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Paper ID: 146

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Day of Session: MON AM

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Session Title: Preference and choice
**Imagery and affect in Swiss farmers: Climate change
mitigation decisions**

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Lay people's perspective of climate change can provide helpful information for the actual discussion about political actions to reduce greenhouse gas emissions and to deal with climate change consequences. As they are especially vulnerable by environmental changes, the view of people economically depending on natural resources is of particular interest in this context. The present study thus investigates farmers' risk perception and decision making concerning climate change issues. By employing a simple word association technique, the affective imagery method, it focuses on the role of imagery and affect within these processes. Affective images unify cognitive representations of and feelings of good or bad toward a certain stimulus. Results show that farmers mention all kind of observations as well as concern about climate change. Nevertheless, there is also a lot of skepticism because respondents do not believe in climate change or consider the whole thing as an exaggeration or a natural development. Agriculture-specific images are mentioned by only 1.9%, nearly as many respondents falsely bring ozone layer in relation to climate change. All associations but those in the categories "skepticism" and "agriculture" are linked with negative affect. This pattern results either due to reactance or to the fact that farmers also see benefits of a global warming, like "corn grows better". Next, images and affect will be set in relation to other constructs from the same survey.

Paper ID: 151
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Day of Session: MON AM
Time of Session: 11:30 - 13:30
Poster board number: 2

Session Title: Preference and choice
Influencing factors of the willingness to support climate policy measures

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Climate change is a rather complex issue and needs a more comprehensive analysis and theory driven research. Therefore we used several theoretical approaches to analyze the willingness to support climate policy measures. The goals of this study are a) to assess the perceptions regarding climate change; b) to identify influencing factors of the willingness to support certain political measures; and c) to test different theoretical approaches within the climate change context. To achieve these goals an online survey among all university members (students and staff of a Swiss university, about 267000 people) was conducted in November 2009. Data were analyzed by means of descriptive statistics and a behavior model including the influencing factors of the willingness to support certain policy measures was built using the Structural Equation Modeling (SEM) approach. SEM results show that Severity and Vulnerability had positive effects on the Problem Awareness ($b=.24$ and $b=.26$ respectively). Control Beliefs and Responsibility Attribution had also positive effects on Problem Awareness ($b=.30$ and $b=.38$ respectively). The explained variance in Problem Awareness is 82% and indicates the importance of the influencing variables. On the other hand, Problem Awareness influences the Willingness to Support Political Measures directly ($b=.40$). The model explained 16% of the variance in Willingness to Support.

Paper ID: 23
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Day of Session: MON AM
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Poster board number: 3

Session Title: Preference and choice
Advancing affective rationality: Judgment of social, economic and environmental harms and benefits in energy-related decision-making

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Public risk perceptions are critical components in the socio-political and economic-ecological context in which energy decisions take place. Previous studies have shown that risk perceptions of different energy technologies depend on how risk is defined, and on the dimensions perceived. In our study, we re-examine the commonly observed inverse relationship between perceived risk and benefit by distinguishing between social, economic and environmental dimensions in the energy context. Additionally, to reduce complexity, we replace 'risk' with 'harm' to identify public perceptions of negative outcomes for different energy options, regardless of the likelihood of harm actually occurring. Our research hypotheses are so far empirically tested in Germany on a full range of energy sources (fossil, renewable and nuclear) with 275 respondents from a leading university in natural resources and energy. Findings indicate that people significantly differentiate between perceived levels of harm and benefit posed by different energy options to the society, economy and environment. Furthermore, in addition to being confounded in people's minds, harm and benefit judgments appear to be moderated by gender. Our study utilizes the concept of affective rationality to better understand affect-loaded judgments and decision-behaviors in the energy context.

Paper ID: 179
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Day of Session: MON AM
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Poster board number: 4

Session Title: Preference and choice
Measuring social value orientation

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Narrow self interest is often used as a simplifying assumption when studying human decision making behavior in social contexts. However, people exhibit a wide range of different motivations when choosing among interdependent outcomes. Measuring the magnitude of the concern for others, sometimes called Social Value Orientation (SVO), has been in the focus of social scientists for decades and several different measurement methods have been developed thus far. We introduce a new measure of SVO, which we refer to as the Slider Measure, that has several advantages over existent methods. A detailed description of the new measure is provided, along with norming data that provides evidence of its solid psychometric properties.

Paper ID: 270
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Poster board number: 5

Session Title: Preference and choice
The excess choice effect for volunteer recruitment

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Volunteering is beneficial to individuals in terms of greater well-being and life satisfaction (Meier and Stutzer, 2008; Borgonovi, 2008) and to society in terms of greater service provision at little cost (NCSR, 2007). However, the number of voluntary organisations in the UK is vast (>164,000) and rising (The Cabinet Office, 2008). Focussing on volunteering recruitment, we demonstrate the existence of the too-much-choice effect when choosing a volunteering organisation from extensive choice sets across two studies. Study 1: 52 student participants interested in starting volunteering were directed to the Volunteering England website (containing 115 organisations) and their experiences recorded. In general they found the decision difficult, wanted more structure and crucially the more organisations individuals looked at the greater their deferment likelihood. Importantly, this relationship was significantly mediated by negative mood. Study 2: 134 participants were asked to select an organisation to volunteer for from a choice set of 10 or 30 hypothetical organisations (to counter prior preferences) with an option to defer. Replicating Study 1, participants again were more likely to defer in the larger choice set and again this was mediated by negative mood. The findings suggest that the number of volunteering organisations from which a potential volunteer must choose poses a potential barrier to the recruitment of volunteers. This highlights the needs for various choice architectures such as structure and guidance to facilitate volunteering decisions.

Paper ID: 329
Type: poster
Day of Session: MON AM
Time of Session: 11:30 - 13:30
Poster board number: 6

Session Title: Preference and choice
Whom would you hire? Differences in expert-novice decision-making strategies

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Previous research demonstrated that experts use more often a limited set of relevant cues to make their decision (i.e., non-compensatory strategy) whereas novice tends to use systematic strategies (i.e., compensatory strategy). We tested the generalisability of these results in a personnel selection context with a sample of students as novices and experienced recruiters as experts. Strategies were traced based on participant's decision in four subsequent hiring decision trials designed individually and by self reported judgments. Results showed that contrary to prevailing views, both experts and novices used more the WADD compensatory strategy and that experts used it more often than novices. Furthermore, to make their decision, experts allocated more importance to cues predicting future performance than novices. The controversial nature of the results on strategies preference put into question the established view on decision making strategies of novices and experts and casts a new light on decision making in personnel selection. Possible explanations and implications for these results are discussed.

Paper ID: 88
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Time of Session: 11:30 - 13:30
Poster board number: 7

Session Title: Preference and choice
Dishonestly increasing the likelihood of winning

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To avoid losses people would lie more than to secure gains (Kern & Chugh, 2009). However, people are also motivated to create as many opportunities for positive outcomes (Payne, 2005). That is, when distributing money between gambles with equal probabilities of being selected, people often invest in modifying negative gambles into positive ones. Here I studied people's investment decisions when it was more (vs. less) likely to (dis)honestly turn losing options into winning ones. Students allocated 20 points into one of three pots with equal probability of being selected to determine pay. Points were added by choosing a pot and predicting 20 coin tosses with every correct prediction adding a point. Critically, predictions were either typed or only kept in mind before reporting if they were correct. The latter procedure allowed over-reporting correct predictions. Participants chose between adding points to a pot with 38, -30, or -6 [vs. -12] points. The last pot was thus likely [vs. unlikely] to move from being negative to being positive (Neg-to-Pos). Choosing the Neg-to-Pos pot, and predicting well enough would increase the probability that the randomly selected pot would yield positive outcome (from 1-in-3 to 2-in-3 pots). Results show that when participants could not lie, they were less likely to add points to the Neg-to-Pos pot when their likelihood of turning it to a positive outcome was low compared to when it was high. However, when participants could lie, they chose to add points to the Neg-to-Pos pot regardless of whether the likelihood to (honestly) turn it to a positive outcome was low or high. This suggests that the ability to dishonestly influence one's outcomes increases people's likelihood to attempt turning their potential losing hands into winning ones.

Paper ID: 310
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Day of Session: MON AM
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Poster board number: 8

Session Title: Preference and choice
Visualization cognitive style, numeracy and decision Making

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In this poster we consider the importance of Visualization Preference, its potential relationship to Numeracy and the implications it may have for decision making and Marketing. Research has identified visualization preference as a cognitive style characterized by two components: object and spatial visualization (Blazhenkova & Kozhevnikov, 2009). Object visualization is a mental representation richly elaborated, detailed, vivid and holistic. Spatial visualization is characterized by the breaking down in parts of an image, schematic representation, and elaboration on the spatial relationships between the different parts of an image. Though inconclusive, literature suggests that preference for visualization might affect mathematical performance (Hegarty and Kozhevnikov, 1999), a basic component of numeracy. Numeracy, the basic understanding of mathematical concepts needed to function in daily life, is important for consumers (Withnall, 1995), as high numerates have more precise feelings towards a problem involving a numerical calculation (Peters et al. 2006). This is the first study arguing that numbers may inform cognition (System 2), and affect (System 1). Despite the importance of numeracy in consumption situations, the marketing literature has devoted scant attention to the topic, with most studies carried out in the area of medical decision making (see Dieckmann, 2008 for a review). The marketing literature recognizes that matching consumers' cognitive style and format of information presentation 'generates more positive attitudes towards a brand, purchase intention, and brand choice' (Ruiz & Sicilia, 2004, p. 657).

We therefore propose to investigate the links between Visualization Style, Numeracy and integrate the findings in the Marketing literature.

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Session Title: Preference and choice
The mechanism of fast value integration

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When dealing with novel choice alternatives, the cognitive system must integrate information about the features of these alternatives. A central question in decision making research is how such 'value integration' occurs. Insights into this process may be gained by considering value-integration in simplified contexts where many instances of values on the same dimension are presented sequentially. Here we used fast (250 or 500 ms per item) sequences of numerical values (described as 'the returns of market-stocks'), in order to examine the mechanism of value integration. At the end of each sequence, the participants had to select the sequence with the highest mean value. The main questions of interest were the dependence of the evaluation accuracy on sequence length (the integration bound), and the temporal profile with which decision-makers weight the values (recency vs. primacy). The results demonstrate a significant range of integration (accuracy improved, even in the range of 12-24 items per stock) and a significant recency. The data are well accounted by a simple mechanism based on leaky-integration, and they rule out a number of alternative mechanisms, such as decision on the basis of the maximal values (of each sequence), or of a few samples of items maintained in working-memory.

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Session Title: Preference and choice
The influence of cognitive control on decision making as a function of task goals

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Although previous research shows a relation between cognitive control and decision making, the mechanisms by which cognitive control facilitates decision making are not fully clear yet. We investigated the influence of cognitive control on decision making as a function of task goals. In three studies we tested the hypothesis that individual differences in cognitive control predict goal attainment in decision tasks. In all studies we measured individual differences in cognitive control. Subsequently, participants performed several rounds of an adjusted version of the beads-in-a-jar task, an abstract decision making task in which beads have to be requested in order to make a correct decision. Requesting more beads per round results in a greater likelihood of accurate decisions, but entails fewer rounds to earn points in the task. We employed this task with different instructions. In Study 1, participants were instructed to be accurate. Participants with high (versus low) levels of cognitive control showed more accuracy: they requested more beads per round and made fewer incorrect decisions in total. In Study 2, participants were instructed to be efficient. Now, high (versus low) levels of cognitive control were found to be related to requesting fewer beads per round and more correct decisions in total. Study 3 replicated the results from the previous studies with both task instructions (accuracy versus efficiency) included as a between-subjects factor. The three studies show that cognitive control leads to strategies and outcomes in line with a task goal. Furthermore, we found that especially the cognitive control component updating is involved in the findings. The results are a first step into getting insight into the mechanisms by which cognitive control facilitates decision making.

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Session Title: Preference and choice
Physical effort and outcome valence

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An action entails a cost in terms of effort and its outcome. Effort may discount the value of the chosen action, but it is less clear whether the representation of effort is modulated by the valence of its outcome (of bringing about positive outcome or avoiding negative outcome). While expending effort may reflect an act of overcoming cost to obtain a positive outcome such as reward, an organism may learn to perform an effortful act which allows it to escape a negative outcome such as punishment. Previous research has examined the former, but less so with the latter. One recent finding highlights the opponency between (non-effortful) actions which reap rewards and those which avoid punishment. For example, an approach action could have an intrinsic association with positive outcomes. Consequently, learning to approach where it yields a positive outcome could be faster than learning the same motor action in which the action obviates a negative outcome. To investigate the effect of outcome valence on learning about physically effortful actions, we ran a learning task where participants had to either squeeze a handgrip or let go their grip to either obtain reward or avoid loss (N = 19). We developed a modified reinforcement learning model which highlights the role of pavlovian influence of outcome in boosting and suppressing learning of effortful actions. Using fMRI (N= 20), we also recorded activity in the striatum while participants performed a modified version of the task and tested if activity associated with effort deployment is modulated by outcome valence.

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Session Title: Preference and choice

When no choice is better than some choice: The case of negative outcomes

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Research into the excess-choice effect generally considers satisfaction with active choices from few vs. many options. In two chocolate 'taste-test' studies we examined whether offering default options in large choice sets might attenuate the effect. A yoked stimulus design meant that the chocolate presented first in the default condition was identical to that chosen by the preceding participant under active choice. A similarly yoked control condition only exposed to this chocolate allowed us to test whether having the chance to choose an alternative but not exercising it, i.e. sticking with the default, influenced satisfaction. In Study 1, participants sampled a 'luxury' chocolate and 90% in the default condition stuck with the default. There was no significant difference in satisfaction, regret or counterfactuals between default stickers, switchers or active choosers. Nevertheless, all were significantly more satisfied than controls. The key comparison between default stickers and controls suggests that merely having the possibility to choose but not exercising it significantly improved satisfaction. Study 2 used the same paradigm but with relatively unpleasant chocolates. Again 89% of those in the default condition stuck and again there was no difference for satisfaction between active, default stickers and default switchers. This time satisfaction among control participants was significantly higher than in all other groups. Thus merely having the potential for choice but not acting on it decreased satisfaction when the outcome was relatively negative, an effect significantly mediated by regret. Results are considered in relation to the growing excess-choice effect literature and accentuation theory.

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Session Title: Preference and choice

KAIROS? About the right time to decide: A self evaluation test of individual decision making behavior

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The author is discussing the power and influence of environmental conditions versus personal behavior on decision making processes. Based on theoretical studies and on field research (individual patterns of decision making behavior of managers in assessment situations), he has developed an attitude scale, identifying individual and behavioral decision making habits and their interrelationships. Eight decision modes are defined, characterized as being mainly: Energetic, Pragmatic, Solicitous, Flexible, Intuitive, Communicative, Autonomous, Balanced. Each decision mode is represented by 28 items (descriptions of behavior); each decision mode is opposed to each other decision mode (represented by its items) four times in randomized form, and a total of 112 choices have to be made. Up to now the scale is based on the statistics (percentiles, correlations between decision modes etc.) of 1.100 individuals (German version). Average reliability correlations (between first and second version) between 0,70 and 0,87. Construct validity studies show plausible results with MBTI, NEO-PI-R and GZTS in the relevant dimensions. There is a German and English version of the Attitude Scale.

Paper ID: 308
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Session Title: Preference and choice
Vaccination decisions and violations of the principle of invariance

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Vaccines are not very popular, especially when they are not the status quo, despite their value in reducing the likelihood of infections or the severity of diseases. The low vaccination compliance can be demonstrated in the vaccination coverage for Influenza last winter (2009) in the U.S.: according to the NHIS (National Health Interview Survey), only 19.7% of the healthy adults age 19-49 vaccinated against Influenza, and 34.2% of adults age 50-64 years. A possible explanation for the low vaccination compliance is that vaccination is perceived as exposing the individual to a certain or almost certain risk of experiencing side effects. In contrast, the exposure to the disease is perceived as probabilistic and therefore more avoidable. However, many viruses are airborne, making the risk of exposure very high, if not certain, but not all people develop symptoms. Raising people's awareness of this distinction may increase their willingness to be vaccinated. With this in mind, we conducted an experiment which included two conditions of exposure to the disease - certain vs. uncertain exposure- while keeping the probability of being sick constant. We hypothesized that the willingness to be vaccinated will be higher when exposure is certain. In both conditions, participants were also asked to estimate how likely they are to develop symptoms if they do not get a vaccine. When exposure to the disease was certain, most participants (74%) said they would get a vaccine, compared to 51% under uncertain exposure. The willingness to be vaccinated was predicted by the level of exposure and participants' estimates of developing symptoms in case of non-vaccination. Our study suggests that part of the low willingness to be vaccinated may be due to violations of the principle of invariance.

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Poster board number: 15

Session Title: Preference and choice
More choice is not necessarily more variety: An experiment with prescription drug plans

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Aim: This study develops and tests a conceptual framework that accounts for the number of alternatives in the choice set and the range of variety that the alternatives in the set offer a consumer. We test our hypotheses with a hypothetical study that closely resembles enrollment into Medicare Part D prescription drug plans, a recent and important US health care policy aimed at older adults. **Method:** Participants were randomized to a level of variety (high, low) and number of drug plans (2, 5, 10, or 16) and shown a choice of drug plans that reflected this randomization. After choosing amongst the drug plans, respondents were asked a set of questions about their choice. Here they were asked to assess the benefits, costs, and net benefits of their chosen plan. In our empirical work, we test whether the benefits, costs, and net benefits varied in the low and high variety choice sets, both overall and when we controlled for the number of options in the choice set. **Results:** The mean benefit for a chosen plan in the low variety condition is significantly lower than the mean benefit in the high variety condition. Furthermore, our results show that the benefits in the high variety condition show a significantly different distribution across choice set size, while they do not for those in the low variety condition. We find less differences for costs and net benefit between the two different conditions. **Conclusion:** The study lends support to the addition of a variable that accounts for the variety of the choice set, in addition to the number of alternatives. There are also important implications for how a consumer perceives variety, in general as well as in our specific context.

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Session Title: Preference and choice

Expanded access to free prescription drugs and its impact on social welfare. The case of cholesterol-lowering agents in Italy.

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This paper intends to provide an evidence based contribution to the policy decision to expand publicly funded access to prescription drugs and its impact on social welfare, defined as the governmental provision of economic assistance to persons in need. The scenario is the Italian National Health System (SSN) in January 2004: the existing prescribing limitations on statins (cholesterol-lowering agents) were relaxed and only a marginal prescription fee was applied, similarly to any other fully reimbursed medicine. Prescribing information on a cohort of 3,175,691 Italian residents was analysed in the study, during a two year period (from January 2004 to December 2005). According to published Italian data, prior to the decision to expand access to statins the percent of treated patients persistent to treatment was in the range of 50 to 60 percent. The objective of the study was to measure the percent of new patients persistent and compliant to statins twelve month after initiating treatment. During the observation period, only 7% of the 33,139 patients enrolled were persistent and 6% compliant (84% of compliant subjects were also persistent). The total incremental cost sustained by the Italian SSN for the cholesterol lowering treatment of the new patients observed in the study amounted to 4.77 million. Approximately 20% of the total incremental cost was used by persistent and compliant patients, while the remaining 80% was wasted in financing a sub-optimal, clinically inefficient, sporadic use of statins. Expanded access to prescription drugs minimised the impact of income on patients' choices, but it raised additional issues in terms of efficient allocation of public budget, such as rational prescribing and coverage subject to persistence and compliance to therapy.

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Session Title: Preference and choice

Girls' versus parents' preferences for HPV vaccination: A discrete choice experiment

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Aim: This study compares girls' and parents' preferences for Human Papillomavirus (HPV) vaccination characteristics, and assesses how these characteristics relate to their uptake intentions. **Method:** A discrete choice experiment (DCE) was conducted in the Netherlands among a sample of girls aged 11-16 years and among another sample of parents with a daughter aged 10-12 years. Questionnaires containing DCE choice sets were administered between March and June 2009. Choice sets consisted of different levels of four characteristics: degree of protection against cervical cancer, duration of protection, risk of serious side-effects, and age at which vaccination is given. Respondents had to choose between two hypothetical HPV vaccination scenarios and an opt-out scenario. A multinomial logit regression model was used to analyze the results. **Results:** Response rates were 325/359 (91%) for girls and 307/983 (31%) for parents. Results showed that all vaccine characteristics, as described in the choice sets, influenced girls' and parents' preferences for HPV vaccination ($p < 0.05$). Parents had a more positive attitude towards getting a HPV vaccination at a later age ($p < 0.01$) and evaluated the risk of serious side-effects more negatively than girls did ($p < 0.01$). **Conclusions:** This study showed that parents and even girls were able to make trade-offs reading numerical rates. Overall parents' and girls' preferences for HPV vaccination were similar. However, girls evaluated serious side-effects less negatively than parents. Parents favoured vaccination at a later age than girls did, possibly because parents underestimate their daughter's age of sexual initiation. Awareness in parents (and girls) that vaccination is less useful after infection with HPV is essential.

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Session Title: Preference and choice

Identifying components of decision aid interventions that enable informed decision making about dialysis modality

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Patient decision aids (pDAs) are complex interventions with several component parts designed to help patients make an informed decision between two or more medically reasonable options (Bekker et al., 1999; Bekker, 2010; O'Connor et al, 2009). However, there is a paucity of evidence to indicate which component parts are the active ingredients that help people make decisions (Feldman-Stewart et al., 2004; Bekker, 2010; Fagerlin, 2009). This research investigated the added values of three aspects of pDAs over and above the provision of evidence-based information on people's decision making processes and outcomes. These studies are part of a project evaluating the Yorkshire Dialysis Decision Aid (YoDDA). In Study 1 we investigated how best to structure details about dialysis treatment options (comparing information structured by-option vs. by attribute and even vs. un-even categorization of options). In Study 2 we compared the effect of different values clarification (VC) techniques (no VC, implicit VC, explicit ratings of values, and explicit global evaluations). The effect of a decision narrative describing the decision making process only or including also the decision by the narrator was tested in Study 3. We measured: information used during decision making; treatment choice; decision quality; knowledge; values; perception of risk; acceptability of resource. Preliminary findings indicate the resource was easy to understand but data analysis is not yet complete. The information content of patient resources can be structured in a way that encourages patients' active engagement with the treatment details and reduces the likelihood of biasing their final representation of the decision problem. Appropriate VC techniques can help patients' decision making.

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Session Title: Preference and choice

Influence of causal beliefs on judgment and decision making in medical and financial domain

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People encounter a variety of problems in a wide range of domains that require adaptive, content-specific solutions. In two experiments, we examined the influence of domain-specific causal beliefs on judgment and decision making. Participants made 120 decisions in a two-alternative forced-choice task framed either within medical or financial domain. Before each decision, participants could actively search for information about four cues. Two cues generated the outcome and the other two had a preventative relation to the outcome. One generative and one preventive cue had high, remaining cues had low validity for predicting the outcome. To examine the strength of domain-specific causal beliefs, we manipulated empirical evidence by switching the validities of cues after half of the trials. Results revealed a substantial influence of causal beliefs in decisions and judgments as a function of the domain: While participants strongly relied on their initial causal beliefs when making causal judgments and decisions in the medical domain, they adapted to the empirical evidence in the financial domain. We conclude that the strength of causal beliefs is shaped by domain-specific knowledge and that it influences the degree empirical evidence is taken into account in judgments and decision-making.

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Session Title: Preference and choice

The effect of financial literacy and emotions on intent to control personal budget: A study among Israeli college students

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Financial literacy skills enable individuals to make informed decisions about their money and minimize their chances of being misled on financial matters. Yet previous studies show that the level of financial literacy among young people in developed countries is low. The current study's objectives were (a) to examine financial literacy (FL) among Israeli college students, (b) to examine gaps in FL between Jews and Arabs, (c) to analyze the factors affecting students' FL, (d) to analyze the factors affecting intent to control personal budget without debt. A financial literacy survey was distributed in March 2010 among 574 students from two colleges in Israel. The mean percentage of correct answers to the survey was below 50%, indicating a low level of financial knowledge. In addition, the results reveal large gaps in FL between Jews and Arabs. Regression analysis results showed that students with a higher level of financial knowledge were more likely to be studying economics and business administration, be male and Jewish, have more work experience and be further along in their studies. Analysis of the second model showed the following factors to positively affect intent to control personal budget without debt: higher level of financial literacy, higher level of positive personal finance opinion, higher income, less frequent overdraft in checking account and higher level of negative emotion toward possibility of a large checking account debt. The results suggest that to change Israeli students' intent to control their budgets, FL should be promoted, especially among Arab and female students, and attitudes toward money management should be changed. Moreover, maintaining a budget may reduce negative feelings associated with the consequences of financial debt.

Paper ID: 311
Type: poster
Day of Session: MON AM
Time of Session: 11:30 - 13:30
Poster board number: 21

Session Title: Preference and choice

What does an affective-oriented product really mean for consumers?

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Considering an affective-oriented product, consumers are willing to buy it because they perceive it based on their needs, values, and interests. According this point of view, the present study adopted a musical celebrity doll to examine the relationship between relevant psychological factors and buying intention. An online questionnaire was used to recruit participants. Results indicate that product appearance and gratification factors were main factors to affect consumers' buying decision. Findings also showed that attachment behavior factor only have an influence on fan-group. This research suggests that marketers should take consumer psychological factor into account, when they design an affective-oriented product.

Paper ID: 52
Type: poster
Day of Session: MON AM
Time of Session: 11:30 - 13:30
Poster board number: 22

Session Title: Preference and choice
Capturing consumer food choice in action: An experience sampling study of consumer decision making

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How do consumers make decisions about food? What are the relative contributions of psychological and sensory factors in consumption decisions? How are consumers affected by emotional vs. rational considerations when making consumption decisions? In an ongoing interdisciplinary research project we examine these questions. We use the Experience Sampling Method (ESM) to assess emotions/other states and consumption decisions simultaneously. Using this technique requires that participants carry a small, handheld computer or palmtop with them at all waking hours, for a specified period (e.g., a week). During the week, the palmtop emits sound signals at predetermined or randomized intervals. Each time the participant hears this signal, he or she is supposed to immediately respond to various questions administered by the palmtop about his or her latest experience. One advantage of the ESM is that it permits one to study personal events as they unfold in their natural and spontaneous context. Another advantage is that it renders possible repeated measurements over time, so that one may obtain a better sense of whether a specific phenomenon occurs in particular recurrent patterns?for instance at specific times of the day. This study will provide new insights about everyday decision making -especially consumer food choice.

Paper ID: 59
Type: poster
Day of Session: MON AM
Time of Session: 11:30 - 13:30
Poster board number: 23

Session Title: Preference and choice
Compulsive buying behaviour: Obsessive acquisition, collecting or hoarding?

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We report two investigations into compulsive shopping behavior. The first showed that compulsive shoppers are obsessive in acquiring certain (gender specific) classes of product. Compared to normal shoppers, they spend more money on these products and shop for them more frequently. The second study showed that an obsession with acquiring these products rather than a desire to collect or hoard them is a significant factor in producing compulsive shopping behavior. This is consistent with the notion that compulsive shopping is an addictive habit reinforced by the relief from craving produced by the act of purchasing particular products. In our Taiwanese but not our British sample, compulsive shopping led to hoarding behavior. This implies that the Taiwanese are more reluctant to discard items that they do not use. We discuss cultural factors that may account for this finding.

Paper ID: 124
Type: poster
Day of Session: MON AM
Time of Session: 11:30 - 13:30
Poster board number: 24

Session Title: Preference and choice
Fluency attribution and the outcomes of product placement

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Consumers have witnessed a dramatic increase in the number of product placements that occur across all forms of media. Despite this enthusiastic use of product placements, researchers have not determined whether or not this form of advertising produces profitable outcomes for featured brands. In the framework presented here, we sought to outline how basic cognitive processes may be used to account for some of the divergent consequences that occur for product placements. Unlike other frameworks that treat memory as a separate outcome of product placements, we conceptualize memory as nonanalytically influencing other more critical outcomes (i.e., brand evaluation and selection). The nonanalytic influence of memory is hypothesized as occurring via an attribution that is made about the ease experienced when processing a brand that has been previously encountered. To examine this nonanalytic framework, two studies were conducted. In each of these studies, participants were presented with a narrative containing a number of brand presentations. Later, participants completed tasks that assessed memory and brand preferences across the various studies. The first study revealed that participants were more likely to select a brand after it had appeared in a preceding narrative. The second study revealed that orienting participants to the processing experienced while reading the narrative eliminated the positive effect for featured brands. However, when the brand's prior presentation in the narrative was not made salient, a brand's prior presentation in the narrative lead to more positive choice ratings, suggesting that fluency-based perceptual processing nonanalytically influenced participants' brand preferences.

Paper ID: 61
Type: poster
Day of Session: MON PM
Time of Session: 15:30 - 17:30
Poster board number: 1

Session Title: Decision making under risk and uncertainty
**Conditions for discounting ambiguous probability information
in economic decision making**

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There is experimental evidence that in economic decision making ambiguous information on probabilities, or prices is not taken into account for the decision. The present research presents three experiments to investigate conditions where ambiguous probability information is or is not discounted. In all experiments, a scenario was presented describing a decision of a Chinese restaurant owner who after some initial investment in a new restaurant gets market research information on the percentage of frequent restaurant customers who are to visit Chinese restaurants. Participants had to decide if they wanted to continue or cancel the project. In experiment 1 the difference between the given two percentages was varied while the mean of both remained constant, and a control condition displayed no information. There was no difference between the conditions, indicating that the span of uncertainty played no role. Experiment 2 kept the difference of the two given probabilities constant, but varied the mean of both at uncertainty constant at 10% but varied the means of both given probabilities. In the decisions, there was a significant linear effect with higher willingness to continue with higher the mean probability. Experiment 3 consecutively two similar restaurant decisions were presented, one with a fixed value of interested customers, the other one with ambiguous information on interested customers, respectively. Order of the conditions was varied between participants. Here, a very strong order effect occurred indicating that the mean of the ambiguous values was used as basis for the decision.

Paper ID: 42
Type: poster
Day of Session: MON PM
Time of Session: 15:30 - 17:30
Poster board number: 2

Session Title: Decision making under risk and uncertainty
Asymmetric discounting in valuation of reward points

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Reward points as sales promotion tools are of increased prevalence as a type of currency. This study explored that the degree of discounting the subjective value of points depends on the direction of point conversion as well as asymmetric discounting in temporal choice. Cash-points direction is the conversion of cash into reward points, and points-cash direction is the conversion of reward points into cash. Experiment 1 asked 164 undergraduates and graduates to indicate an acceptable amount with open-ended questions in both directions of point conversion, using reward points issued by a major convenience store chain. Respondents discounted the value of the points more in the cash-points direction than in the points-cash direction. Additionally, in the points-cash direction, more respondents did not discount in the conversion of the points into cash. In Experiment 2, 300 volunteers completed an on-line survey, using Amazon gift points. Participants of cash-points direction were given a series of binary choices between a 500-yen gift in cash and a gift certificate in points, worth 1 yen each; the amount value of the points increased. Points-cash respondents were given a series of binary choices between a 500-point gift certificate and a cash gift; the amount value of cash increased. The result repeatedly showed asymmetric discounting in the valuation of reward points between the cash-points direction and the points-cash one. We have found out asymmetric discounting in the valuation of reward points. This result suggests that a change of the conversion direction in valuation of reward points causes consumers to shift their focus of attention to different aspects of reward points.

Paper ID: 327
Type: poster
Day of Session: MON PM
Time of Session: 15:30 - 17:30
Poster board number: 3

Session Title: Decision making under risk and uncertainty
Whether it is reality or imaginary, people are still spurred on by their previously sunk costs

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The sunk cost effect can be defined as the heightened tendency to invest in an endeavour once investments of time, effort or money have been made (Arkes & Blumer, 1985). Much of the research in this area has been based on the examination of hypothetical one-shot decisions (e.g. Arkes & Blumer, 1985; Strough, Mehta, McFall & Schuller, 2008). Recent literature (Beaumesiter, Vohs & Funder, 2007) has specified the possible distinctions between hypothetical and actual behavior: people may not always do what they think they will do. The present study had two aims: firstly to examine the effect of sunk costs in repeated decision making- specifically decisions to chase losses and secondly to assess if the effect of sunk costs varied as a function of whether the sunk cost was real or hypothetical. Sixty- six undergraduate students played a one-player, sequential risk-taking game as well as responding to a hypothetical scenario in which they were required to imagine the decisions they would make in a similar sequential, risk taking game. In both the behavioural game and the hypothetical scenario, the sunk cost was the initial entrance fee paid to play the game. The results of the present study signify that in both real and hypothetical decision making situations, sunk costs have a significant impact on subsequent behaviour and repeated decision making. That is individuals continue to chase losses as a function of their previous costs in a particular endeavour. The study further demonstrates that people's self-reports of their decision making and behaviour in a hypothetical sunk cost situation matches their actual decision making and behavior in a real time sunk cost situation.

Paper ID: 314
Type: poster
Day of Session: MON PM
Time of Session: 15:30 - 17:30
Poster board number: 4

Session Title: Decision making under risk and uncertainty
What should the rabbit do? Risk defusing in children's decision making

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In experiments on risky decision making with quasi-realistic scenarios instead of gambles, the majority of decision makers is usually not actively interested in information about probabilities. Often, decision makers search actively for a risk defusing operator (RDO) (an action to be performed in addition to a specific alternative and expected to decrease the risk). Examples in daily life are: insurance, vaccination. Up to now, no information is available about the role of RDOs when risky decisions are made by children. In our experiment we compared risky decision making of preschool children (4-5 years) with that of 7-8 year old children. We expect the 7-8 year olds to produce more RDOs than the 4-5 year olds. Nineteen preschool children and twenty children aged 7-8 years had to choose one out of two alternatives in three scenarios. In each scenario, one alternative was risky whereas the other one had certain positive and negative consequences. The scenarios were based on the stories of Pettersson and Findus, Pippi Longstocking and Winnie-the-Pooh. Explanation of the scenarios was assisted by pictures. As expected, the older children significantly more often came up with RDOs. Developmental reasons for the differences in RDO use between the age groups are discussed.

Paper ID: 44
Type: poster
Day of Session: MON PM
Time of Session: 15:30 - 17:30
Poster board number: 5

Session Title: Decision making under risk and uncertainty
Attitude towards risk in willingness-to-pay-tasks: Bayesian modeling of cumulative prospect theory and a linear portfolio model

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Normative and descriptive decision models has often treated attitude towards risk indirectly as a part of the weighting of probabilities and outcomes of the uncertain prospect, and these models are also often applied to direct assessments of the willingness to pay for a prospect. Portfolio Theory is one exception that treats attitude towards risk directly by assuming that the perceived value of a prospect is a positive function of its expected value but a negative function of the variability of its outcomes. In view of the large literature on multiple-cue integration this simpler linear integration may seem a more plausible account in regard to estimates of a continuous variable, like willingness to pay, as compared to the subtle nonlinearities assumed by many decision theories. In an experiment with a willingness to pay task, people were instructed either to take an objective stance and assess the expected value of positive risky prospects or a subjective stance and assess their personal willingness to pay for the prospects (akin to its expected utility). The results showed that on average participants were quite accurate in their assessments of the objective expected value. Bayesian modeling revealed that in the willingness to pay (or utility) condition a Linear Portfolio Model, assuming that people directly discount the variability of outcomes from the expected value of the prospect, was a significantly better account of the data than a standard decision model (Cumulative Prospect Theory). This result suggests the need to chart the conditions under which standard decision models are applicable to willingness to pay assessments.

Paper ID: 312
Type: poster
Day of Session: MON PM
Time of Session: 15:30 - 17:30
Poster board number: 6

Session Title: Decision making under risk and uncertainty
What does the owner think and feel? Query theory and subjective feelings of possession in the endowment effect

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After 30 years of extensive research, the endowment effect (Thaler, 1980) remains one of the most convincing empirical demonstrations of loss aversion in the domain of riskless choice (Novemsky & Kahneman, 2005). Recently, Weber and Johnson (2006) proposed Query Theory, a process-level model of preference construction, which explains the source of the effect in terms of dynamic and reason-based memory retrieval (Johnson, Haubl & Keinan, 2007). Accordingly, buyers are assumed to evaluate negative features of a potential purchase first, while sellers consider all value-increasing aspects about the item they wish to trade. The present investigation integrates the premises of Query Theory with the possible moderators and mediators of the subjective feelings of ownership. We conducted two experiments in which the classical endowment effect paradigm (with an incentive-compatible value elicitation method) was extended via a manipulation of the participants' feeling of control (use), physical contact, and familiarity with a target item. Crucially, both buyers and sellers listed their reasons for and against buying or selling respectively. We found a weak endowment effect, with no effect of the manipulation of physical contact. Critically, the order and number of queries did differ between buyers and sellers consistent with the Query Theory explanation of the disparity between willingness-to-pay and willingness-to-accept. Interestingly, a second experiment found no endowment effect but a strong effect of object-familiarity, with more knowledgeable participants valuing objects more highly. In this case, however, the listed thoughts did not map onto WTAs or WTPs, revealing limitations of the Query Theory in explaining value construction.

Paper ID: 121
Type: poster
Day of Session: MON PM
Time of Session: 15:30 - 17:30
Poster board number: 7

Session Title: Decision making under risk and uncertainty
Finding Happy Sequences on the iPad

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We propose an empirical test of the model of utility under habituation and satiation by Baucells & Sarin (2010), utilizing a novel approach incorporating Apple iPhone smartphones and iPad tablets to provide unprecedented immediate feedback and control of a complex model to test subjects. Subjects participate by downloading to their iPhone or iPad an application that first walks them through the underlying model with a series of short educational videos as well as providing them with a fully interactive representation of the model that they can experiment with intuitively and in real time. The empirical tests then asks the participants to submit a sequence of deterministic consumption paths that optimize expected utility under lifetime uncertainty (given by a certain lifetime distribution previously demonstrated to them) while they receive feedback in the form of a simulation of realized utility corresponding to multiple random draws from the underlying distribution after every round. Our goal lies in empirically exploring the ways in which individuals perform a complex multi-period optimization task under various constraints and under uncertainty as well as obtaining new insights on how individuals form and apply heuristics in such situations, with a focus on the influence of experience versus description, immediate feedback and social comparisons all afforded by the novel implementation of the experiment.

Paper ID: 220
Type: poster
Day of Session: MON PM
Time of Session: 15:30 - 17:30
Poster board number: 8

Session Title: Decision making under risk and uncertainty
Probability neglect in decisions involving risk: The effect of numeracy, cognitive reflection and affect

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The aim of this study was to gauge the relationship between numeracy, cognitive reflection, affective state and probability neglect. Many models of decision making under risk assume that decision makers utilise both outcome value and outcome probability information. However, evidence gathered in a series of studies conducted by the authors indicates that probability information is frequently neglected in risky choice, leading to systematic violations of dominance. The evidence obtained in this research suggested that this probability neglect is largely a result of reliance on intuitive System 1 processes. In terms of dual-process accounts of choice, numeracy, cognitive reflection and affective state are all factors that have been suggested as possible influences on mode of thought. The decision was therefore taken to investigate their relationship with dominance violation. 57 participants underwent an affect elicitation procedure before being presented with a series of lottery choice games. After playing the games participants were required to complete a numeracy scale and the cognitive reflection task (CRT). The results obtained indicated that both numeracy and CRT score negatively correlated with rate of dominance violation. When CRT score and numeracy were controlled for, a measure of task-induced change in happiness was also found to negatively correlate with rate of dominance violation. It was concluded that task-induced happiness corresponds with increased utilisation of probabilistic information, and that this relationship is not mediated by cognitive ability or numeracy.

Paper ID: 233
Type: poster
Day of Session: MON PM
Time of Session: 15:30 - 17:30
Poster board number: 9

Session Title: Decision making under risk and uncertainty
Risk mitigation decisions for low probability-high consequence events

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Risk and time preferences, affective responses and social interactions all have strong impact on catastrophic risk management, both at the personal and societal level. A growing number of experimental work shows that individuals facing the same low probability-high consequence event do not necessarily respond in the same way. This study analyzes individuals' responses to catastrophic risk. A large-scale survey consisting of 79 questions was administered in face-to-face interviews in an earthquake-prone region. Based on the survey results, we identify the factors influencing willingness-to-pay (WTP) measures for risk mitigation and insurance. The results show that the distribution of WTP for insurance and risk mitigation is bimodal, with approximately 40% of respondents reporting WTP=0. The main determinants for WTP are found to be income level, past experience and peer influence (chi-sq= 34.02, $p < .001$). In addition, respondents were generally insensitive to the duration of stay in their homes, which indicates that myopic loss aversion is a fundamental cause of underinvestment in insurance and risk mitigation measures. Policy implications of these results are also discussed.

Paper ID: 101
Type: poster
Day of Session: MON PM
Time of Session: 15:30 - 17:30
Poster board number: 10

Session Title: Decision making under risk and uncertainty
Emotion regulation strategies, need-for-arousal and ventursomeness differently predict risk-taking in the Hot And Cold Columbia Card Task

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Recent studies revealed that induction of emotional reappraisal leads to increased risk-taking, while induction of emotional suppression leads to decreased risk-taking. We explored the role of chronic use of these emotion regulation strategies in the Hot And Cold conditions of the Columbia Card Task (CCT). Additionally, individual differences in mood states, need-for-arousal, impulsivity and ventursomeness, were assessed psychometrically. Participants (N=119) were randomly assigned to the hot or cold CCT condition. One month before the experiment, participants filled in the Emotion Regulation Questionnaire, Need-for-arousal scale, and I7 scale. The PANAS was administered before the task to test for group differences in mood states. Risk-taking (average number of cards chosen) and the PANAS scores were not statistically different between groups. Greater reappraisal was significantly associated with greater risk-taking in both experimental conditions. Greater suppression was related to decreased risk-taking, but only in the cold task. Need-for-arousal and ventursomeness were significantly positively correlated with risk-taking, but only in the hot task. Impulsivity was unrelated to risk-taking in both tasks. A linear regression analysis of risk-taking was also carried out to control for potentially confounding effects of need-for-arousal and ventursomeness. The results show that chronic use of emotional suppression and reappraisal may influence risk-taking, especially when deliberative processes are strongly involved.

Paper ID: 240
Type: poster
Day of Session: MON PM
Time of Session: 15:30 - 17:30
Poster board number: 11

Session Title: Decision making under risk and uncertainty
Simulated altitude and risk taking: Higher reflection effect in 3000 m than on sea level

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The objective of the present research was to examine the impact of acute stress (induced by the exposure to oxygen-depleted air in a simulated high altitude environment) on decision making and risk taking. In particular, we tested the hypothesis that acute stress due to a subnormal oxygen concentration can cause an increased use of simplified cognitive strategies, exacerbating decisional biases. Specifically, we studied the effect of acute stress on the reflection effect, which refers to the tendency to opt for safe alternatives when decisions involve gains rather than losses. Twenty university students took part in three different sessions: a familiarization session and a control session both in normoxic condition simulating an altitude of 0 m o.s.l., and an experimental session in hypoxic condition simulating an altitude of 3,000 m o.s.l., with an oxygen-depletion of 14.1%. In all sessions, participants had to perform the same computer-based task, which involved a sequence of gambles. For each gamble, participants had to choose between two options of equal expected value. Some gambles involved gains whilst others losses. Physiological data showed that the experimental manipulation was effective in inducing an acute stress response. Preliminary results from the decision task showed that participants exhibited an exacerbated reflection effect in the experimental (hypoxic) session than in the control (normoxic) session. Consistent with dual-process approaches, these preliminary results suggest that individuals rely more on intuitive strategies when under stress.

Paper ID: 94
Type: poster
Day of Session: MON PM
Time of Session: 15:30 - 17:30
Poster board number: 12

Session Title: Decision making under risk and uncertainty
Does risk-taking depend on the risk-return profile given?

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We know from the literature that investors use certain heuristics when allocating their money. With this in mind, the question arises whether investors care about the risk at all. We analyze in a between-subjects-design whether investors' portfolio allocations result in the same risk-return-profile independent of the risky asset presented. We ask participants to allocate an investment amount between a risk-free asset and a risky asset. The assets given can be transferred into each other by combining them with the risk-free asset. We find that investors care about the risk in the sense that they know how much of their wealth should be invested with any risk at all, irrespective of the degree of risk. This amount can be predicted by their risk-attitude. When it comes to the degree of risk of the risky assets - the riskiness - they are less able to choose a completely rational or consistent allocation. It appears that the amount that should have any risk at all serves as an anchor. When judging the riskiness and adjusting the amount invested into the risky asset for the riskiness, investors show an insufficient adjustment. For investors with high financial literacy, the adjustment is much better. Our findings have important implications for the current debate on the communication of investment risks to investors and on the measurement of investors' risk attitude.

Paper ID: 286
Type: poster
Day of Session: MON PM
Time of Session: 15:30 - 17:30
Poster board number: 13

Session Title: Decision making under risk and uncertainty
The relevance of a probabilistic mindset in risky choice

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Choice preferences can be changed depending on whether outcome and likelihood information about the options are provided in a description or learned from the experience of sampling. We explored whether this description-experience 'gap' could be explained as a difference in probabilistic mindset, that is, the explicit consideration of probability information in the former but not the latter. We replicated the gap but found little evidence to support our main hypothesis. Nevertheless, the data inspired a number of interesting proposals regarding experimental design, preference for probability information, sampling strategies, optimal presentation format, and the probability judgment probe.

Paper ID: 180
Type: poster
Day of Session: MON PM
Time of Session: 15:30 - 17:30
Poster board number: 14

Session Title: Decision making under risk and uncertainty
Memory-biased preferences: How accessibility affects judgments and decision-making prospects

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In one experiment we studied the extent to which theories of judgment, decision-making and memory can predict people's preferences. Applying Prospect Theory and Support Theory to these data we find that (a) the weighting function required to model decisions with 'high-accessible' features in memory exhibits different properties to those required to model choices between monetary gambles and (b) the accessibility (Fox & Levav, 2000; Kahneman, 2003; Koriat, 2001) of events in memory affects choices between options, influencing participants' decision weights, but not their judgments of these options.

Paper ID: 75
Type: poster
Day of Session: MON PM
Time of Session: 15:30 - 17:30
Poster board number: 15

Session Title: Decision making under risk and uncertainty
Decision making with the uncertain probabilistic weighted average and the theory of expertons

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We present a new model for dealing with decision making under risk by considering subjective and objective information in the same formulation. We present the uncertain probabilistic weighted average (UPWA). Its main advantage is that it unifies the probability and the weighted average in the same formulation and considering the degree of importance that each case has in the analysis. Moreover, it is able to deal with uncertain environments represented in the form of interval numbers. We study some of its main properties and particular cases. We study the applicability of the UPWA and we see that it is very broad because all the previous studies that use the probability or the weighted average can be revised with this new approach. We focus on a multi-person decision making problem regarding the selection of strategies by using the theory of expertons.

Paper ID: 74
Type: poster
Day of Session: MON PM
Time of Session: 15:30 - 17:30
Poster board number: 16

Session Title: Decision making under risk and uncertainty
Decision making with distance measures in a unified framework between the probability, the weighted average and the OWA operator

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We present a new decision making approach that uses the probability, the weighted average and the OWA operator in the same formulation. Thus, we are able to consider subjective and objective information and the attitudinal character of the decision maker. We introduce the induced generalized probabilistic ordered weighted averaging weighted averaging distance (IGPOWAWAD) operator. It provides a more general formulation that includes a wide range of particular cases including the probabilistic distance, the Minkowski distance, the generalized OWA distance (GOWAD), the generalized probabilistic weighted averaging distance (GPWAD), the generalized probabilistic OWA distance (GPOWAD) and many others. We further extend this approach by using quasi-arithmetic means obtaining the induced quasi-arithmetic POWAWAD (Quasi-IPOWAWAD) operator. We analyze the applicability of the IGPOWAWAD operator and we focus on a grouping process based on the use of a multi-person analysis. Thus, we introduce the multi-person IGPOWAWAD (MP-IGPOWAWAD) operator. Its main advantage is that it can assess the information of several persons in the analysis. We see that the use of different particular cases of the IGPOWAWAD operator permits to consider different scenarios that may occur and select the one that it is in closest accordance with our interests.

Paper ID: 249
Type: poster
Day of Session: MON PM
Time of Session: 15:30 - 17:30
Poster board number: 17

Session Title: Decision making under risk and uncertainty
Stability in development across context in ambiguity aversion effects

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We report three studies that examine how robust the ambiguity aversion effect (Ellsberg, 1961) is across the trajectory of human development. In study 1, 6-18 year olds responded to Ellsberg urn problems varying urn magnitudes (with insights proposed by Pulford & Colman, 2008) and both one and two urn formats of the Ellsberg paradigm. Participants preferred the known-risk option significantly more in the two urn problems and in urns with a larger urn magnitude significantly more than urns with smaller urn magnitudes. We link these findings to preferences guided by variances in outcomes. Ambiguity aversion effects were stable across all ages. Study 2 and 3 attempted to elicit ambiguity seeking behaviour using the two urn Ellsberg structure from study 1 but with vignettes that had a real-world context. Children aged 8-9 years, a young adolescent group aged 12-13 years and adults took part (N=180). We created one vignette each in the context of dental hygiene, diet, exercise, road safety and bike safety behaviour. Participants were significantly ambiguity averse across all contexts and effects were stable across all ages. Study 3 further examined ambiguity by manipulating the probabilities for the known-risk options using the same vignettes from study 2. The probability of a desired action taking place was altered to have a 25% chance of occurring rather than a 50% chance. Significant ambiguity aversion was still manifest and effects were stable across all ages. Robust ambiguity effects in younger children demonstrate competency in assessing ambiguous information in both abstract and real world contexts and under real and hypothetical decision making. Safety aiding behaviour to deal with our uncertain environment takes shape early in development.

Paper ID: 333
Type: poster
Day of Session: MON PM
Time of Session: 15:30 - 17:30
Poster board number: 18

Session Title: Decision making under risk and uncertainty

**Why the glass half full is not always the glass half empty:
Risk framing, context and representation in a developmental
framework**

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We report two studies with an aim of examining framing effects in risky decision making within a developmental framework. In study 1, we created 5 pairs of normatively equivalent vignettes using real world contexts that carried over the salient characteristics of risky choice from the 'cups task' developed by Levin and Hart (2003). In the gain frame the safe option always ensured one prize with the risky option offering a 50% chance to win two prizes and a 50% chance to win nothing. In the loss frame the safe option always ensured the loss of one prize with the risky option offering a 50% chance to lose two prizes and a 50% chance to lose nothing. One vignette pair (each framed as a gain and equivalently redescribed as a loss) formed a dental hygiene, diet, exercise, road and bike safety behaviour situation in which hypothetical returns varied as a function of context. We used a within participant design and recruited approximately thirty children aged 8-9 years, a young adolescent group aged 12-13 years and adults. We found a significant standard framing effect in the diet vignette and a significant reverse framing effect in the exercise vignette and non-significant framing effects across the remaining contexts. Study 2 further examined these framing effects in the same manner as above. However the probability of a risk paying off in the risky option was altered to have a 33% chance of a gain or loss and a 67% chance of nothing (the safe option was matched for EV). The significant framing and non-significant framing effects from study 1 were replicated. All effects were stable across ages. The axiom of invariance holds under some contexts in which processing allows for canonical representations which are not a function of age.

Paper ID: 55
Type: poster
Day of Session: MON PM
Time of Session: 15:30 - 17:30
Poster board number: 19

Session Title: Decision making under risk and uncertainty

Choosing the choice rule

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Empirical evidence suggests that real-life decision makers rarely maximize their expected utility, but often use heuristic decision rules to make their choices. As there is a huge variety of heuristics available, each different in necessary decision effort and outcome quality, the question arises which heuristic would be chosen in which decision situation. As the established effort-accuracy framework is not able to explain recent empirical findings, I developed a new effort-certainty model to reveal which decision characteristics affect strategy choice. The strategy selection process is modeled as a boundedly rational trade-off relationship between the perceived certainty about a decision environment and the processing effort that would occur if a specific strategy would be applied to it. Hence, only strategies with positive perceived net utilities (= utility - effort) are likely to be applied on the underlying decision problem. Moreover, the used heuristics are expected to differ across individuals and products, each described by important socio-economic characteristics. Empirical evidence is collected by conducting an incentivized 2-stage Mouselab experiment. The resulting clickstream data is analyzed with a decision tracing algorithm, which is capable of determining one out of thirteen decision strategies that was actually used. Decision Effort is measured with Payne's elementary information processes (EIPs) whereas perceived certainty is captured by observing the relative share of looked-up information elements. An econometric analysis of the actually chosen strategies with respect to the above mentioned decision characteristics completes this study.

Paper ID: 13
Type: poster
Day of Session: MON PM
Time of Session: 15:30 - 17:30
Poster board number: 20

Session Title: Decision making under risk and uncertainty
A recency weighting approach to predict decisions from experience

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We extend a model originally designed to estimate reference points in a financial domain (Baucells et al., 2010) to make predictions on how subject evaluate decisions from experience (Erev, et al., 2010). We use the sampling task: Participants chose between a risky and a safe option, and learn about these options by sampling sequentially from them. We propose a predictive model to estimate how subjects evaluate risky options known through sampling. The predictive model is a modification of a recency weighting formula, successfully applied to estimate reference-point formation. We apply the model to predict choices in the Technion Prediction Tournament's data (TPT). The model assumes that observed outcomes are transformed into prospect theory values through a non-linear function that exhibits loss aversion and diminishing sensitivity. Each value is then weighted according to the position in the sequence of outcomes: Recent outcomes receive higher weight than less recent ones. We fitted a three-parameter model to the observed choices in 60 problems of TPT's estimation set. The parameters were varied to maximize the rate of correct predictions. The fitted model achieved a rate of 84.45% of correct predictions, while the top four models achieved rates around 95%. After estimating the model parameters, we generated predictions for the competition set. The model generalized surprisingly well, achieving a rate of correct predictions of 84.98%, outperforming the winner of the competition by 2%. We extend an existing model of reference point formation to account for decisions from experience. Results suggest that the evaluation of risky alternatives follows a process similar to that of formation of reference points.

Paper ID: 317
Type: poster
Day of Session: TUE AM
Time of Session: 11:30 - 13:30
Poster board number: 1

Session Title: Risk perception and risk communication
When do we shoot the messenger? Judging responsibility of a speaker who gives uncertain statements

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In four experiments we tested how speakers predicting uncertain events were held responsible according to the uncertainty format they used. In experiment 1, speakers used percentages, positive verbal probabilities or negative ones, of different magnitude. Speakers were held less responsible for predicting a positive event with a positive verbal probability or a percentage, but more for predicting it with a negative verbal probability. Speakers were also held more responsible if the outcome was negative than if it was positive. In experiment 2a, speakers used round or precise percentages (e.g., 70% or 71%). Only speakers who used round percentages were held more responsible after a negative outcome. In experiments 1 and 2a participants' judgements ignored the predicted likelihood of the uncertain event. Experiment 2b replicated experiment 2a with an additional measure of the intention to recommend to another. Speakers were held more responsible for positive than for negative outcomes and if the event's likelihood was high rather than low. Intention to recommend was rated higher for positive than for negative outcomes; this difference was bigger if the event's likelihood was high. Level of precision had no effect on the responsibility judgements or on the intention to recommend. Experiment 2c replicated experiment 2b but the responsibility judgement and the intention to recommend were measured between participants. Speakers were held more responsible and were more likely to be recommended for positive than for negative outcomes. They were held more responsible if the event's likelihood was low, but were more likely to be recommended if this likelihood was high. We discuss how these findings inform our understanding of the Preference Paradox (Erev & Cohen, 1990).

Paper ID: 65
Type: poster
Day of Session: TUE AM
Time of Session: 11:30 - 13:30
Poster board number: 2

Session Title: Risk perception and risk communication
Context effects on the interpretation of verbal expressions of speed acceleration

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The context is known to influence words' interpretation (Pepper & Prytulak, 1974; Teigen & Brun, 2003) such that the same verbal expression can have a different meaning in different contexts. This is an interesting problem concerning decision support systems (Boegl et al., 2004) and man-machine interactions where technical systems receive spoken language commands. We explored the influence of the context (ground speed) on the interpretation of verbal expressions of acceleration (e.g., "slower") and used a translation procedure (Bocklisch et al., in press) to translate the words and create fuzzy membership functions (MF). Fifty participants (mean age 26 years, SD = 9.3) took part in the study. The task of the participants was to translate five verbal expressions of acceleration (e.g., "Please drive: much slower, slower, with equal speed, faster, much faster.") into numbers. The resulting MFs differ significantly in their position on the underlying numerical speed scale as well as in their shapes and overlaps depending on the context (ground speed). Results show that the context (ground speed) influences the interpretation of verbal expressions of acceleration. The words' meaning can be modeled using fuzzy MFs. These functions allow a precise determination of the discriminatory power of the words depending on the context. Therefore, they may serve as a basis for choosing useful verbal expressions, for instance, for language commands in man-machine interaction.

Paper ID: 56
Type: poster
Day of Session: TUE AM
Time of Session: 11:30 - 13:30
Poster board number: 3

Session Title: Risk perception and risk communication
Climate change: Values, risk perceptions and theory of planned behavior

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To assess public perceptions of climate change, an online survey was conducted in November 2008 among all university members of a Swiss university (students and staff, total=23568). Data were analyzed by means of a structural equation model using the Theory of Planned Behavior (Ajzen 1985) as the theoretical basis. The modeling followed a step-by-step procedure: First a basic ToPB model was build. This basic ToPB model was then extended using the value types from the cultural theory developed by Wildavsky (1987). Another extension of the model was done by incorporating the risk perception variables introduced in risk perception research by Dake (1991). Regarding the extended model, Attitudes had the biggest effect (.64) on Intentions, followed by Subjective Norm (.28). In contrast, Perceived Behavioral Control had no effect. The explained variance in Intentions was about 72%. The extended model further showed that the risk perception variables Vulnerability and Severity have moderate effects on Attitudes (.21 and .14) and on Norms (.22 and .26). People who perceive Climate Change as a high risk have more positive Attitudes towards the use of public transport and feel more social pressure to behave climate-friendly. The value types have an impact on Vulnerability, Severity and on Attitudes and Norms. As expected, Individualists have negative effects on the model variables whereas the Egalitarian and Fatalist have positive effects on the model variables. The explained variance in Attitudes and Norms is 31% and 29% respectively.

Paper ID: 288
Type: poster
Day of Session: TUE AM
Time of Session: 11:30 - 13:30
Poster board number: 4

Session Title: Risk perception and risk communication
The role of causal beliefs in climate change perceptions and preferences for policy actions

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We present a cross-national survey on climate change that investigated the role of risk perceptions and causal beliefs in the formation of policy preferences of economics and business undergraduates from six countries: Austria, Bangladesh, Finland, Germany, Norway, and USA (total N = 664). Five constructs were measured; reduced to the following dimensions via factor analysis: a) risk perception: dread, moral responsibility, equity, known risk, controllability; b) perceived causes: environmentally harmful practices, carbon emissions, volcanoes; c) perceived consequences: societal and personal consequences; d) perceived effectiveness of policy actions: green practices, carbon policies, engineering solutions, and e) support for the same policy actions. Differences between countries are generally small. Bangladesh is the country that differs most markedly from the other countries. For example, Bangladeshis perceive higher dread and more severe personal consequences, and identify environmental harms rather than carbon emissions as the most important cause. Regression analyses with one of the policy support factors as criterion and the other factors as predictors show that policy support can be predicted from people's risk perceptions and causal models. In all analyses, adding perceived causes and perceived effectiveness as predictors adds significant amounts of explained variance. Perceived effectiveness is generally a stronger predictor than ascribed causes. The three models yield specific patterns of significant predictors, demonstrating that support for a specific type of policy goes together with specific risk perceptions and causal beliefs. In sum, the results demonstrate the important role of causal beliefs in both risk perceptions and preferences for policy actions.

Paper ID: 137
Type: poster
Day of Session: TUE AM
Time of Session: 11:30 - 13:30
Poster board number: 5

Session Title: Risk perception and risk communication
Health risks of electromagnetic fields: Exploring differences in lay and expert beliefs about health risks to improve risk communication

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The purpose of this study was to compare lay and experts knowledge and beliefs of electromagnetic fields (EMF). Through this comparison, we aimed to assess focal points for adjusting information about EMF fitting people's existing ideas and beliefs in order to improve people's comprehension of EMF. We used a descriptive qualitative Mental Models Approach (Morgan et al., 2002) to assess both lay and experts beliefs potential health risks of EMF. An expert model was constructed based on a search of the relevant literature and interviews with 15 experts with different expertise. The lay mental model was based on interviews with 12 lay people using the expert model as a guide. The expert model and lay mental models of EMF were then compared to determine the focal points for risk communication. Our result showed that lay people had little knowledge about the technical aspects of and exposure to EMF. In contrast to the experts, many lay participants believed EMF, in particular of base stations, to be a risk to health. In addition, most lay participants thought some people were especially sensitive to EMF. On the other hand, personal perceptions of EMF risk were low and participants did not particularly worry about the danger of EMF. Lay knowledge about precautionary measures and government policy towards EMF was mostly either absent or incorrect. In conclusion, focal points for risk communication are the misconceptions and knowledge gaps about the nature and magnitude of EMF exposure in daily life, health effects and exposure management.

Reference:

Morgan MG, Fischhoff B, Bostrom A, Atman CJ. Risk Communication: A Mental Models Approach. Cambridge University Press, 2002

Paper ID: 171
Type: poster
Day of Session: TUE AM
Time of Session: 11:30 - 13:30
Poster board number: 6

Session Title: Risk perception and risk communication
Lay people's mental models about cardio-metabolic health risks: A call for better risk communication

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The aim of this study was to assess lay people's mental models about cardio-metabolic health risk, to be able to adjust risk information to these mental models. Information that fits with people's existing ideas and beliefs will likely improve people's comprehension and use of risk information. To assess lay people's mental models about cardio-metabolic diseases (diabetes, cardiovascular disease, kidney disease), we interviewed 40 lay people with different socio-economic background. In these interviews, we asked open-ended questions about the risks of these cardio-metabolic diseases. The lay mental models were qualitatively analyzed and compared with the conceptions of experts (physicians and epidemiologists) to assess the focal points for better risk communication. Although we found substantial overlap between the content of lay mental models and expert conceptions, lay people differed from experts in the value attached to certain causes (e.g. ageing), risk factors (e.g. abdominal obesity), and risk reduction strategies (e.g. losing weight). Lay conceptions were not as coherent as expert conceptions, but were rather superficial, indiscriminate, and fragmented. The identified focal points for risk communication were to: (1) emphasize a coherent total cardio-metabolic risk concept; (2) explain the shared risk factors and the interrelatedness between the 3 diseases; and (3) address certain concepts that lay people mark as important, such as stress and adverse socio-economic circumstances. The typical cardio-metabolic risk messages currently available do not fit with lay conceptions. If we want to improve communication about cardio-metabolic health risk, we should build on the principles derived from our focal points.

Paper ID: 234
Type: poster
Day of Session: TUE AM
Time of Session: 11:30 - 13:30
Poster board number: 7

Session Title: Risk perception and risk communication
Risk perception of pharmaceutical drugs: Expert judgment in the European regulatory network

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To date, the majority of studies comparing judgments of risk between laypersons and experts show a persistent divergence (Kraus et al., 1992; Slovic et al., 1995). There has been insufficient attention paid to the possibility raised (Christensen-Szalanski, 1989; Faust, 1985; Rowe et al., 2001; Sjoberg, 2002) that in some situations expert judgment may also be influenced by over/underconfidence, motivational bias, and other biases. The aim of our study was to explore the perception of risk among expert medical assessors who evaluate whether a drug's benefits outweigh its risks; our hypothesis is that experts are not only influenced by the probability and magnitude of a risk but may also be influenced by their perception of risk. We tested this hypothesis among 80 medical assessors in 9 EU countries. We included an adaptation of the Slovic et al., 2007 study, evaluating 28 pharmaceutical items to examine how different their perceptions were to laypersons; we measured risk taking /risk perception in 5 domains (Social, Financial, Health/Safety, Recreational, Ethical) using the DOSPERT scale (Blais et al., 2006); we collected data for several benefit/risk dimensions after assessors had reviewed clinical data specific to their area of expertise. Our results showed perceived risk for cancer drugs was the highest, followed by diet drugs, sleeping pills and drugs for AIDS. Vitamin pills and nicotine patches had the lowest risk. Most items were seen as low-medium risk/high benefit; risk taking as measured by DOSPERT was negatively correlated to the risk perceptions of an activity across all domains except Social; factor analysis of several benefit/risk dimensions revealed 2 latent factors that explained 57% of the variability in the data.

Paper ID: 191
Type: poster
Day of Session: TUE AM
Time of Session: 11:30 - 13:30
Poster board number: 8

Session Title: Risk perception and risk communication
Musical genre, sub-culture, and differences in harm perception of illicit substances among music festival visitors

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The study analyses the impact of sub-cultural norms on the perception of associated health hazards in a social environment which promotes drug use. Trivialization of harm was assessed as a function of sub-cultural differences among visitors of the Open-Air Music Festival St. Gallen. In 2009, a split-ballot experiment (n = 376) was designed to test the impact of cognitive availability of high prevalences of substance use on perceived risk associated with heroin, cocaine, cannabis, alcohol, and tobacco use. In 2010, a second experiment (n = 222) was designed to explore sub-cultural factors on a trivialization effect through additionally analyzing musical preferences. In 2009, cannabis was perceived as the least harmful substance, followed by tobacco, alcohol, and cocaine. Cannabis was also judged as least addictive, followed by alcohol, tobacco, and cocaine. If prevalence estimates preceded risk judgements a significant decline for perceived sequelae was observed for cannabis, alcohol, and tobacco. In 2010, alcohol was considered more dangerous than cannabis, but a reversed picture was observed for the fans of alcohol-associated acts. A significant interaction effect was observed for musical preference, estimated prevalence, and cognitive availability of substance use: Trivialization of perceived addictiveness was observed for the substance which is not associated with one's musical preferences. The present study confirms the existence of a context dependent trivialization effect, with regard to perceived hazards of substance use. This effect is modulated by a sub-cultural peer group membership. Thus, future harm reduction interventions need to take into account sub-cultural factors in order to successfully correct misperceptive group norms.

Paper ID: 175
Type: poster
Day of Session: TUE AM
Time of Session: 11:30 - 13:30
Poster board number: 9

Session Title: Risk perception and risk communication
Linguistic multi-person decision making with probabilities and OWA operators

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We develop a new decision making approach in uncertain environments based on the use of linguistic information. For doing so, we present the linguistic probabilistic OWA (LPOWA) operator. It is an aggregation operator that unifies the linguistic OWA (LOWA) operator and the linguistic probabilistic aggregation (LPA) in the same formulation and considering the degree of importance that each concept has in the aggregation. It provides a parameterized family of linguistic aggregation operators between the linguistic minimum and maximum. It includes a wide range of particular cases including the linguistic minimum PA, the linguistic maximum PA and the linguistic average (LA). We analyze the applicability of this new aggregation operator and we see that we can apply it in a wide range of problems because all the previous studies that use the probability or the OWA operator can be revised and extended with this new approach because this model can always be reduced to the classical formulations. We focus on a linguistic multi-person decision making problem regarding the selection of strategies. We use a multi-person analysis by using the multi-person LPOWA (MP-LPOWA) operator. Thus, we can assess the information in a more complete way because the opinion of several experts is usually more robust than the opinion given by a single expert.

Paper ID: 154
Type: poster
Day of Session: TUE AM
Time of Session: 11:30 - 13:30
Poster board number: 10

Session Title: Risk perception and risk communication
Information intermediation and risks in construction

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Market diffusion of new types of concrete and associated technologies that have emerged during the last decades varies, despite progress having been made in laboratory research into both materials and structures. Yet, the diffusion of innovative concrete technologies and structural design cannot be regarded as satisfactory, thus factors besides those features identified in technical research are needed to explain the varying success of certain technologies. The purpose of the study presented in this paper is to improve the understanding of professionals as information intermediaries when choosing materials and structural design in construction projects. Theories of choice under uncertainty are applied to the process of adoption and diffusion of technologies within the construction sector, especially to concrete technologies. Professional individuals, architects, project managers, technical consultants, and contractors have been surveyed and their risk attitudes towards construction technologies in general and concrete technologies in particular have been mapped. Using two commercial databases, a sample of 111 projects that started in 2003 in three Swedish metropolitan regions has been identified. A total of 292 questionnaires were mailed to architects, structural engineers, project managers and contractors representatives in these projects. The response rate is 52.7 per cent. Results indicate that attitudes to construction site uncertainty vary across professions, as well as information search patterns and the relation between private and professional risk attitudes.

Paper ID: 257
Type: poster
Day of Session: TUE AM
Time of Session: 11:30 - 13:30
Poster board number: 11

Session Title: Risk perception and risk communication
The advanced numeracy test for highly educated samples (ANT-E): A brief, adaptive, validated test of risk and statistical comprehension

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In recent years, numeracy has become a topic of considerable interest to both basic and applied decision researchers. However, most numeracy tests have unknown or poor psychometric properties (e.g., high negative skew), or are only diagnostic for low skill individuals. Here we introduce a free online test, based on classical testing theory and designed for highly educated individuals, that automatically scores and sends data to researchers, and provides immediate feedback to the public. The Advanced Numeracy Test for highly Educated samples (ANT-E) provides a brief, validated, psychometrically rigorous instrument for the assessment of statistical and risk literacy (available at <https://sites.google.com/site/advancednumeracytest>).

Paper ID: 265
Type: poster
Day of Session: TUE AM
Time of Session: 11:30 - 13:30
Poster board number: 12

Session Title: Risk perception and risk communication
The effect of misleading graphs on the comprehension of health and political communications: Who is more susceptible to misinterpret data?

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Graphical displays can facilitate the communication and comprehension of numerical information. However, graphical communication can also be distorted causing judgment errors. In the present paper, we aimed to document some of the mechanisms underlying people's susceptibility to misinterpret information in graphs containing common misleading features (e.g., modified axes). In particular, we aimed to demonstrate that individual differences in graph literacy (the ability to understand graphically presented information; Galesic & Garcia-Retamero, in press) can be linked to differences in encoding and attention to key elements in graphs. Consequently, we predicted that individuals with low graph literacy would be more likely to misinterpret information in misleading graphs than individuals with high graph literacy. We conducted an experiment including graphs from actual political news journalism and pharmaceutical advertisements, in order to enhance ecological validity. Graphs were selected taking into account violations in prescriptions for graph design identified in the literature. Results revealed that less graph-literate participants were more likely to misinterpret information, particularly for graphs including unnecessary elements (e.g., a highlighted arrow containing information about relative drug benefits). Consistent with an encoding hypothesis, individual differences were shown to be partially mediated by differences in a surprise memory test on different features of graphs (e.g., superficial attributes such as the color of bars vs. specific numerical information). These findings contribute to understand individual differences in graphic-related judgment errors and have implications for applied projects in risk communication and decision support.

Paper ID: 319
Type: poster
Day of Session: TUE AM
Time of Session: 11:30 - 13:30
Poster board number: 13

Session Title: Risk perception and risk communication
When higher bars are not larger quantities: On individual differences in the use of spatial-to-conceptual mappings in graph comprehension

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Graphical displays use spatial relations to convey meaning, facilitating the communication of quantitative information. The translation of spatial information into conceptual information in graphs is frequently rooted in our experience with the physical environment (e.g., larger quantities of elements typically reach higher positions along the vertical dimension). However, when information conveyed by spatial features in graphs conflicts with information conveyed by features linked to arbitrary conventions (e.g., axes labels and the range of scale points), people may misinterpret the data depicted. In this paper we investigate how such conflicts affect interpretation of graphs containing health-related information. We hypothesize that people who have low graph literacy, that is who lack the skills, typically acquired by education, to understand the significance of arbitrary graph conventions, will more strongly rely on spatial-to-conceptual mappings grounded in their real world experience to interpret graphs. Additionally, they may disregard important information contained in axes labels or scale points. In an experiment, we found support for this hypothesis. Participants with low graph literacy were more likely than those with high graph literacy to rely solely on spatial features in bar graphs, even when this resulted in erroneous inferences about the data and in non-normative decisions. Results also showed that erroneous inferences were more frequent for vertically than for horizontally oriented graphs. We discuss the implications for some of the different views of embodied cognition, as well as for current models of graph comprehension and the design of effective graphical displays to communicate medical information.

Paper ID: 19
Type: poster
Day of Session: TUE PM
Time of Session: 15:30 - 17:30
Poster board number: 1

Session Title: Social influences in JDM
Act responsibly or let yourself go? Effects of self-signaling through green consumption

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People sometimes purchase products in order to reveal something positive about themselves. For instance, environmentally friendly products are especially suitable for sending positive self-signals. In this research project we investigate how different purchase situations influence the way people deal with such self-signals. In line with symbolic self completion theory we assume that green consumption in public leads to a feeling of progress towards the goal of being a responsible person which causes people to behave less responsibly in subsequent situations. However, if public recognition is denied green consumption actually strengthens people's commitment to behave responsibly. In a laboratory study we asked participants to shop in an online store that contained mostly green or mostly conventional products. We additionally manipulated whether participants revealed their purchases to the experimenter (social condition) or did not share any information about their product selection (private condition). In line with our hypothesis, green consumption under social conditions lead to fewer intentions to act responsibly in subsequent situations, while green consumption under private conditions lead to more intentions to act responsibly. Hence, positive-self-signals can have dramatically diverse effects depending on whether or not the signal becomes a social reality. In order to better understand the nature of these processes, a follow up study is currently underway.

Paper ID: 117
Type: poster
Day of Session: TUE PM
Time of Session: 15:30 - 17:30
Poster board number: 2

Session Title: Social influences in JDM
Facial perception, decision depends on attention

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Judgments of trustworthiness, dominance and threat, indeed facial and emotional stimuli are fast (Bar, 2001) and are often proposed to take place in an automatic fashion, that is independent of top-down factors such as attention (Jonides 1981). Here we present work that challenges the automaticity account of these judgements. The respective role of judgements and attention, particularly in the social sphere is still an open question. Within this sphere, an essential constituent, frequently signalled by facial cues, is the appraisal of agents and their intentions; this interpretation of emotional intent is a pivotal aspect of understanding social situations. While great strides have been made in the comprehension of how attention modulates judgements, a fundamental constraint remains. As processing capacity is limited, selective attention to one element occurs to the detriment of others. The perceptual load model of attention offered a resolution (Lavie, 1995), by a form of an amalgam of early and late selection views. The predictions of perceptual load theory have been supported by diverse range of studies (Lavie, 2010). In a series of experiments we apply load theory and cognitive control to investigate these emotional judgements under load. Employing a combined visual search and face judgement task, where the level of attentional load in the search task was manipulated (by varying the search set size), the results indicated reduced accuracy for trustworthy and threat judgements, while in contrast dominance judgements were immune to the effects attentional load. These outcomes suggest that emotional judgements are not automatic, but instead depend on the deployment of attentional resources, whilst highlighting the special status for judgements about dominance.

Paper ID: 97
Type: poster
Day of Session: TUE PM
Time of Session: 15:30 - 17:30
Poster board number: 3

Session Title: Social influences in JDM
Effects of advice consistency on stated and revealed trust

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People often learn about the levels of risk associated with different activities through advice, and their use and assessment of such advice may depend on factors such as the identity of the advisor, and the perceived quality and consistency of the advice. Earle & Cvetkovich (1999) demonstrated that explicit verbal estimates of trust in advisors correlate with perceived shared values between advisor and advisee, while Twyman, Harvey & Harries (2008) found that behavioural measures of trust placement do not always correlate with verbal trust statements. Here we apply those findings to a risk communication paradigm. Previous findings were replicated in two experiments, in which participants were given advice about a range of risky activities. However, declared trust in advice sources did not correlate with how much those sources were used in making risk judgments. Relative measures of use and assessment of advisors were also found to bear different relationships to the accuracy of advice. Judges stated not only that they had greater trust in consistently accurate advisors, but that they considered such advisors more similar to themselves than the inconsistent advisors. Although judges preferred more accurate advisors, advice consistency did not affect behavioural measures of trust placement.

Paper ID: 82
Type: poster
Day of Session: TUE PM
Time of Session: 15:30 - 17:30
Poster board number: 4

Session Title: Social influences in JDM
Delegating decisions: Using others to make difficult choices

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This research explores when people delegate choices to others. We propose that people are more likely to delegate difficult choices than easy ones to avoid the potential blame they might feel if they were responsible for making a bad choice. In Study 1, participants were more likely to delegate a choice of medication to a pharmacist when the drug information was presented in a difficult-to-process format. Similarly, in Study 2, participants were more likely to delegate a choice of entrée to a waiter when the menu was printed in a hard-to-read font. In Study 3, to distinguish delegation from advice seeking, participants were presented with a choice of entrée from a 24- or 6-item menu and were asked to indicate whether they would prefer to choose the three entrées they thought sounded the best and let the waiter choose the best entrée of the three (delegation), or have the waiter choose the three entrées he thought were the best and choose the best-sounding entrée of the three (advice). Participants who received the large menu preferred delegation to advice more than those who received the small menu. Studies 4 and 5 explored the role of responsibility and accountability in the delegation of difficult choices. In Study 4, participants were more likely to delegate an investment decision to another person when the other person would assume responsibility for the choice outcome than when they themselves would be responsible. In Study 5, participants were more likely to delegate a choice of entrée to a caterer when it was for guests at a catered event than when it was for them personally. Together, these studies demonstrate that, when finding the right option and taking responsibility for the choice is too much to bear, people may opt to let others choose for them.

Paper ID: 142
Type: poster
Day of Session: TUE PM
Time of Session: 15:30 - 17:30
Poster board number: 5

Session Title: Social influences in JDM
How is pragmatic well-formedness calculated? A cognitive consistency approach to framing conditional performatives

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This paper investigates the role of a cognitive balance model in the framing of if p then do q conditional performatives (advice, instructions, etc.). We hypothesize that felicitously framed conditionals will be balanced in that the antecedent p has to have the same (positive vs. negative) sign as the consequent q. We further propose that the sign of the consequent is calculated by multiplying the desirability/undesirability of the precondition for performing the action in question, the polarity of the quantifier used in the antecedent, and the presence or absence of an explicit negation of that quantifier. We present three experiments that support the balance model. The first experiment shows that participants complete antecedents with a quantifier whose polarity enables balance to be established. The second experiment shows that participants prefer consequents that maintain balance with the antecedent. Finally, the third experiment eliminates a decision-theoretic model of conditionals as a possible explanation of our results.

Paper ID: 214
Type: poster
Day of Session: TUE PM
Time of Session: 15:30 - 17:30
Poster board number: 6

Session Title: Social influences in JDM
Prices need no preferences: Social influences in pain markets

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Understanding the behaviour of markets such as health is a central societal concern, with particular relevance to medicine, economics and marketing, political science, psychology and neuroscience. At the very heart of current public policy is a traditional economic assertion that the 'market will decide the true price', based on the assumption that people inherently know the value of a product. Here, in the first laboratory study of a genuine health market, we show that this assumption fails spectacularly. In particular, we demonstrate that market values, and ultimately prices, are strongly referenced to others' choices, and not to genuine health preferences. This suggests that the price of healthcare in a free-market has the capacity to become critically detached from its actual value, because of such psychological effects on decision making.

Paper ID: 228
Type: poster
Day of Session: TUE PM
Time of Session: 15:30 - 17:30
Poster board number: 7

Session Title: Social influences in JDM
Rational order effects in responsibility attributions

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In two experiments we establish a rational order effect in responsibility attributions. Experiment 1 shows that in a team challenge in which players contribute sequentially, the last player's blame or credit for a performance is reduced if the team's result is already determined prior to his acting. However, credit and blame attributions still vary with quality of performance in these cases. This finding is at odds with Spellman (1997) who proposed that a person's perceived contribution varies only with the degree to which it changes the probability of the eventual outcome. However, we consider this performance effect to be rational since a player's quality of performance conveys important information. It shows that the person is in principle capable and her performance could have made a difference in another situation. In contrast, if the player performed poorly, one cannot be sure whether this is due to the fact that the player did not try hard because the result was already determined or whether the player is incapable. Experiment 2 illustrates that the rational order effect does not overgeneralize to situations in which the experienced order of events does not map onto the objective order of events. When players perform simultaneously and are ignorant of each other's scores but participants experience the information sequentially, credit and blame ratings to the last player only vary as a function of performance and not as a function of the certainty of outcome. The quality of the last person's performance is only discredited if she knew that the result was already determined. Hence, the rational order effect is driven by the inferred epistemic state of the agent and not by the objective state of the world.

Paper ID: 274
Type: poster
Day of Session: TUE PM
Time of Session: 15:30 - 17:30
Poster board number: 8

Session Title: Social influences in JDM
The impact of self-perceived social pressure on charitable giving

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We study the impact of perceived social pressure on individual charitable giving. In an experiment, participants play a dictator game and then have an opportunity to donate any fraction of their earnings to charity. In three treatments, each participant is prompted to think about (a) her personal behavior; (b) behavior of other people; (c) other people's expectations about her behavior. We compare participants' decisions in these treatments with their decisions in baseline treatment without prompting. We find that participants donate more to charity when they are prompted to think about other people's expectations of their own behavior.

Paper ID: 290
Type: poster
Day of Session: TUE PM
Time of Session: 15:30 - 17:30
Poster board number: 9

Session Title: Social influences in JDM
The role of oxytocin in social norm enforcement

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The hormone oxytocin has long been considered important for prosocial behavior, with researchers exploring factors such as trust, empathy, cooperation, and generosity. However, contrary to the popular belief of oxytocin being a 'love hormone', recent studies are beginning to suggest that oxytocin does not necessarily lead to indiscriminately prosocial behavior, but rather that its effects are context-dependent and that this hormone may play a role in a broader range of social behaviors. The aim of this study is to explore the possible effects of oxytocin on social norm enforcement. If oxytocin does indeed play a key role in social behavior, then does administration of oxytocin foster the choice to punish social norm violators? Or rather might oxytocin lead to greater willingness to compensate the victim of a social norm violation? To investigate the role of oxytocin on social norm enforcement, we are conducting a between-subject, double-blind, placebo-controlled, functional neuroimaging experiment in which participants play three versions of a monetary game: a second-party punishment game, a third-party punishment game and a third-party compensation game. If the effect of oxytocin does extend into a wider range of social behavior, we expect that participants who received oxytocin respond more intensely to social norm violations and therefore show more punishment and/or compensation behavior than participants in the placebo group. Behavioral and neuroimaging (fMRI) results will be conducted and presented in order to assess the behavioral and neural effects of oxytocin in the context of social decision-making.

Paper ID: 245
Type: poster
Day of Session: TUE PM
Time of Session: 15:30 - 17:30
Poster board number: 10

Session Title: Social influences in JDM
Social value orientation and individual differences in information processing: An eye-tracking analysis

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Social Value Orientation (SVO) is a widely discussed concept explaining behaviour in social situations. Several studies have documented the relatively stable differences in preference concerning payoff distributions between oneself and others (e.g., Liebrand, 1984; Van Lange, 1999). In the present study, we evaluate the construct of SVO by investigating the information search process of people with different distribution preferences (i.e., cooperators vs. individualists). Using eye-tracking technology, we found that information search differs as a function of people's SVO: Individualist acquired less information (indicated by a smaller number of fixations) and spent a shorter period searching (indicated by shorter aggregated fixation times) than cooperators. This difference was particularly pronounced for situations in which others received negative payoffs. Furthermore, individualists focused their attention mainly, but not exclusively, on their own payoffs (61% vs. 39%) whereas cooperators attended both self and others' payoff equally (49% vs. 51%). We find that the differences in attention location are more a matter of degree than due to a strict ignorance of information. The differences in the overall amount of information search confirm the assumption of different underlying processes of social decision making. From a methodological perspective, the present study is a first step towards testing hypotheses on SVO using complex information search tracing methods. This study provides further converging evidence that eye-tracking is a useful tool to gain more detailed insight into cognitive processes underlying decision making in social contexts.

Paper ID: 25
Type: poster
Day of Session: TUE PM
Time of Session: 15:30 - 17:30
Poster board number: 11

Session Title: Morality, affect and intuition in JDM
Affect and intuition in decision making

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Recent research has suggested the existence of an affective/intuition based processes that plays an important role in decision making. In this presentation we report a number of experiments, which assess the impact of mind-set manipulations on decision-making quality. To do so we presented participants with information (12 attributes) about a number of alternatives (cars or flatmates), which are distinguished on the number of positive attributes. Mind-set was manipulated between participants, either implicitly (expressing emotion in drawings) or explicitly (instructions that emphasize deliberation vs gut-feeling) and the decisions were elicited immediately after the presentation of the information. Both manipulations demonstrated an advantage for the affect/intuition based groups. In addition we examined the role of emotion on the estimation of the average of sequences consisting of numerical values. The results are interpreted within a framework based on two interacting subsystems of decision-making: an affective/intuition based system and an analytic/deliberation system.

Paper ID: 230
Type: poster
Day of Session: TUE PM
Time of Session: 15:30 - 17:30
Poster board number: 12

Session Title: Morality, affect and intuition in JDM
Research without rationality?

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It has been suggested that research on judgment, decision-making, and reasoning has been unduly -and counterproductively- been focused on behavioural comparisons with normative standards of rationality (e.g., Elqayam & Evans, in press). It is argued in this talk that far from being a road block to progress, understanding human behaviour needs to draw on rational norms not just for functional explanation (why?) but for the core project of identifying underlying processes and mechanisms. Consequently, as is illustrated by example, rational norms are essential not just for judgment and decision-making, or reasoning research, but for other areas of psychology as well.

Paper ID: 165
Type: poster
Day of Session: TUE PM
Time of Session: 15:30 - 17:30
Poster board number: 13

Session Title: Morality, affect and intuition in JDM
Is it in the eyes? Using eye-tracking to study clinical intuition in novice, intermediate and very experienced clinicians

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This study examines clinical intuition by looking at information search processes of novice, intermediate and very experienced clinical psychologists. Ninety participants (30 per group) fill out a questionnaire and complete twenty decision tasks. In these tasks, participants are asked to make a diagnostic decision based on different pieces of information presented on a computer screen. Decision times are recorded, as well as information search using built-in eye tracking technology. With eye tracking fixation durations and number of fixations can be used to provide insight into cognitive processes. More specifically, shorter fixation durations, fewer fixations, a less complete information search and fewer repeated information inspections suggest a decreased level of processing (i.e. more intuitive processing), which is moreover related to shorter decision times. It is hypothesized that very experienced clinicians show more intuitive processing of information. The opposite is expected for novices; they probably show more deliberate processing (i.e. more long fixations, more fixations, more information inspected, more repeated information inspections, longer decision times). Intermediates are expected to be faster than both novices and experts, and to inspect the information less thoroughly (i.e. fewer short and long fixations, less information inspected, fewer repeated information inspections).

Paper ID: 57
Type: poster
Day of Session: TUE PM
Time of Session: 15:30 - 17:30
Poster board number: 14

Session Title: Morality, affect and intuition in JDM
Cognitive processes in clinical intuition

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Aim: An interview study examined the decision processes involved in clinical intuition in real patient cases in order to gain a better understanding of these processes and inform future empirical investigations. **Method:** 18 GPs were asked to 'think before the interview of two occasions where you felt you knew the diagnosis or prognosis of the patient but you did not know how you knew'. Using a semi-structured interview (Critical Decision Method) we attempted to elicit both implicit and explicit cues, expectancies and goals associated with judgements made using clinical intuition. For each case, the decision process was mapped out chronologically by judgement point. The cases were compared to identify commonalities. Emerging types of decision process were defined and cases independently allocated to types by two raters. **Results:** Twenty-four cases were analysed (32 elicited, 8 excluded) and 3 types of decision process were hypothesised ($\kappa = .75$ for allocating cases to process types): Gut-feeling processes, where the initial interpretation of the situation was later rejected based on acquired evidence; recognition processes, where GPs immediately recognised the problem and committed to that judgement despite salient conflicting information; and insight processes where without awareness of any reasoning, the solution emerged at the end of the encounter. These suggested process types are characterised by differing patterns of conflict between analytical (system 2) and automatic (system 1) judgements. **Conclusion:** Clinical intuition is not a unitary concept and seems to be characterised by different cognitive processes. We suggest that these processes differ in the underlying interplay of system 1 and system 2 processing and should be clarified by future empirical studies.

Paper ID: 184
Type: poster
Day of Session: TUE PM
Time of Session: 15:30 - 17:30
Poster board number: 15

Session Title: Morality, affect and intuition in JDM
Mindful decision makers: The influence of mindfulness on decision making style, competence, and outcomes

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In the present research, we examine the influence of mindfulness on decision making style, competence, and outcomes. Mindfulness can be defined as open, non-judgmental present-moment oriented awareness (Brown & Ryan, 2003; Kabat-Zinn, 1992). Mindfulness has been shown to be positively related to a variety of psychological well-being related variables, including lower depression and higher emotion regulation (Brown & Ryan, 2003). We predict that mindfulness will be positively associated with desirable aspects of decision making style, with decision making competence, and will be negatively associated with detrimental decision outcomes.

In Study 1, we found that mindfulness was positively related to two aspects of decision making style: decision making self-esteem ($r = .27, p < .05$) and vigilance ($r = .34, p < .01$). Mindfulness was negatively related to hyper-vigilance, an undesirable decision making approach ($r = -.29, p < .05$). Mindfulness was unrelated to buckpassing and procrastination. Further, mindfulness was positively related to self-control ($r = .39, p < .01$). In Study 2, mindfulness predicted the Consistency in Risk Perception component of the Adult Decision-Making Competence test ($r = .19, p < .05$). Further, mindfulness was negatively related to a summary index of detrimental decision outcomes ($r = -.33, p < .01$) as well as specific outcomes such as buying new apparel but not wearing them, having a check bounce, and forgetting a birthday.

Paper ID: 38
Type: poster
Day of Session: TUE PM
Time of Session: 15:30 - 17:30
Poster board number: 16

Session Title: Morality, affect and intuition in JDM
Are we Catholics or Kantians? A study on moral balancing

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We assume that whereas exogenous fairness norms provide the metric for people to self-evaluate their behavior, they behave like the moral accountants of catholic doctrine trimming their personal moral balance instead of following their preferences like Kantian imperatives. People construct an individual moral framework spanning actions that are independent from the perspective of ethical theory. They evade taxes but balance their moral self perception by donating for the local hospital.

Paper ID: 64
Type: poster
Day of Session: TUE PM
Time of Session: 15:30 - 17:30
Poster board number: 17

Session Title: Morality, affect and intuition in JDM
Consequentialist versus deontological judgement and moralising in public opinions about health incentives

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Paying people for healthy behaviour might be an effective component of health care policy, but reaction of the general public to such incentive schemes is mixed. Some people do not like the idea of paying smokers to stop smoking, or paying overweight people for weight loss. Are these concerns based on concerns about negative consequences, or are they deontological judgements influenced by moralisation about the underlying health problems? In a choice-based conjoint analysis, we assess participants' preferences for different treatment types (standard treatment vs different incentive types) and treatment effectiveness. Overall, participants prefer more effective treatments, and are willing to trade off their dislike for incentives against effectiveness. However, 45% of participants refuse to fund cash incentives for smokers even if this treatment is four times more effective than standard treatment (40% vs 10% effectiveness), and 29% of participants refuse to fund cash incentives for overweight people losing weight.

While these 'non-traders' might be reasonably concerned about negative consequences of incentive schemes that go beyond simple effectiveness, we find evidence that their judgement is deontological and related to moralising attitudes about smoking and weight loss: The majority of non-traders hold protected values about cash incentives. They are also more likely than traders to think that smokers are responsible for smoking and that overweight people are responsible for being overweight. Non-traders are particularly likely to pick the most extreme option of 'entirely responsible' on the 7-pt scale, which may be further evidence for categorical, rule-based reasoning rather than reasoning sensitive to quantities.

Paper ID: 89
Type: poster
Day of Session: TUE PM
Time of Session: 15:30 - 17:30
Poster board number: 18

Session Title: Morality, affect and intuition in JDM
Distortion of moral judgments in a decision situation with a strong temptation

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Montgomery (1983; 1989) developed a theory according to which the decision maker generally tries to avoid trade-offs between attributes of the choice alternatives. Instead, he/she tries to find a promising alternative and to structure decision situation in such a way that the to-be-chosen alternative is dominant over the other alternatives. This can be done, for example, through the neutralization of the disadvantages of the to-be-chosen alternative. Such a model of decision making seems to be even more compelling in case of decisions with moral consequences. This led us to the following hypotheses: H1: When a choice alternative is profitable but at the same time unethical, the decision maker will tend to neutralize its moral disadvantage through reformulating it in a more neutral or positive way; H2: The stronger moral negative emotions are evoked by a violation of the moral norm, the stronger is a tendency to neutralize its moral disadvantage through reformulating it in a more neutral or positive way. A questionnaire containing a list of 12 presumably immoral activities was designed. The subjects' task was to indicate how well, in their perception, each activity fits four category labels: stealing, cheating, harming others, cunning. One of the items in the list was to exchange his/her difficult exam question for a much easier one drawn by another student. Two groups of students were asked to indicate how well each item on the list fits the four category labels. The control group filled the questionnaire as a simple judgment task, while the experimental group did the same in a decision situation with a strong temptation to exchange his/her difficult exam question for a much easier one. The preliminary results of the experiment seem to support our hypotheses.

Paper ID: 73

Type: poster

Day of Session: TUE PM

Time of Session: 15:30 - 17:30

Poster board number: 19

Session Title: Morality, affect and intuition in JDM

Decision making in shooting task: How arousal and valence affect the stereotype accessibility and racial bias

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Aim of this research was to examine how arousal and valence affects performance on a shooting task and to investigate race bias. Previous studies found that decision to shoot is affected by racial cues, with faster response to a black target. In this research we investigated if the ability to distinguish armed/unarmed target and psychological criterion are affected by arousal and valence. Three studies (S1, S2, S3) using 184 different race human figures (black/white/neutral) were run on 42 white EU Ss. In S1 participants were presented a standing human figure, and after 200ms, the same figure holding a weapon or an harmless object. Ss had to press a response key to shoot the armed person or to respond to unarmed one (target). Results showed faster response for shooting armed target ($F(1,41)=69,76, p<.001$). In S2 18 IAPS pictures with positive valence were presented before each human figure. A significant interaction prime x object was found ($F(2,41)=6,19, p<.005$). Positive valence IAPS reduced RT for no shoot decision, with slower response to shoot white target. In S3 IAPS were highly arousing and negative in valence. Results showed faster response in shooting and slower response in taking a no shoot decision with a change in the psychological criterion according to the type of IAPS pictures presented (crime/violence/generic: $F(2,40)=3,02, p<.05$). Our findings are in line with research on decision making for deadly force use. The weapon effect on RT was affected by the interaction of arousal induced by the IAPS pictures and their valence. Moreover, the interaction between the type of high arousal IAPS with negative valence (crime/violence/generic) and prime (black/neutral/white) proved that the psychological criterion was sensitive to the content of environmental cue.

Paper ID: 150

Type: poster

Day of Session: TUE PM

Time of Session: 15:30 - 17:30

Poster board number: 20

Session Title: Morality, affect and intuition in JDM

**Influences on the ethical reasoning of tax practitioners:
Exploring the individual, the context and professional
socialization**

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In recent years there has been a growing concern regarding the ethical behavior of tax practitioners (Shafer & Simmons, 2008), but little research has been done to investigate their ethical reasoning. In considering the ethical reasoning ability of tax practitioners, three main issues need to be considered: (i) the impact of the tax context itself on reasoning; (ii) the potential for the profession to be attractive to people for whom a particular level of moral reasoning predominates; and (iii) the training/socialization of practitioners in their professional context. We use a 2 x 2 quasi-experimental design to compare ethical reasoning across different contexts (social versus tax) and different groups of participants (tax professionals versus non-specialists). We also further sub-divide tax professionals into those who work for private firms (whose focus tends towards minimizing tax liabilities for their clients) and those who work for the Revenue authority (and are therefore focused on collecting taxes to be used for the public good) to investigate the impact of socialization in the tax profession in more depth. We find that the moral reasoning of tax practitioners does not differ from ordinary people in a social context. Levels of moral reasoning for non-specialists are unaffected by context, but tax practitioners overall apply significantly lower levels of moral reasoning in the tax context. Sub-dividing the tax profession into private practitioners and Revenue practitioners shows that the private sector practitioners apply significantly lower levels of moral reasoning in the tax context than both Revenue practitioners and non-specialists, with the latter two groups not differing significantly.

Paper ID: 325
Type: poster
Day of Session: TUE PM
Time of Session: 15:30 - 17:30
Poster board number: 21

Session Title: Morality, affect and intuition in JDM
When worlds collide: Mood regulation, affect, and morality
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In two studies we found differences between people low and high in positive affect in their willingness to donate money to victims of starvation. In line with mood regulation theory, people low in positive affect predicted to be more likely to donate and they also predicted more positive and less negative emotions from donating money than did those high in positive affect. In stark contrast to this prediction, those low in positive affect were actually less likely to donate in a real donation situation. Further, participants low in PA donated less than those high in positive affect. In a second study we found different donation patterns for those low and high in positive affect. Whereas those low in positive affect donated more to an option with more victims than one with only one, the opposite was shown in those high in positive affect (consistent with the compassion of collapse literature, Slovic & Västfjäll, 2010). We conclude that the processes leading up to a monetary donations is more complex than just simple mood regulation.

Paper ID: 168
Type: poster
Day of Session: TUE PM
Time of Session: 15:30 - 17:30
Poster board number: 22

Session Title: Morality, affect and intuition in JDM
Justified ethicality: Observing desired counterfactuals modifies ethical perceptions and behavior
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Lying is often profitable. Daily life provides ample opportunities to gain financially by behaving unethically. Even generally honest people may be tempted to underreport income when filing tax reports or not mention hidden defects in products they are trying to sell. Recent work suggests that in order to maintaining an honest self concept but maximize profit, people lie modestly (Mazar, Amir & Ariely, 2008). But what determines the extent to which people allow themselves to lie? What leads people to decide that for a certain amount they would lie but for a larger amount they would not? Employing a die-under-cup paradigm we study the extent to which people lie when it is transparently clear they cannot be caught. We asked participants to report the outcome of a private die roll and gain money according to their reports. Results suggest that the degree of lying depends on the extent to which self-justifications are available. When people were allowed to roll the die three times to ensure its legitimacy, but only the first roll is supposed to 'count', we find evidence that the highest outcome of the three rolls is reported. Eliminating the ability to observe more than one roll reduces lying. Additional results suggest that observing desired counterfactuals, in the form of additional rolls not meant to determine pay, attenuates the degree to which people perceive lies as unethical. People find value in self-justifications allowing them to lie for money while feeling honest.

Paper ID: 318
Type: poster
Day of Session: THU AM
Time of Session: 11:30 - 13:30
Poster board number: 1

Session Title: Judgement, heuristics and biases
When does cognitive control lead to biases? Evidence from memory and stock profit estimation tasks

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The dominant view of cognitive control in judgment and decision making is one where rule-based processes either compute answers or monitor and correct outputs of more intuitive processes. However, recent research has documented a surprising link between cognitive control and judgment biases (Cokely, Parpart, & Schooler, 2009), wherein higher levels of control led to a greater influence of fluency on judgments (e.g., a greater devaluation of the purchasing power of 10 Euros in the presence of a picture of unfamiliar (disfluent) money; an effect of name fluency on stock profit estimation). Theoretically, this link can be explained by differences in elaborative encoding: Higher cognitive control leads to more elaborate encoding and more detailed memory representations of cues in the environment which can result in greater biases when only few cues (i.e., fluency) are available. The current research presents new evidence for this elaborative encoding hypothesis by demonstrating a relationship between memory and bias in a stock profit estimation task. Specifically, participants had to judge the past company profit of fictional company names that varied only in their ease of pronunciation (e.g. Flinks vs. Aegeadux). Results reveal that participants with a higher reliance on name fluency (bias) for their judgments were found to have higher memory for the company names afterwards. Critically, company name recognition completely mediated the relationship between cognitive control and bias. These results are consistent with an elaborative encoding hypothesis and suggest a different, commonly neglected, early selection mechanism of cognitive control. Results furthermore remind us of the strong but unconventional link between heuristics and cognitive control.

Paper ID: 138
Type: poster
Day of Session: THU AM
Time of Session: 11:30 - 13:30
Poster board number: 3

Session Title: Judgement, heuristics and biases
Heuristic bias, conflict, and rationality in decision-making

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Human thinking is often biased by heuristic intuitions. Popular theories have argued that people overrely on intuitive thinking and fail to engage in more demanding logical reasoning. However, the nature of the intuitive bias and logical thinking failure are poorly understood. It is not clear whether the bias results from a failure to detect that the heuristic intuitions conflict with more logical considerations or from a failure to discard and inhibit these tempting heuristics. We are addressing this fundamental problem with an interdisciplinary approach that combines reasoning research with insights from the memory and cognitive control field. By relying on a combination of experimental, developmental, and neuroscientific methods we managed to start characterizing the conflict detection and inhibition mechanisms during thinking. Our approach has demonstrated that conflict detection during thinking is remarkably flawless. Although people fail to inhibit tempting heuristics, they at least implicitly detect that their answer is not warranted.

Paper ID: 120
Type: poster
Day of Session: THU AM
Time of Session: 11:30 - 13:30
Poster board number: 4

Session Title: Judgement, heuristics and biases
Fast and frugal heuristics in food choice

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Scheibehenne, et al. (2007) investigated the usage of compensatory and non-compensatory strategies in lunch choices of German consumers. The authors compared the predictive strength of a complex weighted additive model to a simple Take the Best (TTB) rule. Although the former strategy integrates more information, both strategies predicted almost the same number of decisions correctly. We wanted to extend this approach of investigating food choices classifying compensatory (Weighted Additive, Equal Weights) and non-compensatory (Take the Best, Satisfising, Minimalist, Random) strategies. Two groups of participants were confronted with choices between dishes. Each dish was described with a name, picture, price and six nutrition values (fat, cholesterol,...). The dishes were presented using MouseLabWeb so that the recording of the information acquisition process is possible. As a between group manipulation we depleted one group using a Stroop/Go-No Go task (in the framework of ego depletion, Baumeister, et al, 1998) and compared it to a control group. Using three different metrics (Transition Type, Time Ratio and Weighting, based on Riedl et al, 2008) we categorized each acquisition. A majority of strategies was classified as non-compensatory group (80.5%) in comparison to compensatory (19.5%) ones. Depleting participants resulted in a slightly stronger use of non-compensatory strategies, whereas an increase in the usage of compensatory strategies was found in the control group. Both effects were comparably small to the overall usage of non-compensatory strategies regardless of our manipulation. We conclude that non-compensatory heuristics play a much stronger role in food choice as the results by Scheibehenne, et al. suggest.

Paper ID: 92
Type: poster
Day of Session: THU AM
Time of Session: 11:30 - 13:30
Poster board number: 5

Session Title: Judgement, heuristics and biases
Do people build option or strategy routines in multi-attribute decisions? Two tasks ? Two answers

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Although it has been shown that decision routines can be established at the strategy level as well as at the option level, the question about the spontaneous level of routinization has not been tackled, yet. In two experiments, participants learned to make multi-cue predictions for fictitious stocks or card game winners, respectively. In the routinization phases, choosing a specific cue combination strategy (Take The Best, TTB) or a specific option were equally successful. Hence, in this phase, no payoff difference between both routinization strategies existed. In a sudden environmental change, either the formerly successful strategy or the successful option failed, whereas the other response mode was still adaptive. Results were clear-cut in showing a preponderance of strategy-based routines in Experiment 1, but a dominance of option-based routines in Experiment 2 as inferred from dramatic drops in performance and decision times. This reliable difference between experiments may be attributed to important methodological differences, for example the open vs. traditional MouseLab methodology, the costs for information search in Experiment 2, or the interpretation of the task itself. Each potential factor is discussed, and ways for disentangling the explanations are developed.

Paper ID: 7

Type: poster

Day of Session: THU AM

Time of Session: 11:30 - 13:30

Poster board number: 6

Session Title: Judgement, heuristics and biases

A concept of a platform for data-driven approach to detect cognitive biases

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Cognitive biases often influence decision processes related to investment on stock markets. Mainly, these concern complex problems with perception and understanding of surrounding reality. This research was aimed to detect cognitive biases in the data-driven manner. A few basic cognitive biases are examined: gambler's fallacy, hot hand and cold hand effects. This paper presents a new concept of a platform which can detect specific users behaviors. Finally users evaluate algorithms and rules found. These are derived from observation of technical analysis indicators, as well as own built-in sensors. Along with the standard functionalities of a stock market simulator a few methods of data mining are applied: inductive decision trees, associations, clustering and visualization. Now, after two experimental market sessions on NASDAQ, some new features are introduced: 'live advisor for investors' suggesting a risk of occurring a particular fallacy, 'explain' - displaying rules found, with explanation, and finally - the ability to extend the trading platform for a larger group of scientists and individuals willing to take a place in scientific researches and educational simulation games. This is a work in progress and still under heavy development. First results are promising and indicate that there are patterns of behavior hidden in the stock data and it is possible to detect them by rules. It is necessary to discuss this experiment with the wider audience, involving especially: psychologists, financial specialists and traders. This will enable the system to be extended and improved.

Paper ID: 27

Type: poster

Day of Session: THU AM

Time of Session: 11:30 - 13:30

Poster board number: 7

Session Title: Judgement, heuristics and biases

Same world, different perceptions: Systems of measurement affect judgments

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Recent research has showed that semantically equivalent information can be perceived differently depending on the scales that describe such information. Building upon this literature, we propose and show that judgments depend on the culturally relevant system of measurement. Participants from two countries with different standard units (USA and Italy) were presented with an essay about gasoline efficiency. We compared satisfaction with a benefit (reduced gasoline consumption in Study 1a, increased distance covered if Study 1b) in presence vs. absence of measures. When measures were present, American participants considered them in the American system (gallons, miles) while Italians used the metric system (liters, kilometers). Since numerical variations are larger in the metric system than in the American system, we expected Italians to be more satisfied than Americans when benefits were described with measures. In both studies, in absence of measures participants' satisfaction with the improvements in gasoline efficiency (measured on 18-point scales) did not differ between Americans and Italians. In presence of measures, metric units induced significantly higher satisfaction ratings than American units, within both the reduced consumption scenario (Study 1a 16.4 vs. 14.7, $t(89) = -2.70$, $p = .008$) and the increased distance scenario (Study 1b, 17.4 vs. 14.0, $t(52.23) = -5.28$, $p < .001$). Our results suggest that systems of measurement affect people's evaluation of semantically equivalent information. The consistent use of different standard units might ultimately have a role in shaping cross-cultural divergences in how the public thinks and acts on global economic and environmental issues.

Paper ID: 223
Type: poster
Day of Session: THU AM
Time of Session: 11:30 - 13:30
Poster board number: 8

Session Title: Judgement, heuristics and biases
Proximity, progression and probabilistic judgments

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Previous research on Proximity Heuristic (Teigen 2005) has shown that people tend to base their counterfactual probability judgments (e.g. Could I have been killed in that accident?) on simple cues such as spatial, temporal or numerical distance to a counterfactual outcome. Thus, after a horse race, the proposition 'the horse could have won the race' will be more convincing if the horse was beaten by merely the length of a nose than if by the length of a body. We extend this theorization by proposing that in the situation where multiple cues for proximity are available, people base their counterfactual probability judgments not only on momentary distance to a target outcome but also on the variation in the distance over time. That is, a trend of shrinking distance will inflate the judgments on counterfactual probability. We present two experiments testing this hypothesis. It was found in Experiment 1 that a horse, which has a weak start at the beginning of a race but then advances rapidly towards the leader, was considered to have been more likely to win the race than another horse, which consistently follows behind the leader throughout the race, despite that both horses stumble when they are neck-and-neck behind the leader. In Experiment 2, it was found that after flipping three coins on a computer screen with the objective to get identical values as the condition for winning (either three heads or three tails), the sense that 'I could have won' is stronger after the losing trial where the third coin failed to match the first two coins (e.g. head-head-tail or tail-tail-head), compared to other losing trials, despite in all losing trials, the participants were one coin away from winning, suggesting an order effect of events on counterfactual probability judgments.

Paper ID: 119
Type: poster
Day of Session: THU AM
Time of Session: 11:30 - 13:30
Poster board number: 9

Session Title: Judgement, heuristics and biases
Familiarity drives the subadditivity effect: Evidence from semantic priming

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According to standard probability theory, the description of an event has no bearing on its judged probability. However, experimental results by Tversky & Koehler (1994) and by Rottenstreich & Tversky (1997) have shown that people judge the probability of an event, e.g. 'homicide' to be higher when the event's description is unpacked into a disjunction of component events e.g., 'homicide by an acquaintance or stranger'. The classic explanation of this 'subadditivity effect' has been that a hypothesis is better supported when individuals are reminded of salient disjuncts. A related explanation by Sloman, Rottenstreich, Wisniewski, & Hadjichristidis (2004) has underscored the necessity for disjuncts to be typical members of a category. The primary goal of the current study was to investigate an alternative explanation of the subadditivity effect: It is the familiarity of actions prompted by disjoined events (i.e. choice between alternatives) that drives people's support of a given hypothesis. To test this explanation, we examined whether disjuncts and conjuncts are sensitive to semantic priming in a self-paced reading task. We found significant priming for disjuncts, which supports our familiarity-based explanation: people's most frequent experience with disjunction contexts involves a choice between exemplars of a single category. Given that members of a category are alternatives of each other, and that disjunction involves choosing between alternatives, the priming effect inherent between category members is reinforced in disjunctive contexts. In contrast, we found no semantic priming for conjuncts. We interpreted these findings to follow from a failure to perceive conjuncts as alternatives.

Paper ID: 95
Type: poster
Day of Session: THU AM
Time of Session: 11:30 - 13:30
Poster board number: 10

Session Title: Judgement, heuristics and biases
Eating with your mind: The impact of brand name and alleged method of production on perceived taste

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Choosing food may be the most frequent kind of everyday decision people make. In two studies we focused on a decisive factor of food choice, the judgment of taste, and examined how it can be systematically influenced by two kinds of information: brand name (Experiment 1) and method of production (Experiment 2). In Experiment 1, we examined whether brand information leads to assimilation effects that might even reverse judgments of taste. We found that in a blindtasting condition, there was no difference in taste between two samples of a food item (e.g., potato chips), one a high-prestige and the other a low-prestige brand. However, if food items were presented with correct packaging, the taste of the high-prestige item was judged better than that of the low-prestige item, and when they were presented with interchanged packaging, the taste judgments also reversed. In Experiment 2, we examined whether information about food items can also elicit contrast effects. Participants tasted two pairs of food items (e.g., two apple slices and two pieces of banana). Of a given pair of food items, one was actually organically grown and the other conventionally grown. In one condition, participants (incorrectly) learned that the two food items each were conventionally grown but came from two different places, and in the other condition, the correct information was given. It turned out that in the latter condition, the absolute differences in taste judgments were considerably higher; that is, participants 'exaggerated' the difference in tastes in that condition. In sum, the two studies showed that information about food items can have a strong impact on experienced taste and may yield either assimilation or contrast effects, depending on the kind of information given.

Paper ID: 232
Type: poster
Day of Session: THU AM
Time of Session: 11:30 - 13:30
Poster board number: 11

Session Title: Judgement, heuristics and biases
Rhyme as reason in commercial and social advertising

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The study investigated whether the rhyme-as-reason effect applies for perception and evaluation of new artificially created advertising slogans. Rhyming and non-rhyming messages were compared in a between-subjects design. Separate groups evaluated on scales formal quality of the statements and content quality of the statements. For both commercial and social advertising, we found that rhyming messages are evaluated as more likable, more memorable, and more suitable for advertising campaigns than their non-rhyming counterparts. Moreover, the rhyming slogans were also perceived to be more persuasive, more truthful and people were more willing to follow their advice. In a more detailed analysis we found differences also with respect to the quality of particular rhymes. On the basis of the results of the questionnaire focused on formal aspects of the slogans, we divided the rhymes into 'good rhymes' and 'bad rhymes'. For both commercial and social advertising, we found that in comparison with bad rhymes, good rhymes were perceived as significantly more persuasive, more truthful, were of higher content quality and people were also more willing to follow their advice. All in all, research on the rhyme-as-reason effect seems to be interesting and fruitful and further investigations are needed.

Paper ID: 141
Type: poster
Day of Session: THU AM
Time of Session: 11:30 - 13:30
Poster board number: 12

Session Title: Judgement, heuristics and biases
How framing and numerical information affect people's judgments when reading a newspaper story

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In the present study, we aimed at investigating what factors affect the judgments of a common reader when dealing with numerical information in news articles. Participants were asked to read a story about a man who died after hernia surgery and to assess the liability of the medical staff after receiving ambiguous numerical data based on percentages (i.e., 50% risk reduction), and again after receiving unambiguous data based on frequencies. The numerical information they were given was different in terms of framing (survival vs. mortality information) and numerosness of the reference class (small-1,000 vs. large-10,000). Results confirmed that: 1) judgements based on percentages were higher than judgements based on frequencies ($F(1, 159) = 41.842, p < .001, d = 0.46$); 2) judgments based on survival information were lower than those based on mortality information ($F(1, 156) = 16.441, p < .001, d = 0.64$); 3) judgments were lower in the small-numerosness than in the large-numerosness condition ($F(1, 156) = 4.693, p = .032, d = 0.33$); and 4) the frame and the numerosness did not interact ($p = .618$). Reporters should exhibit an increased sensitivity to the potential biases that influence the audience and be very careful about how they report news (Callison et al., 2009). However, on the basis of our results, we suggest that unambiguous numerical information may not be sufficient to de-bias a reader's conclusions, as ambiguous percentages appeared not to be the only factor that biased participants' judgments. Our results show that frame and numerosness had a strong effect, even when explicit numerical information was provided.

Paper ID: 246
Type: poster
Day of Session: THU AM
Time of Session: 11:30 - 13:30
Poster board number: 13

Session Title: Judgement, heuristics and biases
Speculating from absent evidence: A Bayesian network approach

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The extent to which people speculate from absent evidence is an important issue for legal theory and practice. It also presents challenges to psychological theories of evidential reasoning. This paper proposes a Bayesian Network (BN) analysis of inference from the absence of evidence. We claim that the inferences people draw from absent evidence depend on their causal models of the case, and their explanations for the absence. Thus the same information about absence can be treated as incriminating, exonerating or neutral depending on which factors are considered the most likely explanations for that absence. An empirical study supported this analysis. Sixty participants were given an identical murder case, and saw the same incriminating evidence. They were all informed of potential eyewitnesses to the crime who were not presented at court. The reason for this absence was manipulated in three between-subject conditions: participants received 'incriminating', 'exonerating' or 'neutral' explanations. As predicted, judgments of guilt were driven by the explanations given for the absence of eyewitnesses: judgments of guilt increased with incriminating reasons, decreased with exonerating reasons and stayed the same with neutral reasons. Moreover, BN analyses based on participants' verbal explanations matched their probability of guilt judgments. This study confirms the value in investigating people's reasoning from absent evidence, and shows that different inferences can legitimately be drawn from the same absence, depending on assumed explanations. Such inferences cannot be explained in terms of logic alone, but fit naturally into the probabilistic BN framework. The findings have implications for psychological models of evidential reasoning, and for legal decision making.

Paper ID: 45
Type: poster
Day of Session: THU AM
Time of Session: 11:30 - 13:30
Poster board number: 14

Session Title: Judgement, heuristics and biases
Aversive feedback and incomplete knowledge in probabilistic inferences

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Previous studies on the use of simple heuristics (e.g. Brader & Schiffer, 2003; Persson & Rieskamp, 2008) and on the learning of relevant knowledge typically involve simple, verbal and/or numerical outcome feedback and often assume perfect cue knowledge. Assuming that in everyday inferences feedback is likely to carry emotional valence and knowledge is likely to be incomplete, we explored the influence of both factors on information search, validity learning, and strategy choice. In Study 1, with either aversive (white noise bursts) or simple verbal feedback in a prototypical validity learning paradigm, we found no effects on the speed of learning but a tendency that aversive feedback amplifies the use of simple heuristics such as Take The Best (TTB). Contrary to the assumption that negative and arousing feedback would lead to more effortful processing, it appears to make it more selective. In Study 2, a cue value learning setup (Brader & Schiffer, 2003) was used before a memory-based two-alternative inference task about fictitious winners of the Academy Award. Incomplete knowledge was established by including systematically missing cue values in the learning phase. The results show that in decisions with missing information some participants consistently used less information than available but more than predicted by TTB. As an explanation, we suggest that incomplete knowledge increases decision uncertainty and motivates the pursuit of further evidence. It will be discussed how both, aversive feedback and incomplete knowledge, confine information search.

Paper ID: 218
Type: poster
Day of Session: THU AM
Time of Session: 11:30 - 13:30
Poster board number: 15

Session Title: Judgement, heuristics and biases
Probability judgements and decisions weights under two different probability formats

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According to prospect theory, when making decisions under risk people overweight low probability events and underweight high probability events. This claim has been supported in several experiments. A first purpose of this research was to find out whether the inverse S-shaped weighting function becomes more linear when, instead of numerical format, the experience-based probability format will be used. This hypothesis was based on the results showing several advantages of using the experience-based format for communicating probabilistic information. Results of the present experiment did not support this hypothesis. The second purpose for doing the study was to check whether the shape of the probability weighting function (in situation of pure risk) is related to findings in earlier studies on judgements of frequency, which show that rare events were overestimated and frequent events were underestimated. It was found that the shape of the weighting function is mainly due to the misperception of probability.

Paper ID: 118
Type: poster
Day of Session: THU AM
Time of Session: 11:30 - 13:30
Poster board number: 16

Session Title: Judgement, heuristics and biases
Facilitative effect of natural frequencies in Bayesian reasoning is not only about nested sets

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It is well known that people perform better in Bayesian reasoning tasks when the statistical information is given as natural frequencies rather than probabilities. However, the reason why natural frequencies improve performance remains a source of debate (individuation hypothesis vs. nested sets). We conducted three experiments to determine whether the nature of the mental representation of statistical information (as opposed to the format of presentation) explains performance in Bayesian tasks. In the first two experiments, the mental representation of chances and natural frequencies were identified by means of think-aloud protocols. Both experiments showed that participants performed better when the tasks were presented with natural frequencies rather than with chances. Most important, participants who translated chances into natural frequencies performed better than those who interpreted chances as a single event probability. The third experiment investigated the effect of two training manipulations on Bayesian performance. The first focused on nested sets and the second on transformation of probability into natural frequencies. The two training manipulations improved equally and substantially Bayesian performance compared to a control group. However, participants representing chances mentally as frequencies performed better than those representing chances as a single event probability. To summarize, explicit nested sets improved performance in reasoning task, but representation of chances as whole objects (i.e., natural frequencies) boosted performance even more. These findings support the individuation hypothesis and thus challenge the theory of nested sets.

Paper ID: 239
Type: poster
Day of Session: THU AM
Time of Session: 11:30 - 13:30
Poster board number: 17

Session Title: Judgement, heuristics and biases
Sequentially simulated outcomes: Kind Experience versus non-transparent description

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Recent research has investigated differences in decision making based on description and experience. We address the issue of when experience-based judgments of probability are more accurate than those based on description. If description is well understood ('transparent') and experience misleading ('wicked'), it is preferable to experience. However, if description is not transparent, will valid ('kind') experience lead to more accurate judgments? We report two experiments. The first involved seven well-known probabilistic inference tasks. Participants differed in statistical sophistication and answered with and without experience obtained through sequentially simulated outcomes. The second experiment involved interpreting the outcomes of a regression analysis when making inferences for investment decisions. In both experiments, even the statistically naive achieved accurate probabilistic inferences after experiencing sequentially simulated outcomes and many preferred this presentation format. We conclude by discussing theoretical and practical implications.

Paper ID: 190
Type: poster
Day of Session: THU AM
Time of Session: 11:30 - 13:30
Poster board number: 18

Session Title: Judgement, heuristics and biases

More or less information is needed? Evidence from a soccer prediction experiment

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In this paper we wanted to investigate how forecasters evaluate and use information when they predict future events. In order to analyze this we designed an experiment where participants had to predict the results of matches of the Chilean Soccer League. We wanted to focus exclusively on information use; therefore in order to avoid the presence of recognition heuristics we chose a domain that was expected to be totally unknown to our Hungarian subjects. 286 undergraduate and graduate students of the Corvinus University of Budapest answered our questionnaire and made predictions about the final results of the matches. In our study it was confirmed that providing information about a given subject (Chilean Soccer Teams) makes forecasts better than chance. Yet, the relevancy of information provided does not matter: it was concluded that relevant information has not more forecasting power than irrelevant ones concerning decisions on results of an unfamiliar football league, even for experts. When the quantity of information about the soccer teams was raised, the scoring results were not improved at all in neither condition. The results suggest that after a certain quantity of information their presence does not necessarily help a layman forecaster. The experiments also revealed that the evaluation of information is highly subjective and it can be manipulated to a great extent: perceived significance of information used in decision-making depends on the set and type of information available.

Paper ID: 49
Type: poster
Day of Session: THU AM
Time of Session: 11:30 - 13:30
Poster board number: 19

Session Title: Judgement, heuristics and biases

Biases and imperfect utility forecasts

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This paper investigates utility maximisation in which utility is subject to random errors. My basic premise is that if people strive to 'do whatever is best for them', they have to rely on psychological forecasts regarding how satisfied they would be with the different outcomes they can choose from when making a decision. I assume that these forecasts are unbiased but noisy, and show that unbiasedness is not sufficient to treat them as if they were accurate. Instead, maximising utility based on such imperfect, unbiased forecasts will lead to behaviour which is systematically different from the behaviour implied by maximising utility based on perfect forecasts. I then relate my findings to a number of psychological biases which have been interpreted as evidence for systematic errors in utility forecasts, which include the mis-predicting of adaptation, projection bias, diversification bias, and the evaluability hypothesis. Previous research shows that these biases can be thought of as resulting from systematic differences between what 'decision-' and 'experienced utility', or the expected enjoyment from a choice and its realisation. I show that this difference need not always be systematic, but that the observed biases can partly be explained by maximisation which is subject to random errors. My explanation works best for the diversification bias. It can partly explain experimental demonstrations of projection bias and the evaluability hypothesis, and fails at explaining the mis-prediction of adaptation.

Paper ID: 204
Type: poster
Day of Session: THU AM
Time of Session: 11:30 - 13:30
Poster board number: 20

Session Title: Judgement, heuristics and biases
Overview of drivers of affective forecasting in the consumer context

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Consumer decision making is partly based on the anticipated pleasure or satisfaction that different product alternatives may offer. However, such affective forecasts are error-prone because people are generally unable to foresee the future and have to predict their emotions as best as possible based on their present knowledge. This conceptual poster will pinpoint specific factors that influence affective forecasting in a consumer context. Drivers of affective forecasting will be categorized in respect to their occurrence in the process model of affective forecasting by Wilson and Gilbert (2003), that distinguishes three major phases: 1) Initial representation of an event. In a consumer context, this would correspond to a representation of a consumption situation. 2) Assessment of affective reaction to the event. In a consumer context, this would correspond to consumers reflecting on their emotions in the particular representation of a consumption situation. They can either recall a similar past event and use their feelings towards this event as a base for their forecast, or rely on theories about how the event will make them feel. 3) Affective forecast. In a consumer context, this would correspond to an overall assessment of their product-related future emotions. Consumers need to adjust their affective forecast for unique influences because the situation in which forecasts are made and the later usage situation will differ on several dimensions. The poster will highlight relevant studies in the consumer context and examine the specific aspects that need to be considered from a marketing and consumer policy perspective. These considerations will serve as a conceptual framework for future research on affective forecasting in consumer decisions.

Paper ID: 207
Type: poster
Day of Session: THU AM
Time of Session: 11:30 - 13:30
Poster board number: 21

Session Title: Judgement, heuristics and biases
Perceptions of randomness: The consequences of viewing sequences sequentially

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Given the acute ability of human beings to discern relevant structure in the environment (born out by science itself) and their well-documented sensitivity to the statistics of the environment, it seems puzzling that they have fundamental misperceptions (such as the Gambler's Fallacy) about the outputs of random devices such as coin tosses. How can it be that humans are so good at discerning structure given that they seem to readily impose structure where there is none? Hahn and Warren (2009) seek to resolve this apparent paradox by proposing that seeming biases reflect the subjective experience of a finite data stream for an agent with a limited short-term memory capacity. Once this aspect of people's actual experience of random generating processes is taken into account, 'errors' and 'biases' reflect people's subjective experience of environmental statistics. The talk provides a brief introduction to the account and then describes novel experimental data from sequence perception tasks. Hahn, U. & Warren, P.A. (2009). Perceptions of randomness: Why three heads are better than four. *Psychological Review*. 116, 454-461.

Paper ID: 285
Type: poster
Day of Session: THU AM
Time of Session: 11:30 - 13:30
Poster board number: 22

Session Title: Judgement, heuristics and biases
The recognition heuristic and knowledge use

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A source of contention in the study of the 'recognition heuristic' as a means of making criterion judgments between two alternatives has been the extent to which recognition alone is employed. The debate has largely centred on whether recognition is employed as a single sufficient cue when only one item of the alternatives is recognised, or whether further knowledge is consulted. Here, a simulation study is presented that examines the possibility that different types of knowledge might be involved when such decisions are made, and when more than one item is recognised. We develop statistics, based on a generalization of Pearson's phi coefficient, that enable us to observe under what circumstances it should be possible to detect use of the various sorts of knowledge. These statistics, which are applicable to multiple experimental situations, are validated by reference to simulations with known parameter values and applied to specific data-sets from Frosch et al. (2007) and Hilbig and colleagues (Hilbig et al., 2010).

Paper ID: 69
Type: poster
Day of Session: THU PM
Time of Session: 15:30 - 17:30
Poster board number: 1

Session Title: Confidence, optimism, and time in JDM
Covariation estimates of continuous variables

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In the standard task of covariation judgments participants are presented with the value of two dichotomous variables on each trial. For example on one trial participants can observe that the sun is shining (X; shining/not shining) and that a person is happy (Y; happy/sad). After a series of such presentations participants are asked to judge the strength of covariation between X and Y and, in some cases, to what degree X can be said to cause Y. How people come up with their judgments have received a lot of attention in the literature, with suggestions ranging from the delta-P rule (Allan, 1980) to resented Bayesian accounts (Griffiths & Tenenbaum, 2005). However, little concern has been given to whether the choice of dichotomous over continuous variables in itself influences covariation judgments. People tend to experience the world in degrees of dimensions rather than merely in on/off, yes/no categories and hence it is possible that the type of variable used in covariation judgment tasks could have influenced results of this research. In fact one previous study has suggested that dichotomizing two continuous variables might change people's perception of their covariation (Trolier & Hamilton, 1986). The present study investigates how covariation judgments are influenced by what variables are used and by what properties these variables have. The results suggest that people are sensitive to the actual correlation when making covariation estimates regardless of whether they are judging a continuous or a dichotomous variable. Further, people's covariation estimates for continuous variables are influenced by the statistical properties the variables have, suggesting the possibility to inflate or attenuate people's perception of covariation by linear transformation of variables.

Paper ID: 298
Type: poster
Day of Session: THU PM
Time of Session: 15:30 - 17:30
Poster board number: 2

Session Title: Confidence, optimism, and time in JDM
Things you most believe to see: Existing knowledge dictates interpretation of covariation data

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In everyday life we are often exposed to causal claims stating a certain event produces a certain effect. For example a friend may ask you not to use a cellular while driving (the cause) since it may cause an accident (the effect) or an ad for an energy drink (E) may claim consumption improves IQ test performance. Sometimes, data on cause-effect covariation is available. Typically it includes information on the difference between the probability of effect occurrence in the cause presence (sufficiency) and its absence (necessity) (a difference known as delta P). Sides wanting to support a causal claim do so with data indicating delta P not equal 0. For example, the marketer of E may provide study results in which 30 of 40 participants consuming E succeeded in an IQ test (sufficiency: 0.75), while only 20 of 40 who did not consume E succeeded (necessity: 0.5). Alternatively, sides wanting to refute E claim of superiority (e.g., a competitor) provide results in which sufficiency equals necessity (e.g., 0.75 for both). Here delta P = 0. In four experiments involving a variety of products, effects, contexts, and measures, we demonstrate that data supporting a causal claim (delta P not equal 0) are more persuasive when the proposed cause (for example, E) is compared to a referent differing in causal features (energy bar) than a referent similar in causal features (another energy drink). Process evidence indicates this is since individuals more easily generate reasons to explain target superiority in producing the effect in the former case. In contrast, the effectiveness of data refuting the proposed causes claim for superiority (delta P = 0) is not influenced by target-referent similarity. This appears to be since individuals tend to look for explanations only when an effect occurs.

Paper ID: 201
Type: poster
Day of Session: THU PM
Time of Session: 15:30 - 17:30
Poster board number: 3

Session Title: Confidence, optimism, and time in JDM
Outcome evaluation: winning vs. avoiding a loss.

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The present studies focus on the potential reward value of an avoid-loss situation. An outcome can be 'positive' because something desired is obtained, or because something negative or aversive is avoided. Previous research, using scenario-type evaluations, has established that both types of outcomes can be equally rewarding (Svartdal, 2011). The present research extends this finding to a situation involving direct experience with situational consequences. In two experiments, participants played a simple game where the objective was to accumulate as many points as possible. Half the participants experienced steadily increasing success (overall positive outcome), the other half experienced some success after an initial experience of failure (avoiding an overall negative outcome). Although the overall outcomes for the two groups were dramatically different, both groups evaluated the final outcome as equally positive. We argue that this similarity of judgment is possible because the two situations invoke different standards of comparison. A positive outcome can be contrasted to a range of counterfactual alternatives both for better or worse. The avoid loss condition more unambiguously invites a downward comparison. Consequently, avoiding a loss can be as rewarding as winning.

Paper ID: 203
Type: poster
Day of Session: THU PM
Time of Session: 15:30 - 17:30
Poster board number: 4

Session Title: Confidence, optimism, and time in JDM
Overconfidence in judgment, valuation and investment decision: Bankers versus students

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Empirical research documents that overconfidence has a strong impact on investment decision. In this experimental study using a within-subject design and an asset allocation problem, we detail this relationship by introducing a stage of judgment (initial knowledge about the assets to invest in) and valuation (forecasts to be made) before the investment decision. We also examine the role of expertise by comparing a group of bankers (20 loan officers) and a group of students (65), control for the role of risk aversion, and implement different measures of overconfidence (miscalibration in two formats, BTA effect and illusion of control). Our results show that no differences could be observed between bankers and students in the degree of overconfidence, whatever the measures. However, overconfidence seems to determine decision making in a different way across the two groups. For students, we observe that overconfidence influences general tasks such as global knowledge about the asset but when it comes up to invest, risk aversion has a major effect. In contrast, bankers are strongly influenced by their overconfidence. For them, it mainly affects specific tasks (valuation and investment choices) but, surprisingly, risk aversion has no effect on investment decision. Our results suggest that introducing an assessment stage in the decision process helps to understand differences between expert and novices.

Paper ID: 192
Type: poster
Day of Session: THU PM
Time of Session: 15:30 - 17:30
Poster board number: 5

Session Title: Confidence, optimism, and time in JDM
Non-technical skills, overconfidence and decision-making style among airline pilots

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Airline pilots' non technical skills and overconfidence are measured with the NOTECHS system. In addition, general decision-making style (GDMS), reasons for violating standard operating procedures and behavior are measured. Data from two studies are presented where airline pilots had to make a choice between two alternative actions, either to violate or comply with the standard operating procedure. Study 1 took place in a Boeing 737 simulator. Study 2 was a scenario based web survey. A total of 241 airline pilots participated. One aim of the studies was to explore the relationship between violations, NOTECHS and, GDMS. Another aim was to explore how differences in confidence about own non-technical skills are related to violations of standard operating procedures and GDMS. The result indicates that although it is assumed that the NOTECHS system should reflect rational and normatively correct decision-making, this is not always the case. Not all NOTECHS items correlate with the decision-making styles in the expected direction. In addition, one NOTECHS item is related to violation of the standard operating procedure. Furthermore, overconfidence about NOTECHS is also related to procedure violations and reasons for violating. Taken together, the results from the studies indicate that it might be worthwhile to further investigate the content of the NOTECHS system.

Paper ID: 140
Type: poster
Day of Session: THU PM
Time of Session: 15:30 - 17:30
Poster board number: 6

Session Title: Confidence, optimism, and time in JDM
Higher height, higher ability: Judgment confidence as a function of building floor

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Based on the embodied view, we introduce an interesting possibility: spatial heights may regulate ability judgment. Specifically, when people are primed with a higher rather than a lower spatial height, they will unwittingly change their representations of ability and thus place more confidence on their answers to a general knowledge test. Consistent with our hypothesis, when seeing the ground from a higher floor, people increased their expectations about their performance on the test and assigned themselves higher rank positions in the peer comparison evaluation. These results suggest that people's ability judgment is not independent of spatial perception.

Paper ID: 63
Type: poster
Day of Session: THU PM
Time of Session: 15:30 - 17:30
Poster board number: 7

Session Title: Confidence, optimism, and time in JDM
Confidence-enhanced performance: Does it exist and if so how does it work?

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We empirically test, and investigate the psychological mechanism behind, the theory of Confidence Enhanced Performance (Compte and Postlewaite, 2004). This theory suggests that if confidence enhances performance, then people will benefit from having the commonly observed tendency of being overconfident. We propose that confidence may enhance performance by increasing motivation, improving mood, or boosting arousal. We test this hypothesis, and investigate these mechanisms, using three tasks which require different cognitive abilities. Preliminary results suggest some support for the theory but there are strong task differences (e.g. confidence seems to enhance performance significantly for our syllogism task, but not for general knowledge, and a reverse effect seems to be true for our picture recall task). Mood seems so far to be the most plausible of the three mechanisms by which any enhancement of confidence by performance operates. Theoretical and practical implications of our findings are discussed.

Paper ID: 336
Type: poster
Day of Session: THU PM
Time of Session: 15:30 - 17:30
Poster board number: 8

Session Title: Confidence, optimism, and time in JDM
Planning for the Planning Fallacy: Causes and solutions for unrealistic expectations about project delivery

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It is likely that few were surprised when it was announced that the estimated cost of the aquatic center being built for the London 2012 Olympic games had tripled (from £75 to £242 million), the expected date of completion was set back by two years, and its estimated size was reduced by almost two thirds. The media are full of stories in which projects underperform; cost too much, take too long, and deliver too little. Studies on representative samples of projects, both public and private, and in many different fields, show that the average project does underperform; Kahneman & Tversky (1979) refer to this phenomenon as the planning fallacy. We explore the psychological and managerial causes of the planning fallacy. Using data from a wide range of past projects, we operationalize and test Kahneman and Lovallo's (Kahneman & Lovallo, 1993; Lovallo & Kahneman, 200; Flyvbjerg, Garbuio and Lovallo's (2009)) outside view approach, by implementing reference class forecasting (RCF). To do so, we first identify generalizable project features which are likely to lead to faulty parameter estimation such as size of a project or the experience of the management team. We find that private projects are just as vulnerable as public ones to overruns and delays. Second, we demonstrate how RCF can assist project managers and planners in overcoming the fallacy and by producing better project outcome estimates.

Paper ID: 173
Type: poster
Day of Session: THU PM
Time of Session: 15:30 - 17:30
Poster board number: 9

Session Title: Confidence, optimism, and time in JDM
Length effects in judgmental forecasting of various time series types

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The experiment examined forecasting performance when series of different lengths were presented to participants. The best forecasting occurred with the longest time series and an inverted U-shaped relation connected series length to accuracy. Furthermore, the version of anchoring and adjustment heuristic used to make forecasts depended on both series' length and series' type. For highly autocorrelated series people adjusted conservatively for all lengths while for seasonal, trended and random series they adjusted away from the last data point for long lengths.

Paper ID: 98
Type: poster
Day of Session: THU PM
Time of Session: 15:30 - 17:30
Poster board number: 10

Session Title: Confidence, optimism, and time in JDM
Elicitation task bias in intertemporal choice experiments

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In a series of experiments with real incentives I demonstrate that subjects' behavior in experiments on time preference in the laboratory cannot be described by a stable preference relation. Elicited discount rates largely depend on the elicitation method. The present study compares discount rates elicited with the most frequently used in experimental research on time preference elicitation method: choice task in multiple price list format (MPL). I distinguish between nominal MPL structure and interest rate MPL structure. Discount rates elicited with choice task in MPL with nominal structure present hyperbolic pattern. While discount rates elicited with choice task in MPL with interest rate structure are compatible with exponential discounting. I claim that elicited discount rates depend on the elicitation method and propose an extension of Rubinstein and Salant (2010) model to explain the results.

Paper ID: 31
Type: poster
Day of Session: THU PM
Time of Session: 15:30 - 17:30
Poster board number: 11

Session Title: Confidence, optimism, and time in JDM
An alternative to dichotomous choice: A novel portfolio choice method for estimating time preferences for health

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Decisions involving trade-offs between different profiles of costs and benefits over time are common in relation to health. The preferences governing these decisions are called time preferences (TP). Investigating the properties of TP rates for health has been suggested to inform the use of such rates in economic evaluations. A newly developed survey method attempts to address some concerns of previous theoretical and empirical TP work. This is compared to an established method using a student sample. An online questionnaire was used. Due to well established domain dependence (TP rates differ depending on the health metric used) and framing effects the new method has been developed to model as closely as possible the health metric (QALY) and context of a typical economic evaluation of a health technology. This includes portfolio choices rather than dichotomous choices and extended sequences of outcomes rather than 'one-offs'. Analysis will first establish feasibility and validity of the new method. Average TP rates derived from the new method and the comparator method will be estimated. A novel online survey feature captured mouse action data. This is used to examine the choice process of survey participants. The implications for stated preference methods in TP will be discussed.

Paper ID: 70
Type: poster
Day of Session: THU PM
Time of Session: 15:30 - 17:30
Poster board number: 12

Session Title: Cooperation, coordination and naturalistic DM

Credit decision-making in banks

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When searching through the literature of the credit approval process in banks we found that there are different traditions of how to handle this process. Different lending technologies seem to be used in different organizational sets. The literature also shows that bankers in many situations rely on intuitive ways of reasoning, although they have access to special designed computer programs for making credit decisions. The differences between computerized techniques which are based on strict financial information and relationship techniques based on soft information of the client are highly interesting as both techniques are used in modern banking. Therefore we are about to investigate how bankers make credit decisions. We set out to investigate which credit decisions that are perceived as difficult in interviews with Swedish bank loan officers by means of the critical incident technique, in what situations the decisions occur and why loan officers regard them as difficult. In addition, we will ask participants to rate on scales the degree of various difficulties with the decisions. Finally, we will also investigate what lending technologies that are used and how they are used by banks in connection with human decision-making. The results of the interview study will be reported at the meeting.

Paper ID: 227
Type: poster
Day of Session: THU PM
Time of Session: 15:30 - 17:30
Poster board number: 13

Session Title: Cooperation, coordination and naturalistic DM

Quasi-naturalistic risky scenarios and the influence of mood induction

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In quasi-naturalistic risky scenarios subjects are often interested in Risk Defusing Operators (RDOs). Huber (2007) proposes RDOs as measures of risk control which he defines as actions anticipated by the decision maker to be performed in addition to an available alternative in order to decrease the risk involved. The experimental research of mood induction assumes that morals can be activated on the basis of the presentation of particular events, for example, pleasant or unpleasant events. This was found to be independent of whether the events are real or just imaginary. In our research we decided to induce positive and negative mood with stories. The main questions in our study are: Do we decide differently in dependence of different mood states? Does the search for RDOs depend on emotional states? We expect that after negative mood induction subjects are more risk averse. After negative mood induction, subjects search more for RDOs, generally ask more questions, as well as more probability questions and need more time until they make a decision. After positive mood induction, subjects are more risk seeking. We use three quasi-naturalistic risky scenarios and the type of mood induction (positive /negative) as independent variables. The information search behavior in the scenarios was operationalized with the method of Active Information Search. Our dependents variables are the risky decision, the search for RDOs, the number of questions, the probability of the negative event and the required time till the decision. The previous results show that with our film clips we can induce positive or negative moods and that the induction of the mood influences the decision in different ways.

Paper ID: 222
Type: poster
Day of Session: THU PM
Time of Session: 15:30 - 17:30
Poster board number: 14

Session Title: Cooperation, coordination and naturalistic DM
Procedure violations and decision-making among airline pilots

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Data from two studies are presented where airline pilots had to make a choice between two alternative actions, either to violate or comply with the standard operating procedure. Study 1 took place in a Boeing 737 simulator. Study 2 was a scenario based web survey. A total of 241 airline pilots participated. The aim was to explore possible reasons for procedure violations. Although pilots are trained and expected to comply with standard operating procedures they do not always do this. In study 1, the number of violators was 8 and compliers 40 and, in study 2 the number of violators was 124 and compliers 69. The result showed differences between violators and compliers in terms of subjective risk judgment and, reasons for violation. In addition, several of these variables were also related to actual behavior. Furthermore, even though pilots are trained to be rational decision-makers, they convert to experience based decision-making when the situation calls for it.

Paper ID: 206
Type: poster
Day of Session: THU PM
Time of Session: 15:30 - 17:30
Poster board number: 15

Session Title: Cooperation, coordination and naturalistic DM
Perception during stress - Experience after a landslide in Å...lesund, Norway 2008

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26 March 2008 there was an accident in the small town of Å...lesund, on the west coast of Norway, that nobody, it seemed afterwards, had imagined could happen. Therefore, there were no procedures established for the kind of rescue operation that needed to be implemented immediately. A modern apartment building partly collapsed after being hit by a rockslide in the middle of the night. 20 residents were staying in the building and a comprehensive rescue operation was effected in a building where global and local stability was unresolved. Furthermore, it became clear after a short period of time that there was a gas leak from a tank of propane under the building, and that the danger of a major explosion was imminent. (Several residential quarters were at risk for several hours.) Afterwards, when establishing new standard operating procedures for such an operation, it is tempting after such a success to copy what was done as a point of departure. But it's not clear that the right decisions were taken, even though the result was satisfactory. As we see it, this was an example of moral luck (Statman, 1993). Based on interviews with the rescue personnel on duty and our own observations, we will in this paper discuss and try to explain the risky behavior (which nevertheless was successful) and risky decisions taken by the rescue personnel. Furthermore, this discussion will be the new point of departure when new standard operating procedures are to be developed for crisis situations like this. We will focus on situational awareness (Endsley, 1995), perception as explained by the Gestalt theory (Braisby & Gellatly, 2005), and heuristics (Kahneman et al., 1982).

Paper ID: 156
Type: poster
Day of Session: THU PM
Time of Session: 15:30 - 17:30
Poster board number: 16

Session Title: Cooperation, coordination and naturalistic DM
**Information use and decision making by silver commanders
in the emergency services**

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This paper reports a study of decision makers in the UK emergency services. However, rather than examining individuals directly and personally engaging with incidents, it considers the behaviour of so-called 'Silver Commanders' who take charge when decision making is escalated because of scale, threat or complexity. Decision research usually focuses on understanding and supporting the decision process itself. However, a related and important dimension highlighted at the Silver level is Information. By looking at decision making and information together, can we understand decision making processes better? Mainstream decision research would normally see information and its use in as full and reflective way as practicable as critical to good decision making, System 2 rather than System 1. An exception is the stream of studies on recognition primed decision making, itself originating in the study of fire-fighters. However theirs is typically direct operational decision making; here we have more tactical thinking, more people, more information and more time. The key initial findings suggest that Silver Commanders do not consistently adopt System 2 behaviour. While this might not seem so unusual, the paper argues that there are features of the Silver Commander decision making context that make it more surprising than it might appear. It sets out evidence in support of this assertion, reflecting on factors such as hidden time pressures; potential distraction of other, concurrent activity; expectations of leadership behaviour; and other factors. Finally, it returns to the inter-play between decision making, information and decision support to explore whether there are opportunities to influence behaviour by different forms of information provision or decision support.

Paper ID: 33
Type: poster
Day of Session: THU PM
Time of Session: 15:30 - 17:30
Poster board number: 17

Session Title: Cooperation, coordination and naturalistic DM
An introduction to the Sandhurst problem solving model

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Officer Cadets at the Royal Military Academy are often accomplished problem solvers before they arrive. The challenge that the Department of Communication and Applied Behavioural science has, is one of helping the cadets become better, in what is one of the fundamental skills of officer-ship. To that end we developed a new model of thinking about the whole process of problem solving and decision making that illustrates the stages of assessing the information available, forming possible solutions and selecting a workable solution. These stages are easily mapped onto a number of problem solving tools, specifically the British military's 7 Questions, which allows leaders to assess and plan for battlefield decision making. It has been noted that the 7 questions can be applied to other areas of decision making with little adaption, such as in business (Franken et al 2010; Harvard Business Review). The model itself has been taught around the world and is being applied in a number of military settings. It allows the problem solver to break the process into several stages. At each stage the user can consider the psycho-social factors that may interfere good information processing and decision making. In short by being aware of the stages of the model, allows the problem solver to take a rational approach to the problem. Even when time is short being aware of the model should allow the problem solver to be aware of the issues with using intuitive problem-solving rather than a more considered thought through approach and lead to a better solution.

Paper ID: 297
Type: poster
Day of Session: THU PM
Time of Session: 15:30 - 17:30
Poster board number: 18

Session Title: Cooperation, coordination and naturalistic DM
Theory of mind and the ultimatum game: An investigation into the development of young children's performance

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In a study of Ultimatum Game (UG) performance in relation to theory of mind (ToM) ability, 82 Reception and Year 1 children, randomly allocated to Experimental and Control conditions, were assessed on first-order false belief ability. Using a microgenetic approach, participants played as Responders in the UG over four sessions. ToM ability was assessed again on the final occasion. Experimental condition participants were asked each time to reason upon their performance, including consideration of offers they would make as Proposers. Scores applied to ToM and UG performance provided data for quantitative analysis. Participant verbalizations were also recorded, yielding data for categorical analysis to support statistical findings and provide further insight into performance development. Over 50% of Experimental condition participants attempted to achieve a 50:50 split both as Responders and in considering offers they would make as Proposers. Many references to shares being 'equal' or 'the same' indicated the influence of outcome upon decision-making. Several participants made offers of over 50%, their verbalizations showing altruism or a desire to please: further evidence of the importance of outcome in their decisions. Utterances from two thirds of Experimental condition participants also revealed consideration of Proposer's intentions in decision-making, varying from inferred dissatisfaction at the Proposer taking a majority share, to appreciation that the Proposer's offer would increase their own gain from zero, to clear assertion of the importance of sharing equally. This novel approach in facilitating focus on a) specific influential factors and b) within a very specific target population, is expounded and offered as the way forward for future research.

Paper ID: 213
Type: poster
Day of Session: THU PM
Time of Session: 15:30 - 17:30
Poster board number: 19

Session Title: Cooperation, coordination and naturalistic DM
Prevention focus fosters trust

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This paper reports findings from a trust game experiment, where we manipulated regulatory focus (prevention/promotion), and controlled for trust attitudes. Prevention focused trustors gave significantly more money to an unknown trustee. This effect remained when controlling for differences in self reported generalized trust. We argue that responsibility-mindedness which drives prevention focus, draws on a generalized feeling of community, which fosters cooperation.

Paper ID: 188
Type: poster
Day of Session: THU PM
Time of Session: 15:30 - 17:30
Poster board number: 20

Session Title: Cooperation, coordination and naturalistic DM
Moral self-licensing and moral cleansing effects in public good games

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Moral-cleansing occurs when past immoral behaviour makes people more likely to behave morally. This effect would take place because dubious behaviour threatens people moral identity that has to be reaffirmed. By contrast, moral self-licensing occurs when past moral behaviour makes people more likely to behave immorally. This effect would take place because performing good deeds established people moral identity and thereby licenses subsequent immoral behaviour. Here we will prime participants with either positive, or neutral or negative words in order to manipulate participants' perception of moral self-worth. They will then participate to a public good game in which they will have to choose between maximizing their personal profit or preserve environment. The incentives will be real: participants will either receive some cash or make a donation to a pro-environmental association. The game will be played in small groups and will consist in a series of trials. Participants will receive a feed-back about the behaviour of other members of the group between trials. We hypothesize that participants will be more likely to maximize their profit and less likely to make a donation in the positive priming condition than in the other conditions. In the negative words condition, we hypothesize that participants will make the largest donation and thereby minimize their personal profit.

Paper ID: 131
Type: poster
Day of Session: THU PM
Time of Session: 15:30 - 17:30
Poster board number: 21

Session Title: Cooperation, coordination and naturalistic DM
Giving: A conformity heuristic?

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Giving: a conformity heuristic? 112 students were assessed for social desirability pre-experimentally. At a subsequent session they were divided into two groups (determinate / indeterminate). Two types of economic game were played. Game 1) A dictator game was played in which a participant decided how much of her money to spend to give money to her partner or a computer partner. Game 2) A charitable-giving game was played in which a participant decided how much of her money to give to a specified charity. The research intended to investigate if trait social desirability correlated with increased generosity to others, and whether that correlation would be increased or decreased when conditions were indeterminate (unspecified recipient) compared to determinate (specified recipient). Social desirability did correlate with generosity but only when recipients were unspecified (indeterminate).

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Environmental sampling in social dilemmas ? The impact of rare events

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In order to understand why and when people cooperate in a social dilemma, much research has focused on social uncertainty. Yet, even if all people cooperate, collective efforts are exposed to exogenous risks (e.g. economy, natural catastrophes). In line with this, studies have started to investigate the effect of exogenous risks on social dilemmas by presenting people with probabilities of possible outcomes and found contributions to decline even further, aggravating the 'tragedy of the commons'. Often however, people base their decisions on their personal experience of risks. Recent research in risky choice highlights that it matters how people learn about the likelihoods of different outcomes: if people decide based on probability statements (decisions from description), they appear to overweight rare events (<25%) in line with Prospect Theory. If people sample the likelihood of a rare event (decision from experience), their choices appear to underweight its occurrence. We investigate the effect of how people learn about rare events on cooperation rates in a stochastic Prisoner's Dilemma without feedback. The following hypotheses are tested: (a) If there is a rare event with undesirable implications, cooperation rates in the experience condition will be higher than in the description condition. (b) If the rare event has desirable implications, the choice pattern will be reversed. (c) The effect holds only for rare events (< 25%) and is amplified the smaller the probability of the rare event is. The study highlights the importance of how people learn about likelihood of exogenous risks for cooperation in social dilemmas. Importantly, if risks are small, cooperation based on personal experience may be more likely than previous laboratory experiments suggest.