate the advice of his professors and friends with other information about the various schools; b. A committee deciding which of several candidates for a position to hire has to aggregate the opinions and impressions of all its members; c. A manager deciding on production quotas for the next year, has to aggregate the forecasts for demand for various products in all segments of the market; d. A democratic society deciding on its next head of government, has to aggregate the preferences of all its members over the set of declared candidates. These examples illustrate that aggregation problems vary in terms of the nature and goal of the decision, the decision making entity, the type of decision rule(s) used, the nature of the information being aggregated, and many more factors. Aggregation problems are ubiquitous and, not surprisingly, several distinct lines of research dealing with these issues have developed, almost independently of each other, in various disciplines such as individual decision making, social psychology, operations research, political science, judgmental forecasting, etc. The goal of the proposed symposium is to illustrate the wide variety of perspectives on this topic by bringing together people who:

a. do normative and descriptive work;
b. theoretical and applied work;
c. focus on interactive groups and on individual judges;
d. d. focus on the actual forecasts and on their related confidence.

The hope is that such a meeting will also facilitate communication and collaboration across strict disciplinary boundaries in this important domain.

Presentations within the symposium:

Ilan Yaniv, Hebrew University, Jerusalem	
Title: Weighting the Opinions of Others	
Abstract: We investigated how decision makers revise their opinion on the basis of another person's opinion. We propose two central concepts regarding the psychological process of combining own and an advisor's opinions. The first is discounting which implies that, overall, decision makers apply an egocentric weighting policy whereby the advisory estimates are discounted. Second, we suggest that decision makers develop reputation for the advisors, a construct which mediates the observed weighting policy and tendency to seek advisory opinions. We investigated respondents' weighting policies and their willingness to purchase estimates from an advisor whose advice they had experienced over the course of several "free" trials. The results show evidence for both discounting and for a fast learning process such that advisors "acquire reputation" almost instantaneously. In addition, the sensitivity to the quality of the advice appears asymmetric. Poor advice is discounted to a greater extent than good advice is given credit. The weighting policies are related to the process by which reputation is formed and also to cognitive and social aspects of interactive decision making	

Tatsuya Kameda , Hokkaido University Sapporo	Coauthor: Reid Hastie
Title: Social sharedness and adaptation: Group decision heuristics	
Abstract: Previous research on group decision making suggests that a single most powerful determinant of consensus outcome may be the degree of "social sharedness" existing among members at the outset of an interaction. The robust influence of preference majority in guiding consensus is one manifestation of such a tendency. Then, a question arises why individuals are so susceptible (or sensitive) to various forms of sharedness in social settings. In this paper, we formulate several types of social influence in consensus formation as cognitive heuristics and examine the adaptive functions of such "group decision heuristics" using a series of computer simulations.	

Thomas S. Wallsten, University of North Carolina	Coauthors: Gal Zauberman, Hongbin Gu, Christiana B. Dietz, David V. Budescu, Randall H. Bender, David V. Budescu, Wing Tung Au, Dan Ariely
Title: Averaging Probability Estimates: Empirical Tests of Two Theorems	
Abstract: We present re-analyses of published experiments plus a new study to test predictions that follow from two theorems (Wallsten & Diederich, 1998) regarding the effects of averaging subjective judgments. The theorems are inspired by Erev, Wallsten, and Budescu's (1994) suggestion that the overconfidence observed in subjective probability estimates may partially be an artifact of stochastic variability in the cognitive processing underlying the estimates. The predictions are that pooling replicated estimates within respondents yields less diagnostic results than does pooling across respondents, that the diagnostic value of the average estimate increases asymptotically with the number of individual judges, and that the asymptotic limit depends on the degree to which the estimates are conditionally correlated. The predictions were strongly substantiated. The design of the new study showed, further, that individual overconfidence is traceable to the setting of response criteria rather than to item sampling or to memory search, and a small but significant violation of additivity. Implications are discussed.	

Nigel Harvey, University College London	Coauthors: Clare Harries
Title: Weighting of Advice from Different Sources	
Abstract: People should take into account only the relative accuracy of different sources of advice when combining the information they provide into a final judgment. However, we show that weighting also depends on features of the sources that are uncorrelated with their relative accuracy. For example, in one experiment people weighted forecasts more heavily when wrongly told that they had originally produced them than when rightly told someone else had. Additional experiments made similar comparisons for other source features (eg forecasts specified as statistically produced versus those specified as judgmentally produced).	

Symposium G4: Intertemporal Choice

(Tu 14^{15} - 16^{15})

Organizer: **Daniel Read**
Discussants: **Peter Roelofsma**

Abstract: Because all choices are made for future experiences, all choices are also intertemporal choices. Consequently, a complete model of decision making must incorporate delay along with the traditional decision variables of value and uncertainty. This session includes a diverse set of contributions that investigate different ways of doing so. Moreover, we focus on aspects of intertemporal choice that have either been neglected or under-investigated in the past. The papers by Jenkins, and by Read and Powell, focus on explaining time preference. Jenkins focuses on positive time preference. Rather than searching for a discount function linking current valuation with time and value, she asks what it is about deferred outcomes that make them less valuable. Read and Powell are concerned with why people make apparently suboptimal choices when choosing sequences of future earnings and health states. They find out by asking people to explain their choices. Chapman investigates how people discount the experiences of future generations. Finally, Siebenmorgen, Weber and Weber investigate how people's perceptions of the risk from their choices varies as a function of how far in the future those choices occur.

Presentations within the symposium:

Jane Jenkins, Harvard University	
Title: Discounting depends on imagination	
Abstract: When considering the value of experiences that will occur in the very near future people think about these experiences with more detail and with more imagery than when considering experiences in the more distant future. I present three experiments with evidence on this hypothesis, and discuss the potential implications of this evidence for understanding the discounting effect.	

Daniel Read, University of Leeds	Coauthor: Melanie Powell
Title: Preferences for income and health distributions: A verbal protocol analysis	
Abstract: Subjects spoke aloud while choosing between pairs of future income or health distributions. For income, subjects preferred constant distributions; for health, they liked decreasing ones. Subjects explained that they wanted distributions to match their ideal pattern of consumption, and they wanted income distributions to be easy to manage. Most people appeared to treat income as equivalent to consumption, either because they didn't think of the alternative, or because they didn't trust themselves to save.	

Gretchen Chapman, Rutgers University	
Title: Intergenerational Discount Rates	
Abstract: Whereas many environmental decisions have very long-term consequences (across generations), most time preference research examines relatively short delays (decades or less). Some health economists argue that intergenerational discount rates should be smaller than intragenerational rates, perhaps even zero. This study asks whether inter- and intragenerational discount rates differ. Two types of comparisons are made. If the distinction between inter- and. intragenerational discount rates refers to the difference between the discount rate applied to saving the lives of members of the next generation 30 years from now vs. saving lives of current generation members 30 years from (when they are, by necessity, 30 years older), then inter- and intragenerational discount rates are the same. If, however, the distinction refers to the difference between the discount rate applied to saving lives during the current generation (i.e. in the next 30 years) vs. saving during future generations (i.e. in the next 900 years_ or 30 generations), then intergenerational discount rates are lower than intragenerational ones.	

Niklas Siebenmorgen, Universität Mannheim	Coauthors: Elke U. Weber, Martin Weber
Title: Risk perception in the short run and in the long run	
Abstract: An experiment examined which effect the presentation of different types of information about sixteen investment options in different format would have on judgments of projected volatility and perceived risk by potential investors. One part of our participants was provided with the names of the investment options in addition to historical (last 10-years) volatility data and the other part was not. We found that risk and volatility perceptions depend significantly on the given information and the type of assets that had to be evaluated. Participants provided evaluations of the 16 investment options for both a one-year and a five-year investment horizon. Their answers showed that both risk and volatility perceptions differed significantly for the short and the long run.	

4. Abstracts of papers presented in regular sessions at SPUDM 17

Abele, Susanne
University of Mannheim
Coauthors: Ehrhart, K.M., Bless, H.

Title: Why Timing Matters: Differential Effects of Uncertainty about the Outcome of Past versus Current Events

Abstract: In strategic decision situations (e.g. in games) the outcome of decisions depend on all decision-makers involved. Imagine such a situation, in which you make your choice simultaneously with another player ('simultaneous'). Would that be different from knowing that your opponent chose before you, but still not knowing what s/he did ('sequential')? Contrary to game-theory, empirical evidence suggests that the two situations have different effects. For example in coordination games, risk-dominant strategies were more likely in simultaneous rather than sequential situations. We hypothesize that sequential game structures activate concepts of social interactions, which in turn increases individual's interpersonal trust and decreases individual's risk-aversion in situations of interdependence. Participants (N = 192) played a coordination game either simultaneously or sequentially. Additionally we manipulated the salience of interactive aspects by either giving standard instructions or instructing participants to focus on their expectation about their opponent's choices. Under standard instruction conditions the timing effect was replicated. The effect was eliminated when participants were asked to think about their opponent. We assume that the timing effect is mediated by different cognitive processes which either intensify or diminish the focus on the other person.

Time Slot: D2 (Tu 8:30 - 10:00)

Artyom A. Asanov
Russian Academy of Sciences, Moskow
Coauthors: Oleg I. Larichev

Title: The stability of human perception of relative criteria importance in different decision methods.

Abstract: The notion of criteria importance is widely used in multicriteria decision analysis. The results of many studies demonstrate that quantitative criteria weights are very sensitive to a procedure of weights elicitation [1]. The goal of the study is to investigate the stability of human perception of relative criteria importance (ranking) in two different decision methods : for ordering and classifying of multicriteria alternatives. The methods of decision analysis used in the study are developed for unstructured problems described by qualitative attributes with ordinal scales [2]. The results of experiments demonstrate that subjects have consistent perception of criteria importance in spite of different preference elicitation procedures. A modified Kendall concordance indicator is developed for the evaluation of the correlation between partial ordering of criteria. 1. Borcherding K., Schmeer S., Weber M. Biases in multiattribute weight elicitation., Contribution to Decision Making -I., Elsevier,1995,pp.3-28. 2. Larichev O., Moshkovich H. Verbal Decision Analysis for Unstructured Problems., Kluwer Academic Publishers, Boston, 1997.

Time Slot: I4 (We 14:00 - 15:30)

Peter Ayton
City University, London
Coauthors: Ilan Fischer

Title: The hot hand, the hot foot and the gambler's fallacy

Abstract: The representativeness heuristic has been used to explain the expectation that a random sequence will exhibit negative recency - the gambler's fallacy. Thus when coin tossing people expect that after a long run of a sequence of heads, tails is more likely next time. The representativeness heuristic has also been used to explain the expectation that a random sequence will exhibit positive recency - the hot hand fallacy. Thus basketball players and fans falsely believe that after a player has scored with his last few scoring attempts he is more likely to score next time. How, in the light of experience, do people develop and maintain these different expectations? Why don't people think that coins and roulette wheels get hot or that basketball players are more likely to score following a miss? We argue that people over-generalise a valid hypothesis that human performance is subject to streaks. There is evidence that people really do "get hot" when playing darts, golf and billiards or when making auditory and visual discriminations.The natural ecology of randomness may provide some justification for expectations of negative recency. We describe an experiment which shows that while subjects have expectations that one random sequence (red or black in roulette) will exhibit negative recency they simultaneously believe that another - the sequence of winning and losing of their bets on red or black in roulette - will exhibit positive recency. Finally we report evidence that the hot hand fallacy has a relative - the hot foot fallacy. Despite widespread belief to the contrary footballers are not more likely to score if they scored in their last few games.

Time Slot: I1 (We 14:00 - 15:30)

Neil Bearden
University of North Carolina

Title: Similarity and Subadditive Frequency Judgments:A Multiple-trace Model

Abstract: A multiple-trace judgment model was developed to examine the relationship between category similarity and subadditivity of frequency judgments. Subadditivity occurs when the sum of probability or frequency judgments for disjoint events exceeds the judgment assigned to the union of the events. Support Theory (Tversky & Koehler, 1994) predicts that subadditivity should increase as the evidence one finds for the description of the event being judged increases. The global matching memory models (e.g., MINERVA2—Hintzman, 1988; SAM—Gillund & Shiffrin, 1984) predict that frequency estimates for particular events will be enhanced if items similar to the events are present in memory. Computer simulations which assumed multiple-traces (i.e., that each experienced event creates its own trace in memory) were conducted to explore the relationship between the similarity of items within a category and the degree of subadditivity of frequency judgments for the category. The simulations predicted that subadditivity should increase as within-category similarity increases. These predictions were supported with data from human subjects. Implications for Support Theory and future extensions of the model are discussed.

Time Slot: C4 (Mo 16:15 - 17:45)

Lehman Benson III
University of Arizona, Tuscon

Title: The Relationship Between Time Constraints and Time Pressure

Abstract: ‘Time constraints’ and ‘time pressure’ often are used interchangeably. We differentiate between the two and

conduct four experiments that examine the relationship between them. Three factors influence perceived time pressure: (1) the time available to the actor to do a task, (2) the time he or she thinks the task will require, and (3) the importance of the task to him or her (motivation). In experiment 1, subjects simply were told both the time required to do a hypothetical task (Rr) and the time available to do it (Ra) and were asked to rate perceived time pressure. It was found that rated time pressure is a function of the ratio of the shortfall between required and available time to the required time, (Rr - Ra) / Rr. Experiment 2 was much the same as experiment 1 except that some tasks were designated as important and some were designated as unimportant. Rated time pressure was higher for important tasks and the ratio of shortfall to required time again described the data. Experiment 3 was parallel to experiment 1, but more realistic.Subjects solved arithmetic problems for pay after estimating the time required (Rr) to do the task and having been told how much time was available (Ra). The results of experiment 1 were replicated. Experiment 4 was parallel to experiment 2, but used the arithmetic task from experiment 3, the importance of which was increased by raising the pay for performance. This time the results were not wholly clear. Importance appeared to make time pressure so high for all levels of time constraint that the effects of constraints were overwhelmed. Implications for future research are discussed.

Time Slot: I4 (We 14:00 - 15:30)

Yoella Bereby-Meyer
Ben Gurion Univeristy of the Negev

Coauthors: Gal Shamir

Title: Learning the contingency between two dichotomous variables

Abstract:Many decisions, such as medical diagnoses, require the prediction of an unknown variable (i.e., a disease) from a known variable (i.e., a symptom). Such a task requires the use of information on the correlation between variables. Research on correlation estimation has shown systematic biases. However, although people may give biased correlation estimates, they may still efficiently predict events. A series of experiments examined the learning of the contingency of two dichotomous variables through a prediction task. In each experiment 500 stimuli that varied in two variables were presented. In each trial participants received information about one variable and were asked to predict the other. The correlation between the variables was manipulated between groups (0, 0.4, 0.8). Feedback and reward were given after each response. Learning was slow when subjects were simply told to predict a variable. Learning became faster when the potential existence of a correlation between the variables was indicated. A revised reinforcement based learning model was able to account for these results. The implications of these findings for modeling learning in decision making will be discussed.

Time Slot: H2 (We 8:30 - 10:00)

Tilmann Betsch
Universität Heidelberg

Coauthors: Henning Plessner, Susanne Haberstroh, Christiane Schwieren & Robert Gütig

Title: I like it but I can't say why: Feeling based judgment and choice

Abstract: In two experiments we investigated a) which aspects of previous experiences are conserved in intuitive evaluations about objects, and b) when these intuitions are used in judgment and decision making. In both experiments, participants were presented with a considerable amount of return information about unfamiliar shares during an initial learning phase. While encoding this information, attention was directed to another task in order to reduce the likelihood that participants try to form online judgments about the shares. Afterwards, participants were not able to reliably retrieve any aspects of the return distributions. Results of Experiment 1 showed that, in the absence of any concrete memory, evaluation of the shares reflected the sum of returns quite accurately. However, participants were not sensitive at all to the peak or the average of the return distributions.In Experiment 2, participants had to make share aquisisition decisions on the basis of additionally provided information. However, decisions were biased by prior knowledge about the shares, even when participants were told not to consider the information from the initial learning phase. In contrast, if participants were explicitly instructed to consider the information of the first phase in their decision, decisions were no longer biased by prior knowledge. The results indicate, that people's intuitive evaluations of objects can quite accurately reflect the accumulated values of prior experiences with an object. These intuitions can serve as a base for decision making in constrained situations or when people do not consciously try eleborate on them.

Time Slot: F2 (Tu 11:30 - 13:00)

Ànn-Renee Blais
Ohio State University

Title: Risk Attitudes: A Domain-Specific Assessment Scale

Abstract: Research shows that individuals differ in their perception of the riskiness of choice alternatives and that risk perceptions often differ across domains (Weber, 1997, 1998). Theperceived-risk taking model (Weber & Milliman, 1997) describes people's choices as a tradeoff between the expected returns and perceived-risks of risky choice alternatives.Perceived-risk attitude, defined as a person's tendency to choose or avoid options perceived to be riskier and operationalized as the risk-return tradeoff coefficient, appears to be a relatively stable personality trait (e.g., is stable across choices in the gain and loss domain, despite the reflection effect for choices). What changes from gain to loss options is, in fact, the perception of therelative riskiness of choice alternatives. A person's perceived-risk attitude thus cannot be inferred from a set of choices alone, but also required knowledge of his or her risk perceptions. An instrument that assesses both conventional risk attitudes and perceived-risk attitudes was developed based on this conceptual framework. Evidences of the construct validity, the internal consistency, and the theoretical implications of this new instrument are reported.

Time Slot: D3 (Tu 8:30 - 10:00)

Herbert Bless
Universität Mannheim

Coauthors: Markus Ruder

Title: Reliance on the availability heuristic: A question of individuals´ mood?

Abstract: We report several studies addressing the relation between individuals´ affective state and their reliance on the availability heuristic. According to the availability heuristic individuals rely on the ease with which information comes to mind. Previous work has demonstrated that the ease with which information comes to mind may sometimes have different implications as the content that comes to mind. Building on previous theorizing on affect and cognition, we assume that happy moods increase the reliance on the ease with which information comes to mind whereas sad moods increase the

reliance on the content. Participants in different affective states generated either few (easy) or many (difficult) arguments in favor of a specified position. Happy participants reported more favorable attitudes after generating few rather than many arguments, presumably because they relied on the ease with which the information came to mind. In contrast sad participants reported more favorable arguments after generating many rather few arguments, presumably because they relied on the content of the generated information. The implications of these findings for general models on the relation between affective states and the use of heuristics are discussed.

Time Slot: C3 (Mo 16:15 - 17:45)

Gisela Boehm
PH Ludwigsburg

Coauthors: Hans-Ruediger Pfister

Title: Action Preferences and Characteristcs of Environmental Risks

Abstract: It is assumed that the causal structure of environmental risks, i.e., the type of cause and the type of potential consequence, determine which sort of behavioral preferences are formed. For instance, whether people feel inclined to react aggressively towards the perpetrator or to help victims. Four hundred subjects participated in an experiment where scenario information about environmental risks was provided. The scenarios differed with respect to a) type of cause (man-made vs. natural cause; single cause vs. cumulative causation), b) type of potential consequence (harm to self vs. to other people vs. to nature), and c) geographical distance (proximate vs. distant). For each scenario, subjects indicated how much they preferred each of thirty-one prospective actions. Factor analyses of the action preferences yielded five types of behavioral tendencies: Help, aggression, escape, indirect action, and self-focus. The risk's causal structure is systematically related to these action preferences, e.g., it is environmental risks that are caused by humans, and in particular those caused by a single human agent, that elicit aggressive action preferences. The implications for the decision process and the mediating role of emotional evaluations is discussed.

Time Slot: A1 (Mo 11:00 - 12:30)

Iris Bohnet
Harvard University

Coauthors: Bruno S. Frey and Steffen Huck

Title: More Order With Less Law: On Contract Enforcement and Crowding

Abstract: This paper studies decision making with exogenous and with endogenous preferences when contracts are incomplete. The first mover has to decide whether she wants to enter a contract without knowing whether the second mover will perform. We analyze how contract enforcement probabilities affect individual performance with given preferences. Then we apply a dynamic model of preference adaption and find that economic incentives have a non-monotonic impact on behavior: Trustworthiness can be crowded in or out. In a laboratory experiment we test our model's implications and find support for the crowding prediction: Performance rates are high not only when the expected cost of breach is sufficiently large but also when it is sufficiently small.

Time Slot: I2 (We 14:00 - 15:30)

Fergus Bolger
Erasmus Universiteit Rotterdam

Coauthors: Gerrit Antonides

Title: Dual Processes in Consumer Choice

Abstract: We describe a dual-process model of consumer choice. In the holistic-processing mode choices are made on the basis of properties of the product as a whole. In the analytic- processing mode choices are made by evaluating the pros and cons of individual attributes. We predict that the more 'expressive' a product is of a consumer's personality the more choice is based upon holistic processing. Further, the more motivation there is to make the right choice ('involvement'), the more choice is based upon analytic processing. Finally, holistic processing is hypothesized to be primary to analytic processing so the more of the former the less of the latter. In an experiment to test this model, consumers chose one of two product brands to keep as a gift.They then completed a questionnaire measuring the perceived expressiveness and involvement of the products, and the amount of processing by each mode. Support was obtained for the hypotheses that holistic and analytic processing are positively related to expressiveness and involvement respectively, but not for the proposed negative relationship between the two processing modes. We conclude by discussing the implications of the findings of this and similar experiments for notions of human rationality and applications in marketing.

Time Slot: F1 (Tu 11:30 - 13:00)

Hans Wolfgang Brachinger
University of Fribourg

Title: Risk Measurement under Ambiguity

Abstract: There is empirical evidence that in certain cases of ambiguity or partial probability information decision makers use some sort of mean-risk decision rule. In this paper, a theory of risk under partial probability information is presented. The risk measures developed are natural generalizations of well-known measures of risk.

Time Slot: D1 (Tu 8:30 - 10:00)

Wandi Bruine de Bruin
TU Eindhoven

Coauthors: Baruch Fischhoff, Susan Millstein Bonnie Halpern-Felsher

Title: Verbal expressions of probability: "It's a fifty-fifty chance"

Abstract: When estimating risk, people may experience epistemic uncertainty, in the sense of inability or unwillingness to express precise numeric probabilities. When this occurs, peoplemay express their feelings by using the verbal phrase "fifty-fifty chance," without intending the associated number of 50%. The result is a blip at 50 in the response distribution.Previous work found that this blip disappeared when explicit numerical response modes are used, suggesting that they reduce the accessibility of verbal responses (Fischhoff &Bruine de Bruin, 1999). The present study further examines the conditions favoring the "fifty-fifty" response, using a large sample of adolescents and adults. We find that phrasing probability questions in a singular format (asking about risks to individuals) rather than a distributional format (asking about risks as a percentage in a population) reduces the use of 50. It also shows that less numerate respondents, such as children and less educated adults, are more likely to use "fifty-fifty" than those who are more numerate. Finally, events that elicit feelings of epistemic uncertainty are shown to lead to more 50s. These results are discussed in terms of what they show about the use ofverbal probability terms and the expression of epistemic uncertainty.

Time Slot: H3 (We 8:30 - 10:00)

David V. Budescu
University of Illinois

Coauthors: Adrian K. Rantilla

Title: Confidence in aggregated probability judgments

Abstract: We investigate the case of a single Decision Maker (DM) who obtains probabilistic forecasts regarding the occurrence of a unique target event from J distinct, symmetric andequally diagnostic, expert advisors (judges). We assume that in the absence of individuating information about the expertise, experience or accuracy of the judges, the DM averages their forecasts and we develop a model of his/her confidence in this average value, as a function of: (a) J, the number of judges, (b) N, the total number of cues, (c) g, the fraction of cues available to each judge, (d) r, the (inferred) inter-judge correlation, (e) o, the level of inter-judge overlap in information, and (f) d, the (inferred) diagnosticity of each judge. We present results from a series of experiments that support the main (ordinal) predictions of the model

Time Slot: H1 (We 8:30 - 10:00)

David Butler
University of Western Australia, Nedlands

Title: Do Non-Expected Utility Choice Patterns Spring from Hazy Preferences? An Experimental Study of Choice 'Errors'

Abstract: Individuals often have only incompletely known preferences when choosing between pair-wise gambles. Particular presentations of the choice problem may then passively encourage the use of some choice method to clarify the preference. Different presentational displays can then lead to choice patterns predicted by one or other Generalised Expected Utility theory. When a preference is not or cannot be constructed, choices will be arbitrary. I run an experiment that uses three different presentational displays and incorporates a 'strength of preference' indicator. The experiment investigates regret theory as an example of a Generalised Expected Utility theory. Regret effects, event-splitting effects and choice reversals (errors) are found to occur most commonly when preferences are weak. As preference strength also varies by display, so do those other phenomena. If incompleteness underlies both the systematic choice switches of a Generalised Expected Utility theory, (due to preference construction), and choice reversals, then having clear preferences would end not just the choice reversals, but the systematic choice behaviour predicted by the generalised utility theory. The normative case for those theories would then rest on the necessity for preference construction given the fact of incompleteness, and the reduction in arbitrary choices that results.

Time Slot: H4 (We 8:30 - 10:00)

Gretchen B. Chapman
Rutgers University, USA

Coauthors: Laura Y. Niedermayer

Title: What counts as a decision?

Abstract: Research on decision processes has not usually addressed the question of what constitutes a decision. To address this question, we presented 86 college students with 10 scenarios that described clear decisions (e.g., choosing a graduate school), clear "non-decision" (e.g., accidentally turning down the wrong street), or ambiguous actions (e.g., eating a donut when on a diet, engaging in routine behavior, or allowing someone else to make the decision). Subjects rated each scenario as to how similar the action was to a decision. They also rated whether the actor had plausible alternatives, thought about long-term consequences, acted reflexively, was influenced by physiological drives, had problems with self control, and how much thought the actor engaged in. Correlations were computed for each subject across scenarios and then averaged across subjects. Scenarios were rated as clearly illustrating a decision if the actor engaged in much thought (mean r=0.51, N=86, $p<0.05$) and did not act reflexively (r=-0.52, $p<0.05$). Considering consequences (r=0.38, $p<0.05$), not having self control problems (r=-0.17, $p<0.05$), and having alternatives (r=0.15, $p<0.05$) were moderately related to decision ratings, while influence of physiological drives was not (r=0.02, n.s.). These results suggest that careful thought is more important in defining a decision than the actual components (e.g., alternatives and consequences) thought about. Also surprisingly, losing self control or being overcome by a physiological drive did not define a "non-decision"; instead these factors showed a small or no relationship to decision ratings.

Time Slot: D1 (Tu 8:30 - 10:00)

Helmut W. Crott
Albert-Ludwigs-Universität Freiburg

Coauthors: Ralf Hansmann

Title: Effects of a technique to improve normative functioning and output of Groups (INFO) in collective problem solving processes: An analysis of the dynamics and results of groupdiscussions

Abstract: Previous research has shown that the faction size of the subgroup preferring a certain alternative is a predominant influence factor in the process of collective opinion formation. According to the stochastic depiction of such processes by means of the PCD model (Probabilistic Model of Opinion Change Including Distance), large factions have a negative impact on the quality of group decisions in difficult tasks and a positive impact in easy tasks. Based upon these considerations, an informative intervention was applied that advises group members how to evaluate task difficulty and react correspondingly to majority/plurality influences. The intervention technique (INFO)was used in this study to improve normative functioning and output of groups in collective problem solving processes. Groups of five persons had to solve two types of intellective tasks: questions of knowledge and logical problems. There was a tendency that individuals/groups in the INFO condition had more correct individual answers already before group discussion and reached more correct group decisions than control groups. The processes of opinion change in INFO groups and control groups during the discussions about the two task-types were stochastically analyzed using the PCD model.

Time Slot: D2 (Tu 8:30 - 10:00)

Manon de Groot
Leeds University

Coauthors: Daniel Read, Gerrit Antonides, Peter Roelofsma

Title: The psychology of purchase decisions: The effectiveness of free-trials and money back-guarantees

Abstract: How to derive and predict intransitivities from fast and frugal heuristics, such as Take The Best, Minimalist, and Take The Last? It is specified in analytical terms under which conditions these lexicographic heuristics generate intransitivities. On the basis of the analytical results a simulation study was conducted which investigates how concepts oflimited discriminability and randomness affect transitivity if the amount of missing information is varied in a naturally structured environment. The results of the Monte Carlosimulation indicate that intransitivity varies considerably with missing information and between heuristics. Consequently, intransitivity may serve as a tool for policy capturing. Acomparison of fast and frugal heuristics with empirical data of 94 subjects shows that Take The Best and Take The Last give reasonable fits whereas a unit weight linearmodel, which performs exhaustive information gathering, systematically underestimates the number of intransitivities. It has long

been known that transitivity and even weakstochastic transitivity is violated in human choice behavior. These results together with the present findings demand an explanation that goes beyond the concept of randomnessand discriminability as preferred in classical models of rational choice. It is concluded that fast and frugal heuristics which adhere to the principles of bounded rationality offersuch an explanation.

Time Slot: F1 (Tu 11:30 - 13:00)

Adele Diederich
Universität Oldenburg

Coauthors: Jerome R. Busemeyer

Title: Conflict and the stochastic dominance principle of decision making

Abstract: One of the key principles underlying rational models of decision making is the idea that the decision maker should never choose an action that is stochastically dominated by another action. In experiments, which are reported here, violations of stochastic dominance frequently occurred when the payoff produced by two actions were negatively correlated (a conflict situation), but no violations occurred when the payoffs were positively correlated (no conflict). This finding is contrary to models which assume that choice probability depends on the utility of each action, and the utility for an action depends solely on its own payoff and probabilities. The violations of stochastic dominance are explained in terms of a dynamic theory of decision making called multi-attribute decision field theory.

Time Slot: I2 (We 14:00 - 15:30)

Frank A. Drews
Technische Universität Berlin

Title: Strategies and accuracy of frequency judgments

Abstract: Judging frequencies is a common everyday task required in various contexts. Recently, it was argued that people use different estimation strategies to judge frequencies; some involving enumeration of instances (enumerative strategies) and others whichdo not (non-enumerative strategies). Different strategies are argued to lead to systematic under-estimation (enumerative strategies) or over-estimation (non-enumerative strategies) of frequencies. Which strategy is used can be determined by examining the relationship between the number of instances presented and a person's response latency.For enumerative strategies, these factors should be positively related. But an enumerative strategy can only be applied when people remember specific instances. Remembering instances provides the basis from which estimations are made, and assome instances are likely to be forgotten, can lead to the underestimation of actual frequencies.But what if instances are harder to remember, for example, because they are untypical? In this study, I examined the effect of typicality of frequency judgments about how often categories were presented. I presented word-pairs consisting of a category and an instance (e.g., FISH salmon). After all pairs (total presentations = 218) had been presented, participants estimated how often they had seen a particular category. I expected that participants who had seen typical instances would employ enumerative strategies in judging, while those who had seen atypical instances would employ non-enumerative strategies due to difficulties in recalling atypical instances. The response latency data supported this hypothesis. The frequency estimations themselves, however, suggest that participants underestimated frequencies regardless of which strategy they employed. This finding provides evidence that use of a particular estimation strategy does not imply the over- or underestimation of an event's frequency.

Time Slot: A2 (Mo 11:00 - 12:30)

Markus Eisenhauer
Justus-Liebig-University Gießen

Coauthors: Ruediger F. Pohl

Title: Selective activation as an explanation for hindsight bias

Abstract: In hindsight, people often claim to have known more in foresight than they actually did. For example, the confidence for one of several possible outcomes is larger when it is known that this particular outcome occurred. A widespread explanation of hindsight bias assumes that the feedback serves as an anchor. How precisely this anchor takes effect and why it leads to a bias towards the anchor value has not been satisfactorily answered yet. One possible mechanism to explain hindsight bias assumes that the encoding of the feedback leads to a selective activation of the item-specific knowledge base. As a result, specific information units are strengthened and are thus more likely to be recalled when a person tries to reconstruct his or her original judgment. We tested the effect of selective activation in two hindsight experiments. The results showed a clear hindsight bias in that the recalled confidence ratings were distorted towards the feedback. Moreover, the consequences of selective activation were evident in that more information favoring the feedback was recalled.

Time Slot: F4 (Tu 11:30 - 13:00)

Ido Erev
Haifa

Coauthors: Greg Barron

Title: On the effect of experience on decision making under uncertainty: Loss aversion without reflection, and the reversed certainty (Allais) effect.

Abstract: In a recent paper Thaler et al. (1997) found that a maladaptive loss aversion tendency can emerge from experience. The current paper presents four experiments designed to improve our understanding of this surprising finding and explore if other predictions of Prospect Theory (Kahneman and Tversky, 1979) are likely to emerge in a similar fashion. Experiment 1 demonstrates the robustness of Thaler et al. results to our experimental paradigm. Experiments 2 and 3 show that the certainty effect (Allais paradox) can emerge from experience, but experience can also lead to an opposite effect. Surprisingly, a "reversed certainty effect" emerged given the gambles used by Kahneman andTversky (1979) to demonstrate the original effect. Experiment 4 reveals that repeated experience with the tasks used to demonstrate the reflection effect in one-shot setting(Kahneman and Tversky, 1979) leads to a slow learning to prefer the alternative with higher expected value (in violation of the reflection effect). The results of the four experiments can be predicted by the 2-parameter reinforcement learning model proposed in Erev, Bereby-Meyer and Roth (1998). The results can also be described by apost-hoc 5-parameter variant of Prospect Theory.

Time Slot: D4 (Tu 8:30 - 10:00)

Klaus Fiedler
Universität Heidelberg

Coauthors: Babette Brinkmann, Tilmann Betsch, Beate Wild

Title: A Sampling Approach to Biases in Conditional Probability Judgments: Beyond Baserate-Neglect and Statistical Format

Abstract: Conditional probability judgments of rare events are often inflated when some meaningful relation exists between the condition and low baserate event. While traditional explanations assume that human judgments are generally insensitive to statistical baserates, more recent evidence shows much better performance when problems

are presented in natural frequency (as opposed to probability) format and when the conditions refer to natural categories. The theory advanced here suggests a different explanation. Rather than postulating an a priori advantage of natural formats or categories, we emphasize sampling decisions as a key to understanding biased probability judgments. Experiment 1 shows that the seeming advantage of frequencies over probabilities is confined to conditions in which probabilities are scaled with reference to unequel subsamples. In Experiment 2, an active information search paradigm is employed that always provides a natural frequency format. When sampling by the predictor condition, the conditional probability tobe estimated, p (criterion/predictor), is conserved in the samples and the resulting judgments are quite accurate. However, when sampling by the criterion, the low-baserate event is strongly overrepresented in the samples. This sampling bias is even stronger than the resulting judgment bias. In general, judgments reflect the statistics of the actually acquired samples quite accurately, but they do not understand the constraints imposed by their own sampling. This is corroborated by Experiment 3, where judges can freely choose between predictor sampling and criterion sampling, and in Experiment 4 using direct evaluations of the appropriateness of different sampling procedures.

Time Slot: C2 (Mo 16:45-17:45)

Ilan Fischer
Ben Gurion University of the Negev, Beer Sheva

Coauthors: Ramzi Suleiman

Title: The Emergence of Mutual Cooperation in a Simulated Inter-Group Conflict

Abstract: The simulation expands the modeling of an intergroup conflict by introducing a sub level of simulated society. In the study an enduring intergroup conflict is modeled by two representatives, each elected for a given constituency period. The conflict between the two groups is modeled as an iterated Prisoner's Dilemma game played by the groups' representatives. However, we assume that the performance of each representative influences her constituents and that this, in turn, affects her prospects to be reelected. At the end of a constituency period, new elections are called for, and their results determine whether the delegate remains in her position or is replaced by another representative.Our study explores the effect of this common democratic procedure, namely, the periodic election of group representatives, as well as the influence of different constituency periods, on the evolution of cooperation between the groups. Outcomes of 360 simulations yield the following main results: (1) the dynamics of the intergroup conflict evolve into five phases of well-defined patterns.(2) The probability of the emergence of each of the five patterns depends upon the election frequencies in the underlying societies. (3) For all election frequencies mutual defection was not an enduring pattern while mutual cooperation evolved as an enduring one.

Time Slot: D2 (Tu 8:30 - 10:00)

Craig Fox
Duke University, Durham

Title: Ordering Beliefs Over Events

Abstract: People are often called on to make an assessment concerning the relative likelihood of events (e.g., which of two medical treatments is more likely to succeed?). The ordering of beliefs over events can also be established by assessing the relative likelihood of their complements (e.g., which of the two treatments is more likely to fail?), or by comparing the magnitude of separate cardinal judgments (e.g., how likely is it that each treatment will succeed?). Probability theory and most descriptive models of judgment under uncertainty such as support theory (Tversky & Koehler, 1994; Rottenstreich & Tversky, 1997) assume that belief orderings over events and their complements should mirror each other (e.g., P(H) >= P(L) iff P(not-H) <= P(not-L)), and that the ordering of beliefs should coincide for relative versus absolute likelihood judgments. These principles are violated in several surveys in which we asked people to assess the relative and absolute likelihood of familiar versus unfamiliar events. In particular, respondents were biased to view more familiar events (and their complements) as more likely than less familiar events In particular, respondents were biased to view more familiar events (and their complements) as more likely than less familiar events (and their complements). Our data show that the proportion of subjects judging a familiar event as more likely than an unfamiliar event exceeds the proportion of subjects rating the complement of the unfamiliar event more likely than the complement of the unfamiliar event. An identical pattern was observed in studies in which subjects indicated which of two events they thought was less likely. Further studies suggest that the familiarity bias may be less pronounced among subjects who are asked to judge the probability of each event rather than which event is more likely. Moreover, the proportion of subjects rating the familiar event more likely is generally greater than the proportion of subjects assigning a higher probability to that event. The data are consistent with contingent weighting model in which the process of judging relative likelihood biases attention toward evidence supporting focal hypotheses (and away from evidence supporting complementary hypotheses). Because it is easier to recruit evidence supporting familiar events than unfamiliar events, this skewed attention causes both familiar events and their complements to be judged more likely, on average, than unfamiliar events and their complements. I will conclude with a discussion of several methods for producing reversals in the ordering of beliefs over events.

Time Slot: C4 (Mo 16:15 - 17:45)

Alexander Gattig
University of Groningen, The Netherlands

Title: Choice anomalies in multi-dimensional discounting of decision consequences: generalising behavioural regularities from risky, intertemporal, interspatial and interpersonal choice

Abstract: Empirical research has revealed various anomalies to the normative theories of choice under risk (EU theory) and of intertemporal choice (DU theory). We will present an overview of underlying axiomatic systems and empirical results in each domain of choice. It appears that the normative theories as well as their behavioural violations are highly similar. We argue that this is due to a behavioural tendency to compare expected outcomes to a multi-dimensional ideal point, where gains are as large as possible, for oneself, and would occur "here", "now" and "for sure", and conversely for losses. Our basic assumption is that people devalue outcomes to the extent that they differ from this ideal point. We then generalise the empirical results obtained with respect to risky and intertemporal choice to other choice domains where distance from such an ideal point is involved, viz. interpersonal and interspatial choice. First, these ideas are tested by replication of standard experiments in intertemporal and risky choice where we replace the respective temporal or risky component with an attribute

representing spatial or social distance. Second, we test our ideas by adding such an attribute to standard EU or DU experiments thus changing the overall distance of this outcome to the hypothesized ideal point. The main hypotheses and experimental results on systematic anomalies will be presented and discussed.

Time Slot: A4 (Mo 11:00 - 12:30)

Werner Güth
Humboldt-University

Title: (Boundedly) Rational Decision Making and Robust Learning

Abstract: In traditional decision and game theory one assumes (common knowledge of) rationality whereas learning and evolutionary theories partly try to justify rational choices as resulting from dynamic adjustments rather than from rational deliberation. But the polar assumption of no deliberation, entertained in most of the literature, is empirically wrong as the one of perfect rationality. Indirect evolution offers an intermediate approach since it can combine (boundedly) rational decision making and evolving patterns of behavior.
After this conceptual discussion I report about a series of experiments on robust learning where participants are not stereotypely playing the same game, but a variety of related, however structurally different games. We find evidence not only for behavioral, but also for cognitive adjustments. For theories, accounting for such effects, we can at best offer a framework, but no explicit
algorithm of decision emergence.

Time Slot: Plenary Session: Di 16:30-17:30

Susanne Haberstroh
Universität Mannheim

Coauthors: Tilmann Betsch, Andreas Gloeckner, Klaus Fiedler

Title: Routine strength and adaptation in recurrent acquisition and disposal decisions.

Abstract: Most of decision theories do not allow precise predictions of under which conditions and how long people keep to their decision routines. The goal of this study was toinvestigate whether people show routine effects in non-restricted situations in which valid information about the new environment is available. In contrast to other studies, theroutine was not only measured, but induced and manipulated. The strength of routines was manipulated within a computer controlled micro-world simulation which requiredthat participants make recurrent acquisition and disposal decisions. After having learned weak or strong routines, participants were confronted with changes in this micro-world that rendered the routine obsolete. The duration of routine maintenance was assessed as a dependent variable. The decision task was characterized by the lack of any constraints. Participants were free to consider new evidence that reliably indicated the inadequacy of the routine. Results showed that routines can overrule new evidence if they are strong, yielding delays in adaptive routine deviation. This, however, did not lead to maladaptive behavior in the long run, which indicates that strong routine participants profit from greater expertise compared to weak routine participants.

Time Slot: H2 (We 8:30 - 10:00)

David Hardman
London Guildhall University

Title: What effect do rationales have on the solutions to framing problems?

Abstract: When Jou, Shanteau and Harris (1996) presented rationales for the options in framing problems, framing effects disappeared. For example, their rationale version of the Asian Disease problem had either (a) sharing a reduced dose of some treatment amongst everybody, or (b) giving the full treatment to a subset. Apart from the fact that there were some wording discrepancies between rationale and no-rationale versions, the introduction of sharing may have introduced issues of fairness into the choice. The present study investigates whether this was the case, by comparing rationales that either do or don't introduce issues of sharing.

Time Slot: C3 (Mo, 16:45-17:45)

Sylvia Harms
EAWAG

Title: „… and then my car broke down, and I thought: Do I really need a new one?" The influence of context and past behaviour on environmental decision making

Abstract: Although there is a broad literature on how attitudes predict future behaviour, moderating factors like past behaviour and behavioural context have received far less attention. The often low predictive power of attitudes on behaviour, however, yielded the necessity to include both factors. Regarding environmental decision making, one important target behaviour is more sustainable (less private-car dominated) mobility. Since car use can be considered as a well-practised behaviour being performed in constant contexts, one can assume a strong behavioural determination by past behaviour. In a qualitative pre-study, we analysed the mobility behaviour of 40 participants of a car-sharing organisation, their participation motivations, attitudes, social norms and perceived behavioural control towards the system as well as their experiences with it. Computer-aided qualitative data analysis revealed a significant interaction between past behaviour and context on the participation decision: Former car owners reported sudden changes in environmental resp. life conditions prior to their participation whereas non-owners reported no or only gradual changes. In contrast to non-owners, former car owners had to undergo a break- through of past behavioural routines before being interested in a new mobility alternative. Results will be embedded in a dynamic behavioural model, and the design for a quantitative model test will be discussed.

Time Slot: A1 (Mo 11:00 - 12:30)

Clare Harries
University College London

Coauthors: Nigel Harvey

Title: The effects of task difficulty and sample size on self-insight in judgement.

Abstract: Stated knowledge of the relative importance of information is usually measured on only one trial, often at the end of a long judgement making task. Self-insight is often poor. Here we test the hypotheses that this is because of the insensitivity of the measure, because of difficulty of the judgement task, or because participants tend to state ideal weights. Participants made forecasts of monthly sales figures on the basis of four pieces of information. Task difficulty was manipulated by labelling the information as advice (advice task) or else labelling it in terms of four sales related dimensions (MCPL task). For every forecast they made, half the participants estimated the ideal weighting of information, half estimated the way they themselves had weighted the information. At the end of the task participants stated ideal and used weights for the whole experiment. As predicted, there was less of a relationship between stated used weights and actual use of information for participants who had the MCPL as opposed to the advice task. Stated used weights were more similar to

stated ideal weights than to the actual weights. There was no difference between stated weights sampled on only one occasion and those sampled on every trial.

Time Slot: H1 (We 8:30 - 10:00)

Denis Hilton
Université de Toulouse-II

Coauthors: Antoine Bioye, Hans-Peter Erb

Title: Subconscious priming of risk attitudes

Abstract: We primed attitudes to risk using the unrelated tasks method. In a first phase, participants were exposed to words which either gave risk-seeking a positive connotation (e.g. enterprising) and risk-aversion a bad connotation (e.g. timid), or which gave risk-seeking a negative connotation (e.g. rash) and risk-aversion a positive connotation (e.g. prudent). This was done through informing participants that that they had to evaluate the frequency of occurrence of a list of words for use in creating and German (Expt. 1) or French (Expt. 2) dictionary. In a second phase, we presented subjects with four choice dilemmas in which they had to choose between a safe and a risky option.In both experiments, subjects showed a significant tendency to be influenced by the priming manipulation, and to be unaware of this influence. We conclude by discussing the likely conditions for this subconscious priming effect to arise, and its implications for the psychological construction of risk attitudes and preference reversals.

Time Slot: D3 (Tu 8:30 - 10:00)

Christine Hodson
Bolton Institute

Title: Understanding Organ Donation Decisions: The Role of Belief Salience.

Abstract: In the U.K., cadaveric organ donation occurs through an 'opting-in' system. Individuals can express their willingness to become a potential organ donor by signing an organ donor card or by joining the National Health Service Organ Donor Register. Such actions play a vital role in the organ donation process. Despite numerous campaigns to promote the donor card and register, only a quarter of the British population has made the decision to commit to either. The major aims of this study were to assess the role of personal belief salience in strengthening the predictive abilities of the theory of reasoned (T.R.A.) and in identifying specific cognitions that differentiate pro- and anti-donation decisions. The T.R.A. has been successfully applied to predict a multiplicity of behavioural decisions. The theory prescribes the use of modally salient beliefs derived from a sub-sample, representative of the target population. However, past research in other decisional domains has shown how the integration of a measure of personal belief salience within the T.R.A. can improve both the predictive and explanatory power of the theory. The findings of this study are presented and discussed in relation to the theoretical and practical implications.

Time Slot: C1 (Mo 16:15 - 17:45)

Ulrich Hoffrage
Max Planck Institute for Human Development, Berlin

Coauthors: Angelika Weber, Ralph Hertwig, Valerie Chase

Title: How to Keep Children Safe in Traffic: Find the Daredevils Early

Abstract: Crossing the street in front of oncoming vehicles is a dangerous situation for young children first learning to make decisions in traffic on their own. In this research, we tried to identify children who are particularly prone to making risky crossing decisions. Simple games involving risk (a computer game and a gambling game, adopted from Paul Slovic) were first used to classify 5- to 6-year-old children as either risk takers or risk avoiders. We then tested whether children's risk disposition as inferred from risk-taking behavior on the games is related to their risky decision making in a real-world traffic task in which they had to stand on one side of a busy one-way street and decide when agap between two vehicles was large enough to permit a safe crossing. The results suggest that children who were willing to take more risks in the games also made more "Go"decisions in the real traffic task, in particular, when there was uncertainty about whether it was possible to cross. They also tolerated shorter time intervals between their initiation of the step off the curb and the arrival of the vehicle, had a (slightly) higher probability of causing an accident, and made faster decisions. We relate the results to previous research and discuss how they might help to improve traffic safety programs.

Time Slot: H3 (We 8:30 - 10:00)

Eric R. Igou
Universität Mannheim

Coauthors: Bless, H.

Title: What's important? Or: Order effects in judgment and decision making as a function of conversational rules

Abstract: It has been often demonstrated that in one-sided communications (either pro or contra arguments are presented) the first piece of information has a greater impact on judgments and decisions than subsequent information. The opposite tendency can be observed in two-sided communications (pro and contra arguments are presented). We suppose that in addition to cognitive aspects (e.g. differential elaboration) order effects are in part a function of conversational rules (Grice, 1975). Based on findings indicating that in one-sided communications people usually present the most important arguments at the beginning, whereas in two-sided communications these arguments are presented at the end. We assume that considering this rule recipients should differentially weight the various pieces of information. Therefore in one-sided communications we expect primacy, but in two-sided communications we expect recency effects to occur. If these effects are due to conversational rules, they should diminish when the conversational rule is discredited. In several experiments we varied the order of arguments and the suitability of the conversational rule (discrediting this rule by informing participants about the (alleged) random order of the arguments). In one-sided communications participants rated a product as more favourable and manifested a greater desire to acquire it, when strong arguments were presented before weak arguments rather than in the reversed order. However recency effects were observed in two-sided communications. Both effects were eliminated when the conversational rule was discredited. These results suggest that conversational rules influence the importance of an information presented in a particular order.

Time Slot: I2 (We 14:00 - 15:30)

Eva Jonas
Universität München

Title: Information Seeking in Advisor - Decision Maker Situation

Abstract: The topic of decision processes of advisors who are paid for helping other people in their decicions is of important relevance in the context of efficient division of labor between advisors and customers. In the context of dissonance theory the phenomenon of selective exposure to information after tentative and definite decision making is

well known; i.e. after making their decisions people prefer supporting information to contradictory. Now the question is if or rather under which conditions this process is the same for advisors as for people who make decisions for their own benefit (private decision maker)? Two experiments are presented in which the information search of advisors is compared to that of private decision maker (control group). The results in the first experiment show that advisors prefer - compared to the control group - a balanced ratio of supporting and contradictory information according to their tentative decision. In the second experiment these results are replicated for those advisors, who have to make a recommendation. On the other hand those advisors who have to make a decision in place of the customer show even more selective exposure to information than private decision maker. The results are discussed on the background of dissonance theory and the economical principal agent theory.

Time Slot: F2 (Tu 11:30 - 13:00)

M. K. Jones
University of Newcastle

Title: Positive Confirmation Bias in the acquisition of Information

Abstract: An experiment is reported which tests for positive confirmation bias in a setting in which individuals choose what information to buy, prior to making a decision. The design- an adaptation of Wason's selection task- reveals the use that subjects make of information after buying it. Strong evidence of positive confirmation bias in both information acquisition and information use, is found; and this bias is found to be robust to experience. It is suggested that the bias results from a pattern of reasoning which, although producing sub- optimal decisions is internally coherent and which is self- reinforcing.

Time Slot: F2 (Tu 11:30 - 13:00)

Ralph L. Keeney
University of Southern California

Title: From 'Decisions with Multiple Objectives' to 'Smart Choices'

Abstract: There has been significant progress in our understanding of decision-makers and decision-making over the last quarter century. This influences what we should do to help decision-makers make better decisions and also influences research that we should pursue to help even more in the future. Twenty-five years ago, I was writing the book Decisions with Multiple Objectives with Howard Raiffa, that attempted to help people make better decisions. This year, with our colleague John Hammond, we published Smart Choices with the same goal: helping people make better decisions. The books are very different. What has changed and what has remained the same over this time period? What are the implications of the changes?

One thing that did not change: making good decisions is critical to one's success and happiness. How can we best help people make good decisions? Twenty-five years ago, I thought that helping a decision-maker analyze some tough decisions was the best way to make a big improvement. Today, I believe that we need to transfer the basic skills of making smart choices to decision-makers for use on all of his or her decisions. These different circumstances require different tools, procedures, and research agendas than what we have had in the past. These are the main topics of the presentation.

Time Slot: Plenary (Mo, 9:30-10:30)

L. Robin Keller
University of California, Irvine

Coauthors: Thomas Eppel, Jeff Guyse

Title: Preferences for Sequences of Long-Term Environmental Consequences

Abstract: In a time of shrinking budgets and increased scrutiny of environmental policies and regulations, decisions about large-scale projects involving long-term consequences (such as nuclear waste clean-up or environmental policies mitigating potential effects of global warming) must be made with the utmost care and analytical support. Models and procedures of multi-attribute utility theory can provide an explicit and consistent framework to assess risk- and time-sensitive preferences. Several studies have shown that different assessment methods lead to different temporal discount rates in different situations. While these studies have given us some insights about what factors determine discount rates for monetary consequences, little systematic research has been done on non-monetary consequences. A few studies have shown that discounting does occur for consequences related to health and safety, either on an individual or societal level. We describe experiments that analyze what patterns of sequences of environmental outcomes over time are preferred by participants. Finding preferences for different patterns suggests that different implicit discount rates are bein gused We will discuss implications of such findings for real-world decisions with long-term consequences.

Time Slot: A4 (Mo 11:00 - 12:30)

Gideon Keren
Eindhoven University of Technology

Coauthors: Karl Halvor Teigen

Title: Why are pleasant surprises so surprising?

Abstract: A surprise is commonly defined as an emotional reaction to a sudden, unexpected outcome, a "schema-discrepant" event, or a conflict between belief and reality. Despite the negative connotations of these definitions, surprise appears to be more frequently connected with positive than with negative outcomes. Indeed, autobiographical reports of surprises refer more often to pleasant than to unpleasant events. We studied the surprising potential of positive and negative events by asking subjects to rate a person's surprise to success and failure scenarios while controlling the corresponding probabilities of occurrence. It was found that medium probabilities ($p = .40$-$.60$) led consistently to more surprise for positive outcomes (e.g. of catching a flight, or being cured by a medical treatment) than for negative ones (missing the flight, or an unsuccessful cure). Further studies were designed to understand the motivational and/or cognitive mechanisms underlying the apparent greater impact of pleasant surprises.

Time Slot: F4 (Tu 11:30 - 13:00)

Anton Kühberger
University of Salzburg

Coauthors: Michael Schulte-Mecklenbeck, & Josef Perner

Title: A meta-analysis of the Effects of Framing, Probability, and Payoff on Risk Preference

Abstract: A meta-analysis of over 40 studies is presented to identify the factors which determine risk preference in Asian disease-like tasks. First the structural relations between probabilities, payoffs, and framing conditions are clarified, and the difference between framing and reflection studies is made explicit. Then the role of framing, reflection, probability, type, and size of payoff, for risk preference is evaluated in a meta-analysis. By using the method of multiple regression, we show that bidirectional framing effects exist for gains and for losses. Presenting

outcomes as gains tends to induce risk-aversion while presenting outcomes as losses tends to induce risk-seeking.Risk preference is also shown to depend on the size of the payoffs, on the probability levels, and on the type of good at stake (money/property vs. human lives). In general, higher payoffs lead to increasing risk-aversion. Higher probabilities lead to increasing risk-aversion for gains and to increasing risk-seeking for losses. However, it is not probabilities or payoffs, but the framing condition which explains most variance. These findings show that no linear combination of formally relevant predictors is sufficient to capture the essence of thef raming phenomenon.

Time Slot: D4 (Tu 8:30 - 10:00)

Martin Lages
Max Planck Institute for Human Development, Berlin

Coauthors: Ulrich Hoffrage, Gerd Gigerenzer

Title: Intransitivity of fast and frugal heuristics

Abstract: How to derive and predict intransitivities from fast and frugal heuristics, such as Take The Best, Minimalist, and Take The Last? It is specified in analytical terms under which conditions these lexicographic heuristics generate intransitivities. On the basis of the analytical results a simulation study was conducted which investigates how concepts of limited discriminability and randomness affect transitivity if the amount of missing information is varied in a naturally structured environment. The results of the Monte Carlosimulation indicate that intransitivity varies considerably with missing information and between heuristics. Consequently, intransitivity may serve as a tool for policy capturing. A omparison of fast and frugal heuristics with empirical data of 94 subjects shows that Take The Best and Take The Last give reasonable fits whereas a unit weight linearmodel, which performs exhaustive information gathering, systematically underestimates the number of intransitivities. It has long been known that transitivity and even weakstochastic transitivity is violated in human choice behavior. These results together with the present findings demand an explanation that goes beyond the concept of randomnessand discriminability as preferred in classical models of rational choice. It is concluded that fast and frugal heuristics which adhere to the principles of bounded rationality offer such an explanation.

Time Slot: H2 (We 8:30 - 10:00)

Laura Martignon
Max Planck Institute for Human Development, Berlin

Coauthors: Stefan Krauss

Title: To be a Bayesian or to be fast and frugal. A matter of information formats.

Abstract: We present empirical evidence that humans can solve categorization tasks with two cues by means of a Bayesian approach, if information is presented in frequency formats. Thus we extend the classical result of Gigerenzer & Hoffrage (Psych. Review, 1995). We show that the crucial element of infomation formats that foster Bayesian Reasoning is the possibility of being expressed in terms of Markov Frequencies. We discuss empirical evidence put forward by Harries and Dhami (JDM, 1998), that medical doctors of the British National Health System use fast and frugal inference heuristics for categorization tasks involving several cues. We propose a theoretical framework that explains why and when people switch to fast and frugal heuristics for categorization, based on limits in memory and retrieval capacity. We derive suggestions for teaching Bayesian Reasoning in high school by means of Markov Frequencies and frequency trees.

Time Slot: C2 (Mo 16:15 - 17:45)

John Maule
Leeds University

Title: Risky Decision Making Under Time Pressure: The Moderating Effects of Strategy and State

Abstract: Variable State Activation Theory (Maule & Hockey, 1993) predicts that decision makers adapt to time pressure on the basis of an appraisal mechanism that assesses the current task demands and the resources that decision makers have to meet these demands. The paper reports an experiment to test predictions from the theory in the context of decision making under risk. Different groups of subjects (N=108) were presented with short everyday risk scenarios involving a choice between a safe and a risky alternative, with and without time pressure. The scenarios were differentiated in terms of valence (positive or negative outcomes) and effort (the safe alternative involved an action that required either a large or small amount of effort). Affective state was measured at the beginning of the session, and after each block of high and low effort scenarios.Contrary to previous research, there was no overall effect of time pressure on either expressed or revealed preferences for the risky alternative. Further analysis is under way to investigate the relation between different modes of adapting to time pressure (acceleration vs filtration), risk taking and affective state across the different scenario types.

Time Slot: I4 (We 14:00 - 15:30)

Alastair McClelland
University College London

Coauthors: John Haynes

Title: Is there a Hard-Easy Effect in the Calibration of Subjective Probabilities? It Depends on how you Define 'Hard' and 'Easy'

Abstract: Strong evidence favouring a Brunswikian explanation for the hard-easy effect in calibration is provided by Juslin (1993). He obtained good calibration at different levels of performance when items were segregated on the basis of rated familiarity, rather than solution probability. In this study we report a partial replication and extension of Juslin'sstudy. Participants were presented with a either a list of countries names or celebrity names, and rated each item for familiarity. They were then given pairs of country names orpairs of celebrity names (selected at random) and had to decide which country had the bigger land area, or which celebrity was older. For each pair, a half-scale confidencerating was also requested. The items in each domain were then split into two categories on the basis of: i) solution probability ii) absolute difference (in area or age) and iii) average familiarity. For solution probability, a classic hard-easy effect was observed; with absolute difference, overconfidence was abolished for difficult items, but underconfidence was observed for easy items. With familiarity, overconfidence was removed, but a reverse hard-easy effect was noted in both domains. The results are discussed with respect to ecological and cognitive-bias accounts of calibration performance.

Time Slot: I1 (We 14:00 - 15:30)

Jim McLennan
Swinburne University of Technology

Coauthors: M. Omodei, Alexander J. Wearing

Title: Decision-Making by Fire Officers During Emergency Incidents

Abstract: Fire officers' decision-making processes during 10 potentially life-threatening emergency incidents were analysed. The data were generated by cued-recall

interviews utilising video footage obtained from a miniature video camera in the incident-manager's safety helmet. The verbalised cued recollections were transcribed and the protocols analysed.Consistent with proposals by naturalistic decision researchers, there was little evidence of decision processes involving the weighing-up and selection of alternative actions.Rather, most of an incident manager's attentional resources are devoted to generating adequate situational understanding. Interpersonal communication between incidentmanager and subordinates played a crucial role in the incident management process. At the 5 incidents which were (a) transparent, (b) familiar, (c) appropriately resourced,there was extensive delegation of action to subordinates. At the other 5 incidents, the officers exercised tighter operational control. Under opaque conditions, incident managers utilised a strategy of provisionally accepting the first plausible hypothesis as to the nature of the key element of the situation and proceeding cautiously until the hypothesis was verified or falsified. Emergency management decision making is best conceptualised as distributed decision making in a dynamic and uncertain environmentunder conditions of high risk. Improving our theoretical understanding of the processes identified in this field study represents a challenge for laboratory researchers.

Time Slot: I3 (We 14:00 - 15:30)

Gerard Meij
University of Soesterberg, The Netherlands

Title: Dynamic Decision Making

Abstract: A main characteristic of dynamic control tasks is the autonomous change of the situation. For this reason decision makers need to keep track of the system dynamics continuously, in order to be able to adapt their strategy to the changed conditions. In an experiment participants' strategies were identified when dealing with a dynamic control task. Participants needed to extinguish spreading fires that could either start simultaneously or sequentially. In this last condition there would be a need to interrupt an ungoing decision process at the level of a single fire in order to assess the priority in which all fires needed to be handled. The results showed suboptimal performance in the sequential condition, which could mainly be explained by a less efficient order of fire handling. Participants requested the available information to assess the optimal priority more often in the simultanuous than in the sequential condition. In the sequential condition fires were mostely handled in the order in which they started. In all, the results suggest that decision makers cannot adapt their decision strategies suffiently to environmental changes when they are engaged in a local problem. Possible reasons for this behaviour will be discussed.

Time Slot: H1 (We, 8:30-10:00)

Simone Moran
Ben Gurion University

Coauthors: Ilana Ritov

Title: The role of integrative initial offers in multi-issue negotiations

Abstract: In negotiations, where several issues are under consideration and parties have different priorities among these issues, integrative agreements can be reached through "logrolling":concessions on low priority issues in exchange for gains on higher priority issues. The great impact of initial offer suggests that the antecedent of such integrative agreements can already be found in the initial offer. The present research examined how inexperienced negotiators evaluate and respond to integrative versus distributive initial offers. Our findings suggest that: (a) Due to coding of values as gains or losses relative to the "even split" reference point, integrative offers do not appear more attractive than distributive offers. (b) Integrative initial offers are not associated with improved understanding of mutual interests and don’t lead to violation of the "fixed pie" bias. (c) The composition of counter-offers depends on the composition of initial offers, suggesting a within issue issue anchoring effect. (d) Integrativ initial offers yield higher counter-offer values for the initiator than distributive offers. We conclude by suggesting that the effectiveness of integrative initial offers does not necessarily require conveyance of a social message or improved understanding of mutualinterests. It may simply be due to the establishment of within issue advantageous anchors.

Time Slot: A3 (Mo 11:00 - 12:30)

Jeryl L. Mumpower
U.S. National Science Foundation

Title: Inter-Rater Agreement among Psychiatrists in Psychiatric Emergency Assessments

Abstract: Psychiatric assessments conducted in psychiatric emergency service facilities (PES) and resulting dispositions have major physical, psychological, and fiscal effects on the patient, family, community, and insurance carriers. In the worst cases, inappropriate release may lead to violence against self or other, may burden support systems, or may result in further deterioration. Inappropriate admissions may be disruptive and stigmatizing, adversely influence the course of the illness, or lead to the loss of jobs, housing, income, or child custody. The inter-rater reliability of psychiatrists in PES assessments was studied using videotapes of 30 patient assessment interviews. Eight experienced PES psychiatrists rated each videotape on dimensions such as severity of depression and psychosis, and recommended a disposition. The level of agreement (intraclass correlation coefficient) was comparatively higher for psychosis (.64) and substance abuse (.65), and comparatively lower for psychopathology (.28), impulse control problems (.30), danger to self (.32), and disposition (.33). None of the reviewers' disposition recommendations correlated significantly with the assessing psychiatrist's actual disposition. The empirical research demonstrates imperfect diagnostic capabilities, which have substantial policy implications. Admission decisions have four possible outcomes: for admits, there are True Positives and False Positives; for releases, there are True Negatives and False Negatives. Any given admission rate will result in a different distribution of these four autcomes, with associated payoff rewards or penalties. Policies that change the admission rate without improving diagnostic capabilities simply trade-off one type of error for another.

Time Slot: C1 (Mo 16:15 - 17:45)

Robert F. Nau
Duke University/Insead

Title: Arbitrage choice theory: beyond preferences and consequences

Abstract: For most of the last century, the concept of "individual preference" has been the psychologically primitive datum in terms of which mathematical models of decisions, games, and markets have been constructed. In models of choice under uncertainty, following Savage, the objects of preferences are hypothetical acts that lead to rather abstract "consequences." This modeling approach is by now so standard that mathematical decision theory is practically synonymous with the axiomatization of

preferences over acts. I will argue that this approach has serious limitations, not merely because the preferences of real individuals do not always obey the usual axioms, but because the very concepts of preferences and consequences are inherently unsuitable as primitives, particularly for modeling decisions that occur in a social, competitive, or strategic environment.I will propose an alternative theory of choice that addresses those limitations, in which the primitive datum is the public acceptance of a non-hypothetical material transaction (e.g., a gamble or trade) and the main axiom of quantitative rationality is the principle of no-arbitrage.

Time Slot: D1 (Tu 8:30 - 10:00)

Andreas Oehler
University of Bamberg

Coauthors: Heilmann, K., Laeger, V.

Title: Insider behavior and multi-asset trading in experimental call markets

Abstract: The paper reports the results of 26 experimental asset markets with 12 participants each. The used design of a call market with an open orderbook is more realistic than most of the related studies because the assets are not liquidated after each trading period. The effects of insiders and of a 3-asset design on the price formation process and its results are com- pared to the basic design of a 1-asset market without insiders. In markets without insiders the market depth is higher com- pared to markets with insiders. The participants react to the existence of insiders by widening the implicit spread: the same reaction has also been observed in experimental market- maker markets but not yet in call markets. Corresponding to this reaction to potential insider behavior the information efficiency of both types of asset markets does not have any significant difference. The non-insiders seem to be incapable of learning from the activities of the insiders. When the participants have to cope with 3 different assets instead of 1, the market depth is significantly smaller. The lower complexity of the 1-asset design results in smaller implicit spreads.

Time Slot: A3 (Mo 11:00 - 12:30)

Wilma Otten
Leiden Medical University Center, The Netherlands

Coauthors: Joop van der Pligt

Title: Indications for a dual-process approach to probability appraisal.

Abstract: Although people can reason according to probability theory, they quite often violate statistical rules when they assess probabilities. An interpretation is that people may have different modes to appraise probabilities: A distributional versus singular approach (Reeves & Lockhart, 1993). An event presented as "one of many" evokes frequentistic, rule-based assessment of its probability, whereas one specific event focuses the assessment on unique aspects of the event. Applying these ideas Klar et al. (1996) observed that probability assessments for an individualized person were positively biased relative to assessments for an average person. In three studies we assessed the impact of factors that should either affect a frequentistic or a singular approach to appraise probabilities. We assumed that probability estimates for an average other would elicit a frequentistic approach, and that estimates for an individual would evoke a singular approach. Therefore we expected that manipulations in (a) base-rate information, and (b) "one of many" would affect appraisals for an average other, whereas (c) personality information, and (d) displaying a picturewould mainly influence appraisals for an individual. Results show that base-rate and personality information had the expected impact. The question is whether these results indicate a dual-process, that is, a rule-based, deliberative process and an associative, intuitive process (Windschitl & Wells, 1996).

Time Slot: A2 (Mo 11:00 - 12:30)

Ruediger F. Pohl
Justus-Liebig-University, Giessen

.

Title: No reliability of hindsight bias

Abstract: Hindsight bias refers to the well-documented and robust finding that persons in hindsight overestimate what they had known in foresight. Several researchers tried to identify personal characteristics that could explain individual differences in the amount of hindsight bias. By and large, however, this search failed to convey any conclusive evidence.This paper argues that the whole enterprise was doomed to failure because hindsight bias is not an individually reliable phenomenon. Computing the split-half reliability scores of 29 data sets (from 13 independent experiments, with a total sample of 729 participants), found only small values in most cases, with a mean reliability score of r = .11. As aconsequence, individual differences in hindsight bias should best be accounted for by assuming random processes during selective activation and retrieval of information fromone´s knowledge base.

Time Slot: F4 (Tu 11:30 - 13:00)

Rob Ranyard
Bolton Institute

Coauthors: John Charlton

Title: A Comparison of Laboratory Lottery and Equivalent Sports Gambling Choices: The Influence of Real-world Knowledge and Ambiguity

Abstract: Standard lottery gamble tasks have been said to lack ecological validity. In addressing this issue, we compared decisions in lottery tasks with those in more naturalistic, but equivalent, sports betting tasks. We considered two research questions: (1) people may bring more real-world knowledge to bear when making naturalistic decisions compared to lottery tasks; (2) people may be more risk averse with naturalistic decisions because of the greater ambiguity associated with their outcomes. In two studies (N=72 in each), participants were given the choice of gambling on alternative soccer match outcomes with varying odds (Home Win, Draw, Away Win). In both studies we found that: (1) people were more likely to opt for a Home Win than they were to choose a corresponding alternative in an equivalent lottery task, thus demonstrating the effect of real-world knowledge on ill-defined gambling decisions; and (2) people were no more likely to select the shortest odds on soccer gambles than they were on lotteries: i.e.they were not more risk averse when dealing with ill-defined sports betting risks. A third study is in progress using the think aloud method to obtain further evidence of the role of ambiguity and knowledge on decision processes.

Time Slot: I3 (We 14:00 - 15:30)

Daniel Read
University of Leeds

Coauthors: Peter Roelofsma

Title: Subadditivity of intertemporal discount rates

Abstract: Tversky & Koehler have demonstrated that probability judgments are subadditive: when the probability of an event composed of a number of independent events is evaluated, its probability is judged to be greater than the sum of the probabilities of the independent events. In several experiments we demonstrate that a similar subadditivity effect is truefor discount rates: when an

interval is unpacked into a set of subintervals, the amount by which an amount is discounted over that interval is less than the sum of the discountingover the subintervals. In Experiment 1, subjects indicated the amount of money which would make them indifferent between receiving it at a given delay, or another (known)amount of money at a different delay. The inter-delay interval was varied, as was the length of each delay.There was clear evidence of subadditivity of intertemporal discountrates. We replicated this effect in three other experiments in which we varied response mode, the length of delays being considered, and the precision of the procedure bywhich discount rates are assessed. The subadditivity effect was robust and undiminished under all manipulations. We consider the implications of this result for interpretingexperimental studies showing hyperbolic discounting - the finding that smaller-sooner rewards are discounted more than larger-later ones may occur because shorter intervalsyield more discounting than larger ones. We also discuss our results in terms of Support Theory, suggesting that some version of this theory might be generalised to a widerange of situations.

Time Slot: C4 (Mo 16:15 - 17:45)

Peter H. M. P. Roelofsma
University of Leeds

Coauthors: Daniel Read

Title: The Gain/Loss Assymmetry in Intertemporal Choice

Abstract: A general finding in the empirical literature on intertemporal choice is the gain/loss effect: The discount rate is smaller for losses than for gains. In these studies discount rates were estimated for the amount of the good, usually money, and not its utility. The gain/loss effect could, however, occur because the utility function for losses has a different form than the utility function for gains. Indeed, the gain/loss effect for amount is compatible with any possible gain/loss effect for utility. In our study we integrated empirical measures of time preference and utility. We used a two-stage cross modality matching paradigm. In the first stage, subjects assigned numbers to squares of different sizes. We then estimated a unique number-square size function for each subject. In the second stage, subjects indicated their utility for amount/delay combinations by matching them to squares. We then transformed the matched squares back into a utility scale using the number-square size function. From these data we were able to estimate discount rates for money amounts and for utility. The traditional measure of discount rates for money showed the typical gain/loss effect with gains discounted more quickly than losses, but this pattern reversed when we obtained discount rates for utility. These results conform to those predicted by approach-avoidance theory.

Time Slot: A4 (Mo 11:00 - 12:30)

Renate Schubert
ETH Zürich

Coauthors: Martin Brown, Matthias Gysler and Hans Wolfgang Brachinger

Title: Gender Specific Attitudes towards Risk and Ambiguity

Abstract: A predominant view concerning financial decision making is that women are more risk averse than men. The stereotype seems to be confirmed by a number of recent field studies on male and female wealth disposition. In these studies however gender specific risk attitudes are possibly confounded with differences in the opportunity sets of the average man and woman. Experimental methods facilitate the analysis of gender specific risk preferences by creating identical constraints. Recent experimental evidence indicates that women do not in general make less risky financial choices than men. Gender differences are found in gambling decisions as well as in ambiguous financial decisions; they seem to lack for non-ambiguous investment and insurance decisions. Experimental evidence on the prevalence of gender specific risk attitudes is far from conclusive. In particular it is puzzling why gender differences arise in ambiguous decision contexts. In this paper we report an experiment which investigates the role of ambiguity in generating gender specific risk behavior. We test the hypothesis that the attitudes of male and female subjects towards perceived risks are similar and stable across contexts. Furthermore, we examine whether the higher overconfidence of male subjects may lead to gender differences in ambiguous choices.

Time Slot: D3 (Tu 8:30 - 10:00)

Stefan Schulz-Hardt
Universität München

Coauthors: Birgit Thurow-Kröning, & Dieter Frey

Title: The Responsibility Effect as an Artifact: Evidence against a Self-Justification Explanation of "Entrapment" and "Escalation of Commitment"

Abstract: The "self-justification hypothesis" serves as a central psychological explanation for "entrapment" and "escalation of commitment". According to this hypothesis, people persist with a losing course of action because they do not to want to admit having made a mistake. Empirical support derives largely from the so-called "responsibility effect": People invest more in a losing course of action or persist with it for longer if they themselves had decided to initiate the action (responsibility) as opposed to when it was assigned to them by somebody else (such as taking over the decision from a predecessor). Our claim is that this effect is based on an artifact. People invest more in an action and persist with it for a longer time when it corresponds to their preferences (i.e. when they view it as the best of all available alternatives). In the responsibility condition, all participants preferred the action in question since they had chosen it themselves. The control condition, in contrast, always represented a mix of two different groups, namely persons who would have decided in exactly the same way (action corresponds to preference) and persons who would have decided differently (action does not correspond to preference). Over the course of three experiments we demonstrate that persons adopting an assigned alternative from a predecessor (no responsibility, thus no justification pressure) who also prefer this alternative persist with it for the same length of time when confronted with negative feedback as do persons in the responsibility condition. Only persons without responsibility preferring a different alternative broke off their commitment to this alternative earlier. Further findings corroborate the thesis that decision preference acts as the mediating mechanism for persistence instead of responsibility or justification pressure.

Time Slot: A3 (Mo 11:00 - 12:30)

Peter Sedlmeier
Universität-GH Paderborn

Title: Associationist Learning as the Basis for Relative Frequency Judgments?

Abstract: People are able to make quite good judgments of relative frequencies for successively encoded events, although high relative frequencies are usually under- and low relative frequencies overestimated (e.g., Sedlmeier, Hertwig, & Gigerenzer, 1998). This sensitivity for frequencies goes even further: with increasing sample size, the accuracy of judgments and the confidence therein increases as well (Sedlmeier, 1998). PASS, an

associationist model is introduced that simulates these aspects of sensitivity for relative frequencies. The model consists of two parts, FEN, a neural network, and the CA-module, which operates on the output of the neural network (Sedlmeier, in press). FEN encodes events, including their contexts, by their featural description and builds up a representation of the frequency with which features co-occur. The CA-module consists ofonly two algorithms that suffice to model the results usually found in studies on frequency estimates as well as on confidence judgments about such estimates. PASS's relationship to cognitive biases is discussed and it is compared to competing models that have been used to simulate relative frequency judgments. Sedlmeier, P. (1998). The distribution matters: Two types of sample-size tasks. Journal of Behavioral Decision Making, 11, 281-301. Sedlmeier, P. (in press). Improving statistical reasoning: Theoretical models and practical implications. Mahwah, NJ: Erlbaum. Sedlmeier, P., Hertwig, R. & Gigerenzer, G. (1998). Are judgments of the positional frequencies of letters systematically biased due to availability? Journal of ExperimentalPsychology: Learning, Memory, and Cognition, 24, 754-770.

Time Slot: C2 (Mo 16:15 - 17:45)

James Shanteau
Kansas State University
Coauthors: Rick Thomas, David J. Weiss and Julia Pounds

Title: A Performance-Based Measure of Expertise: Three Applications

Abstract: The identification of who is, and who is not, an expert is vital to any study of expertise. If there are external criteria, then the identification is straightforward. However, suchcriteria are typically unavailable in most domains where experts work. The purpose of this paper is to explore the application of a novel approach (labeled CWS) for definingexpertise in the absence of external standards. To assess the usefulness of this approach, CWS was applied to three previously collected datasets involving expert decisionmaking. In each case, new insights were provided into the identification of experts. When applied to a study of auditors, CWS correctly identified group differences inexpertise. In a study of livestock judges, CWS was able to distinguish between experts with different domains of experience. And in a study of personnel selectors, CWSrevealed that irrelevant attributes may be more informative about expertise than relevant attributes. In the future, CWS may become a vital tool in research on expert decisionmaking.

Time Slot: I3 (We, 13:45-15:15)

Dirk Smeesters
Katholieke Universiteit Leuven
Coauthors: Luk Warlop, Piet Vanden Abeele (KULeuven), S. Ratneshwar (U. Connecticut)

Title: Exploring the recycling dilemma: intrinsic motivation in mandatory recycling programs

Abstract: Sustainable economic development requires communities to manage their production of household waste. One way to realize efficient control is recycling, which requires the separation of waste fractions at the source. From a consumer perspective, recycling constitutes a social dilemma. Social marketers can try to induce individuals to cooperate voluntarily, or try to change the properties of the decision situation such that it is no longer a social dilemma. Until recently, recycling programs were all voluntary. Reported research on recycling behavior has found that it was motivated almost solely by environmental values. Governments are increasingly switching to structural strategies, and set up mandatory programs. They mandate the use of particular waste recipients for separated fractions, the prices of which cover processing or dumping costs. Monitoring of compliance is, however, inefficient. We report three studies examining the underlying value structure of recycling in mandatory programs. We find that citizenship and duty related values play a dominant role in explaining mandatory recycling compliance. Environmental motivations are secondary. These findings are confirmed in a qualitative means-end chain study. Finally, a survey (inprogress) with 400 Belgian households tests whether citizenship and environmental motivations are homogeneously distributed among socio-economic segments of the population. Social marketing implications of these findings are discussed.

Time Slot: A1 (Mo 11:00 - 12:30)

Joanna Sokolowska
Polish Academy of Sciences, Warsaw

Title: Acceptance of Unique Risky Events

Abstract: The following dual criterion model of a single choice is proposed here: -f1(R) + f2 (aw), where R is perceived risk, aw is amount of win and j1, and j2 represent psychological functions of these two parameters. The model is based on three assumptions: (1) Utility theory does not apply to unique risky events (e.g. Lopes, 1981; Keren and Wagenaar, 1987; Montgomery and Adelbrat, 1982). (2) Single and repeated choices differ in perceived risk (Coombs and Bowen, 1971; Joag et al. 1990). In repeated choices, EV may represent a psychologically sure outcome. In contrast, people making single choices experience considerable uncertainty. Thus, risk is a salient determinant of decisions. (3) Risky prospects also include potential benefits. Decisions require trade-offs between risk and benefits. Thus, choice is based on a dual criterion (Coombs, 1975; Lopes 1990). The proposed model was verified empirically. Descriptions of 27 risky investments were presented to 243 managers, who declared whether they would make an investment. The proposed model and 13 other models derived from the literature were fitted to reproduce the decisions through nonlinear optimization of parameters. Calculations performed on the averages yielded the best fit for the proposed model (R2=0.96).

Time Slot: F3 (Tu 11:30 - 13:00)

Fiona South
University College London
Coauthors: Nigel Harvey

Title: Allowing for causal effects in judgmental forecasting from time series.

Abstract: This study investigated whether people can take into account 'special events' when making forecasts from time series data. Participants considered a sequence of 42 weekly test marks of a hypothetical student. On 21 of these weeks we indicated the student had taken different dosages of a drug suspected to temporarily increase test performance. From these data, they were asked to forecast test marks for the next six weeks. The drug would be given on three of these weeks. The relationship between drug dosage and increase in marks varied, and was either linear, damped, logistic, peaked or exponential. Forecasts were too high when the drug was not given but too low when it was given. Errors were greatest when the relation between drug dosage and increase in marks was peaked or exponential; it appeared that people were linearising the relationship. Participants' attempts to plot it in a separate graph supported this interpretation. It was also found that participants were generally overconfident in their forecasts. We shall also report results from similar studies in which people (including managers) had to incorporate effects of promotional campaigns into their sales forecasts.

Time Slot: I1 (We 14:00 - 15:30)

John Sterman
MIT

Title: Complexity or Perplexity: Beyond the Misperceptions of Feedback in Dynamic Decision Making

Abstract: The complexity of the systems in which we live is growing. As it does so do the unanticipated side effects of human action, further increasing complexity in a vicious cycle. However, lab and field studies show that people suffer from multiple "misperceptions of feedback" which cause us to perform extremely poorly, and learn slowly, in such complex dynamic systems (systems with multiple positive and negative feedbacks, stock and flow structures, time delays, and nonlinearities). The traditional explanation is bounded rationality: Our mental models of these systems are grossly oversimplified, and our ability to simulate mentally the consequences of alternative decisions is poor. On this view people understand the building blocks of complex systems (such as time delays) but lack the cognitive capacity to understand systems with large numbers of interacting elements. Unfortunately, preliminary evidence suggests the problem is worse. In lab experiments highly educated subjects showed poor understanding of the building blocks, for example consistently violating basic laws of physics. Though much more work is needed, poor Performance and slow learning in dynamic systems may arise from more fundamental gaps in people's understanding of elementary structures. I discuss ways these deficits may be overcome.

Time Slot: Plenary (We, 16:00-17:00)

Volker Stocké
University of Mannheim

Title: Explaining framing-effects as schema activation process - the special case of equality norms

Abstract: In the behavioral decision research a large number of very heterogenious phenomena is summarized under the label „framing-effects", which must be differentiated into three effect-types. In the present paper the relevance of the schema-based framing-type for explaining the wording effects in the „Asian disease problem" (ADP) can be shown.Using a multivariate logistic-regression model to analyze the data of 765 subjects, influences of the other two effect-types are controlled. Wording-effects in the ADP are partially the result of a selective activation of equality-norms. This activation is created by the use of the linguistic symbol „dying". Under this condition the choice-probability of the risky alternative, which implies an equal treatment of all affected persons, depends on individual differences in the support of fairness-principles. But this priming-effect isonly observed, if there are no opportunity costs for a normative decision. In addition social norms are only relevant, if the actors are in a less elaborated decision mode. This mode can be predicted by the interactive relevance of the motivation and cognitive ability of the decision makers. If the motivation and/or the ability for analytical thinking islow, decision behavior is influenced by social norms. This is predicted using the „Model-of-Frame-Selection" (Esser 1998).

Time Slot: D4 (Tu 8:30 - 10:00)

Karl Halvor Teigen
University of Tromso

Title: When equal chances are good chances

Abstract: When several candidates apply for the same job, the chances of each of them may appear quite good, despite low p values. Similarly, risks that can happen to 'anybody' appear more alarming than those that are less evenly distributed. This equiprobability effect can be shown to affect actual choice behavior, even in cases where numerical p estimates are unaffected. It is easily demonstrated with verbal probability expressions, and is more pronounced with positive terms (chances and possibilities) than with negative ones (uncertainties and doubts). We report a series of studies that are designed to test the conditions and limits of the equiprobability effect, and how it is related to factors like type of probability (internal vs external) and outcome determinants (random vs controlled).

Time Slot: H4 (We 8:30 - 10:00)

Danielle Timmermans
Universiteit Amsterdam

Coauthors: Bert Molewijk MA, Job Kievit MD

Title: Communicating individualized risk information to patients: what is the best format?

Abstract: AIM: Adequately communicating treatment risks to patients is not easy. In the present study we aimed to determine how risk format, type of risk and size of risk affected respondents evaluation and understanding of risk information and their treatment choice. METHODS: We used three different formats: numbers, bars and figures to represent the risks. Risks concerned 1 year mortality risks and 5 year mortality risks of surgery and the observation policy and were given for two hypothetical patients differing in the size of risk. RESULTS: Risk information presented in bars was evaluated as the most difficult and most threatening. When risks for the low risk patients were presented as human figures, this information was evaluated as more important than when the same information was presented in another format. There were no differences in correct understanding of the risks as measured by one item. Risks presented as human figures turned out to lead to lower percentage of respondents who chose for surgery. Respondents also reported to be less confident about their choice. In conclusion, risk format seems to have an impact on patients'evaluation of risk information and on their decisions. More reserach is needed to determine which format is better.

Time Slot: H3 (We 8:30 - 10:00)

Tadeusz Tyszka
Institute of Psycology, Warsaw

Coauthors: Tomasz Zaleskiewicz

Title: Risk Taking in Real Managerial Tasks

Abstract: Recently, more and more authors criticize the predominant lottery paradigm which has been adapted in the research on risky decision making. Critics of the lottery structure as the model of risky situation demonstrate that real life risky situations differ in several respects from the lottery tasks, and similarly, peoples' judgments and choices also differ in these tasks. The purpose of our research was to identify basic processes underlying real-life managerial risk taking. Several scenarios were constructed in which a choice between two risky alternatives was required. In accordance with real life situations, both consequences of the choice alternatives and probabilities of these consequences were purposefully described very vaguely. Apart from choices and ratings of certainty, subjects were also encouraged to ask questions about the scenarios - the ones they considered important for making the decision. In this way framing of risky decision tasks was studied. The analysis of questions posed by the participants demonstrated that much more participants showed interest in details concerning possible consequences of the situation than were concentrned with probabilities of these

consequences. Moreover, most participants asked questions concerned with framing of the decision problem - including: detailed circumstances which could influence the decision, a possibility to add another (typically dominant) alternative which could reduce the decisional conflict, or even reframing consequences of the described scenarios.In the second part of the study which is now being carried out, another group of participants received the same scenarios as in the first part, but supplemented with more precise information - either concerning consequences, or probabilities, or both. The purpose of this study is to find out which (if any) of these extensions would change the certainty of the choices. Hypothesis is that information about the consequences would weigh more than the information

Time Slot: F3 (Tu 11:30 - 13:00)

Peter P. Wakker
Leiden University

Coauthors: Han Bleichrodt, Jose Luis Pinto

Title: Using descriptive findings of prospect theory to improve prescriptive applications of expected utility

Abstract: This Paper proposes a quantitative modification of standard utility measurement procedures, such as the probability and certainty equivalence methods, to correct for commonly observed violations of expected utility. Traditionally, decision analysis assumes expected utility not only for the prescriptive purpose of analyzing subjects' behaviour in utility measurements. However, descriptive violations of expected utility have been known for many years. In the early 1980s, it became apparent that these violations bias utility measurements. Systematic discrepancies were found between different utility measurement methods that, under expected utility, should have provided identical utilities. As it is not clear how to correct for these biases without further knowledge of the size or nature, most utility elicitations are still analyzed in terms of expected utility today.
This paper uses findings from nonexpected utility theory to speculate on the biases and on their sizes. In particular, we use the quantitative assessments of probability transformation and loss aversion suggested by prospect theory. By means of these, quantitative corrections are proposed for the probability and certainty equivalence methods. In an experiment, the discrepancies between these two methods are removed by our proposal.

Time Slot: Plenary (We 10:15-11:15)

Elke U. Weber
Ohio State University

Coauthors: Sharoni Shafir, Ann-Renee Blais

Title: Predicting risk-sensitivity in humans and lower animals

Abstract: Both the animal and human literature have proposed models of risky choice -- in finance, the risk–return model (Markowitz, 1959); in zoology, the energy budget rule (Caraco, 1980) – that assume that the likelihood of choosing a risky option is a function of the variance of its outcomes. Observed descriptive shortcomings of these models (Kacelnik & Bateson, 1996; Weber, 1988) may stem from their use of variance as a measure of risk. Psychophysics shows that people encode differences between stimuli in proportion to the magnitude of the reference stimulus. This regularity (Weber's law, 1834) suggests the coefficient of variation (CV = standard deviation standardized by expected value) as a better measure of risk. This hypothesis is supported in three ways: (1) Shafir (1998) shows that the CV and not the variance of outcomes predicts animals' risk-sensitivity in foraging. (2) A meta-analysis of 252 published choice proportions shows that the CV of outcomes is a significant predictor of risk preference, after controlling for other variables. (3) An experiment in which people learn the outcomes of risky options and their probabilities by repeated sampling (similar to animal foraging) shows that it is the CV rather than the variance of outcomes that predicts risk preference.

Time Slot: F3 (Tu 11:30 - 13:00)

Myriam Welkenhuysen
University Hospital Leuven, Belgium

Title: Women's decisions concerning a predictive genetic test for hereditary breast cancer.

Abstract: In the Western population, breast cancer affects about 1 in 10 women before the age of 80. A confrontation with this type of cancer is therefore not unusual. Consequently, information about breast cancer in general as well as about hereditary breast cancer - the latter group representing 5%-10% of the breast cancer cases - receives a lot of attention. In a recent study, 329 women (19 - 65 years old) read an informative text (4 pages) concerning hereditary breast cancer, its genetic transmission and the availability of predictive testing. Thereafter, they completed a questionnaire investigating their perception of hereditary breast cancer and their hypothetical decision concerning a predictive test for breast cancer. Almost two thirds of the sample would decide to have a predictive test. The correlates of the decision and of the arguments pro and contra are examined. It is suggested that the personal intention regarding the predictive test tends to be positively associated with rational variables, while a negative association is observed with emotional variables. Hereby, the negative relationship with the reported number of breast cancer patients in the family is especially intriguing.

Time Slot: C1 (Mo 16:15 - 17:45)

Janis Williamson
Bolton Institute

Coauthors: Rob Ranyard and Lisa Cuthbert

Title: Risk management in consumer insurance decisions

Abstract: The Expected Utility model of insurance assumes that people buy insurance because it has greater expected utility than does not buying insurance. However, Kunreuther's (1978) study of flood insurance found this to be an inadequate explanation of the choice processes underlying insurance purchases. Huber, Wider and Huber (1997) also question the validity of the EU model when applied to a wider range of real world risky decisions, particularly with regard to its reliance on subjective probability. They claim that the decision maker engages in risk management by applying one or more defusing operators. Using a simulation approach, the study reported here examined the applicability of Huber's model of risk management to a real world consumer decision, namely whether to insure a recently purchased item (car or washing machine) against possible mechanical breakdown in the future. We also examined, via verbal protocols, differences in reasoning between 'insurers' and 'non-insurers'. The results obtained suggest that Huber's model can be successfully applied to real world insurance decisions of this nature; in particular, much evidence of risk defusion was obtained. Prior experiences of breakdown insurance also appear to be a major factor in the insurance decision.

Time Slot: F1 (Tu 11:30 - 13:00)

Cilia Witteman
Utrecht University

Coauthors: Pieter Koele

Title: Mood and multi-attribute decision making

Abstract: Our paper describes an exploration of the effects of induced positive and negative mood on decision making

with multi-attribute problems. Emotions have only recently been recognized as important issues in the cognitive process of making a decision. In social psychology, emotions figure more prominently in studies of attributions and judgments of people. More cognitively or process oriented research has generally ignored emotions, largely because of pragmatic reasons. Some models have however been constructed to explain the influence of emotions on cognitive processes. We will describe the most promising model, the Affect-as-Information model (e.g. Clore, 1992). This model predicts that one's mood affects one's decision-making strategies. More specifically, negative mood would lead to analytical thought processes, more careful and more focussed on detail than the heuristic strategies used with positive mood. We describe and compare the different models that have been developed for the influence of emotions on cognitive processes and, more in particular, decision-making. We also present data we have gathered in an experiment in which we induced happy and sad mood in subjects and then set them a multi-attribute decision problem.

Time Slot: C3 (Mo 16:15 - 17:45)

Kimihiko Yamagishi
Shukutoku University

Title: Proximity, argument recruitment, and probability judgments of occurrence versus nonoccurrence.

Abstract: Previous research in intuitive probability judgment has shown that such judgments produce logical fallacies when people rely on proximity as a judgmental heuristic. Well-known examples include the "conjunction fallacy." In turn, research in similarity judgment has demonstrated the non-Euclidean property of similarity space. It is possible to name two objects that are SIMULTANEOUSLY similar and dissimilar to each other. Assuming these findings, the current research shows a new kind of judgmental contradiction and an explanation as follows: (1) The probability that "eXample is NOT a member of Category C" is judged by "How X is DISSIMILAR to C." (2) If X is both similar and dissimilar to C, then both p(X belongs to C) and p(X does not belong to C) would be judged as high. (3) Thus, a judgmental fallacy may be observed, wherein estimates of p(X belongs to C) PLUS p(X does not belong to C) exceed 1.0. (4) Such judgmental process also produce illogical forecasts that imply that estimates of p(Event X occurs) and p(Event X does not occur) exceed 1.0. (5) The cognitive process that underlie such contradictions may be regarded as analogous to the processes by which people produce overconfidence in sentence verification task.

Time Slot: A2 (Mo 11:00 - 12:30)

5. Posters presented at SPUDM 17

1	**Mohammad J. Abdolmohammadi** Bentley College, USA

Poster: The Bayesian Statistical Appraoch in Auditing: A Review of the Application Problems

Abstract: The Bayesian statistical approach has several advantages over the classical methods currently used in auditing. For example, the Bayesian statistical inference can help auditorsin assessing the values of control errors (a binary variable) or account balances (a continuous variable) based on a blending of subjective priors and objective sample results toform posterior estimates. Similarly, the Bayesian decision theory can help auditors make optimal sample decisions based on their expressed loss functions. Consequently, theBayesian approach received attention in the audit literature following Winkler's [1967] classic study of "The Assessment of Prior Distributions in Bayesian Analysis." Indeed,many auditing studies conducted in the 1970s and 1980s indicated much promise, but no formal Bayesian applications were adopted by accounting firms. Importantly, the late 1990s has brought a significant change to the audit practice that may indicate a revival of interest in the Bayesian approach. Major international accountingfirms have moved to adopt audit approaches that focus on a strategic systems audit as compared with the transaction or cycle approaches of the past decades. For example,KPMG Peat Marwick LLP has developed an audit approach called Business Measurement Process (Bell et al., 1997) that requires the auditor to more fully consider suchsubjective information as management style and business processes in his/her audit than in the past. Also important to note is the advances in the computer technology and theeasy-to-use software that can facilitate the use of the Bayesian approach in auditing. In this paper, I review the studies in the application of the Bayesian approach to auditingfocusing on its major advantages as well as its application problems as a means of identifying future research directions.

Time Slot: E (Poster Session)

2	**Jonathan Aldred** Emmanuel College Cambridge

Poster: Intransitivity and Vague Preferences

Abstract: This paper is concerned with intransitivity in normative rational choice. It focuses on a class of intransitivities which have received little attention, those involving vaguepreferences. Vague preferences are defined in terms of vague predicates such as 'red' or 'bald' which have borderline cases, and lack sharp boundaries. The paradigmatic caseof vague predicates in philosophical logic and philosophy of language is the Sorites paradox, sometimes known as the Paradox of the Heap or Wang's Paradox. It is widelyagreed that no satisfactory resolution of the paradox has been discovered. The paper develops an example of intransitive indifference, where the intransitivity is driven by the Sorites structure, rather than by some reasoning failure. This distinguishes theexample from 'imperfect discrimination' instances of intransitive indifference popularised by Luce and Raiffa. Since the example appears threatened by the 'money pump'argument, a defence against this is offered, exploring the temporal interpretation, if any, of the transitivity axiom. Three competing formal theories of vagueness are applied tothe example, but none of them appear to justify imposing transitivity as a requirement of rationality. Vague preferences are common, and often entail intransitive indifference structures. Such structures are shown to undermine intransitive strict preference also.

Time Slot: E (Poster Session)

3	**Ole Boe** Goteborg University	Coauthors:Tommy Gärling

Poster: Attention Bias in Integration of Outcomes of Concurrent Decisions

Abstract: Two experiments are reported which investigate the hypothesis that an attentional bias prevent people from correctly assessing the benefits of combinations of outcomes whenthey face several decisions at the same time. In such situations it is assumed that highly preferred single outcomes are evaluated before they are combined and therefore receivea higher weight than they otherwise would do. In Experiment 1 participants faced two concurrent choices between buying means-end related and unrelated pairs of consumerproducts (e.g., telephone and answering machine or telephone and alarm clock). Despite an advantage of the combinations, single preferred products were more frequentlychosen when participants were free to choose but not after being forced to choose either the mean or end. In Experiment 2 another group of participants made choicesbetween walking and driving to stores at different distances where they could buy goods at reduced prices. Attitudes to driving were assessed independently. The resultsshowed that participants with a positive attitude towards driving more frequently choose to drive, even when the distance was so short that they in a control condition chose thesame store when forced to walk.

Time Slot: E (Poster Session)

4	Fergus Bolger Erasmus Universiteit Rotterdam	Coauthors: Gerrit Antonides, Philip Hans Franses

Poster: What determines consumer sentiment?

Abstract: The Index of Consumer Sentiment (ICS) is constructed monthly for each EU country. The ICS has been found to predict both discretionary consumption and the business cycle, but what determines consumer sentiment? We study the relationship between ICS and macroeconomic events, seasonal factors and non-economic events reported in the Media, for different EU countries. Seasons and non-economic news influence public mood, and hence the ICS, but undermine its predictive utility so should be removed. The results are discussed both in practical terms, for data collection and forecasting, and theoretical terms, for modelling the relationship between news, mood and expectation formation.

Time Slot: E (Poster Session)

5	**Richard Breton** Defence Research Est., Québec	Coauthors: Robert Rousseau and Wilson Price

Poster: Human Factor Perspective of Reasoning under Certainty in a Command and Control Task

Abstract: The Command and Control (C2) task on a warship requires that the commander is aware of the tactical situation in order to make a timely decision about the best course ofaction to be implemented. The commander must perceive and understand relevant elements from the environment and make projection about their future state. Unfortunately,C2 is characterized by ill-structured problems, changing and stressful conditions, high stakes and time demands. Therefore, most of the decisions are the result of reasoningunder uncertainty. This paper presents a human factor perspective of reasoning under uncertainty. The influence on the C2 task of factors like the time pressure and stress is presented. Thesefactors impose constraints on the situation assessment and the decision-making processes.The role of scripts, schemata and mental models is also described. These constructsplay a

major role when relevant information is missing. Other factors like heuristics, intuitions, expertise and the type of personality of the decision-maker are considered. Decision support systems can improve human performance in uncertain situations. However, the system designer must analyze and understand the mapping betweenconstraints imposed by uncertainty in the situation and the human information processing. From this analysis, system requirements are identified and may be addressed from atechnological perspective.

Time Slot: E (Poster Session)

6 **Wandi Bruine de Bruin**, TU Eindhoven; Coauthors: Paul Fischbeck, Neil Stiber, Baruch Fischhoff

Poster: Redistributing fifty-fifty responses

Abstract: Studies using open-ended response modes to elicit probabilistic beliefs have found an elevated frequency (or blip) at 50% in their response distributions. We hypothesize that this is caused by an intrusion of the phrase "fifty-fifty," and represents epistemic uncertainty, rather than a true numeric probability. Using an explicitly numerical probability scale reduces the 50 blip. We present two techniques for adjusting the response distributions of data collected with open-ended response modes. These procedures redistribute responses as though a linear scale had been used. They are validated and demonstrated with several data sets, including judgments elicited from groundwater pollution experts.

Time Slot: E (Poster Session)

7 **Alexander Gattig**
University of Groningen

Poster: Temporal discount rates for hedonic and utilitarian goods

Abstract: Temporal discount rates for hedonic and utilitarian goods Alexander Gattig, University of Groningen, ICS We investigate whether "myopia" (overweighing of immediate vs. delayed rewards) differs for hedonic vs. utilitarian goods. We assume that myopia is due to an adaptation to the reference state of owning a product. Delaying its receipt is then aversive. Based on different degrees of loss aversion we predict that delaying hedonic goods is more aversive than delaying utilitarian goods. Because adaptation to goods presented vividly is easier, delaying vivid goods should be more aversive. We present results of experiments where subjects have to make choices between television sets and washing machines (hypothetical) and gift certificates for CD's and computer disks (real).

Time Slot: E (Poster Session)

8 **David Hands**
BT Labs, Ipswich

Poster: Multimodal Quality Assessment: Investigating the relationship between recollective memory and quality judgements

Abstract: Research on quality measurement of communication systems has traditionally required subjects, either implicitly or explicitly, to focus attention on quality at the expense ofcontent. However, information content is likely to be the primary focus of attention for the home or business user. Therefore, a potential problem for traditional quality testingprocedures is that the reported quality ratings may not be representative of more natural viewing environments in which the focus of attention is on content rather than quality.The present study required two groups of subjects to evaluate the overall transmission quality of audio-video sequences containing varying levels of degradation. Half thesubjects were asked to assess quality only for each test sequence, with the remaining subjects asked to recall the audio-video content in addition to a quality evaluation. Theresults found no difference in quality ratings between groups, indicating that quality ratings are independent of content recall. This result shows that quality ratings are robust to acontent recall task, suggesting that quality opinions obtained under controlled laboratory conditions may not be dissimilar from opinions made under more natural viewing conditions.

Time Slot: E (Poster Session)

9 **Niklas Karlsson**, Göteborg University; Coauthors: Fredrik Gustafsson, and Tommy Gärling

Poster: The impact of goals and responsibility on escalation and de-escalation

Abstract: Abstract submitted to SPUDM17, Mannheim, Germany, August 9-11 1999 The impact of goals and responsibility on escalation and de-escalation Niklas Karlsson, Fredrik Gustafsson, and Tommy Gärling People are sometimes making decisions with the goal of minimizing losses rather than maximizing gains. According to the loss-sensitivity principle (Gärling & Romanus, 1996) people are only integrating prior outcomes when evaluating potential losses. Hence, people are expected to integrate prior outcomes to a greater extent when making decisions with the goal of minimizing losses than when maximizing gains. Such a difference in which goal that come to the fore may also be a reason for the well documented finding that personal responsibility for a decision makes people less prone to ignore sunk costs. As demonstrated by Heath (1995), in investment decisions people may both escalate and de-escalate commitment in response to sunk outcomes. In an experiment 64 undergraduates made decisions about continuing an investment or not for different investments scenarios.In line with previous results, responsibility lead to greater escalation. Furthermore, it was found that instructions about the goal of the decision maker (i.e., minimizing losses or maximizing gains) interacted with whether the subjects were responsible for the previous decision or not. There were no differences in decisions to continue to invest for the responsible decision makers. For the non-responsible decision makers, those who were instructed to maximize gains were to a greater extent de-escalating commitment. This was contrary to what was expected. An interpretation in line with the results was that subjects who were instructed to minimize losses did so in relative rather than absolute terms (i.e., total losses/total investment rather than total losses). An implication of the results is that the goal of an investment decision is significant for how sunk costs affects the decision.

Time Slot: E (Poster Session)

10 **Xiao Luo**, McGill University, Montreal, Canada; Coauthors: Chenghu Ma

Poster: Stable equilibrium in beliefs in extensive games with perfect information

Abstract: The Savage model of decision making under uncertainty has been the most commonly used decision model in game theory and economic theory. Nevertheless, in the Savage model, the representation of beliefs underlying preferences by a single probability measure leaves no room for the degree of imprecision in information to affect decisions. Experimental evidence such as the Ellsberg Paradox contradicts some of the tenets in the Savage model; in particular, decision makers usually display an aversion to uncertainty or ambiguity. Since many economic problems essentially involve intertemporal decision making, this paper is devoted to applying Gilboa and Schmeidler's (1989) decision-theoretic model of

multiple priors to dynamic settings. The purpose of this paper is to present a new solution concept of ``stable equilibrium in beliefs (SEB)" by assuming it is common knowledge that players are uncertainty averse in the sense of Gilboa and Schmeidler (1989). By making use of an appealing criterion of ``stability," an SEB is defined as a strategy profile supported by a stable belief system. It is shown that all SEBs constitute a unique stable belief system, and an SEB satisfies subgame perfectness. Moreover, it is shown that the notion of SEB ``refines" that of subgame perfect equilibrium in terms of path of play. Finally, following Aumann (1995), this paper establishes some epistemic foundation for the notion of SEB.

Time Slot: E (Poster Session)

11	**Craig R. M. McKenzie** UC San Diego	Coauthors: Laurie A. Mikkelsen

Poster: The Psychological Side of Hempel's Paradox of Confirmation

Abstract: People often evaluate relationships between two variables (X and Y) that have two levels each (X1 and X2, Y1 and Y2). Past research has shown that when participants test hypotheses such as, "If X1, then Y1," observing the named conjunction (X1 & Y1) is overwhelmingly perceived as more supportive than observing the unnamed conjunction (X2 & Y2), although both observations support the hypothesis. For example, if testing "If people smoke, then they will get cancer," observing a smoker with cancer would be perceived as much more informative than observing a nonsmoker without cancer. In various contexts, this tendency has been labeled positive testing, "confirmation bias," and "matching bias." Normatively speaking, however, the more informative observation is the one that is less likely a priori (i.e., the one that is more surprising). In the smoking example, observing the smoker with cancer is, normatively speaking, more informative: Because most people do not smoke and most people do not have cancer, it would be relatively unlikely to observe a smoker with cancer. Note that one must know the relative base rates of (a) smokers versus nonsmokers, and (b) those with cancer versus without cancer, in order to know which observation is normatively more informative. Because participants in laboratory settings typically test hypotheses they are unfamiliar with, previous research has not examined whether participants are sensitive to a priori probability of observations. The present experiment revealed that participants were sensitive to this variable, and even judged the unnamed observation to be more supportive than the named observation under certain conditions. We also argue that, when the hypothesis to be tested is unfamiliar (as in the typical laboratory experiment), preferring the named observation to the unnamed observation makes good normative sense because the apriori probability of the former will generally be lower than that of the latter.

Time Slot: E (Poster Session)

12	**Guenter Molz** Justus-Liebig-University, Giessen

Poster: The Effect of Information Reliability and Precision on Subjective Probabilities

Abstract: An information "if p, then q" is both reliable and precise. Reliability is lower if the relation between the antecedent and the conclusion is non-deterministic ("if p, then often q"). The precision is affected by the number of states in the conclusion ("..., then q or r"). Within a consumer behavior context (price and quality of products) the influence of reliability and precision on subjective probabilities and other variables (search patterns, utility ratings) was examined (n=114). Results showed that a lack of precision had a stronger impact on subjective probabilities than a logically equivalent reduction of reliability.

Time Slot: E (Poster Session)

13	**Mary M. Omodei** La Trobe University	Coauthors: Jim McLennan, Alexander J. Wearing

Poster: Open Versus Restricted Communication Structures in Team Dynamic Decision Making

Abstract: Modern information and communications technologies allow subordinates in dynamic decision making teams to have direct real-time access to their superiors. This raises issuesfor situations where subordinates (a) detect what they believe to be erroneous commands from a superior or (b) believe that they have information which would assist theirsuperior. To experimentally investigate this, the microworld generator, Networked Fire Chief, was used to create a forest firefighting command and control scenario comprisingan Incident Controller station and four subordinate Sector Controller stations. In a restricted communication condition Sector Controllers were not permitted to addresscriticisms or suggestions to the Incident Controller whereas in an open condition they could. Contrary to recent speculations in military and aviation psychology, no averagedifferences were found in decision making performance between the two communication structures. The data indicate this counter-intuitive finding is due to interactionsbetween aspects of the communication structure and team member cognitive processing characteristics, including the disruptive effects of subordinate communications onleader ability to maintain situation awareness and to formulate strategy. Significant effects of leader personality were also observed. These and other findings are presented, andtheir implications for understanding the role of communication in team dynamic decision making tasks discussed.

Time Slot: E (Poster Session)

14	**Tim Rakow** University College London	Coauthors: Nigel Harvey, Charles Vincent

Poster: Pre-surgical estimation of the risk of early mortality following paediatric heart surgery

Abstract: Total cavopulmonary connection (TCPC) is a ‘high risk’ operation for repair of univentricular heart, with an early mortality rate of about 15%. Heart surgeons and paediatric cardiologists estimated the likelihood of early mortality (death within 30 days of surgery, or within the same hospitalisation) for 40 TCPC cases. This estimate was made three times: first following presentation of the patient’s history and investigations, then after viewing the imaging if the heart, and finally after a discussion of the case. Doctor’s estimates tended to diverge following the presentation of the additional imaging data. Analysis of pooled estimates showed very little bias in judgement, but little discrimination between high risk and low risk cases. Analysis of Brier scores indicated pooled performance was comparable to the performance of base rate and logistic regression models, and revealed that some individuals outperformed the statistical models. Doctors’ estimates were uncorrelated with estimates derived from the logistic regression model. The implications for improving judgement by using statistical models as a decision aid are discussed.

Time Slot: E (Poster Session)

15	**Torsten Roensch** Technische Universität Dresden

Poster: Experimental comparison of desicion rules for

multiattribute selection problems

Abstract: An experiment was carried out to compare naive naive decision behaviour with a non-compensatory and a compensatory decision rule (elimination by aspects and multiattribute utility, respectively). The participating subjects (60 students) had to solve two multiattribute selection problems of different familiarity (VCR; machine system), each with 10 alternatives described on 10 attributes. Dependent variables were decision result (first rank, overall rankings), type, number and weights of attributes used for the decision, and two subjective measures. The results suggest a differential impact of formal rules to support the decision process, dependent on the familiarity of the decision problem.

Time Slot: E (Poster Session)

16 **Luba Sapir**
Nachal Ashan, Beer-Sheva, Israel

Poster: Optimality of various decision rules under partial information

Abstract: We focus on the dichotomous choice model, which goes back as far as Condorcet(1785). A group of experts is required to select one of two alternatives, of which exactly one is regarded as correct. The alternatives may be related to a wide variety of areas. A decision rule translates the individual opinions of the members into a group decision. A decision rule is optimal if it maximizes the probability of the group to make a correct choice. Our goal is identifying the optimal decision rule under partial information on the decision skills. Specifically, we assume the correctness probabilities of the experts to be independent random variables, selected from some given distribution. Moreover, the ranking of the members of the team is (at least partly) known. Thus, one can follow rules based on this ranking. The extremes are the expert rule and the majority rule. In some cases we obtain explicit formulas for the probability of the expert rule to be optimal, as a function of the group size (and distribution parameter). The results obtained here contain some previous results as particular instances.

Time Slot: E (Poster Session)

17 **Stefan Schwarz**
Universität Mannheim
Coauthors: Dagmar Stahlberg

Poster: Hindsight Bias: Hypothetical Design vs Memory Design

Abstract: The hindsight bias is the tendency of people to falsely believe that they would have predicted the outcome of an event correctly, once the outcome is known. The present paper addresses the ongoing debate whether the hindsight bias is due to memory impairment or due to biased reconstruction. We report on an experiment that shows that the generally larger effect size of the hindsight bias in the hypothetical design compared to the memory design disappears when the number of correctly recalled predictions (perfect hits) in the memory design are partialled out. This is exactly what the biased reconstruction approach predicts.

Time Slot: E (Poster Session)

18 **Robert D. Sorkin**
University of Florida, Gainsville

Poster: Assessing the Efficiency of Group Decision Making

Abstract: We measured component efficiencies in a dichotomous, uncertain, group decision task. Each member received a display of a signal-plus-noise or a noise-alone event; each member made a numerical estimate of signal likelihood and the group decided which event occurred. We show that overall efficiency is equal to the product of two components: (a) the efficiency with which the members' estimates are converted to a group decision and (b) the efficiency with which the displayed stimuli are converted (by individual members) to numerical estimates. Losses attributable to (a) were low and independent of group size. Losses attributable to (b) were high,but decreased to an asymptotic level. This suggests that large groups may be able to achieve useful performance in situations that previously were considered impractical.

Time Slot: E (Poster Session)

19 **Christian Steglich**
Rijksuniversiteit Groningen

Poster: Goal Hierarchies and Salience Mechanisms in Multiattribute Decision Making

Abstract: In applied multiattribute utility theory, evaluation tasks are frequently structured following a goal hierarchy: higher-order goals are differentiated into subgoals, the lowest level ofthe hierarchy consisting of specific attributes. The importance of any attribute for attainment of the super-goal then is defined as its relative position in the goal hierarchy. Apartfrom this ‘top-down' importance of an attribute, however, there also is a ‘situational importance' corresponding to the attribute's potential to impose structure on the option set.In this paper we show that this situational importance has a ‘bottom-up' effect on the goal hierarchy: decision goals may get salient by factors such as availability and situationalfit of attributes. In the paper, we investigate how pre-adopted goals are adjusted to match the situational importance of attributes. To test these ideas empirically, weconducted a personnel selection task. A goal hierarchy is prescribed by specifying two sets of requirements which job candidates are to meet (‘conscientious worker' vs.‘sociable colleague'). Attributes used to describe candidates systematically vary in their instrumental relation to these two goals. As independent variables, we manipulate theaverage values and the discriminability of attribute scores, and the attribute sequence. The main results will be presented in the paper.

Time Slot: E (Poster Session)

20 **Rickey P. Thomas**
Kansas State University, Manhattan

Poster: Developing a performance-based measure of expertise in an air traffic control microworld environment.

Abstract: The Cochran-Weiss-Shanteau (CWS) measure, a new performance-based measure of expert performance, is applied to C-TEAM (Controller Teamwork Evaluation and Assessment Methodology), an air traffic control microworld environment. Using the CWS measure, the index of expertise becomes the common F-ratio with discrimination ability in its numerator and consistency in its denominator. Many theoretical, methodological, and technical challenges had to be overcome in order to apply the CWS approach to C-TEAM. The poster will present our solutions to many of these problems and our latest results. We have successfully used CWS to develop indices of competent performance for both individuals and teams in C-TEAM.

Time Slot: E (Poster Session)

21 **Danielle Timmermans**
Vrije Universiteit Amsterdam
Coauthors: Astrid van Mierlo, Joep Avezaat, Trees van der Maat, Barend Middelkoop

Poster: Self care versus the decision to seek professional help

Abstract: AIM: To evaluate the effect of providing information about minor ailments on patients' self care and their decision to consult a primary care physician. METHODS: A booklet with information about minor

ailments was given to patients by their physician. Patients were interviewed before they received this booklet, 2 weeks and 6 months later. 120 Turkish and 120 Dutch patients were interviewed. The questionnaires contained items about attitude and self-efficacy regarding self care and the decision when to seek professional help, self care behavior and several personal variables. Data will be analyzed using the Theory of Planned Behavior of Ajzen

Time Slot: E (Poster Session)

22 **Sandra van Dijk**
Universiteit van Amsterdam

Poster: Risk perception and informed decision making of women at risk for familial breastcancer.

Abstract: The current study has the purpose to comprehend risk perception and decision making in a real-life setting. Women with a family history of breast cancer who apply for genetic counseling at the family cancer clinic receive a questionnaire at 4 points in time covering a period of one year to assess the effects of personal riskinformation given during (several stages of) genetic counseling. We measure, among other variables, riskperception and screening behavior. The Melbourne Decision Making Questionnaire is administered as well. In addition, a subgroup of women with a high genetic risk, is invited for a semi- structured interview at three points in time to assess their personal riskappraisal, coping and illnessperceptions. We first conducted a pilot study in which 28 women participated. Remarkably, the objective risk to get breastcancer as given by the counselor was unrelated to the personal riskperception before counseling. Only women with a relative low objective risk changed their riskperception towards the risk given by the counselor. The objective riskinformation did affect intentions to undergo DNA-testing. Data collection started in November 1998. In June, we will start the first analyses of approximately 100 respondents. Results will be discussed at the presentation.

Time Slot: E (Poster Session)

23 **Daniel Västfjäll**
Göteborg University
Coauthors: Tommy Garling

Poster: Anticipated Emotional Outcomes of Decisions

Abstract: Some current theorizing emphasizes the role of emotional factors in decision making, either the influence of mood or the anticipation of emotional outcomes. We propose atheoretical account which attempts to integrate these factors. A point of departure is previous research on the taxonomy of emotional states suggesting at least the two Somecurrent theorizing emphasizes the role of emotional factors in decision making, either the influence of mood or the anticipation of emotional outcomes. We propose a theoreticalaccount which attempts to integrate these factors. A point of departure is previous research on the taxonomy of emotional states suggesting at least the two orthogonaldimensions pleasure and arousal. Assuming that anticipated emotions are similarly decomposed, how are these dimensions integrated when emotional outcomes are evaluatedon a single preference dimension? Extending the pleasure-arousal theory which accounts for preferences for emotional states, we assume that emotional evaluations ofanticipated pleasant outcomes increases with anticipated arousal whereas the reverse is true of anticipated unpleasant outcomes. Current mood is also assumed to determinethe relationship in two ways: (1) current positive mood and arousal are reference points for anticipated emotions; and (2) the relative weight placed on anticipated pleasantnessincreases with current arousal. Investigating these assumptions 40 undergraduates were first exposed to an aircraft sound, then a week later asked to rate their preference forthe emotional reactions anticipated from listening to the sound once again. Conventional self-report measures were obtained of mood as well as of both emotional reactionsand anticipated emotions.

Time Slot: E (Poster Session)

24 **Ina D. von Haeften**
University of Pennsylvania

Poster: THE GOLDEN CASCET PARADIGMA: WHEN ADDITIONAL INFORMATION IS GIVEN, DO PEOPLE DETECT THAT THEIR DECISIONS TURN OUT TO BE BAD?

Abstract: Two studies examined the factors underlying change of decisions. Multiattribute decomposition was used to measure subjective preferences and create alternatives based on the subjects'individual preferences. After a preliminary choice of a poor alternative in virtue of bounded information, subjects selected additional information. We investigated whether subjects could detect the optimal fitting alternative. In study 1, biased selectivity of information and elaboration of the preferential representation influenced decision change. Study 2 showed that decision change was facilitated by knowledge of the distribution of alternatives and handicapped by commitment to the primary choice.

Time Slot: E (Poster Session)

25 **David J. Weiss**
California State University, Los Angeles

Poster: Inferring Expertise from Judgments

Abstract: A common task calling for an expert is the appraisal each of a set of objects. But how do we determine whether someone is truly expert? In many settings of interest, outcomemeasures that confirm the expert's judgments do not exist. Information within a set of judgments can be used to evaluate putative experts. Whereas Einhorn (1972) argued that an expert must be reliable, we argue that an additionalcriterion is necessary. An expert must be able to discriminate among the stimuli within the domain. This criterion is adapted from Cochran's (1943) suggestion that an effectiveresponse instrument allows the subject to express perceived differences among the stimuli in a consistent way. We propose that similarly, an effective judge can consistentlyidentify differences among the objects. A candidate judge can be tested using the single-subject experimental design, which calls for the evaluation of each stimulus object several times. The F-ratio for stimuli, testedagainst within-cells error, incorporates both discrimination, in its numerator, and reliability, in its denominator. We propose to use this familiar statistic in a new way, as an indexof expertise. A large F-ratio implies a judge who can perceive differences among the stimuli reliably.

Time Slot: E (Poster Session)

26 **Guido Weisshahn**
Technische Universität Dresden

Poster: Factors influencing decisions in repeated choice problems

Abstract: This study focused on repeated menu choice decisions in a natural setting, a university canteen. In a first step, 30 students and assistants were interviewed about their preferences regarding meal components and menu choices. For every person, preference structures and a set of decision rules were derived. The next step consisted of 20 real meal choice situations recorded by the participants over the course of 6 weeks. Results from these choices were compared to predictions based on the preference structures. Three main factors influencing the choice behaviour are identified and discussed: problem-inherent, situational and decision-maker characteristics.

Time Slot: E (Poster Session)

27	**Helena Willen** University of Skövde, Sweden

Poster: The "Who am I? Who will I become?" Perspective in Personal Decision Making

Abstract: Little research interest has been devoted to the study of how people make major decisions about their personal lives. In this paper I will discuss context and cognitive factorsthat are characteristic of personal decision making as compared with traditional and naturalistic decision making, and also methodological issues that might differ from JDM andNDM practices, due to the private content of such decisions and the extension in time. In particular, I will argue for an increased interest in how the self-concept and alsopeople's search for meaning affect and are affected by the DM process, an issue that has not been considered within the framework of NDM or JDM. My reasoning is based on the results from three interview studies of the decision to have a child (1 study) and the decision to divorce (2 studies). Participants were 36 couplesand three singles. Data were collected between 1991 and 1995 and analysed using a qualitative, interpretative method. Results showed that the participants during the DMprocess deliberated aspects of their self-concept, such as the self in comparison with significant others, the relational self, self as reflected by others, and an independent self.Per ceived discrepancies between the independent self and other aspects of self functioned as an important driving force in the DM process.

Time Slot: E (Poster Session)

28	**Marcel Zeelenberg** Tilburg University, The Netherlands

Poster: The role of attributions in post-decisional affect

Abstract: We present 3 studies on attributions and affective reactions to outcomes. In Study 1 participants read a vignette in which two actors arrive at the same negative outcome, one is responsible, the other in not. The first is judged as feeling worse than the second. In Study 2 we focussed on the role of attributions in affect following action and inaction. The target in the vignette was a hypothetical other or the participant himself. This resulted, as predicted, in in the first case. Study 3 shows that more extreme affective reactions were correlated with more internal attributions.

Time Slot: E (Poster Session)

6. List of Participants SPUDM 17 Mannheim

Name	Address		Contrib. to: (C)=chair (D)=disc. (O)=organiz.
Abdolmohhamadi, Mohammed	Dept of Accountancy Bentley College 175 Forest St. Waltham, MA 02452	E-Mail: mabdolmo@bentley.edu Phone: 781-891-2976 Fax:781-891-2896	E
Abele, Susanne	University of Mannheim Faculty for Social Science, Microsociology and Social Psychology L 13, 17, 68131 Mannheim	E-Mail: susanne@pool.uni-mannheim.de Phone: 0621-1813483 Fax:0621-181-3451	D2
Arih, Lilijana	Faculty of business and economics Razlagova 14 2000 Maribor Slovenia	E-Mail: larih@uni-mb.si Phone: 386 62 /22 90 302 Fax:386 62 /210 461	
Asanov, Artyom A.	Institute for Systems Analysis Russian Academy of Sciences 9, pr. 60 let Octjabrja, 117312, Moscow, Russia	E-Mail: art@isa.ac.ru Phone: 7+(095) 135-8503 Fax:7+(095)938-2209	I4
Ayton, Peter	Psychology Dept. City University, London EC1V 0HB	E-Mail: P.Ayton@city.ac.uk Phone: (44) (171) 477 8524 Fax: (44) (171) 477 8581	A3(C) B2(D) G1(D) I1
Bar-Hillel, Maya	Dept. of Psychology The Hebrew University Jerusalem 91905 Israel	E-Mail: msmaya@math.huji.ac.il Phone: 972-2-5630742 Fax:972-2-6513681 (state: for Maya)	C2(C)
Barron, Greg	Haifa Israel	E-Mail: barron@tx.technion.ac.il Phone: Fax:	I4(C)
Bauer, Florian	Institut für Psychologie TU Darmstadt Steubenplatz 12 D-64293 Darmstadt	E-Mail: bauer@hrz1.hrz.tu-darmstadt.de Phone: 06151 163066 Fax:06151 164614	
Bearden, J. Neil	Department of Psychology The University of North Carolina at Chapel Hill	E-Mail: nbearden@email.unc.edu Phone: 919-967-6002 Fax:919-962-2537	C4
Benson, Lehman	Department of Management and Policy The University of Arizona Tucson, AZ ,USA	E-Mail: Lbenson@mail.bpa.arizona.edu Phone: (520) 621-4146 Fax:(520) 621-4171	I4
Bereby-Meyer, Yoella	Department of Education Ben-Gurion University of the Negev P.O.B 653 Beer-sheva 84105, Israel	E-Mail: Yoella@bgumail.bgu.ac.il Phone: 972-7-6461868 Fax:	H2
Berndsen, M.	Department of Social Psychology Universiteit van Amsterdam Roetersstraat 15 1018 WB Amsterdam,The Netherlands	E-Mail: sp_berndsen@macmail.psy.uva.nl Phone: +31 20 5256888 Fax:+31 20 6391896	
Betsch, Tilmann	Psychological Institute University of Heidelberg Hauptstr. 47-51 D-69117 Heidelberg	E-Mail: Tilmann_Betsch@psi-sv2.psi.uni-heidelberg.de Phone: 06221-547362 Fax:06221-547745	F2
Blais, Ann-Renee	Department of Psychology The Ohio State University 1885 Neil Ave Mall Columbus, OH 43210,	E-Mail: blais.8@osu.edu Phone: 614-292-9114 Fax:	D3
Bless, Herbert	LE Mikrosoziologie und Sozialpsychologie Universitaet Mannheim D-68131 Mannheim	E-Mail: hbless@sowi.uni-mannheim.de Phone: 0621-181-2007 Fax:0621-292-2872	C3 D4(C)
Boe, Ole	Department of Psychology Göteborg University Box 500 Se-40 530 Göteborg, Sweden	E-Mail: Ole.Boe@psy.gu.se Phone: +46 31 7734284 Fax:+46 31 773 4628	E

Böhm, Gisela	PH Ludwigsburg Postfach 220 71602 Ludwigsburg	E-Mail: boehm-gisela@ph-ludwigsburg.de Phone: 07141/140-685 Fax:07141/140-434	A1
Bohnet, Iris	Kennedy School of Government Harvard University 79 JFK Street Cambridge, MA02138, USA	E-Mail: Iris_Bohnet@Harvard.edu Phone: 001 617 495 5605 Fax:001 617 496 5747	I2
Bolger, Fergus	RIBES, Faculteit der Econ. Wetenschappen Erasmus Universiteit Rotterdam Postbus 1738 3000 DR Rotterdam, The Netherlands	E-Mail: bolger@few.eur.nl Phone: +31 010 408 8719 Fax:+31 010 452 6355	E F1
Bonetti, Shane	Dept of Economics University of St. Andrews Scotland	E-Mail: smb2@st-andrews.ac.uk Phone: 01334 46 24 36 Fax:01334 46 24 44	B3
Borcherding, Katrin	Institut für Psychologie TU Darmstadt Steubenplatz 12 D-64293 Darmstadt	E-Mail: borcherding@hrz1.hrz.tu-darmstadt.de Phone: 06151 165113 Fax:06151 164614	I2(C)
Bown, Nicola	2 St Johns Place Leeds, W York, UK, LS5 3LA	E-Mail: njb@lubs.leeds.ac.uk Phone: +44 (0)113 2334594 Fax: +44 (0) 113 2640	
Brachinger, Hans Wolfgang	Department of Quantitative Economics University of Fribourg Av. du Beauregard 13 CH-1700 Fribourg	E-Mail: hanswolfgang.brachinger@unifr.ch Phone: 0041-26-300 8274 Fax:0041-26-300 9781	D1 F3(C)
Brandstaetter, Eduard	Johannes Kepler University of Linz Dept. of Social and Economic Psychology Altenbergerstr. 69 A-4040 Linz, Austria	E-Mail: e.brandstaetter@jk.uni-linz.ac.at Phone: ++43 732 2468 578 Fax:++43 732 2468 9315	D2(C)
Brenner, Lyle A.	Dept. of Marketing Bryan 212 University of Florida PO Box 117155 Gainesville, FL 32611-7155	E-Mail: lbrenner@ufl.edu Phone: 352-392-0161 x1427 Fax:352-846-0457	B2(O) B2
Breton, Richard	Defence Research Establishment Valcartier 2459 Pie-XI blvd. North Val-bélair Québec, Canada G3J 1X5	E-Mail: richard.breton@drev.dnd.ca Phone: (418) 844-4000 (x.4753) Fax:(418) 844-4538	E
Broeder, Arndt	Psychologisches Institut der Universität Bonn Römerstr. 164 D-53117 Bonn	E-Mail: Arndt.Broeder@uni-bonn.de Phone: +49 (228) 73 4 208 Fax:+49 (228) 73 4 353	G1
Bruine de Bruin, Wandi	TU Eindhoven, Tema 0.01, PO Box 513, 5600 MB Eindhoven Netherlands	E-Mail: W.J.A.Bruine.de.Bruin@tm.tue.nl Phone: x31 40 247 2561 Fax:x31 40 244 9875	E H3
Brun, Wibecke	Dept. of psychosocial science University of Bergen N-5014 Bergen Norway	E-Mail: wibecke.brun@psych.uib.no Phone: 47 55 58 31 83 Fax:47 55 58 98 79	B1 B1(O)
Budescu, David	Department of Psychology University of Illinois 603 E Daniel st. Champaign IL 61820, U.S.A.	E-Mail: dbudescu@s.psych.uiuc.edu Phone: 217 333 6758 Fax:217 244 5876	G3(O) G3(D) H1
Butler, David John	Department of Economics University of Western Australia Nedlands WEA 6907	E-Mail: dbutler@ecel.uwa.edu.au Phone: 61 8 9 380 2893 Fax:61 8 9 380 1016	H4
Chapman, Gretchen	Psychology Department Rutgers University 152 Frelinghuysen Road Piscataway NJ 08854-8020, USA	E-Mail: gbc@rci.rutgers.edu Phone: 00111 (732) 445-2640 Fax:00111 (732) 445-2263	D1 G4
Charlton, John	Psychology Subject Group Bolton Institute Deane Rd. BOLTON BL3 5AB, UK	E-Mail: jc4@bolton.ac.uk Phone: +44 1204 528851 Fax:+44 1204 399074	
Connolly, Terry	MAP BPA University of Arizona Tucson, AZ 85721 USA	E-Mail: connolly@u.arizona.edu Phone: (520) 621-5937 Fax:(520) 621-4171	G2(D)

Covey, Judith	Department of Economics and Related Studies University of York YORK, YO10 5DD UK	E-Mail: jac16@york.ac.uk Phone: (+44)(0) 1904 434673 Fax:(+44) (0) 1904 433759	
Crott, Helmut	Psychologisches Institut, Albert-Ludwigs-Universität Freiburg Niemensstr. 10, 79098, Freiburg (Germany)	E-Mail: crott@psychologie.uni-freiburg.de Phone: 0761-203-2480 Fax: 0761-203-9271	D2
de Groot, Manon	Leeds University Business School University of Leeds 11 Blenheim Terrace Leeds LS2 9JT, UK	E-Mail: ecoimd@leeds.ac.uk Phone: 00 44 113 233 4649 Fax:00 44 113 233 2640	F1
Demirer, Güldem	Wittgensteinstr. 16 D-50931 Köln	E-Mail: g.demirer@uni-koeln.de Phone: 0221-4009006 Fax:--	
Dhami, Mandeep K.	Max-Planck-Institute for Humano Development Centre for Adaptive Behavior and Cognition Lentzeallee 94 14195 Berlin	E-Mail: dhami@mpib-berlin.mpg.de Phone: 030/82406-413 Fax:030/82406-394	B4(O) G1
Diederich, Adele	Universität Oldenburg Institut für Kognitionsforschung FB 5 A 6 D-26111 Oldenburg	E-Mail: diederich@psychologie.uni-oldenburg.de Phone: 0441 7985160 Fax:0441 7985170	I2
Drews, Frank A.	TU Berlin Franklinstr 5-7 D-10587 BERLIN	E-Mail: fdrews@psych.gp.tu-berlin.de Phone: 3031424670 Fax:	A2
Edwards, Ward	Wise Decisions, Inc. 11466 Laurelcrest Road Studio City, CA 91604 USA	E-Mail: wedwards@mizar.usc.edu Phone: 818-985-4094 Fax:818-763-8024	I3(C)
Eisenhauer, Markus	Justus-Liebig-Universitaet Giessen FB 06 Psychologie, Abt. Allgemeine Psychologie Otto-Behaghel-Str 10 F D-35394 Giessen	E-Mail: markus.eisenhauer@psychol.uni-giessen.de Phone: 0641 99 26 103 Fax:0641 99 26 119	F4
Eppel, Thomas	Decision Insights Inc. 2062 Business Center Drive, Suite 110 Irvine, CA 92612 USA	E-Mail: TomEppel@aol.com Phone: (949) 474-7303 Fax:(949) 474-7624	
Erev, Ido	Industrial Engineering Technion Haifa, 32000 Israel	E-Mail: erev@tx.technion.ac.il Phone: 972-4829-4418 Fax:972-48235-194	D4
Feuchter, Annette	Alfred-Jost-Str. 32 69124 Heidelberg	E-Mail: annette.feuchter@urz.uni-heidelberg.de Phone: 06221/780380 Fax:	
Fiedler, Klaus	Psychologisches Institut Universitaet Heidelberg Hauptstrasse 47-51 D-69117 Heidelberg, FRG	E-Mail: Klaus_Fiedler@psi-sv2.psi.uni-heidelberg.de Phone: 6221 547270 Fax: 6221 547745	C2
Fischer, Ilan	Department of Behavioral Science Ben Gurion University of the Negev Beer Sheva, ISRAEL 84105	E-Mail: ifischer@bgumail.bgu.ac.il Phone: 972-7-6472032 Fax:972-7-6472932	D2
Fox, Craig A.	Fuqua School of Business Duke University Box 90120 Durham, NC 27708, USA	E-Mail: cfox@mail.duke.edu Phone: 919-660-7833 Fax:919-681-6244	A2(C) C4
Fujii, Satohi	Transportation Systems analysis laboratory Kyoto University Yoshida, Sakyo, Kyoto, Japan, 606-8501	E-Mail: fujii@term.kuciv.kyoto-u.ac.jp Phone: +81-75-753-5136 Fax: +81-75-753-5916	
Funke, Joachim	Psychologisches Institut Universität Heidelberg Hauptstr. 47-51 D-69117 Heidelberg	E-Mail: joachim.funke@urz.uni-heidelberg.de Phone: 06221-54-7305 Fax:06221-54-7273	B4
Gärling, Tommy	Department of Psychology Göteborg University Box 500 Se-40 530 Göteborg, Sweden	E-Mail: Tommy.Garling@psy.gu.se Phone: +46 31 7731881 Fax:+46 31 773 4628	B1(D)

Gattig, Alexander	University of Groningen Grote Rozenstraat 31 9712 TG The Netherlands	E-Mail: a.gattig@ppsw.rug.nl Phone: 0031-50-3636201 Fax:0031-50-3636226	A4 E
Goldstein, Daniel	Max-Planck-Institut für Bildungsforschung Lentzeallee 94 D-14195 Berlin	E-Mail: goldstein@mpib-berlin.mpg.de Phone: +49 30 824 06 352 Fax:+49 30 824 06 394	G1
Güth, Werner	Humboldt-University, Inst. for Economic Theory III, Spandauer Str. 1, 10178 Berlin, Germany	E-Mail: gueth@wiwi.hu-berlin.de Phone: +49 (0)30 2093-5731 Fax:+49(0)30 2093-5704	Plenary
Haberstroh, Susanne	University of Mannheim SFB 504 L 13, 15 D-68131 Mannheim	E-Mail: Susanne_Haberstroh@psi-sv2.psi.uni-heidelberg.de Phone: 06221/ 54 73 80 Fax:06221/ 547 745	H2
Hands, David	MLB 3/7 pp2, BT Labs, Martlesham Ilcath, Ipswich, Suffolk, UK, IP5 3RE	E-Mail: david.2.hands@bt.com Phone: +44 1473 606518 Fax:+44 1473 644649	E
Hansmann, Ralf	Psychologie Department Universität Freiburg	E-Mail: hansmann@psychologie.uni-freiburg.de Phone: 0173/3043972 Fax:0761-203-9271	
Hardman, David	Department of Psychology London Guildhall University Calcutta House, Old Castle Street London E1 7NT, UK	E-Mail: dhardman@lgu.ac.uk Phone: +44 0171 320 1256 Fax:+44 0171 320 1236	C3
Harms, Sylvia	Swiss Federal Institute for Environmental Science and Technology (EAWAG) Überlandstr. 133 CH - 8600 Dübendorf	E-Mail: sharms@eawag.ch Phone: +41 21 6538563 Fax:+41 1 8235375	A1
Harries, Clare	Department of Psychology University College London Gower Street London, WC1E 6BT, UK	E-Mail: clare.harries@ucl.ac.uk Phone: 44 171 504 5389 Fax:44 171 436 4276	B4(O) B4 H1
Harvey, Nigel	Department of Psychology University College London Gower Street London WC1E 6BT, UK	E-Mail: n.harvey@ucl.ac.uk Phone: +44 71 504 5387 Fax:+44 71 436 4276	B4(D) G3(O) G3
Hertwig, Ralph	Max-Planck-Institut für Bildungsforschung Lentzeallee 94 D-14195 Berlin	E-Mail: hertwig@mpib-berlin.mpg.de Phone: 030-82406-354 Fax:030-82406-394	B3(O) B3
Herz, Thea	Universite Rene Descartes Laboratoire de Psychologie sociale 28, rue Serpente 75270 Paris, cedex 06, FRANCE	E-Mail: herz@ext.jussieu.fr Phone: (+33) 01 40 51 98 84 (personal: +33 01 45 50 43 97) Fax:(+33) 01 40 51 70 85	
Hodson, Christine	Psychology Subject Group Bolton Institute Deane Rd. BOLTON BL3 5AB, UK	E-Mail: ch4@bolton.ac.uk Phone: +44 1204 528851 Fax:+44 1204 399074	C1
Hoffmann, Christine	Psychologie Department Universität Freiburg	E-Mail: choffman@psychologie.uni-freiburg.de Phone: 0761-203-2480 Fax:0761-203-9271	
Hoffrage, Ulrich	Max-Planck-Institut für Bildungsforschung Lentzeallee 94 D-14195 Berlin	E-Mail: hoffrage@mpib-berlin.mpg.de Phone: 030-82406-273 Fax:030-82406-394	G1(O) H3
Hogarth, Robin M.	University of Chicago Arago 271 08007 Barcelona Spain	E-Mail: robin.hogarth@gsb.uchicago.edu Phone: 34 93 488 33 80 Fax:34 93 488 34 66	B3(D) D3(C)
Hönekopp, Johannes	Universität Münster	E-Mail: honekop@asterix.uni-muenster.de Phone: 0251/8339398 oder 82477 Fax:	
Igou, Eric	University of Mannheim SFB 504 L 13, 15 D-68131 Mannheim	E-Mail: eric@sfb504.uni-mannheim.de Phone: 0621 / 1813439 Fax:0621/1813451	I2

Jansen, Noortje	Roeterstraat 15 1018WB Amsterdam The Netherlands	E-Mail: pn_jansen@macmail.psy.uva.nl Phone: xx-20-5256837 Fax:xx-20-6391656	
Janssens, Cecile	Erasmus University Rotterdam dept. Medical Psychology and Psychotherapy, CF228 POBox 1738 3000 DR Rotterdam, the Netherlands	E-Mail: janssens@mpp.fgg.eur.nl Phone: +31-10-4087810 Fax:+31-10-4089420	
Jenkins, Jane	Department of Psychology, Harvard University, Cambridge MA 02138	E-Mail: jenkins@wjh.harvard.edu Phone: +1 617 495-9181 Fax:	G4(O) G4
Jonas, Eva	Ludwig-Maximilians-Universität Institut für Psychologie -Sozialpsychologie Leopoldstr. 13 D-80802 München	E-Mail: jonas@psy.uni-muenchen.de Phone: 089 - 2180 6313 Fax:089 - 2180 5238	F2
Jones, M. K.	Departement of Economics University of Newcastle upon Tyne Claremont Road, Newcastle NE1 7RV, UK	E-Mail: pe.jones@psy.vu.nl Phone: 020 675 0685 Fax:020 4448832	F2
Jones, P. E.	1e Jan v/d Heijdenstraat 33c 1072 TJ Amsterdam The Netherlands	E-Mail: m.k.jones@ncl.ac.uk Phone: 0191-2225114 Fax:	
Kaas, Klaus Peter	J.W. Goethe Universität Frankfurt Marketing-Lehrstuhl Mertonstr. 17 60054 Frankfurt a.M	E-Mail: kaas@marketing.uni-frankfurt.de Phone: 069/798-23435 Fax:069/798-23402	
Kameda, Tatsuya	Department of Behavioral Science Hokkaido University Bungakubu, N10 W7 Kita-ku Sapporo Japan 060-0810	E-Mail: tkameda@letters.hokudai.ac.jp Phone: +81-11-706-3042 Fax:+81-11-706-3066	G3
Karlsson, Niklas	Department of Psychology Göteborg University Box 500 Se-40 530 Göteborg, Sweden	E-Mail: Niklas.Karlsson@psy.gu.se Phone: +46 31 773 1938 Fax:+46 31 773 4628	E
Keeney, Ralph L.	Department of Information & Operations Management Marshall School of Business University of Southern California University Park, Los Angeles, CA 90089	E-Mail: keeneyr@aol.com Phone: 415-433-8338 Fax:415-434-0968	Plenary
Keller, L. Robin	Graduate School of Management 350 GSM University of California Irvine CA 92697-3125 ,USA	E-Mail: LRKeller@UCI.edu Phone: 949 824-6348 Fax:949 824-8469	A4 D1(C)
Keren, Gideon	Faculty of Technology Management Eindhoven University of Technology P.O. Box 513 5600 MB Eindhoven, The Netherlands	E-Mail: g.b.keren@tm.tue.nl Phone: 31-40-2472845 Fax:31-40-2449875	F4 G2
Kerstholt, Jose	TNO human factors research institute p.o.box 23 3769 ZG Soesterberg The Netherlands	E-Mail: kerstholt@tm.tno.nl Phone: +31 3463 56301 Fax:+31 3463 53977	Plenary (C)
Kobashi, Yasuaki	6-4-13-203, Kitami Tokyo-Setagayaku JAPAN postcode 157-0067	E-Mail: kobashi@computer.org Phone: +81-3-3417-7028 Fax:	
Koehler, Derek	Department of Psychology University of Waterloo Waterloo, Ontario N2L 3G1 CANADA	E-Mail: dkoehler@watarts.uwaterloo.ca Phone: (519) 885-1211 ext. 5013 Fax:(519) 746-8631	B2 C4(C)
Koele, Pieter	Faculty of Psychology University of Amsterdam Roetersstraat 15 1018 WB Amsterdam, The Netherlands.	E-Mail: ml_koele@macmail.psy.uva.nl Phone: (+)31.20.525.6881 Fax:(+)31.20.639.0026	B4 F4(C)
Krauss, Stefan	Max-Planck-Institut für Bildungsforschung; Lentzealle 94, 14195 Berlin	E-Mail: krauss@mpib-berlin.mpg.de Phone: tags: 030/82406416 privat: 030/61307905 Fax:030/8249939	

Kuehberger, Anton	Institute for Psychology University of Salzburg Hellbrunnerstr. 34 A-5020 Salzburg, Austria	E-Mail: anton.kuehberger@sbg.ac.at Phone: int. + 66280445112 Fax:int. + 66280445126	D4
Läger, Volker	Universität Bamberg Lehrstuhl f. Finanzwirtschaft Kirschäckerstraße 39 D-96045 Bamberg	E-Mail: volker.laeger@sowi.uni-bamberg.de Phone: 0951/863-2716 Fax:0951/863-5716	
Lages, Martin	Max-Planck-Institut für Bildungsforschung Lentzeallee 94 14195 Berlin	E-Mail: lages@mpib-berlin.mpg.de Phone: 030 82406 350 Fax:030 82406 394	H2
Lamers, Jesse	Hollandse Signaal Apparaten BV , Dept Applied Systems Research, PO Box 42, 7550 GD Hengelo, The Netherlands	E-Mail: lamers@signaal.nl Phone: Fax:	
Langer, Thomas	Universität Mannheim Lehrstuhl für Bankbetriebslehre L 5,2 68131 Mannheim	E-Mail: langer@bank.bwl.uni-mannheim.de Phone: +49 621 181 1541 Fax:+49 621 181 1534	
Laschke, Andreas	Graduiertenkolleg BWL/VWL Universität Mannheim L13,15 68131 Mannheim	E-Mail: alaschke@pool.uni-mannheim.de Phone: +49 621 181 3431 Fax:0621-181-3429	
Ley, Tobias	Institut für Psychologie Universität Darmstadt Steubenplatz 12 D 64293 Darmstadt	E-Mail: tobias@hrz1.hrz.tu-darmstadt.de Phone: 06151 163066 Fax:06151 164614	
Lipshitz, Raanan	University of Haifa, Israel	E-Mail: raanan@psy.haifa.ac.il Phone: 972-6-6390298 Fax:	B1(D) B1(O)
Martignon, Laura	Max Planck Institut für Bildungsforschung Lentzeallee 94, 14195 Berlin	E-Mail: martignon@mpib-berlin.mpg.de Phone: 82406-355 Fax:82406-394	C2
Maule, John	Leeds University Business School University of Leeds 11 Blenheim Terrace Leeds LS2 9JT, West Yorkshire, UK	E-Mail: jm@lubs.leeds.ac.uk Phone: (44)113 233 2622 Fax:(44) 113 233 2640	A1(C) B4(D) I4
McClelland, Alastair	Department of Psychology University College London Gower Street London WC1E 6BT ,UK	E-Mail: a.mclelland@ucl.ac.uk Phone: 0171 - 504 - 5384 Fax:0171 - 436 - 4276	I1
McKenzie, Craig R. M.	Department of Psychology, UC San Diego, La Jolla, CA 92093-0109, USA, Telephone: 619-534-8075, Fax: 619-534-7190	E-Mail: cmckenzie@ucsd.edu Phone: Fax:	E
McLennan, Jim	Swinburne Computer-Human Interaction Laboratory, Swinburne University of Technology	E-Mail: jmclennan@swin.edu.au Phone: 61 3 97381349 Fax:61 3 92145501	
Mehr, Astrid	Universität Bern Institut für Psychologie Muesmattstr. 45 CH-3000 Bern 9	E-Mail: astrid.mehr@psy.unibe.ch Phone: 0041-(0)31-631 40 39 Fax:0041-(0)31-631 82 12	
Meij, G.	TNO, Human Factors Institute, Kampweg 5, P.O. Box 23 3769 ZG SOESTERBERG, The Netherlands	E-Mail: meij@tm.tno.nl Phone: +31 346 356 303 Fax:+31 346 353 977	H1
Meyer, Joachim	Dept. of Industrial Engineering and Management Ben Gurion University of the Negev Beer Sheva 84105 Israel	E-Mail: joachim@bgumail.bgu.ac.il Phone: 972-7-6472216 Fax:972-7-6472958	
Molz, Guenter	Justus-Liebig-University Faculty of Psychology Otto-Behaghel-Str. 10F 35394 Giessen,	E-Mail: guenter.molz@psychol.uni-giessen.de Phone: Fax:	E
Montgomery, Henry	Dept. of Psychology University of Stockholm 10691 Stockholm	E-Mail: hmy@psychology.su.se Phone: 468163825 Fax:468159342	B1

Moog, Petra	Universität Köln	E-Mail: p.moog@uni-koeln.de Phone: 0221-210078 Fax:0221-210058	
Moran, Simone	School of Management Ben Gurion University Beer-Sheva Israel	E-Mail: adironi@netvision.net.il Phone: 972-7-6518679 Fax:972-7-6472868	A3
Mumpower, Jeryl L.	SBE/SES/DRMS Room 995 U.S. National Science Foundation 4201 Wilson Boulevard Arlington, VA 22230, USA	E-Mail: jmumpowe@nsf.gov Phone: 703-306-1757 Fax:703-306-0485	C1
Nau, Robert	Fuqua School of Business, Duke University Visiting in 1999 at: INSEAD, Boulevard de Constance 77305 Fontainebleau Cedex, FRANCE	E-Mail: robert.nau@duke.edu Phone: (33)1-6072-4479 Fax:(33)1-6074-6158	D1
Nehring, Klaus	Dept of Economics Univ of California Davis CA 95616 USA	E-Mail: kdnehring@ucdavis.edu Phone: (001)-(530)-752-3379 Fax:001-530-752-9382	
Oehler, Andeas	University of Bamberg Department of Finance D-96045 Bamberg	E-Mail: andreas.oehler@sowi.uni-bamberg.de Phone: +49 (0)951 863 2536 Fax:+49 (0)951 863 2538	A3 F1(C)
Omodei, Mary	School of Psychological Science, La Trobe University, Bundoora, Melbourne, Australia, 3083	E-Mail: m.omodei@latrobe.edu.au Phone: 61 3 94791747 Fax:61 3 94791956	B1 E I3
Orasanu, Judith	NASA-Ames Research Center Mail Stop 262-4 Moffett Field, CA 94035-1000 USA	E-Mail: jorasanu@mail.arc.nasa.gov Phone: 650-604-3404 Fax:650-604-3729	B1
Ortmann, Andreas	Center for Adaptive Behavior and Cognition Max-Planck-Institut fuer Bildungsforschung Lentzeallee 94 D-14195 Berlin	E-Mail: ortmann@mpib-berlin.mpg.de Phone: Fax:	B3(O) B3
Otten, Wilma	Dept. Medical Decision Making K6-R Leiden Medical University Center PO Box 9600 2300 RC, Leiden, The Nederlands	E-Mail: otten@surgery.azl.nl Phone: +31-71-526-4574 Fax:+31-71-526-6750	A2
Pijnenburg, Hubert M.	6524 PC Nijmegen the Nederlands	E-Mail: NPI_R&D@universal.nl Phone: 31 24 3243843 Fax:31 24 3243844	
Pohl, Rüdiger	FB 06 Psychology Justus-Liebig-University Giessen Otto-Behaghel-Str. 10 D-35394 Giessen	E-Mail: ruediger.pohl@psychol.uni-giessen.de Phone: 0651-99-26105 Fax:0651-99-26119	F4
Powell, Melanie	York, Y010 5AX United Kingdom	E-Mail: mp@lubs.leeds.ac.uk Phone: +44 (1904)613122 Fax:	
Rakow, Tim	Dept of Psychology University College London Gower Street London, WC1E 6BT, UK	E-Mail: t.rakow@ucl.ac.uk Phone: 0171 504 5938 Fax:0171 916 1989	E
Ranyard, Rob	Psychology Subject Group Bolton Institute Deane Rd. Bolton BLE 5AB, UK	E-Mail: rr1@bolton.ac.uk Phone: +44 1204 528851 Fax:+44 1204 399074	H2(C) I3
Ratner, Rebecca	The Kenan-Flagler Business School The University of North Carolina at Chapel Hill CB 3490, McColl Bldg. Chapel Hill, NC 27599-3490	E-Mail: ratnerr@bschool.unc.edu Phone: (919) 962-8215 Fax:(919) 962-7186	
Read, Daniel	Centre for Decision Research Leeds University Business School, 11 Blenheim Terrace, University of Leeds, Leeds, LS2 9J	E-Mail: dr@lubs.leeds.ac.uk Phone: +44 113 244 6847 Fax:	A4(C) C4 G4(O) G4
Reb, Jochen	Harbigstr. 14, 933 14055 Berlin Germany	E-Mail: jochenre@ww.tu-berlin.de Phone: 030-30305277 Fax:	

Renkewitz, Frank	Universität-GH Paderborn Fb 2 - Psychologie Warburger Str. 100 D-33098 Paderborn	E-Mail: renke@psycho.uni-paderborn.de Phone: 05251 / 602908 Fax:05251 / 603528	
Rieskamp, Jörg	Center for Adaptive Behavior and Cognition Max-Planck-Institut fuer Bildungsforschung Lentzeallee 94 D-14195 Berlin	E-Mail: rieskamp@mpib-berlin.mpg.de Phone: 030-824060 Fax:030-82406394	G1
Roelofsma, Peter H.M.P.	Leeds University Business School University of Leeds Blenheim Terrace Leeds LS2 9JT, UK	E-Mail: phmr@lubs.leeds.ac.uk Phone: 0113 233 2643 Fax:0113 233 2640	A4 G4(D)
Rönsch, Torsten	Institut für Allgemeine Psychologie und Methoden der Psychologie Technische Universität Dresden 01062 Dresden	E-Mail: roensch@rcs.urz.tu-dresden.de Phone: +49 351 463 6891 Fax:+49 351 463 7775	E
Rottenstreich, Yuval	University of Chicago Graduate School of Business 1101 East 58th Street Chicago, IL 6063, USA	E-Mail: yuval.rottenstreich@gsb.uchicago.edu Phone: 7737024833 Fax:7737020458	B2(O) B2
Ruder, Markus	Universität Mannheim Sonderforschungsbereich 504 L 13, 15 D-68131 Mannheim	E-Mail: ruder@sfb504.uni-mannheim.de Phone: 0621/1813484 Fax:0621/1813451	
Sapir, Luba	Ben Gurion University Beer-Sheva Israel	E-Mail: kris@cs.bgu.ac.il Phone: 972-7-6441883 Fax:972-7-6299103	
Schmeer, Stefanie	Dept. of Psychology University of Hertfordshire College Lane Hatfield Herts AL10 9AB, UK	E-Mail: S.Schmeer@herts.ac.uk Phone: 0044-1707-284627 Fax:0044-1707-285073	
Schubert, Renate	Institut für Wirtschaftsforschung ETH Zürich Weinbergstr. 35, ETH Zentrum CH-8092 Zürich	E-Mail: schubert@wif.reok.ethz.ch Phone: 0041-1-632 4717 Fax:0041-1-632 1042	D3 H3(C)
Schulz-Hardt, Stefan	Institut fuer Psychologie, -Sozialpsychologie-, Ludwigs-Maximilians-Universitaet Leopoldstrasse 13 D-80802 Muenchen	E-Mail: schulz-hardt@psy.uni-muenchen.de Phone: 0049-89-2180-3739 Fax:0049-89-2180-5238	A3
Schwarz, Stefan	University of Mannheim SFB 504 L 13, 15 D-68131 Mannheim	E-Mail: schwarz@sfb504.uni-mannheim.de Phone: 0621/1813443 Fax:0621/1813451	E
Sedlmeier, Peter	Universität-GH Paderborn FB 2/Psychologie D-33095 Paderborn	E-Mail: sedl@psycho.uni-paderborn.de Phone: 05251-602906 Fax:05251-603528	C2
Shanteau, James	Department of Psychology Bluemont Hall 492 Kansas State University Manhattan KS 66506, USA	E-Mail: shanteau@ksu.edu Phone: 785/532-0618 Fax:785/532-5401	H4(C) I3
Siebenmorgen, Niklas	Graduiertenkolleg BWL/VWL Universität Mannheim L13,15 68131 Mannheim	E-Mail: siebenmo@pool.uni-mannheim.de Phone: 0621/181-3424 Fax:0621-181-3429	G4
Skaner, Ylva	Älvsjö Schweden	E-Mail: ylva.skaner@usa.net Phone: +46-8-449 65 05 Fax:+46-8-58 58 53 05	
Smeesters, Dirk	Katholieke Universiteit Leuven Department T.E.W Naamsestraat 69 3000 Leuven, Belgium	E-Mail: dirk.smeesters@econ.kuleuven.ac.be Phone: 0032 16 32 69 43 Fax:0032 16 32 67 32	A1
Smith, Philip T.	University of Reading, Department of Psychology, 3 Earley Gate Whiteknights, PO Box 238, Reading RG6 6AL, UK	E-Mail: P.T.Smith@reading.ac.uk Phone: (0118) 931 8525 Fax:(0118) 931 6715	B4
Sokolowska, Joanna	Inst. of Psych. Polish Academy of Sciences Podlesna 61 01-673 Warsaw, Poland	E-Mail: joanna@atos.psychpan.waw.pl Phone: (48 22) 625 17 73 Fax:(48 22) 834 09 07	F3

Sorkin, Robert D.	Department of Psychology University of Florida PO Box 112250 Gainesville FL 32611-2250	E-Mail: sorkin@psych.ufl.edu Phone: 352 392 0601 X229 Fax:352 392 7985	E
South, Fiona	Dept of Psychology University College London Gower Street London, WC1E 6BT, UK	E-Mail: fiona.south@ucl.ac.uk Phone: 0171 504 5389 Fax:0171 436 4276	I1
Starmer, Chris	School of Economic and Social Studies University of East Anglia Norwich NR4 7TJ UK	E-Mail: c.starmer@uea.ac.uk Phone: ++ 44 1603 592899 Fax:++ 44 1603 250434	B3 H1(C)
Steglich, Christian	ICS / Vakgroep Sociologie, Grote Rozenstraat, 31 9712 TG Groningen, The Netherlands	E-Mail: c.e.g.steglich@ppsw.rug.nl Phone: +31-(0)50-363 62 97 Fax:+31-(0)50-636 62 26	E
Sterman, John	MIT Sloan School of Management E53-351 30 Wadsworth Street Cambridge, MA 02142	E-Mail: jsterman@mit.edu Phone: 617/253-1951 (voice) Fax:617/258-7579 (fax)	Plenary
Steul, Martina	J.W. Goethe Universität Frankfurt, Marketing-Lehrstuhl Mertonstr. 17 60054 Frankfurt a.M.	E-Mail: steul@marketing.uni-frankfurt.de Phone: 069/798-23434 Fax:069/798-23402	
Stocké, Volker	Sonderforschungsbereich 504 University of Mannheim L13,15 D-68131 Mannheim, Germany	E-Mail: vstocke@sowi.uni-mannheim.de Phone: (49)(0) 621-1813432 Fax:(49)(0) 621-1813451	D4
Svenson, Ola	Department of Psychology Stockholm University S-10691 Stockholm	E-Mail: osn@psychology.su.se Phone: +49 8 16 36 80 Fax:	F2(C)
Teigen, Karl Halvor	Department of Psychology University of Tromsø 9037 Tromsø Norway	E-Mail: karlht@psyk.uit.no Phone: +47 776 44355 Fax:+47 776 45291	H4
Thomas, Rickey P.	Department of Psychology Kansas State University Bluemont Hall 434 Manhattan, KS USA 66502	E-Mail: rickey@ksu.edu Phone: 785-776-8241 Fax:	E
Thunholm, Peter	15336 Jarna/Sweden	E-Mail: pe.th@telia.com Phone: +46 855171412 Fax:	
Timmermans, Danielle	Dept. of Social Medicine EMGO Vrije Universiteit Amsterdam Van der Boechorststraat 7 1081 BT Amsterdam, The Netherlands	E-Mail: DRM.Timmermans.EMGO@med.vu.nl Phone: +31.20.4448358 Fax:+31.20.4448387	C1(C) E H3
Tindale, R. Scott	Department of Psychology Loyola University Chicago 6525 N. Sheridan Rd. Chicago, IL 60626, USA	E-Mail: rtindal@luc.edu Phone: +1-773-508-3014 Fax:+1-773-508-8713	G3(D)
Tykocinski, Orit	Department of Behavioral Sciences Ben Gurion University Beer-Sheva Israel	E-Mail: oritt@bgumail.bgu.ac.il Phone: 972-7-6472087 Fax:	
Tyszka, Tadeusz	Insti´tute of Psychologie PAN 01-673 Warsaw Podlesna 61 Poland	E-Mail: Phone: Fax:	F3
Ulbrich, Susanne	Mensch-Umwelt-Beziehungen (MUB) ETH Zürich Haldenbachstr. 44, ETH Zentrum HAD CH-8092 Zürich, Switzerland	E-Mail: ulbrich@uns.umnw.ethz.ch Phone: +41 1 632 6321 Fax:+41 1 632 1029	
van der Pligt, Joop	Social Psychology University of Amsterdam Roetersstraat 15 1018 WB Amsterdam, The Netherlands	E-Mail: sp_pligt@macmail.psy.uva.nl Phone: +31 20 525 6890 Fax:+31 20 639 1890	Plenary (C)
van Dijk, Sandra	Borssenburgstraat 24 III 1078 VD Amsterdam The Netherlands	E-Mail: ww.van.dijk@psy.vu.nl Phone: (+31)204448730 Fax:(+31)204448921	E

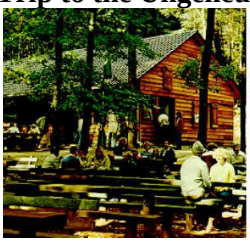
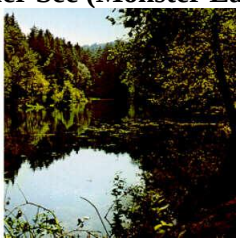
van Dijk, Wilco W.	Social Psychology Free University van der Boechorststraat 1 1081-BT Amsterdam, The Netherlands	E-Mail: dijk@surgery.azl.nl Phone: 020-6722303 Fax:	G2
van Haeften, Ina D.	Annenberg Public Policy Center, University of Pennsylvania, 4025 Chestnut Street, Philadelphia, PA 19104, USA	E-Mail: inhaeften@pobox.asc.upenn.edu Phone: 001(215)898 1607 Fax: 001(215)898 5906	E
van Osselaer, Stijn	University of Chicago	E-Mail: stijn.vanosselaer@gsb.uchicago.edu Phone: 1 773 834 2969 Fax:1 773 702 0158	
Västfjäll, Daniel	Department of Psychology Göteborg University Box 500 Se-40 530 Göteborg, Sweden	E-Mail: Daniel.Vastfjall@psy.gu.se Phone: +46 31 773 4270 Fax:+46 31 7734628	E
Villejoubert, Gaelle	University of Hertfordshire	E-Mail: g.villejoubert@herts.ac.uk Phone: 0044 1707 285250 Fax:	
von Winterfeldt, Detlof	University of Southern California, School of Urban Planning and Development 351 Von Kleinsmid Center Los Angeles, CA 90089-0042	E-Mail: detlof@aol.com Phone: (213) 743 4290 Fax:(213) 743 2476	
Wakker, Peter P.	Medical Decision Making Unit LUMC 1 K6-R P.O. Box 9600, Leiden RC The Netherlands	E-Mail: WAKKER@MDM.MEDFAC.leidenuniv.nl Phone: +31 71 526 4574 (office) Fax:+31 71 526 6750	Plenary
Wallsten, Thomas S.	Department of Psychology University of North Carolina Chapel Hill, NC 27599-3270 USA	E-Mail: tom.wallsten@unc.edu Phone: 1-919-962-2538 Fax:1-919-962-2537	B3(D) G3(O) G3 I1(C)
Warlop, Luk	Department T.E.W Naamsestraat 69 3000 Leuven Belgium	E-Mail: luk.warlop@econ.kuleuven.ac.be Phone: 0032 16 32 69 41 Fax:0032 16 32 67 32	
Wearing, Alexander J.	Department of Psychology University of Melbourne Parkville, Victoria 3052 Australia	E-Mail: ajw@ariel.its.unimelb.edu.au Phone: 61 3 9344-7038 Fax:61 3 9347-6618	
Weber, Elke	The Ohio State University, Department of Psychology, 142 Townshend Hall, 1885 Neil Avenue, Columbus, Ohio 43210-1222, USA	E-Mail: weber@bank.bwl.uni-mannheim.de Phone: +49 621 181 1532 Fax:+49 621 181 1534	C3(C) F3
Weber, Martin	Universität Mannheim Lehrstuhl für Bankbetriebslehre L 5,2 68131 Mannheim	E-Mail: weber.211@osu.edu Phone: +1 614-688-4081 Fax:+1 614-292-5601	Plenary (C)
Weiss, David J.	Department of Psychology California State University Los Angeles, CA 90032 United States	E-Mail: dweiss@calstatela.edu Phone: (626) 792-6638 Fax:(626) 792-6638	E
Weisshahn, Guido	Technische Universität Dresden Institut für Allgemeine Psychologie D-01062 Dresden Germany	E-Mail: guido@weisshahn.de Phone: +49 351 463 5927 Fax:+49 351 463 7775	E
Welkenhuysen, Myriam	Psychosocial Genetics Unit Center for Human Genetics Herestraat 49 3000 Leuven - Belgium	E-Mail: myriam.welkenhuysen@med.kuleuven.ac.be Phone: 32-16-34 58 74 Fax:32-16-34 60 44	C1
Willemsen, Martyn	Universtity of Technology Eindhoven Tema 001, P.O. Box 513 5600 MB, Eindhoven The Nederlands	E-Mail: m.c.willemsen@tue.nl Phone: +31 40 247256 Fax:+31 40 2449875	
Willén, Helena	Department of Health Sciences University of Skövde P.O. 408 S-541 28 Skövde, Sweden	E-Mail: helena.willen@ihv.his.se Phone: +46 500 431912 Fax:+46 500 435625	E

Williamson, Janis	Psychology Subject Group Bolton Institute Deane Rd. BOLTON BL3 5AB, UK	E-Mail: jw9@bolton.ac.uk Phone: +44 1204 528851 Fax:+44 1204 399074	F1
Witteman, Cilia	Psychological Laboratory Fac. of Social Sciences Utrecht University PO box 80.140 3508 TC Utrecht, The Netherlands	E-Mail: C.Witteman@fss.uu.nl Phone: -2534581 Fax:-2534510	C3
Wu, George	University of Chicago Graduate School of Business 1101 E. 58th Street Chicago IL 60637, USA	E-Mail: george.wu@gsb.uchicago.edu Phone: 773-834-0519 Fax:773-702-0458	Plenary (C)
Yamagishi, Kimihiko	School of Business and Environment Shukutoku University 1150-1 Fujikubo, Miyoshi Iruma Saitama 354, JAPAN	E-Mail: kimihiko@shukutoku.ac.jp Phone: +81-492-74-1511 Fax: +81-492-74-1525	A2
Yaniv, Ilan	Department of Psychology Hebrew University Jerusalem ISRAEL 91905	E-Mail: msilan@mscc.huji.ac.il Phone: 9722-588-3026 Fax:9722-588-1159	G3
Zakay, Dan	Departement of Psychology Tel-Aviv University Ramat Aviv 69973 Israel	E-Mail: dzakay@ccsg.tau.ac.il Phone: 97236409294 Fax:97236409547	B2
Zaleskiewicz, Tomasz	Insti´tute of Psychologie PAN 01-673 Warsaw Podlesna 61 Poland	E-Mail: Phone: Fax:	
Zeelenberg, Marcel	Department of Marketing Tilburg University PO Box 90153 5000-LE Tilburg ,The Netherlands	E-Mail: M.Zeelenberg@kub.nl Phone: +31 13 46682142 Fax:+31 13 4663043	E G2(O)

7. Social/Optional Program

Sun, 8.8.99, 13:00-17:00

Trip to the Ungeheuer See (Monster Lake), Palatinate (cost: 10 DM)

The monster lake is a drying up lake with an interesting protected flora. Its name has nothing do to with the legendary "Loch Ness" - the biggest monsters in our Monster Lake are frogs. Directly situated on the lake is a romantic cabin where hearty food and good wines are being served. Expect a beautiful two hour hike through the Palatinate Forest. Busses depart at 1 pm right in front of the Mannheim castle. We will be back in Mannheim at 5 pm.

Sun, 8.8.99, 18:00-20:00

Reception at the Wartburg Hotel Mannheim (at no extra cost for participants)

To welcome all participants to Mannheim and the SPUDM 17 conference a welcome reception will be held at the Wartburg Hotel Mannheim, F 4, 4 beginning at 6 pm.

Tue, 9.8.99, 17:45- ...

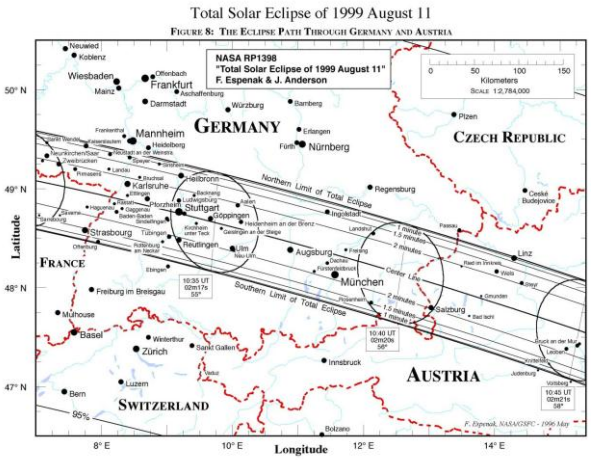
Trip to Heidelberg (at no extra cost for participants)

At 5.45 pm a tram will take you to Heidelberg, Germany´s far-famed university town charming with its romantic atmosphere, dominated by its huge castle. Heidelberg holds Germany´s oldest University, founded in 1386, where today more than 30.000 students study and live. Come and experience Heidelberg of today and tomorrow, in a setting that delights with the spirits of yesterday. We will have a guided city walk of about 1,5 hours, then you may choose a place for dinner in one of the numerous restaurants and pubs. Your ticket allows you to return to Mannheim at a time of your choice with a regular tram (**last tram leaves at 0.17 am**).

Wed, 10.8.99, ~ 12:30

Solar Eclipse (at no extra cost)

On Wednesday, 10.8.99, a solar eclipse can be observed. In Mannheim the eclipse starts at 11:12 and ends at 13:55. The eclipse will reach its maximum at 12:32:48, when 99,7% of the sun is covered (in Mannheim). Eclipse glasses are available in the conference office.



Wed, 11.8.99, 18:15

Conference Dinner at the Wachenburg, Weinheim (cost: 75 DM)

At 6:15 pm buses will pick up participants at the hotels (Wartburg and Delta Park only) and bring them to the Wachenburg in Weinheim. There is a fascinating panoramic view from Wachenburg.. We will be back in Mannheim around 11:30 pm.

8. Restaurants and Pubs in Mannheim

Goldene Gans Tattersallstr. 19
Phone: 105277
Palatinate Wine-Restaurant, Specialities from the Palatinate

Churrasco P3, 14
Phone: 21794
Steak and Salad

China Restaurant Huang Kung Q7, 23
Phone: 103339
Chinese Food, medium price range

Urfa K3, 1
Phone: 26231
Turkish Food, medium price range

Ketch Up B6, 12
Phone: 27245
Student pub, good food, moderate price range

Marché, Restaurant Mövenpick N1
Phone: 101050
upper range self service restaurant

Maredo P5, 9-10
Phone: 14201
Steak and Salad

Henninger's Gutsschänke T6, 28
Phone: 14912
Palatinate food and wine

Andechser N2, 10
Phone: 101618
Bavarian food

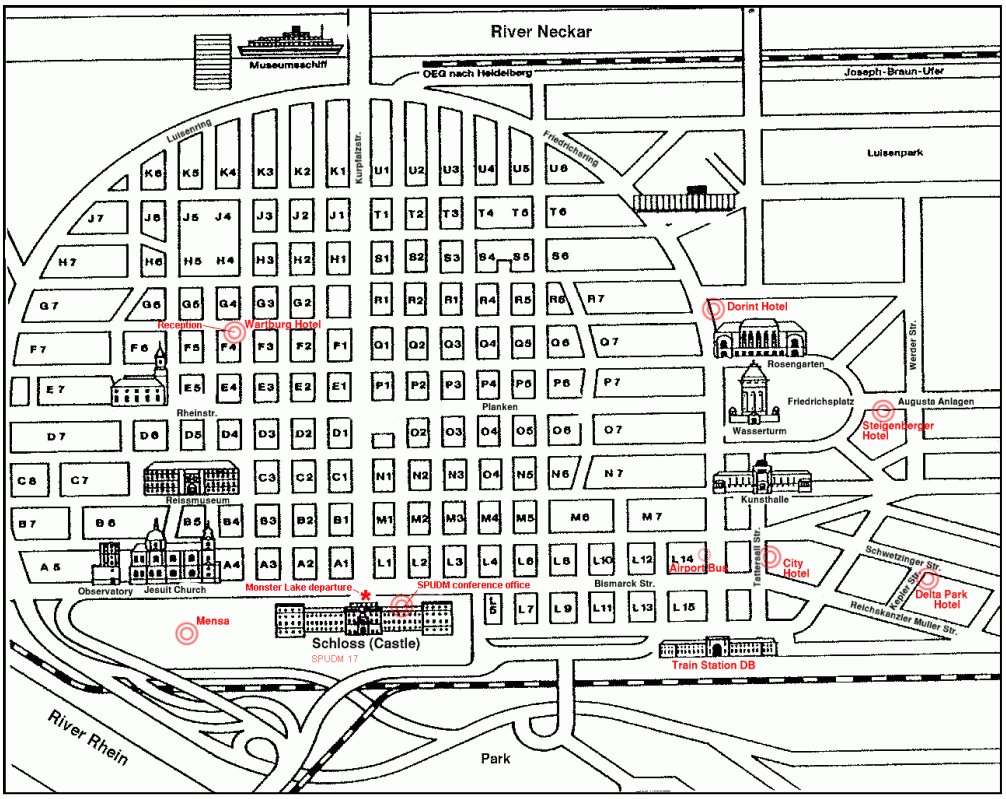
Flic Flac B2, 12
Phone: 22553
Student pub, good food, moderate price range

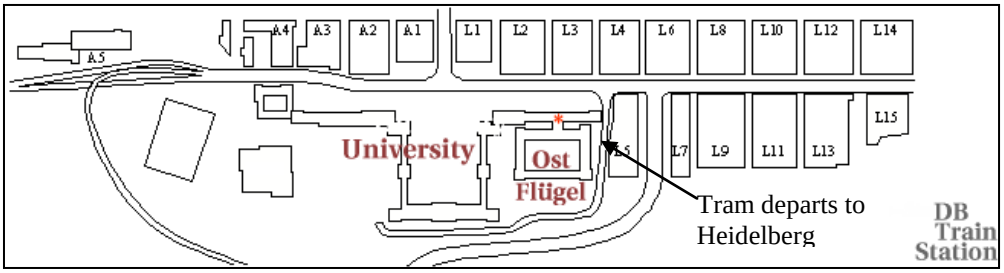
9. Email Access

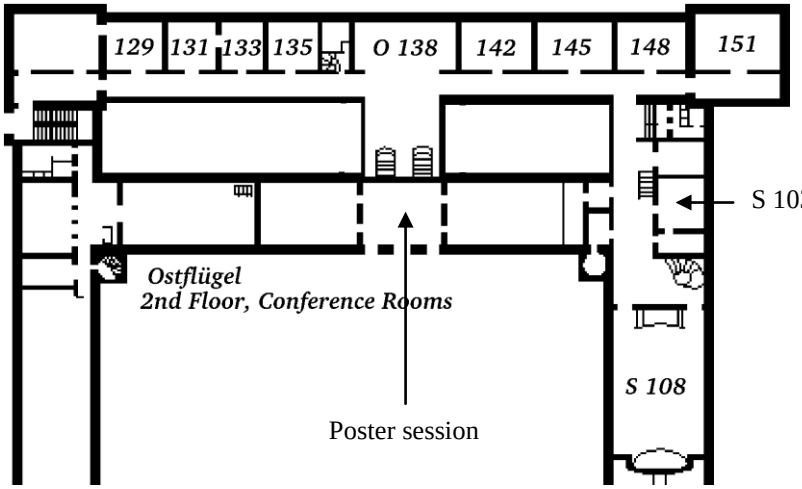
To check your email you may use the computer pool in room S 103. Your login name is **spudm99**, your password is **mannheim**. Computers run the operating system MSDOS 6.22/Win3.1. After the login you get a DOS prompt. To telnet to your computer at home enter e.g. telnet *your.machine.name.edu*. Your email address here is: **spudm99.wipool.wifo.uni-mannheim.de**. The pool will be open on Monday from 10:15 to 14:15, on Tuesday and Wednesday from 10:15 to 18:15.

When you chair a session you may use this page to indicate the number of minutes left.

10. Maps

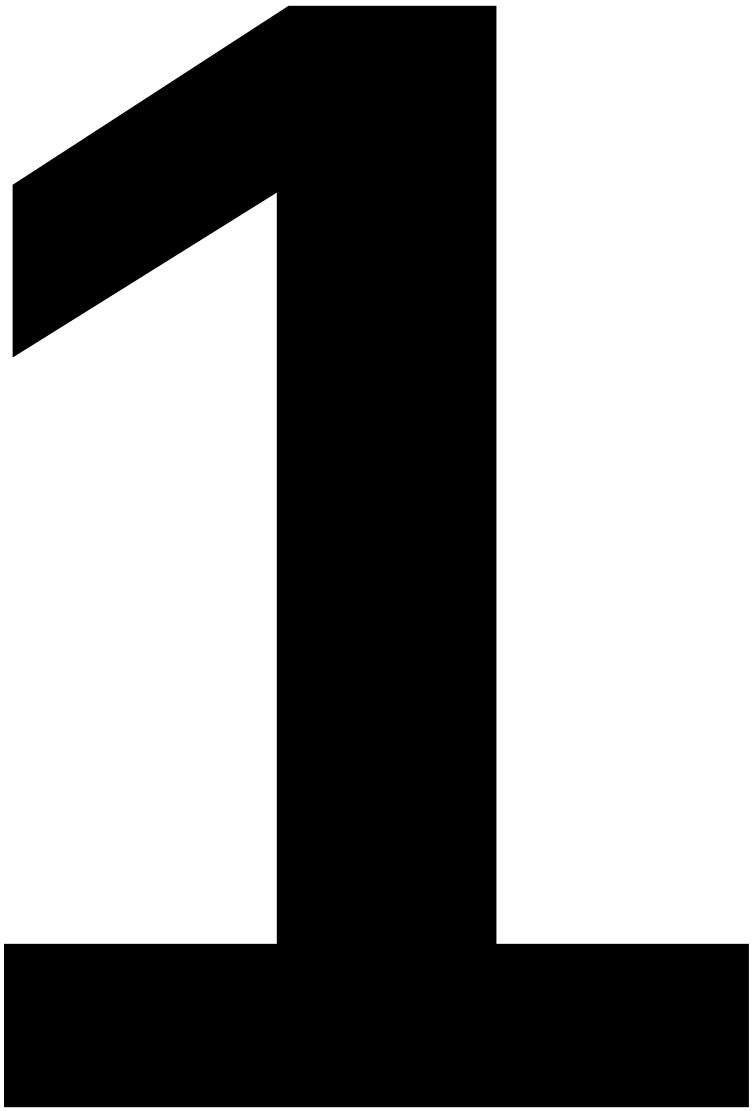






O 138 conference office
O 133 sessions A1, ...
O 135 sessions A2, ...
O 142 sessions A3, ...
O 145 sessions A4, ...

S 108 plenary sessions
S 103 computer pool



When you chair a session you may use this page to indicate the number of minutes left.