

Poster Abstracts, Morning Session

- (1) *When the status quo turns sour: Robust effects of incidental disgust on economic transactions*
Han, Seunghee (Carnegie Mellon University); Lerner, Jennifer S. (Carnegie Mellon University)

Research on choice finds that decision-makers disproportionately choose the status quo over other options. Drawing on an Appraisal-Tendency Framework, the present three studies predicted and found that incidental feelings of disgust – feelings elicited in a past situation that should have no normative influence on decisions in the present situation – eliminate exaggerated preferences for the status quo. All three studies used real commodities, real money, and measured real behavior. Results held even when commodities were generic shapes for which status-quo preferences or aversions were scarcely justifiable. Finally, results held even when decision-makers were explicitly warned about disgust's potential effect.

- (2) *When Matter Matters: Understanding Brains to Enrich Behavioral Explanations of Judgments and Decisions*
Litt, Abninder (University of Waterloo); Eliasmith, Chris (University of Waterloo); Thagard, Paul (University of Waterloo)

There is growing interest in exploring the neurological activity underlying valuation and choice behaviors. We present a biologically realistic neural model that shows how specific brain operations can produce complex decision and preference phenomena. The model provides a rigorous neurobiological account of loss aversion and the shape of prospect theory's value function. It also establishes detailed neural-level mechanisms for behavioral interactions between emotions, prior expectations and counterfactual comparisons explored in decision affect theory. Our results demonstrate a valuable role for theoretical neuroscience in developing richer and more complete explanations and predictions in the psychology of judgment and decision making.

- (3) *On the dance of reason and affect: Models of choice with cognitive weights and emotions.*
Trujillo, carlos A (Universidad Pompeu Fabra, Universidad de los Andes)

This paper investigates how cognitive weights of attributes relate to holistic affective reactions during decision processes. I propose and test four models of choice that capture such interplay. I tested first the assumptions underlying the basic structure of each model and second, I directly tested their predictive power. In short, the models display strong predictive power and weights and affect are strongly correlated during the choice process thereby determining the direction of preferences. Interestingly, people seem able to determine the extent to which they allow emotions to influence their preferences, particularly when emotions are negative and meta cognitive.

- (4) *Moderating Scope Neglect and Affect in Humanitarian Aid Decisions*
Huber, Michaela (University of Colorado, Boulder); Van Boven, Leaf (University of Colorado, Boulder)

We demonstrate two factors that decrease the weight of affect in decisions about allocating humanitarian aid. In one study, participants neglected information about humanitarian crises' deadliness, choosing to write a letter calling attention to a crisis that aroused immediate rather than distant affect—a tendency eliminated by postponing the decision. In another study, encouraging analytical rather than affective processing by providing factual summaries of two crises decreased the weight of affect and increased the weight of deadliness estimates in aid allocation decisions. Thus, postponing decisions and analytical reasoning can both decrease the (sometimes unwanted) influence of affect in donation decisions.

- (5) *Fear, Anger, and Anchoring*
Vietri, Jeffrey T. (Rutgers, The State University of New Jersey); Chapman, Gretchen B. (Rutgers, The State University of New Jersey)

Negative mood results in less biased judgment in a variety of domains. However, research suggests processing effects associated with negative mood are instead attributable to certainty. Unlike most judgmental biases, the anchoring effect is larger in sad participants, but whether this is due to low certainty appraisal or negative valence has never been explored. We induced participants to feel anger and fear, negative emotions of high and low certainty, respectively, and had them complete an anchoring questionnaire. Though fear typically has similar effects to sadness, and anger effects similar to happiness, angry participants showed a greater bias than fearful ones.

(6) Individual Differences in Loss Aversion

Cohen, Yariv (London Business School); Johnson, Eric J. (Columbia University); Narayanan, Jayanth (National University of Singapore); Weber, Elke (Columbia University)

A robust finding within the literature is the reference dependence of risky choice behavior. Loss aversion (“losses loom larger than gains”) has been used to explain risky choices. There has however been no systematic effort to examine the individual differences in loss aversion. In this paper, we examine the relationship between the big five personality dimensions, positive affectivity/negative affectivity (PA/NA) and loss aversion. We find that loss aversion is positively related to extraversion and openness to experience and marginally related to negative affectivity. The findings from the study have implications for understanding loss aversion and individual differences in decision-making.

(7) The Role of Affective vs. Deliberative Information Processing in Scope Insensitivity

Dickert, Stephan (University of Oregon and Decision Research); Sagara, Namika (University of Oregon); Peters, Ellen (Decision Research and University of Oregon); Slovic, Paul (Decision Research and University of Oregon)

We investigated if scope (one or five pictures) and presentation modus (five identical pictures or group picture) influence affective information processing, and in turn if it predicts donations. Participants (N=420) stated their willingness-to-donate and gave affective ratings for endangered pandas. Prior research suggests that affective processing leads to scope insensitivity (Hsee & Rottenstreich, 2004). Our results indicate that willingness-to-donate is dependent on positive affect only in the single picture condition, while participants’ positive affect was lower for five identical pictures compared to the other conditions. We argue that scope sensitivity depends on the type of presentation, which influences affective reactions.

(8) The Trouble With (Subjective) Discount Rates: What Do Patterns of Impatience Among the Very Poor Tell Us?

Krupka, Erin (Carnegie Mellon University)

Measuring patterns of elicited impatience among the poor is a step toward understanding factors that influence their financial decisions. Using data from the Seattle Income Maintenance Experiment, I exploit several design features to show that elicited subjective discount rates – measured by a willingness to wait for a hypothetical larger later reward instead of a sooner smaller reward – are characterized by a pattern of rising impatience over the course of the benefit month for a representative sample of welfare recipients. Further, I show that this pattern is difficult to attribute to a household’s failure to smooth consumption.

(9) Budgeting in lab rats: estimation of subjective opportunity costs

Solomon, Rebecca B. (Concordia University, CSBN); Conover, Kent L. (Concordia University, CSBN); Shizgal, Peter (Concordia University, CSBN)

Opportunity cost can be estimated in laboratory animals by determining the time they are willing to invest in earning a reward; time spent working for the reward is time taken away from “leisure” activities such

as grooming, resting, and exploring. Using conjoint measurement and stimulus-strength scaling in rats working for rewarding electrical brain stimulation, we estimated the function that maps objective opportunity cost (work time per reward) into its subjective equivalent. As opportunity cost is decreased from high values, subjective cost declines accordingly at first but eventually levels off as objective cost becomes very low.

(10) *Moral Judgment in Efficient Breach of Contract*

Wilkinson-Ryan, Tess (University of Pennsylvania); Baron, Jonathan (University of Pennsylvania)

The argument for permitting efficient breach of contract is both difficult to understand and morally counter-intuitive: people should not be allowed to break their promises without penalty. In these studies, subjects read efficient breach cases and answer questions about the moral and financial obligations of the breacher. Results suggest that people consider breach of contract to be morally objectionable, even when the breaching party pays adequate damages. Further studies investigate the differences between breaches to gain vs. breaches to avoid loss, the effects of thorough explanation of the theory of efficient breach, and the effect of a liquidated damages clause.

(11) *The Enigma of Financial Expertise: Superior and Reproducible Investment Performance in Efficient Markets*

Cokely, Edward T. (Florida State University); Patric Andersson (Stockholm School of Economics); Ericsson, K. Anders (Florida State University)

We review research on financial expertise via the expert-performance approach to reveal evidence that some financial professionals display superior and reproducible investment skill. Evidence suggests that through deliberate practice these experts develop highly specialized knowledge and cognitive adaptations that functionally expand their reasoning abilities and limit biases. However, these experts' profits do not on average exceed transaction costs. We propose that this market efficiency is both a result and reflection of expert decision-making. Finally, we discuss the development of ecologically valid tasks required for the identification of experts and the modeling of their judgment and decision-making processes.

(12) *Effects of Correlational Strength and Correlational Indeterminacy on Judgments of Causality*

Kelley, Amanda M. (Bowling Green State University); Anderson, Richard B. (Bowling Green State University); Doherty, Michael E. (Bowling Green State University)

The present study focused on inferences made from samples in which there is an indeterminate (i.e., incomputable) correlation between stimulus variables. Participants made a causal judgment in five different conditions: two in which the correlation was indeterminate (in that there was zero variance in one of the two variables), and three in which there was a definite, quantifiable correlation between the stimulus variables. Participants' responses reflected a sensitivity to the composition of the data, even when the sample correlation was indeterminate. The results suggest a strategy of using a subset of the available data to form a judgment.

(13) *The "Shaken Self": Product Choice as a Means of Restoring Self-View Confidence*

Gao, Leilei (Stanford University); Wheeler, Christian (Stanford University); Shiv, Baba (Stanford University)

The present research shows that individuals are motivated to choose self-view bolstering products when a confidently held self-view is temporarily cast in doubt. Three studies show that a manipulation as subtle as writing with the non-dominant hand can "shake" participants' self-view confidence and lead them to choose products consistent with their original self-view. The consequences of the "shaken self" on product choices are examined in three self-domains: being exciting, intelligent, and health-conscious.

Further, we show that the effect is attenuated when participants can restore their self-view confidence before the choice task.

- (14) *The Effects of Choice Set Reductions on Consumer Choice : The Role of Confidence*
Thozhur, Anil (Columbia University); Heitmann, Mark (University of St Gallen); Lehmann, Don (Columbia University)

Across three studies, we found that removing an alternative from a choice set can lead to different information acquisition patterns depending on the nature of the option removed. When preferences are based on an alternative's inherent appeal or attribute strength, removing the alternative does not alter the decision process, and more extensive, compensatory processing follows, in keeping with prior literature (Payne, Bettman and Johnson 1993). When preferences are purely context-dependent, removing alternatives weakens the decision maker's confidence, resulting in more alternative-based information acquisition, with the decision maker focusing almost exclusively on their next most favored alternative.

- (15) *How Much Information is Too Much?: A Comparison of Decompositional and Holistic Strategies*

Fernandez, Norma P. (University of Texas at El Paso); Morera, Osvaldo F. (University of Texas at El Paso); Lechuga, Julia (La Universidad Autonoma de Ciudad Juarez, Mexico)

Past research has found that as decision problems become more complex, temporal stability of holistic judgments are hypothesized to become adversely affected more than decompositional judgments (Morera & Budescu, 1998). However, manipulations of decision complexity in prior studies have been limited. In the present study, decision complexity was manipulated in terms of the number of attributes and stimuli in the decision. Results partially confirmed the relationship between decision complexity and convergent validity for a measure of distance between values spaced one week apart. However, when the dependent variable was a transformed measure of linear association, holistic judgment outperformed decompositional judgment.

- (16) *Cognitive Processes of Decisions Based on Verbal Probability Expressions -An Analysis from Decision Reason-*

Honda, Hidehito (Tokyo Institute of Technology); Yamagishi, Kimihiko (Tokyo Institute of Technology)

Decision processes based on verbal probability expressions (VP) were analyzed by decision reason for choice. In this analysis, we especially focused on effects of directionality, which is one of the features in VPs, on decisions. Results suggested that cognitive processes of decision were different by the effects of directionality, and this derived from verbal features in directionality. We also analyzed cognitive processes of decisions based on numerical probability, and did not find significant differences between decision processes based on numerical probability and those based on VP. Other implications on decision processes are discussed.

- (17) *Unwilling to decide or willing to let others: The two-dimensionality of motivation in decision avoidance.*

McNeill, Ilona M. (University of Amsterdam); Nijstad, Bernard A. (University of Amsterdam); Handgraaf, Michel J. J. (University of Amsterdam); De Dreu, Carsten K. W. (University of Amsterdam)

Decision avoidance can result from not wanting or being able to choose between options. However, people can also avoid decisions before even comparing the alternatives. In three studies, this type of decision avoidance was studied. We found that the motivation to enter the decision making process is not the exact opposite of the motivation to avoid it. Results also showed that both motivations independently influence whether a person will avoid a decision, and that more complex motivations like feelings of

responsibility and need for control may interact with more basic motivations like attractiveness of acceptance/avoidance of the decision.

(18) *Decision Strategies Matter: A Two-outcome Lottery Simulation*

Decker, Nathaniel (University of South Florida); Schneider, Sandra L. (University of South Florida)

Most theories of decision-making rely heavily on calculating expectation. There may be other factors that decision-makers care about in addition to expectation. We use Monte-Carlo-style simulations of two-outcome lotteries to examine differences in outcomes beyond expectations between nine decision strategies. We investigate outcome predictability mapped by variability, aspiration level attainment, and exceeding thresholds over time with assessments of participant experiences along the way. We show that strategies relying on related external goals have more impact on outcome distributions than standard lottery-specific strategies.

(19) *Comparing multiple options in the past and the present: the influence of multiple options on inaction inertia*

van Putten, Marijke (Tilburg University, The Netherlands); Zeelenberg, Marcel (Tilburg University, The Netherlands); van Dijk, Eric (Leiden University, The Netherlands)

The likelihood of buying a sweater with a 10% discount drops substantially after a 50% discount on the sweater was previously missed. This influence of missed opportunities on current decisions is called inaction inertia. We predicted less influence of the missed opportunity when multiple options are currently available. We found an attenuation of inaction inertia when multiple options were considered (Exp. 1 & 2). Conversely, inaction inertia was enhanced when multiple opportunities were missed (Exp. 3). This supports our reasoning that multiple options influence inaction inertia by influencing the weight of the missed opportunity as a reference point.

(20) *Distinction Bias Among Older Adults: Does the Relationship Between Joint and Separate Evaluation Change With Age?*

Healey, M. Karl (University of Toronto); Kim, Sunghan (University of Toronto); Hasher, Lynn (University of Toronto); Goldstein, David (University of Toronto)

Distinction bias (Hsee & Zhang, 2004) occurs when choosers operating in joint evaluation (JE) mode overpredict the extent to which variation on an attribute (e.g., size of a chocolate) will effect enjoyment of consumption in separate evaluation (SE) mode. We examined possible age differences in the susceptibility to the distinction bias. Participants in the JE condition were given the option of doing a desirable task for a small reward or an undesirable task for a large reward; in the SE conditions only one option was given. The results suggest that under certain circumstances, neither age group exhibits the distinction bias.

(21) *Individual Differences in Preference for Sequences using forced-choice and self-generated methods.*

Westfall, Jonathan E. (The University of Toledo); Jasper, J.D. (The University of Toledo)

Analyzing preferences for two events generally yields a positive-time bias, while preferences for a series of events (sequence) supports a negative-time bias or desire to choose the sequence that improves over its duration. The present study extended the research by comparing two methods—the traditional forced choice method and a new technique whereby individuals were asked to generate their own sequence – and by exploring differences in strength of handedness, an individual difference variable shown to predict response in other decision-making situations. Results indicated that preference may indeed be dependent on response method and whether an individual is mixed- or strong-handed.

(22) *Decision Field Theory as a Bridge between Neural Models and Complex Decision Behavior*
 Jessup, Ryan K. (Indiana University); Busemeyer, Jerome R. (Indiana University)

Diffusion processes are able to account for a wide range of findings from decision research for which purely algebraic and deterministic models cannot. Neural recordings from non-human primates during perceptual decision making tasks have revealed that neural firing rates closely mimic the accumulation of preference theorized by behaviorally-derived diffusion models of decision making (Gold & Shadlen, 2001, 2002). Here we present decision field theory (Busemeyer & Townsend, 1993), a connectionist model of decision making implementing diffusion processes, as a bridge linking lower-level neural recordings and more complex behavioral findings from psychology and economics. Neural correlates of the model are discussed.

(23) *The effects of perceived skill on betting*

Young, Diana L. (University of Georgia); Goodie, Adam S. (University of Georgia)

It has been found that people's risk-taking differs when the outcome of a bet relies on an element of control (e.g. knowledge) versus chance events. In two studies that are extensions of Goodie's control hypothesis (2003), risk-taking strategies in chance bets were pitted against skilled task bets. Following past, knowledge-based studies, Experiment 1 used a partial probability scale, from 51% to 99%, and found that participants betting on skill accepted risk more prescriptively than participants betting on chance events. Experiment 2 extended those findings on a fuller (1% to 99%) probability scale. Implications for applied and natural decisions are discussed.

(24) *People Do Not Know It Unless They Experience It: The Effect of Mental Imagery on Intertemporal Preference Reversal*

Ahn, Hee-Kyung (University of Toronto); Soman, Dilip (University of Toronto)

The research explores that the ease of imaginability of an attribute influences choice to a great extent. For example, people choose apartments based on attributes like view and upkeep of public areas, while undervaluing attributes like distance and commute. However, actual experience will follow their decisions which are based on their prospective evaluations. After their consumption experiences, they will make retrospective evaluations of the choice options. We show reversals of evaluations as a function of asking people choice questions and retrospective preference questions. Also, we can manipulate the imaginability of attributes and show that the effect can be strengthened/ weakened.

(25) *Is There an Expected Trade-off Between a Product's Ethical Value and Its Effectiveness?*

Luchs, Michael (The University of Texas at Austin); Naylor, Rebecca (University of South Carolina); Irwin, Julie (The University of Texas at Austin); Raghunathan, Rajagopal (The University of Texas at Austin)

This research seeks to expose consumers' intuition that there is an inherent tradeoff between how ethical a product is (e.g., environmental friendliness, no animal testing) and the product's effectiveness, even when there is no logical reason for the tradeoff. Our initial studies have demonstrated that people expect the tradeoff when they are less committed to the focal ethical issues. We are replicating these studies using a broad, nationally representative sample, and testing moderators of the intuition such as self/other judgments and precommitment to the intuition.

(26) *How Flattery Influences the Effectiveness of Product Recommendations*

Lieb, Daniel S. (Duke University); Carlson, Kurt (Duke University)

This paper identifies new roles for flattery when making a product recommendation. Two studies demonstrate that flattery, followed by an unrelated product recommendation, helps establish the recommended product as the leader in the choice process. Study one finds that consumers' over-support

the recommended product by biasing new information to favor it more when they have been flattered. The effect is so robust that it persists even when consumers know that the purpose of the flattery is to influence choice. Study two replicates the effect and reveals that flattery succeeds by increasing the consumer's sense of being known by the flatterer.

(27) *Clique here! A linear model to predict ingroup acceptance in online communities*

Walker-Smith, Katherine (Carnegie Mellon University); Dawes, Robyn (Carnegie Mellon University)

Online communities have soared in popularity as alternative social outlets. Recent research has examined whether posts to online community forums will receive responses and whether participants will return. Expanding upon this research, we constructed a linear model to predict whether newcomers will be accepted as ingroup members of online communities. Using data from two online forums, we tested our hypotheses that those who are ultimately accepted as ingroup members seek out advice and answers from others, avoid debate, post in regular intervals and on a variety of threads, and compose short messages that consist of simple, rather than advanced, prose.

(28) *The effects of presenting verbal versus numeric evidence in liability judgments*

Joy, Jennifer (University of Virginia); Spellman, Barbara (University of Virginia)

Is information more convincing when presented verbally or numerically? Participants read a trial in which an expert witness presented an estimated likelihood that the defendant was liable for damages either verbally (i.e., likely, equal chance, or unlikely) or numerically (i.e., 75%, 50%, 35%). The verbal labels were assessed to be good interpretations of the corresponding numbers. Participants appropriately rendered more judgments against the defendant when given higher likelihood estimates. However, overall, confidence was lower for liable than not-liable judgments. Presentation style (verbal or numeric) had no effect. Thus, presentation style affects jurors' confidence but not their decisions.

(29) *Cognitive and Hemodynamic Predictors of Shoot/Don't-Shoot Decision Making*

Barrett, Natasha (Georgia State University); Washburn, David A. (Georgia State University)

To simulate soldier threat/nonthreat decision making, undergraduate participants monitored a projected picture of a street with buildings and windows. A laser-modified handgun was used to shoot multi-colored targets that appeared, interspersed with distractors, in several locations for variable display durations. While performing this task, participants' blood-flow velocity to each cerebral hemisphere was noninvasively measured using Transcranial Doppler. Regional increases in neural activity in the brain resulted in increased blood-flow velocity to that region. The magnitude of heuristic effects on shoot/don't-shoot decision making was significantly associated both with cognitive factors (e.g. attention skills) and hemodynamic changes.

(30) *The Structure of Everyday Decisions*

Kramer, Adam D. I. (University of Oregon); Hodges, Sara D. (University of Oregon)

In three studies (N=892), participants described four different decisions (important, difficult, and bad decisions, plus the most recent decision made) from their own experience. Participants rated these decisions on a wide range of characteristics, allowing us first to demonstrate how characteristic profiles for these four decisions differed from each other. Next, we extracted a factor structure across the four decision types that revealed two primary factors underlying how people think about everyday decisions: how challenging the decision is, and how much closure is perceived regarding the decision. Our analyses provide a framework for describing and comparing decisions across multiple contexts.

(31) *Neural evidence for different cognitive processes in multiple-cue judgment*

Karlsson, Linnea (Umeå university); Juslin, Peter (Uppsala university); Olsson, Henrik (Uppsala university); Nyberg, Lars (Umeå university)

A proposed general process-model of judgment, Sigma (Juslin, Karlsson, & Olsson, submitted; Karlsson, Juslin & Olsson, submitted) predicts that additive multiple-cue judgment tasks and non-linear or non-additive tasks will be addressed by different cognitive processes. This prediction was tested in an fMRI-study. A within-subject design was administered, where participants learned to make judgments in both an additive and a multiplicative multiple-cue judgment task. Participants performed a training phase in the lab and were later tested in the camera. The preliminary results suggest that different neural systems are involved when solving the two tasks.

(32) *The Role of Fluency in Cue Weighting*

Shah, Anuj K. (Princeton University); Oppenheimer, Daniel M. (Princeton University)

Findings from two studies support the idea that fluent, or easy to process, information is given more weight than disfluent information when people make judgments. In Study 1, participants placed more weight on financial information from brokerage firms with easier to pronounce names than those with difficult names. In Study 2, we manipulated retrieval fluency, and participants placed more weight on cues that were seen more recently than on cues that were seen less recently. Implications for cue selection and judgment are discussed.

(33) *Risk Taking With and Without Understanding*

Hudspeth, Christopher S. (University of South Florida); Schneider, Sandra L. (University of South Florida)

In recent experiments we have examined how risky decisions vary as a function of whether decision makers perceive themselves to be moving toward a goal or making a choice between two alternatives. We discuss how participant responses varied in relation to performance on a short quiz which was administered to test understanding of the task; specifically, how a failure to understand the task reflects a participant's tendency to be risk seeking. We discuss the possible implications of this effect and suggest that a forced-choice task fails to differentiate between those who understand a decision and those who do not.

(34) *Overcoming Intuition: Metacognitive Difficulty Activates Analytic Reasoning*

Alter, Adam (Princeton University); Oppenheimer, Daniel (Princeton University); Epley, Nicholas (University of Chicago); Norwick, Rebecca (Harvard University)

Dual-process models propose two distinct modes of reasoning, a default system that is quick and intuitive (System 1) and a slow and deliberate system that can override intuitive reasoning when necessary (System 2). But how do people recognize when more analytical reasoning is necessary? Across four studies, we show that the experience of cognitive difficulty or disfluency leads people to implement System 2 processing. This results in increased attention to central rather than peripheral cues (Study 1), decreased reliance on the representativeness heuristic (Study 2), and improved performance on the Cognitive Reflection Test (Study 3) and difficult syllogisms (Study 4).

(35) *How do people use the fluency heuristic and the recognition heuristic? Evidence from eye-movements*

Marewski, Julian N. (Max Planck Institute for Human Development); Schooler, Lael J. (Max Planck Institute for Human Development)

We examine peoples' usage of two inference strategies: the fluency heuristic and the recognition heuristic. The fluency heuristic describes inferences best when competing knowledge-based strategies are not applicable suggesting a hierarchy for strategy use in which knowledge-based strategies are

prioritized over this heuristic. Inferences inconsistent with the recognition heuristic require more cognitive effort than inferences agreeing with it. Low short-term memory capacity impacts the amount of cognitive effort required most when this heuristic is not used. The data suggests that the recognition heuristic is applied by default. Using the fluency heuristic requires more cognitive effort than using the recognition heuristic.

(36) *The collective wisdom of partially ignorant people*

Herzog, Stefan M. (University of Basel, Switzerland); Hertwig, Ralph (University of Basel, Switzerland)

Forecasters can make predictions about a 'type' (e.g. soccer team) by exploiting recognition knowledge about its 'tokens' (e.g. players). We tested a model that predicts outcomes of the Soccer World Cup 2006 based on player recognition of a team. It predicts that the team with higher token recognition will win. We compared the model with potent benchmark models and found that it can compete extremely well in predicting outcomes of the tournament. We discuss these findings in the larger context of expert knowledge and prediction markets. The collective wisdom of partially ignorant people can be valuable and highly adaptive information.

(37) *Exploring Imprecise Probabilities*

Broomell, Stephen (University of Illinois at Urbana-Champaign); Budescu, David V. (University of Illinois at Urbana-Champaign)

We report partial results from a series of experiments involving decisions with imprecise probabilities. The range and mid-range of the probability ranges, that introduced an element of vagueness in the decision task, were experimentally manipulated. A decision aid allowed subjects to specify probability distributions over these ranges and to calculate the expected values of the various options. We examine these probability distributions and analyze their characteristics as a function of the parameters of the ranges. The central locations of the probability distributions generated by the participants matched the midranges, but they were negatively skewed indicating vagueness avoidance.

(38) *Utility aggregation in temporally extended experiences: What's in representative moments?*

Cojuharenco, Irina (Universitat Pompeu Fabra); Ryvkin, Dmitry (Florida State University)

According to the empirically established Peak-End rule, the extreme and final impressions are disproportionately highly represented in overall evaluations of temporally extended experiences. The studies of lay intuitions, however, suggest that people genuinely believe that overall evaluations reflect the average of all impressions. Are these intuitions wrong? We examine 54 experimental and field data sets and find, surprisingly, that the two aggregation rules produce highly correlated overall evaluations. We propose a theoretical explanation and test it using panel data analysis and simulations. The results suggest that the Peak-End rule is often an adaptive way of summarizing average impressions.

(39) *Complexity is Good: When Disfluent Communication Signals Author Erudition*

Galak, Jeff (New York University); Nelson, Leif D. (New York University)

Previous research shows that people prefer simple writing to complex writing. Four studies demonstrate that this may not always be true. The disfluency of a non-fictional essay in a bad font leads to judgments of more textual complexity and better writing relative to the same essay in a good font (Studies 1 and 2). Furthermore, people make fewer edits to an essay in a bad font than in a good font (Study 3), an effect mitigated by attributing the disfluency to the experimenter (Study 4). When complexity signals communication sophistication, fluency is a negative signal for quality.

(40) *Framing, Omission Neglect, and Perceptions of and Attributions for Fluctuating Gas Prices*

Bechkoff, Jennifer "Kat" (University of Cincinnati); Niculescu, Mihai (University of Cincinnati); Palghat, Vijaykumar K. (University of Cincinnati); Kohne, Mary Lou (University of Cincinnati); Palmatier, Robert W. (University of Cincinnati); Kardes, Frank

The absence of a loss and the absence of a gain are experienced much less intensely than the presence of a loss and the presence of a gain. This asymmetry is inconsistent with the implications of loss aversion, but consistent with the implications of omission neglect. Missing or absent information is difficult to process, and is therefore, less influential relative to presented information. This pattern was observed in judgments of frame believability, price gouging, inflation, and consequences for the U.S. economy. Loss/gain framing was more impactful than non-loss/non-gain framing. Implications for understanding insensitivity to omissions in framing are discussed.

(41) *Revisiting Framing Effects in Group Decisions: The Impact of Social Goals*

Milch, Kerry F. (Columbia University); Weber, Elke U. (Columbia University); Krantz, David H. (Columbia University)

We examined framing effects among individuals and preexisting groups. For a modified Asian disease problem, the effect was smaller for groups than for individuals. For an intertemporal choice about acceleration or delay of consumption, groups whose members first made the decision individually showed no framing effects. Groups making the decision for the first time showed a framing effect in the opposite direction expected from prior research (less discounting in the delay frame). Written reasons revealed greater activation of social goals in group decisions for the loss and delay frames, suggesting that consideration of group concerns may moderate framing effects.

(42) *The Effect of Generation and Gender on Quantity and Resolving Power of Solutions to Ill-Structured Problems*

Gallagher, Erin C. (University of Nebraska, Omaha); Scherer, Lisa L. (University of Nebraska, Omaha); Saathoff, Kristin I. (University of Nebraska, Omaha); Hassing, Daniel J. (University of Nebraska, Omaha); Hayford, Nicole E. (University of Nebraska, Omaha)

We examined the influence of generation and gender on the quantity and quality of solutions generated to high and low emotionally-involving, ill-structured problems. Results indicated that for the high emotionally-involving problem Baby Boomers generated more solutions than Gen-Yers and Gen-Xers, of which a greater number of solutions resolved only one side of a problem conflict. Additionally, males tended to generate more low-quality solutions compared to females. No differences in quantity and quality of solutions existed for the low emotionally-involving problem. Findings of the study suggest that when confronted with a high emotionally-involving problem, generation and gender influence decision outcomes.

(43) *Decision Making in Virtual Teams: Effects of Motivational Orientation.*

Melchior, Stefan N. (University of Rostock); Nerdinger, Friedemann, W. (University of Rostock)

This exploratory study examined the effects of motivational orientation on decision making in virtual teams. Two types of teams were created on the basis of social motives, egoistic and prosocial. Forty two business students solved a three-person-team decision making task via computer-mediated communication. Prosocially motivated teams exchanged more information, less opinion, and showed less negative social-emotional reactions. Post-task questionnaire results indicated that prosocially motivated teams report less competition, higher cooperation, less intra-group conflict, higher cohesiveness, and higher trust between team members. Regarding outcomes, prosocial teams achieved better decisions, showed higher satisfaction, willingness to cooperate in future, and perceived media richness.

(44) *Knowing What You Knew: An Extension of the Hindsight Bias*

Marks, Melissa (The Ohio State University); Arkes, Hal (The Ohio State University); Shoots-Reinhard, Brittany (The Ohio State University)

In a previous experiment, we found that participants were unable to disregard newly learned information about the Revolutionary War when asked to do so. We suspected that the familiar nature of Revolutionary War information may have produced source confusion between old and new information, contributing to participants' inability to discount the latter. We sought to eliminate source confusion by using an obscure war: the War of 1812. Participants reading about the War of 1812 were able to disregard this information. This study presents an important qualification to previous findings; participants are able to discount unfamiliar information but not familiar information.

(45) *People don't vote for competent appearance, but think that others do*

Gaissmaier, Wolfgang (Max Planck Institute for Human Development, Berlin); Schooler, Lael J. (Max Planck Institute for Human Development, Berlin)

Todorov et al. (2005) report that judgments of competence based solely on facial appearance were able to predict the outcomes of U.S. senatorial and congressional elections. Contrary to their conclusion that competent appearance causally influences voting decisions, we demonstrate that the correlation between competent appearance and electoral success is a spurious one and does not indicate that people vote for competent appearance. Still, people seem to have the intuition that competent appearance matters. They seem to overestimate the impact of the individual candidate on electoral success, but largely ignore party affiliation, although this is much more important for electoral success.

(46) *Putting the Self into Self-Presentation: Egocentric Biases in Strategic Presentations to Others*

Myrseth, Kristian Ove R. (University of Chicago GSB); Epley, Nicholas (University of Chicago GSB)

People commonly try to strategically influence others' impressions, but such strategic self-presentation tactics are not always successful. We document here one possible reason why our self-presentational strategies may be less successful than hoped—that self-presentational strategies are egocentrically biased to impress oneself, with insufficient regard for how these strategies will be evaluated by the target of our self-presentation. Studies involving the selection of jokes, excuses, pick-up lines, and items on a resume support our hypotheses. Sometimes self-presentational strategies fail to impress others because they were designed to impress oneself.

(47) *Default Effects in Living Wills Written by Geriatric Patients*

Kressel, Laura (New York University); Chapman, Gretchen B. (Rutgers University); Leventhal, Elaine A. (University of Medicine and Dentistry of New Jersey)

This study examines default effects in living wills completed by geriatric patients. Participants (N=101) completed one of three normatively equivalent documents. When the default was to provide treatment, patients expressed significantly more aggressive preferences than when the default was to withhold treatment. Preferences expressed in a forced choice document that had no default were most similar to those in the withhold-treatment default condition. Discordance between the living will and a subsequent questionnaire was greatest in the provide-treatment default condition. Thus, living wills with a provide-treatment default, the type often distributed by hospitals, are subject to bias.

(48) *A Closer Look at the Number Size Effect*

Guidroz, Ashley (Bowling Green State University); Highhouse, Scott (Bowling Green State University)

Wong and Kwong (2005) found that performance differences between people are perceived larger when presented using small numbers than when presented using large numbers. Whereas the Wong and Kwong study used between-person performance differences, the present study contrasts between-person differences and within-person performance changes. Results indicate that the size of the number size effect may depend on the origin of the numbers being compared.

(49) *Feeling vs. Knowing: A Dual-Systems Approach to Risky Choice*

Bond, Samuel D. (Duke University)

Risky choices frequently present conflict between 'analysis' and 'intuition'. Extending dual-process models of judgment, we suggest that individuals often select a processing output (system-1 or system-2) based on motivational considerations. We investigated three moderators: affective implications of each system, 'fit' of processing outputs with the decision context, and requirements to justify. Study 1 utilized Epstein's ratio bias task; participants chose a perceptually appealing (but probabilistically inferior) option more often when favorably primed towards system-1. Study 2 presented a roulette scenario evoking the gambler's fallacy; justification requirements substantially reduced the bias in a hedonic domain but not in a utilitarian domain.

(50) *Inhibiting of alternatives: Implications of part set cuing and retrieval induced forgetting for hypothesis generation and judgment.*

Tomlinson, Tracy (University of Maryland); Dougherty, Michael (University of Maryland)

Both part-set cuing and retrieval induced forgetting have been shown to reduce the number of elements participants can retrieve from memory. We assumed that these same processes may underlie participants' failure to generate a complete set of alternative hypotheses in judgment tasks. We manipulated whether participants were part-set cued (experiment 1) or induced (experiment 2) with typical or atypical exemplars from the category 'natural-causes of death'. Cuing (or inducing) with typical exemplars, compared with atypical exemplars, led to an increase in judged probability. Moreover, different types of cues led participants to generate different sets of items when forming their judgments.

(51) *Self-Predictions of Future Behavior When Money is on the Line*

John, Leslie K. (University of Waterloo); White, Rebecca J. (University of Waterloo); Koehler, Derek J. (University of Waterloo)

We examine the role of current intentions in self-predictions of future money-saving behavior within a context in which the costs of misprediction are significant. Participants relied on a largely invalid cue, namely their strong intentions, and as a result made overly optimistic self-predictions despite incentives for accuracy. A manipulation that influenced the ease with which intentions were translated into behavior had a greater impact on actual savings behavior than on self-predictions, consistent with the idea that self-predictions closely follow the strength of current intentions with insufficient regard for their predictive validity.

(52) *Demanding Negotiators: The Effects of Reference Price Emphasis, Regulatory Focus and Regulatory Fit*

Appelt, Kirstin C. (Columbia University); Higgins, E. Tory (Columbia University)

Previous literature has shown that demanding negotiators achieve better objective outcomes. But what makes negotiators differ in their level of demandingness? Using the Synertech-Dosagen case, we investigated demandingness in terms of both average fair price participants selected and width of the range of fair prices they selected. We found evidence for three factors affecting demandingness: (1) reference price emphasis (higher for aspiration price than reservation price emphasis; (2) regulatory focus (higher for promotion-focused than prevention-focused negotiators [using the Regulatory Focus Questionnaire]); and (3) regulatory fit (higher for promotion-focused sellers and prevention-focused buyers than promotion-focused buyers and prevention-focused sellers).

(53) Actor/Observer Asymmetry in Risky Decision Making

Wifall, Timothy (Villanova University); Fernandez-Duque, Diego (Villanova University)

In a simplified computer gambling task, subjects chose one card at a time from a set of 10, after being instructed that 9 cards were good (win a dollar) and one was a disaster (lose all the money) (Slovic, 1967). Some subjects played the game, others observed a confederate. Both groups took risks beyond what was rational (i.e., 5 cards). Players were riskier than observers, an effect that was moderated by individual differences (faith in intuition, regret proneness, numeracy). These results are consistent with theories of decision making that emphasize separate contributions of rational and experiential systems.

(54) Responses to Environmental Injustice: Who's Responsible for Protecting Vulnerable Populations?

Kortenkamp, Katherine (UW-Madison); Rentscher, Kelly (UW-Madison); Hill, Emily (UW-Stevens Point); Moore, Colleen (UW-Madison)

Environmental injustice refers to the unequal distribution of environmental risks across ethnic and socioeconomic groups. Two experiments were conducted on the environmental injustices of childhood exposure to lead and pesticides. Participants judged the responsibility of different entities (e.g., government, businesses) to inform people about the risks of lead and pesticide exposure. The right to be informed is a prerequisite to consent to any potentially harmful event. Several factors influenced responsibility judgments, including the story characters' ethnicities and whether participants received information about environmental injustice. Findings indicate that the government's responsibility to inform is greater when vulnerable populations are at risk.

(55) Consensus, Consistency, and Distinctiveness as a Framework for Self and Social Judgment
Steffel, Mary (Princeton University); Oppenheimer, Daniel M. (Princeton University)

Self judgments often differ from those made by other people. We propose that self and social judgments are shaped by the comparison standards people use. Our framework, based on Kelley's covariance model (1967), suggests that people base their evaluations on consensus (i.e. across people), consistency (i.e. across time), and distinctiveness (i.e. across domains) information. In a series of experiments, we examine the relative weight that people place on these three pieces of information when making self and social judgments and how this impacts subsequent evaluations. We conclude by discussing implications for attribution, judgment, and prediction.

(56) Is the representativeness heuristic similar to similarity?

Rivadeneira, A. Walkyria (Department of Psychology, University of Maryland); Galesic, Mirta (Joint Program in Survey Methodology, University of Maryland); Wallsten, Thomas S. (Department of Psychology, University of Maryland); Norman, Kent L. (Department

If similarity judgments are used as a basis for judgments of likelihood, as in the representativeness heuristic, then factors that are known to affect similarity (such as nature, directionality, and context of the task in Tversky's feature-matching model of similarity) should also affect judgments of likelihood. We tested this assumption within two studies in which we manipulated the three factors, as well as the format of questions and prior probabilities. Most of the likelihood judgments were affected by the same manipulations as similarity judgments, but there were some exceptions.

(57) Inferring Causal Structure in Multiple Cue Judgment

Enkvist, Tommy (Uppsala University, Department of Psychology); Juslin, Peter (Uppsala University, Department of Psychology)

Recent studies suggest that humans can infer the underlying causal model from observing the distribution of variables. In a multiple-cue experiment we investigated if people can infer causal structure from merely observation, and if different causal models can be associated with different cognitive models of representation. Participants performed 220 trials of training in two judgment tasks with different underlying causal structure. The result shows a poor ability to discriminate between causal models, poor manipulation insight, and a correlation between causal models and cognitive processes. This study suggests that people do not represent multiple-cue judgment tasks in terms of causal models.

(58) Side-Taking Decision Alternatives: The Influence of Age and Gender to an Emotionally-Involving, Work-Related Problem.

Gerlt, Jason E. (University of Nebraska at Omaha); Scherer, Lisa L. (University of Nebraska at Omaha); Fernandez, Cheryl (University of Nebraska at Omaha); Martz, Jennifer C. (University of Nebraska at Omaha); Brenden, Amy L. (University of Nebraska at Omaha)

We examined the influence of age and gender on an individual's propensity to take a side to an emotionally-involving, work-related problem. Four hundred and sixty participants, who ranged in age from 18 and 75 years, generated solutions to a sexual harassment problem which were categorized as either pro-victim or pro-harasser. Results indicated a significant interaction of age and gender on side-taking. That is, older men were more pro-victim compared to younger men, but women, regardless of age, were equally pro-victim. Thus, age and gender are important factors to consider in organizational decision making.

(59) Logic Structural Information Theory

Anderson, Blake (Ball State University); Butler, Darrell (Ball State University)

Structure is the foundation of logic; it is the logician's object of study. We hypothesize that logical structure is fundamental, not just to logicians, but in general to adult logical human reasoning. To examine this hypothesis, we adapted Leeuwenberg's coding theory to logic structure. Coding theory provides an information load, a relative measure of complexity, for a logical structure. We predict that logic structures with higher information loads will be more difficult to comprehend. We report an experimental examination of the theory, one that measures participants' speed and accuracy in assessing simple logic problems.

(60) Differences in Active versus Abstinent Adolescent Protective Factors for Intentions to Have Sex: A Dual Processes Approach

Estrada, Steven M. (Cornell University); Mills, Britain A. (Cornell University); Reyna, Valerie F. (Cornell University)

The factors contributing to active versus abstinent adolescents' intentions to have sex were examined. We hypothesized that sexual experience alters protective factors by reducing the perception of global risk and social norms and, ironically, increasing efficacy and risk calculation. For abstinent adolescents, ratings of global risks and benefits of sex, and endorsement of social norms, attitudes toward sex, and affiliative need were predictive of intentions. For active adolescents, global benefits, attitudes toward sex, efficacy, security perception, and risk calculation were predictive of intentions. The results have implications for developing successful interventions to reduce unhealthy risk-taking in adolescents.

(61) Dual processes in risky decision making: Gist and verbatim-based modes of processing

Mills, Britain A. (Cornell University); Reyna, Valerie F. (Cornell University); Estrada, Steven M. (Cornell University)

Theoretical predictions about dual processes governing risky sexual behavior in adolescence were tested. Different decision domains recruited different processes: Whereas the decision to have sex was found to be gist-based and intuitive, the decision to use prophylaxis was quantitative and analytic. Also, risk-

taking and risk-avoidant adolescents differed in theoretically predicted ways: Sexually active adolescents were more computational in their decisions to have sex, evaluated reasons for and against having sex independently, and had a more complex conceptualization of the reasons to have sex. Implications for current theories of development, rationality, and risk communication are discussed.

(62) Learning to Communicate Risk Information in Social Groups

Ting, Hsueh (University of Maryland, College Park); Wallsten, Thomas S. (University of Maryland, College Park)

Despite vigorous research on how people choose to communicate judgments about risk, little is known about the social forces that drive these choices over time. Erev, Wallsten, & Neal (1991) showed that in a group context, forecasters learn to select linguistic or numeric expressions as a function of what best serves the group's collective interests. This study builds on that research by asking whether group size and prior winnings also affect the choice of communication, as would be expected by consideration of reputation and personal image. We find that risk communication mode is sensitive to forces underlying reputational concerns.

(63) The Effect of Sequentially Presenting Information on Hypothesis Generation and Probability Judgment

Sprenger, Amber (University of Maryland); Harbison, Isaiah (University of Maryland)

We examine how decision makers generate and evaluate hypotheses when data are presented sequentially. Hypothesis generation occurs in many judgment and decision making tasks, but no research has yet examined the underlying processes of hypothesis generation when data occur sequentially. In a series of experiments, participants learn the relationship between data and hypotheses in a virtual environment. Data are then presented iteratively and participants either generate hypotheses they think caused the data or rate the probability of hypotheses. We test how different orders of data lead decision makers to consider different sets of hypotheses.

Poster Abstracts, Evening Session

(1) Negotiating by the Rules: When Emotional Labor Dictates Emotional Expression in Negotiation

Paddock, E. Layne (University of Florida); Judge, Timothy A. (University of Florida)

Participants completed a 20-minute work-related, multi-issue negotiation (Confetti, O'Connor, 1997) in same-sex dyads. Extending negotiation-emotion research (e.g., Barry, 1999), emotional labor (ref. Grandey, 2000) rules were manipulated within the negotiation directions; participants were encouraged to suppress emotions except those expressed and express anger, neutrality, or happiness. Results for attitudinal and behavioral outcomes show three-way interactions among emotional labor rule, negotiator role (manager, employee), and gender. For example, female "managers" achieved more positive outcomes when displaying neutrality than happiness or anger. Men showed the opposite pattern. Emotion regulation techniques (surface acting, deep acting) and experienced emotional intensity also differed across conditions.

(2) The imaginability of the single case in clinical domain: When 1 in 200 is riskier than 5 in 1000

Savadori, Lucia (University of Trento); Pighin, Stefania (University of Trento); Barilli, Elisa (University of Trento); Cremonesi, Laura (HSR Hospital); Bonalumi, Sara (HSR Hospital)

Three experiments revealed an inverse effect of the "ratio bias" (Miller et al., 1989; Denes-Raj et al., 1991) in the clinical domain. Pregnant women and common individuals estimated the probability of contracting a disease. Results show that the 1 in 200 risk is perceived always as higher than the 5 in 1000 risk. This happens despite we asked to imagine to draw a ball from a container. Results are explained assuming that 1 in the numerator increases the imaginability of the single case.

(3) Regret across the life-span

Väsfjäll, Daniel (Decision Research, Eugene, Oregon); Peters, Ellen (Decision Research, Eugene, Oregon); Johansson, Boo (Göteborg University, Gothenburg, Sweden)

Self-reported regret for everyday omissions and commissions as well as life regrets was obtained from 718 Swedish adults (18-85). Older (compared to younger) adults reported less intense regret for everyday regret (eg not buying a good on sale), but more intense regret for life regrets (eg not having children). These findings are consistent with decision and lifespan theories suggesting that 1) the decreasing possibility of undoing regret with age is an important factor modulating affective experience and 2) an increased focus on positive affect with age can ameliorate the psychological impact of minor negative events.

(4) Poor decision making among older adults: Neuroticism moderates effects of aging

Weller, Joshua (University of Iowa); Denburg, Natalie (University of Iowa); Kaup, Allison (University of Iowa)

Recent research suggests that older adults rely more on experiential thinking strategies. Since these strategies are more affectively-driven, we tested whether dispositional sources of affect (i.e., personality traits of Extraversion and Neuroticism), would be more strongly associated with decision making in older adults. Younger (n = 58) and older adults (n = 65) were administered the Iowa Gambling Task (IGT) and the NEO Five-Factor Inventory. In the older adults, but not the young, higher Neuroticism was associated with poorer IGT performance. We interpret our findings in the context of personality development, and discuss implications for decision-making in older adulthood.

(5) Tort Reform and Disputes under Endogenous Preferences

Landeo, Claudia M. (University of Alberta and Carnegie Mellon University)

We experimentally study the effects of the split-award tort reform, where the state takes a share of the punitive damages, on bargaining outcomes and litigants' preferences over beliefs. In addition, we study preference formation. Role-specific shifts in preferences over general beliefs (background knowledge) toward supporting litigants' choices suggest motivated reasoning. Role-specific bias also operates in the updating of the plaintiff's prior beliefs about the defendant's negligence, i.e., a violation of the Bayes' rule. Out-of-court settlement amounts are significantly lower when bargaining is performed under split-awards, suggesting strategic behavior. In addition, litigants' beliefs about fairness are affected by this statute.

(6) *What If Stock Pickers Could Pick?*

Rude, Dale (U of Houston)

This paper extends the debate on performance of actively managed vs. index mutual funds through a Monte Carlo simulation of stock picking using 2001-2003 returns for the S& P500 firms. For different levels of stock picker knowledge (modeled using the lens model achievement index), the associated level of fund performance is estimated. Returns over the index (unweighted average S& P 500 firm return) ranged from 2% for a .05 achievement index to 34.1% for a .50 achievement index. One implication of these results is that mutual fund companies would guarantee that their returns will exceed relevant indices if fund managers were effective.

(7) *The scarcity bias*

Mittone, Luigi (University of Trento); Savadori, Lucia (University of Trento)

The study investigated the effect of scarcity on consumer choice. In experiment 1 the preferences towards a set of goods was defined and used as benchmark. Participants had to choose two goods among a set of four (AABB). Most participants choose AA. In experiment 2 participants played against an opponent and the set was changed to reflect scarcity (AAAB). Most participants choose AB. The study showed that scarcity can model consumer preferences in a real setting. The results are coherent with a previous experiment (Mittone, Savadori and Rumiati, 2005) on children proposing a developmental explanation of the scarcity bias

(8) *The Social Consequences of Coordinating*

Abele, Susanne (Miami University); Stasser, Garold (Miami University)

Coordination is a fundamental process in social life. We distinguish between matching and mismatching coordination and propose that they elicit fundamentally different social cognitive processes. We demonstrated that success increased perceptions of similarity and liking when matching was required (study 1). There were no effects of percentage matches when mismatching or no coordination was required (study 2). However, in 4-person teams, a player who matched the participant's responses was viewed as more similar to self and liked more than other players, even when s/he reduced the participant's monetary pay-off in a mismatching task (study 3).

(9) *A Theory of Generosity in Games*

Dana, Jason (University of Pennsylvania); Cain, Daylian (Harvard University)

We present a utility model of generosity that uses "psychological payoffs" (Geanakoplos, Pearce, & Stachetti, 1989) to explain recent experimental results of economic games that cannot be explained by any utility function defined over outcomes alone. We characterize giving as a preference to conform to a recipient's expectations of behavior rather than as a preference for an equitable outcome, as predominant social preferences models assume. Accordingly, the model predicts that otherwise generous people may exploit uncertainty about the situation to lower a potential recipient's expectations of a gift and thereby be more selfish.

(10) *Less Power or Powerless: Paradoxical Preferences & Offers for Low- vs. No-Power Agents in Ultimatum Games*

Handgraaf, Michel J. J. (University of Amsterdam); Van Dijk, Eric (Leiden University); Vermunt, Riel C. (Leiden University); Wilke, Henk A. M. (Leiden University); De Dreu, Carsten K. W. (University of Amsterdam)

We investigate the effect of power differences and associated expectations with regard to outcomes in mixed motive distributive decision-making. Using a modified ultimatum game, we show that offers decrease when the power difference shifts in favor of the allocator. However, when recipients are completely powerless, offers increase. This effect is mediated by a change in framing of the situation: powerless recipients invoke feelings of social responsibility. We furthermore show that recipients do not anticipate these higher outcomes resulting from powerlessness. They prefer more power over less, expecting higher outcomes when they are more powerful, especially when less power entails powerlessness.

(11) *Lucky winners: Intuitions about random sequences*

Hardman, David (London Metropolitan University)

Suppose you toss a fair coin 101 times, keeping a running tally of the number of Heads and Tails that have occurred. What is the most likely number of "lead changes" between Heads and Tails? Discussing the application of probability theory to this question, William Feller (1957, p.65) noted that the theoretical conclusion was not just unexpected but "a shock to intuition and common sense". Using four variations of this question, I empirically confirm that people's intuitions are at fault. Furthermore, when asked to produce their own random sequences, people still err but to a lesser degree.

(12) *Quantifying the higher levels of risk-taking in adolescents than adults*

Mitchell, Suzanne H. (Oregon Health & Science University); Schoel, Christiane (Oregon Health & Science University); Stevens, Alexander A. (Oregon Health & Science University)

We compared risk-taking in adolescents and adults using a computer task based on the BART (Lejuez et al 2002). Participants held down a key to inflate a balloon: the larger the balloon, the more points were accumulated but the larger the probability that the balloon would burst, causing the points to be lost. Balloons inflated until the subject released the button or the balloon burst. Adolescents inflated balloons to a larger size prior to saving a balloon than adults, suggesting heightened risk-taking. Conditional analyses indicated that adolescents and adults showed differential responses to wins and losses.

(13) *The Value of Information Sharing up the Supply Chain*

Tokar, Travis (University of Arkansas); Waller, Matthew A. (University of Arkansas); Aloysius, John A. (University of Arkansas); Williams, Brent (University of Arkansas)

We study the value of information sharing on inventory replenishment decision making in two controlled experiments which use simulated supply chains. Experiment 1 in employs a 2X2 design in which information regarding (1) the timing and (2) the magnitude of promotions in a four echelon supply chain. Experiment 2 replicates this design while further controlling for coordination up the supply chain by using a single echelon. We compare the results with the theoretically optimum decision behavior in this complex dynamic decision setting as well as draw implications about the value of sharing specific information.

(14) *Implicit vs. explicit deception in bargaining with asymmetric information*

Nagel, Rosemarie (Universitat Pompeu Fabra); Weber, Roberto (Carnegie Mellon)

We explore bargaining when one party possesses private information and can either misrepresent this information through actions (implicit deception) or must engage in misrepresentation through explicit statements. Our study is novel in that it is the first such comparison between two ways in which people deceive. We find high amounts of deception in both environments – people engage in deception both through their actions, but are also almost always willing to make explicit statements that are untrue. This contrasts with previous studies finding that many laboratory subjects are unwilling to engage in lying.

(15) *Trust me, you'll regret it! The effect of regret considerations on behavior in a trust game*
Kugler, Tamar (University of Arizona); Connolly, Terry (University of Arizona)

In the Trust game, a Sender receives an endowment, and can transfer any of it to a Responder, which receives triple the amount sent, and can then return part of it. Rationality predicts no transfer since the Sender expects the Responder to return nothing. However, in experiments transfers are positive. This study examines the effect of regret on Senders' behavior. Prior to playing, Senders receive hypothetical scenarios eliciting regret for under-trusting the Responder or regret for over-trusting. We find that the amount sent was significantly reduced following any of the manipulations. We discuss the role of regret on trusting behavior.

(16) *A further investigation of the formation of the inverse-S shape probability weighting function*

Qian, Jing (Max Planck Institute for Human Development); Brown, Gordon D A (University of Warwick)

This paper offers an adaptive account for probability weighting, suggesting that the observed PWF may reflect the bimodal distribution of probabilities encountered in typical experiments and in the natural world. In an experimental study replicating the methodology of Gonzalez & Wu (1999), participants were asked for certainty equivalents of gambles, where the probabilities involved either come from a uni-modally skewed distribution or a bi-modally skewed distribution. The results lent support to the hypothesis that the extent of the over and underweighting of probabilities directly reflects the density distribution of experienced contextual probabilities.

(17) *The dynamics of trust between anonymous interdependent decision makers: The effects of credible signaling*

Murphy, Ryan (Columbia University); Rapoport, Amnon (University of Arizona)

The dynamics of trust-based cooperation were studied in a real-time trust game. In this game, as long as all players continue to cooperate, the payoffs for all players increase over time. Concurrently, the temptation to defect also increases as the stakes grow larger; it is commonly known that the first player to defect will receive a substantially larger payoff than the other players. However if all players cooperate for the duration of the interaction, the group level earnings are maximized and payoffs are equivalent. We report the results from an experiment with multiple rounds of an iterated game.

(18) *What do we think we know when we don't know much*

Pushkarskaya, Helen (University of Kentucky); Alvarez, Sharon (The Ohio State University)

This study begins to test the hypothesis that expert bias works in a different direction under sample space ignorance than Fox and Tversky (1995) found that it works in ambiguous environments, i.e. in ambiguous environments experts tend to perceive that more information is available than non experts do, and in uncertain environments experts tend to perceive that some unexpected outcome might occur once decision has been made, while non experts think that they know all the possible outcomes.

(19) *Context effects in multiattribute decision making: Examining attraction, similarity and compromise effects*

Takashi, Tsuzuki (Rikkyo University); Hiroshi, Matsui (Rikkyo University)

Three much-studied findings of the context-dependent choice warrants specific attention, as they constitute violations of fundamental axioms in rational choice. These findings include the attraction effect, the similarity effect, and the compromise effect. These effects all occur with the addition of a third alternative to a two-alternative choice set in multiattribute decision making. One hundred forty four undergraduates participated in twenty hypothetical purchase problems with three alternatives described along two attributes. Significant effects of manipulating the third alternative were found for selection rates, confidence ratings, and reaction time. Results support our stochastic comparison-grouping model of the multialternative choice processes.

(20) *Satisfaction in choice as a function of the number of alternatives: When “goods satiate” but “bads escalate”*

Reutskaja, Elena (Universitat Pompeu Fabra); Hogarth, Robin (Universitat Pompeu Fabra)

People often prefer to choose from small as opposed to large sets of alternatives. We propose that satisfaction from choice is an inverted U-shaped function of the number of alternatives. This proposition is derived theoretically by considering the benefits and costs of choice and is supported by four experiments. We manipulate the perceptual costs of information processing and demonstrate how this affects the “satisfaction function.” We indicate that satisfaction is diminished if people are made aware of the existence of other choice sets. Individual differences in satisfaction from choice are documented by noting effects due to gender and culture.

(21) *Simulating the too-much-choice effect: A comparison of explanations derived from Decision Field Theory*

Veinott, Elizabeth S. (Indiana University); Jessup, Ryan K. (Indiana University); Busemeyer, Jerome R. (Indiana University)

Iyengar and Lepper (2000) observed that more people purchased jam after visiting a 6-option display than when confronted with a display of 24 options, labeling the finding the too-much-choice effect. We implemented three explanations for the effect as extensions of decision field theory (Busemeyer & Townsend, 1993), a dynamic and stochastic model of choice. Two models emerged as potential explanations: lead change (switching too often between preferred options) and time out (taking too long to decide). An interaction was found between the model and the distribution of option values, yielding testable divergent predictions concerning conditions when the effect will occur.

(22) *What moderates the too-much-choice effect?*

Scheibehenne, Benjamin (Max Planck Institute for Human Development)

The too-much-choice effect predicts that an overly large assortment size decreases satisfaction and motivation to choose. In two field studies in German grocery stores mirroring Iyengar & Lepper's (2000) original study, people's motivation to purchase jam and wine did not depend on assortment size. Also, in three laboratory experiments that controlled for prior preferences and that involved real choices between sweets or restaurant coupons, satisfaction and motivation was independent of the number of options. These results suggest boundary conditions that need to be met in order to reliably elicit the effect.

(23) *Context effects based on the tendency to postpone decisions*

Rubaltelli, Enrico (University of Modena and Reggio Emilia); Baghi, Ilaria (University of Modena and Reggio Emilia); Tedeschi, Marcello (University of Modena and Reggio Emilia); Rumiati, Rino (University of Padova)

In one experiment we described how people's tendency to postpone a decision might lead them to decide differently when they are choosing between an alternative allowing to select one of two options in a

second stage and a discrete alternative. In such a condition people prefer the first alternative, since they like to have a second chance to make the final decision. Doing so participants exclude from their decisions a valuable option, ending up deciding at the second stage between a valuable dominating option and a useless dominated one. The dominated alternative is inferior to both the other options.

(24) Predicting others' preferences: How accurate are parents and what strategies do they use to predict their children's preferences?

Mata, Jutta (Int. Max Planck Research School LIFE, MPI Human Development); Scheibehenne, Benjamin (Max Planck Institute for Human Development); Todd, Peter M. (Indiana University Bloomington)

Knowing and predicting others' preferences is a common task. Previous research indicated that people are poor predictors, but domains investigated were of little relevance in people's daily life. Very few studies have looked at the prediction strategies used. We investigated how and how accurate parents predict their child's food preferences - which is a relevant daily task. We assessed 59 parent-child dyads. Overall, parents predicted 80% of children's choices correctly. Parents overestimated their prediction accuracy by about 20%. Parents used projection in 63% of the cases. We discuss further mechanisms useful for predicting others' preferences.

(25) Aging and Decision-Making Competence: The Role of "Non-Cognitive" Factors
Finucane, Melissa L. (Center for Health Research, Hawai'i); Gullion, Christina (Center for Health Research, Hawai'i)

This paper addresses the gap in knowledge about how "non-cognitive" factors facilitate or impede older adults' decision-making competence (DMC). In two studies we investigated how two "non-cognitive" factors (self perceptions of decision skills and reliance on affective processes) related to age differences in comprehension, consistency, and insight in decision making. Results suggested that the non-cognitive factors played a significant role in explaining aging-related changes in DMC, even after accounting for individual differences in cognitive abilities, health status, and demographics. We will discuss the relative importance of non-cognitive versus cognitive factors in understanding how DMC might be maintained in older adulthood.

(26) Aging and the Use of Recognition in Decision Making

Pachur, Thorsten (Max Planck Institute for Human Development); Mata, Rui (Max Planck Institute for Human Development); Schooler, Lael (Max Planck Institute for Human Development)

Recognition has been shown to be used strategically across different judgment tasks. How does the use of recognition change with age given the age-related changes in the cognitive processes underlying recognition? Using a probabilistic inference task, in two studies we found that (1) older and younger adults adapt their use of recognition to different task environments similarly; (2) though older adults made more accurate inferences overall and were more knowledgeable, they used recognition less efficiently than younger adults; (3) older adults increased, whereas younger adults decreased their reliance on recognition when recognition was experimentally induced.

(27) Cognitive Aging and Adaptive Strategy Selection

Mata, Rui (Max Planck Institute for Human Development); Schooler, Lael (Max Planck Institute for Human Development); Rieskamp, Jörg (Max Planck Institute for Human Development)

One experiment (N =160) investigated the relation between the adaptive selection of decision strategies (e.g., Take The Best, Weighted Additive) and age-related gains (e.g., knowledge) and losses (e.g., memory) in intellectual functioning. We examined strategy selection both as a function of environment structure (i.e., distribution of cue validities) and individual characteristics (i.e., cognitive capacity). Our

results suggest that (1) older adults rely more on computationally simpler strategies and (2) make more application errors compared to younger adults due to age-related cognitive decline. Nevertheless, (3) older adults are adaptive decision makers, choosing the appropriate strategy as a function of environment structure.

(28) *Frugal Sampling Can Make Life's Gambles Simpler*

Hertwig, Ralph (University of Basel); Pleskac, Timothy J. (University of Basel)

During decisions from experience people tend to rely on small samples to make a choice. How adaptive are small samples in uncertain situations? A formal analysis shows that small samples typically amplify the difference between the average earnings associated with the payoff distributions, thus rendering choices simpler. A person's choice heuristic determines the magnitude of amplification. The heuristic people use – pick the lottery with the largest sample mean – provides one of the largest amplification effects. Finally, although small samples do not provide an accurate portrayal of the world, they can produce surprisingly accurate choices.

(29) *Learning from Adaptive Samples*

Denrell, Jerker (Stanford University)

To ensure favorable future outcomes it makes sense to choose alternatives with favorable past outcomes and avoid alternatives with unfavorable past outcomes. Such adaptive sampling introduces an asymmetry in experiential learning. If decision makers overestimate the expected payoff of an alternative, they are likely to sample it again and can correct the error. If decision makers underestimate an alternative, they may avoid it and thus cannot correct the error. This talk illustrates how the asymmetry can offer an alternative account of biases in impression formation and decision making, including risk aversion, ingroup bias, and social influence.

(30) *Students' Integrity Decisions: Lessons from and for JDM*

Rettinger, David (University of Mary Washington)

When a student is caught cheating on an exam or plagiarizing a paper, it can have serious consequences for their academic career. Why, then, do these consequences so often surprise them? This presentation will discuss the issue of cheating from a JDM perspective, exploring the decision process itself, and how our understanding of general decision theory can inform us about academic integrity decisions. Data exploring framing effects on cheating are presented, and we explore how decision theory and research can help understand why students cheat and how to help them avoid doing it in the future.

(31) *Cognitive Processing of Morally Relevant Tasks*

Iliev, Rumen (Northwestern University); Bartels, Dan (Northwestern University); Sachdeva, Sonya (Northwestern University); Medin, Douglas (Northwestern University)

A number of findings point to differences between (non)morally-motivated decision making. We conducted 3 studies where participants reasoned about moralized resources/values (sacred or protected values) and found that, compared to controls, these people: (a) made more conjunction errors in scenarios involving these values, (b) showed larger stroop effects for value-related words and (c) were either hypo- or hyper-sensitive to the consequences of their choices involving these values, depending on task demands. These effects undermine any simple picture of morally-motivated choice and suggest that targeting the underlying cognitive processes is a reasonable strategy for exploring the semantic side of decision making.

(32) *Who Are These Maximizers?*

Highhouse, Scott (Bowling Green State University); Diab, Dalia (Bowling Green State University)

A recently developed measure of individual differences in the tendency to maximize or satisfice (Schwartz et al., 2002) has received considerable attention. Maximizers are characterized as an unhappy lot, debilitated by unrealistically high expectations in the face of an insurmountable array of options. We correlated responses to the maximizer items with a number of established personality measures. Results revealed a profile characterized by avoidance, indecision, and neuroticism. Despite some demonstrated utility as a predictor, the maximizer scale fell short of conventional psychometric standards for an individual difference measure.

(33) Context Effects on Romantic Partner Selection

Pettibone, Jonathan C. (Southern Illinois University Edwardsville)

In order to study the effect of context on romantic decisions, participants were presented with three item choice sets that contained two equally attractive potential romantic partners and either an asymmetrically dominated, a compromise, or a phantom decoy. Participants chose the partner from each set they would date. Decoy type and context was manipulated within subjects. Results showed typical decoy effects for with the asymmetrically dominated and phantom decoys, but not the compromise decoy. Phantom effects were larger for males. Individual differences in the phantom and compromise decoy effects were found to positively correlate with the asymmetrically dominated decoy.

(34) Kin-Based Resource Allocation: Inclusive Fitness and Emotional Closeness

Webster, Gregory D. (University of Colorado at Boulder)

Nearly everyone faces the difficult resource allocation decision of will writing, yet little research has been done. Across 4 studies, over 800 undergraduates allocated fictional dollar amounts to either their own kin or a manipulated set of relatives. Genetic relatedness was positively related to kin-based resource allocation regardless of whether it was measured or manipulated, and regardless of whether emotional closeness was measured or manipulated. Emotional closeness partially, but not fully, mediated the relationship between genetic relatedness and money allocations to kin. The implications of this research for kin-based resource allocation decisions, and their social and evolutionary determinants, are discussed.

(35) Exploring the Determinants of Job Choice

Brooks, Margaret E. (Bowling Green State University); Gillespie, Jennifer Z. (Bowling Green State University); Highhouse, Scott (Bowling Green State University)

Research lacks consensus regarding the features job seekers consider when making job choices, and how they make tradeoffs among these features. The current research is a step toward creating a typology of job features. Participants rated job features, made forced choices between pairs of features, and provided reasons for these choices. Quantitative and qualitative analyses provide insight into the factor structure of job features and reasons these factors may be important. Findings suggest potential connections between these factors and typologies of human values/needs.

(36) The Effects of False Feedback on Prudent Decision Making

Brown, Jay (Texas Wesleyan University)

Participants played an iterated computer game which required prudent decision-making for success. Prudent decisions are those which value larger long-term consequences over short-term, smaller consequences. Participants played the game where the future consequences of decisions were either 65% or 75% predictable and feedback was given about behaviors which was either true or false. As predicted, participants' behavior was modified by false feedback, but behavior seemed to follow a pattern midway between the true level of uncertainty experienced and the false level reported.

(37) Happy ending - certain ending: effects of a limited future time perspective on risk avoidance.

Teuscher, Ursina (University of California, San Diego (UCSD))

Two experiments investigated whether people choose more certainty in situations with salient endings. Experiment 1 involved decision scenarios and showed that certain options were indeed preferred in situations with salient endings. However, in the scenarios the certain options were also the familiar ones, so an alternative explanation would be that people shift from exploration to exploitation if they approach an ending, rather than becoming risk-avoidant per se. Experiment 2 therefore used series of gambling tasks to avoid familiarity as a confounding variable. The results of both experiments suggest that a limited future time perspective leads to a certainty shift.

(38) *Lunch choices in the cafeteria: choose the best or avoid the worst?*

Kurzenhauser, Stephanie (University of Basel, Switzerland)

What are people's goals in everyday dietary decisions? Is self-regulation towards these goals approach or avoidance oriented (i.e., promotion/prevention focused; Higgins, 1998)? This study describes the cues used by 146 students when choosing lunch at a university cafeteria. The majority relied on simple strategies with one (41%) or two (38%) cues, approaching attractive choices (46%) rather than avoiding unattractive ones (28%). The most frequently used cue categories were sensory/hedonic value and meat content. Healthiness cues were used only by promotion-oriented individuals. These findings have clear implications for how to promote healthy eating more effectively.

(39) *Influence of Decision Making Styles upon Consumer Choice*

Nygren, Thomas (Ohio State University); White, Rebecca (University of Waterloo); Snuttjer, Kristi (Ohio State University)

Theoretical and applied distinctions between the use of intuitive, analytical and regret-driven decision styles have gained prominence in recent years. A reliable self-report measure, the Decision Making Styles Inventory (DMI) consists of three subscales, representing "analytical," "intuitive" and "regret-based" decision styles. Participants in this study responded to consumer choice scenarios in which sequential request compliance techniques were presented. Results suggest that susceptibility to persuasive methods may be related to intuitive strategy use, while regret-based style may buffer one against persuasive methods. Scores on the DMI subscales also corresponded with a measure of participants' self-reported consumer decision making techniques.

(40) *Effect of Regulatory Focus on Time Discounting*

Zhao, Shenghui (University of Miami); Zhou, Rongrong (HKUST)

In this research we examine the motivational influence of regulatory focus on revealed discount rate. We hypothesize an interaction effect between regulatory focus and valence such that promotion focus is associated with lower discount rate in the gain domain than in the loss domain whereas prevention focus has the opposite effect. This prediction was tested and confirmed in three laboratory experiments where participants revealed their preference for intertemporal tradeoffs among hypothetical monetary rewards or payments. These results highlight the importance of incorporating motivational influences in any theoretical treatment of time discounting.

(41) *Multiple reference points as the carriers of value in risky decision making*

Johnson, Joseph G. (Miami University); Wang, X.T. (University of South Dakota)

A theoretical and mathematical argument is presented for valuation of risky options using three key reference points, via Tri-Reference Point theory (TRP). We follow the approach of Bordley and LiCalzi (2000), who formalize decision-making as maximizing the probability of reaching an uncertain target, and incorporate additionally the status quo and minimum requirement. Furthermore, we show how a simple step function can give rise to behavior previously attributed to the familiar "S-shaped" prospect

theory value function. Results from experiments designed to test novel predictions of TRP theory are reported and used to compare and evaluate TRP theory against other competing theories.

(42) *The Detection of Correlation*

Doherty, Michael E. (Bowling Green); Anderson, Richard B. (Bowling Green); Kelley, Amanda (Bowling Green); Albert James H. (Bowling Green)

There are a number of conceptions of how people infer causation or correlation from data, often from data presented as discrete observations that can be represented in terms of contingency tables. These conceptions are often framed in terms of the tools used to design the experiments and analyze the data. They include the phi coefficient and variations thereof (especially in the illusory correlation literature), delta p, causal power, and Bayes' theorem. These conceptions will be briefly discussed, and data on correlation detection from faculty members in a variety of quantitative departments at Bowling Green will be presented.

(43) *cultural difference in group creativity under evaluation*

Liou, Shyhnan (CCU); Nisbett, Richard (U. of Michigan); Lan, Xuezhao (U. of Michigan)

The purpose of this study is to examine whether Asians are less productive than Westerners in interactive groups than nominal groups due to their higher evaluation apprehension. Cross-cultural study uses a 2 (Culture: Asian/ westerner) X 2 (Type of Group: interactive versus nominal) X 2 (Task Separation: combined versus separate) factorial design to test the hypothesis that Asians generate as many ideas as their American counterparts, but many of them will be suppressed during the idea selection process. In addition, Asians are hypothesized to generate more useful ideas whereas their American counterparts are more likely to generate more original ideas.

(44) *Probability Judgment Accuracy: Does the Overconfidence Phenomenon Replicate in Mexico?*

Lechuga, Julia (Universidad Autonoma de Ciudad Juarez, Mexico); Morera, Osvaldo (The University of Texas at El Paso); Fernandez, Norma (The University of Texas at El Paso)

A recent important finding in the overconfidence phenomenon is that knowledge calibration varies cross culturally (Wright & Phillips, 1980; Yates et al., 1998; 2002). Although the cross-cultural variation of the overconfidence phenomenon has been established, further research is needed to investigate if it replicates in other cultures. Participants of Mexican descent answered 70 general knowledge questions along with questionnaires assessing reasoning style, certainty orientation, and decision making style. The overconfidence phenomenon replicated in Mexico. The mean probability score was .14 and the calibration index was .037. Preference for quick decision making and for holistic reasoning predicted the calibration index.

(45) *An Investigation of the Generality of the Ratio Bias Using Indian and American Students*
Stone, Eric R. (Wake Forest University); Parker, Andrew M. (Virginia Polytechnic Institute and State University); Kamra, Kunal (Virginia Polytechnic Institute and State University)

The ratio-bias phenomenon occurs when a probability is seen as more likely if the numerator and denominator of the ratio are large than if both are small. We previously showed that the ratio bias holds when both sets of judged numbers are small, but not when both sets are large. The present work extends these findings by including a larger group of numbers to be judged, showing that the bias typically occurs only if one of the ratios has just one digit in the numerator. Additionally, we found consistently stronger ratio biases exhibited by Indian students than by American students.

(46) *Decision Making Model Identified for Taiwanese Executives in Mainland China*

Kao, Peng-Hsian (U of the Incarnate Word); Vequist, David George IV (U of the Incarnate Word); Kao, Hsin (U of the Incarnate Word); Craven, Annette (U of the Incarnate Word)

Many economic scholars believe that Mainland China will become the biggest market in the 21st century and have the most economic power in the world by 2020. Therefore, more and more industries are investing in Mainland China (Liu & Li, 1998). Taiwanese companies, who share the same culture and language with the people of the mainland, have been enthusiastic about investing in Mainland China. This study focuses on Taiwanese owned enterprises in the shanghai region of Mainland China. The relationship between the Taiwanese executives' decision-making models and their demographic information is investigated using the General Decision-Making Styles Scale (GDMS).

(47) *Does the East Feel More Vulnerable Than The West? It Depends on How You Ask*
White, Sierra J. (California State University, Fresno); Price, Paul C. (California State University, Fresno)

We compared levels of comparative optimism for college students in the USA and Taiwan using both the direct and indirect methods. In the direct method, participants judge their own likelihood of experiencing positive and negative events compared to their peers. In the indirect method, they judge their own likelihood and their peers' likelihood separately. Both the Americans and the Taiwanese exhibited comparative optimism using the direct method, but only the Americans did using the indirect method. These results can help resolve some of the apparent contradictions in cross-cultural studies of comparative optimism.

(48) *Incorporating Multiple Opinions of Test Construction Experts into Cognitive Diagnosis Model Q-matrix Construction*

Ledford, Emily C. (University of Kansas); Templin, Jonathan (University of Kansas); Henson, Robert (University of North Carolina, Greensboro)

When constructing educational tests, the expertise of multiple content experts is elicited. For multidimensional tests, improperly aggregated expert opinions may cause additional measurement error if their decisions deviate from the actual behavior of the test. This study incorporates the opinions of multiple content experts into test construction by allowing their aggregated decisions to set a prior distribution in a Bayesian algorithm that estimates the likelihood each item measures a given test skill. Our results demonstrate how the interplay between the decisions of multiple experts and the Bayesian algorithm can lead to a final test form that measures skills more accurately.

(49) *The shipowners behavior: persisting in doing wrong?*
Scarsi, Roberta (University of Genova)

Despite a strong linkage with the macro-economic course, the bulk shipping market, in the short period, follows a typical cyclic pattern, where continuous freight adjustments balance demand and supply movements. In this context - widely unstable but quite regular in its general scheme, the shipowners may have enough competencies and information to take logical and consistent decisions about ship purchasing and chartering. Yet, why do they periodically make mistakes? The analysis of shipowners behavior provides a reasonable answer: mistakes incur when they ignore or undervalue the market trends, following their personal intuition or even unwisely imitating their competitors.

(50) *Structural Equations for Multi-Health State, Multi-Utility Assessment Method Data.*
Hamm, Robert (University of Oklahoma Health Sciences Center)

Structural equation modeling of multi-trait, multi-method data is used to separate concept differences (utilities of health states) from method effects (utility assessment methods: standard gamble, time tradeoff, and ratings). This approach was taken with three data sets, from two studies, each with 3 utility

measures and 2 to 5 health states. For each data set, it was possible to produce a full MTMM structural equation model. All intercorrelations among latent methods, and all among latent states, were included in the models. Structural Equation MTMM modeling, as applied to utility assessment data, promises a framework for clarifying utility assessment method effects.

(51) Risk and Time Preferences Integrated

Baucells, Manel (IESE Business School); Heukamp, Franz H. (IESE Business School)

We propose a model for simple risky prospects with payoffs in the future that combines risk and time preferences. The key behavioral axiom for our representation is that additive increments in time are treated as multiplicative increments of risk, at an exchange rate that is independent of the delay and the probability level. The model has a natural interpretation in which time is intrinsically uncertain, and the discounting of certain (or uncertain) future events is the result of attaching a probability less than one to their actual occurrence.

(52) Effects of time pressure on errors in experienced judgments

Inaba, Midori (The University of Electro-Communications); Itoh, Makoto (University of Tsukuba); Tanaka, Kenji (The University of Electro-Communications)

Experiences usually facilitate correct responses and decrease errors in judgments under uncertainty. Repetitive learning is also expected to be concerning faster judgments. However, previous research provided the possibility that the instruction of decision without time stress lengthened the estimated judging latency and increased error rate in the case of performing an experienced task. In the present study, we focus on effects of time pressure on judgments and errors and compare them between experts and beginners. We discuss the findings in terms of the skill-based, automatic strategy and the rule-based, conscious strategy.

(53) Risk-defusing in decisions with multiple risky alternatives

Huber, Odilo W. (University of Fribourg); Baer, Arlette (University of Fribourg); Huber, Oswald (University of Fribourg)

Risk-defusing operators (RDOs) are measures actively invented additionally to an existing alternative in order to defuse the risk involved. An experiment (120 subjects) investigates quasi-realistic risky scenarios with multiple alternatives. We expect a phased strategy with information search to be cognitively economic with alternatives eliminated based on positive consequences early, possible negative consequences inspected only for a subset, and the cognitively demanding invention of RDOs occurring afterwards. A majority of subjects displayed the predicted behaviour in two scenarios and under different initial information conditions, either without or with some consequential information displayed for a subset of alternatives.

(54) The Influence of Decision Aid Usage on Medical Malpractice Verdicts

Arkes, Hal R. (Ohio State University); Shaffer, Victoria A. (Wichita State University); Medow, Mitchell A. (Ohio State University)

A DVD depicting a malpractice trial was sent to a national sample. The 8 versions varied in whether (a) the physician used a decision aid, (b) he heeded or defied the aid, (c) the aid indicated appendicitis. The same adverse outcome always occurred. The 655 mock jurors were more likely to deem a physician liable for malpractice if the physician either operated with few symptoms present or did not operate when several symptoms were present compared to the converse strategy. Additionally, jurors deeming the physician liable for malpractice advocated harsh punishment to physicians who used an aid but defied it.

(55) Handedness Differences in Response to Positively and Negatively Framed Health Messages

Jasper, J.D. (U of Toledo); Woolf, Jon (U of Toledo); Christman, Stephen D. (U of Toledo)

Research shows that mixed- and strong-handers are differentially sensitive to attribute framing. The present study extends this line of work to message framing. 156 participants read a sunscreen pamphlet containing embedded statements emphasizing either the gains of using or the losses of not using sunscreen. Results replicated previous research (see Detweiler, et al, 1999) in showing that positively-framed messages are more effective in promoting preventative health behaviors. This was true, however, only for strong-handers. Mixed-handers responded more effectively to negatively-framed messages. Theoretical implications as well as ongoing work in risk, persuasion, and brain asymmetry will be discussed.

(56) Framing and Reference Point Effects in Decisions Under Ambiguity

Levin, Irwin P. (University of Iowa); Lauriola, Marco (University of Rome); Rouwenhorst, Robert (University of Iowa)

Using Ellsberg-type urn tasks, researchers have generally identified ambiguity-avoiding and ambiguity-seeking by comparing choices between options with unknown odds and options with 50-50 odds. By using a combination of urn tasks and real-world scenarios, we show that preference for ambiguous/non-ambiguous options varies as a function of information frame (presenting probability of success or probability of failure of risky options), decision domain (e.g., medical vs. economic decisions), and country (U.S. vs. Italy). Our research suggests that these differences reflect reference point shifts based on domain-specific expectations.

(57) Effects of Age and Gender on Assertiveness of Responses to Ill-Structured Problems

Scherer, Lisa L. (University of Nebraska at Omaha); Houlihan, Theresa V. (University of Nebraska at Omaha); Fitch, Christopher T. (University of Nebraska at Omaha); Husain, Ishrat I. (University of Nebraska at Omaha); Malcolm, Allison M. (University of Ne

This study examined effects of participant age and gender on solutions generated for two ill-structured problems: a sexual harassment and an unproductive employee situation. Two independent raters categorized solutions as assertive, passive, aggressive, or passive-aggressive. Degrees of response type were calculated by dividing the number of solutions of one response type by the total number of solutions generated for each participant. Results indicated that older individuals had a higher degree of assertiveness on the unproductive employee problem, but not on the sexual harassment problem. Differential experiences due to age and gender are suggested as possible explanations for these findings.

(58) Group polarization: A multilevel analysis of individual decision change

Lees, Catherine D. (University of Western Australia Business School)

Group polarization is the tendency for the decisions of groups to be more extreme than the decisions made by the group members when deciding as individuals. But individual polarization also occurs, in which an individual's decision becomes more extreme after discussions. This research examines whether individual polarization occurs because of group polarization, or contributes to it. In 53 small groups, 248 participants role-played as a discipline board, deciding the penalty in a hypothetical student plagiarism scenario. Multilevel modelling was used to relate the group decision and individual pre- and post-decisions. Group decisions predicted individual change.

(59) Givers attend to costs, receivers to benefits: Egocentric biases in the evaluation of favors

Zhang, Yan (University of Chicago, GSB); Epley, Nicholas (University of Chicago, GSB)

Social interaction often involves exchange—people do favors for others in order to be appreciated or reciprocated. Doing a favor requires favor givers to experience some cost to provide a favor receiver some benefit. We document an egocentric bias in the evaluation of favors—favor givers believe they will be valued more heavily on the basis of the cost they incur to perform a favor, whereas favor receivers

value a favor based more heavily on the benefit they receive. This bias predicts when favor givers will feel over- or under-appreciated for their efforts, and when they will feel fairly valued.

(60) *Perceptions of Correlations Between Multiple Cues*

Templin, Sara E. (University of Kansas); Budescu, David V. (University of Illinois); Kareev, Yaakov (Hebrew University)

A set of experiments was designed to assess the perception of a third (non-focal) correlation in a trivariate distribution where two (focal) correlations are provided (in the context of two cues and one predictor). The studies varied the presentation mode, strength, sign of the correlations, and marginal frequency of the variables. The perception of the non-focal correlation is affected by both the strength and sign of the focal correlations, with the actual value of the non-focal correlation offering little predictive power. Implications of our results are discussed.

(61) *Receiving vs. Earning Knowledge: Implications for Hindsight Bias*

Wallace, Harry (Trinity University)

After receiving knowledge regarding some topic, people usually overestimate their prior topic knowledge. We hypothesized that people would fail to show this hindsight bias if they earned their present knowledge through personal investment, rather than receiving it as a gift as is customary in hindsight bias research. In three studies, participants who worked by choice or requirement to obtain their present knowledge showed less hindsight bias than participants who did not work to gain their knowledge. This effect appeared to be partly related to participants' desire to justify their investment by perceiving knowledge improvement.

(62) *Can the "Perfect Couple" Beat the Odds? The Representativeness Heuristic and Prediction of Divorce*

Mangan, Michael (University of New Hampshire); Reips, Ulf-Dietrich (University of Zürich)

Despite the well-known 50% base rate of divorce, people may ignore it and give ostensibly "perfect" married couples better odds than less than perfect ones. Participants estimated chances of divorce for representative instances of "perfect" and "less than perfect" newlywed couples with or without divorce base rate provided. Chances of divorce for the "perfect" couple were significantly lower than the "less than perfect" couple. Provision of base rate had no effect on estimates. Men were more optimistic than women in their estimates. Results regarding influence of subjective divorce rates, stereotype effects, gender, participant age and marital status will be discussed.

(63) *Do Frequency Formats Elicit Better Statistical Reasoning?*

Neace, William P. (University of Hartford)

A current controversy in the probability judgment literature centers on the efficacy of framing probabilities as frequencies. The natural frequency view predicts that frequency frames attenuate judgment errors, while the nested-sets view predicts that highlighting the set-subset structure of the problem reduces error, regardless of problem frame. This study tested these predictions using a conjunction judgment task. Participants were randomly assigned to rank probabilities, provide numeric probability estimates, or estimate frequencies of constituent categories and their conjunction. Results of two experiments suggest that frequency effects are not stable, nor do they result in producing better statistical representations of the information.

(64) *The Consequences of Being Egocentric in Judging the Likelihood of Success*

Windschitl, Paul, D. (University of Iowa); Rose, Jason (University of Iowa); Stalkfleet, Michael (University of Iowa)

Previous research suggests that people are egocentric in judging their likelihood of success in competitions, leading to overoptimism about winning on generally easy tasks but underoptimism about winning on generally difficult ones. We report two studies concerning the consequences of this egocentrism in terms of judgment accuracy and earnings from bets. When participants received debiasing instructions, they exhibited less egocentrism in forming their probability judgments, but this did not increase their overall accuracy or money earned. We discuss the conditions under which egocentrism is costly and when it is not.

(65) *Toward a theory of false positives: A meta-analysis*

Salz, Talya (University of North Carolina, Chapel Hill); Brewer, Noel T. (University of North Carolina, Chapel Hill); Lillie, Sarah T. (University of North Carolina, Chapel Hill)

Although testing is increasingly central to decision making in medicine, business, and national defense, we have no good theories of how false positive (FP) tests may affect people's decisions. We report a meta-analysis of literature from an area where FPs are common, breast cancer screening. Data from 22 studies and 305,377 women showed that FP mammograms increased breast self-exams and anxiety, effects that lasted for months and years, but they had no effect on return for routine screening. We theorize that false positives reduce trust while at the same time increasing anxiety, leading to potentially paradoxical effects on behavior.

(66) *Ripped from the Headlines: What Can the Popular Press Teach us about Software Piracy?*

Zamoon, Shariffah (Kuwait University); Curley, Shawn P. (University of Minnesota)

Ethical decisions are decisions that are characterized by a combination of their social nature and the use of ethical norms. The rapid development of technology has led to situations, e.g., with software piracy, in which our society has not yet developed consensual norms—software producers decry the losses due to piracy while those engaged in the activity disavow any ethical difficulties. Rationales for and against software piracy are identified from articles in the highest circulation U.S. newspapers from 1989-2004. The rationales are analyzed with an expanded neutralization theory and with social relations theory, uncovering differences between pro- and anti-piracy viewpoints.

(67) *Task Difficulty and Confidence: Decision Style as a Moderator Variable*

Zarnoth, Paul (Saint Mary's College of California); Harden, Catharine (Saint Mary's College of California); Melo, Elizabeth (Saint Mary's College of California); Lopez, Marissa V. (Saint Mary's College of California)

Some people appear to better adjust their confidence level as a function of task difficulty, and this ability seems to be related to the individual's decision style (intuitive vs. analytic). Two measures of decision style (DMI, CSI) were completed by 168 participants. Each participant also completed an easy or difficult version of the moon survival problem and responded to three measures of confidence. Analytic participants were more confident if they received the less difficult problem or if their responses were more accurate. The confidence of intuitive participants was not significantly related to either task difficulty or performance.

(68) *Promoting informed choice in prenatal screening:*

Timmermans, Danielle RM (VU University Medical Center); Kleinveld, Johanna H (VU University Medical Center); Van den Berg, Matthijs (VU University Medical Center); Van Eijk, Jacques ThM (University Maastricht); Ten Kate, Leo P (VU University Medical Cent

The concept of informed choice is originally developed within the context of decisions about treatments. It is now seen as being important within public health programmes, especially when it concerns decisions about conditions for which there is no treatment such as Down syndrome. We studied the decisions of pregnant women who are offered prenatal screening, and the subsequent effects on their emotional well-

being. Our study showed no negative emotional side effects of prenatal genetic screening, but there is concern that decisions are not based on adequate information and risk perception.

(69) *Nurses decisions to intervene in acute care: A Signal detection Theory Analysis of the effects of time pressure and experience.*

Dalgleish, Len I (Department of Nursing and Midwifery, University of Stirling,); Thompson, Carl (Department of Health Sciences, University of York, England)

Nurses make decisions to intervene in acute care based on patients' vital signs. Nurses report that lack of time is one of the major influences on their decision making. 241 nurses with varying experience levels made decisions to intervene on 50 actual case profiles under time pressure or with no time limit. Since a validated scoring system for whether to intervene or not was available, a SDT analysis yielded measures of ability (d') and response bias (β). Nurses had lower d' and were less likely to intervene under time pressure. Any effects of experience were negated under time pressure.

(70) *The Effects of Sample Size on Different Measures of Subjective Correlation*

Gilkey, Justin M (Bowling Green State University); Anderson, Richard B (Bowling Green State University); Doherty, Michael E (Bowling Green State University)

The ability to accurately infer population correlations is important in our everyday lives. One factor influencing the evaluation of population correlations is the size of the sample used in making the inference. There are three primary tasks used to measure subjective correlation: rating, prediction, and frequency estimation. Recent studies evaluating the impact of sample size on subjective correlations suggest that the effect of sample size on subjective correlations measured by the prediction task will be the inverse of its effect on rating and frequency estimation. Preliminary prediction task data suggest that the effect of objective correlation increases with sample size.

(71) *Ego-threat Exaggerates Egocentric Perception of Fairness*

Zhang, Liqing (Carnegie Mellon University); Baumeister, Roy (Florida State University)

An experiment was conducted to explore whether ego-threat exaggerates egocentric perception of fairness. In the ego-threat condition, participants were told that the other participants in their group did not like them. In the control condition, participants were told that their peer participants like them. Participants were then told that they were paired with an anonymous person who was not in their group to divide \$7. The results showed that ego-threatened participants took more money as a fair compensation for themselves than participants in the control condition. Mood did not mediate the effect of ego-threat on self-serving judgment of fairness.

(72) *Contextual Priming: The Effects of Recent and Frequent Priming on Consumers' Brand Perceptions in Print Advertisements*

Lu, Fang-Chi (member of SJDM); Chien, Yi-Wen (not member)

Under the context of print advertisement, this study demonstrated when alternative constructs for characterizing an stimulus were both made accessible by being either frequently or recently primed, consumers would categorize the target in terms of the construct most recently primed if the target appeared immediately after final priming, but the frequently primed construct will dominate if there was sufficient delay between final prime and target presentation. This study also showed range (interpretation range in terms of judgmental dimension) overlap between prime and target is key factor to determine judgmental direction. When there was (no) range overlap, assimilation (contrast) effect occurred.

(73) *Stuck in the middle: The effect of number of alternatives on satisfaction with outcomes*

Kassam, Karim S. (Harvard University); Morewedge, Carey K. (Princeton University); Gilbert, Daniel T. (Harvard University)

Rationalization helps maintain well-being by convincing us that whatever happened was for the best, but its effectiveness depends on the number of alternatives to a given outcome. When there is a very small number of alternatives, it is relatively straightforward to compare options in a way that makes the experienced outcome seem best. When there is a very large number of alternatives, comparison becomes inappropriate and rationalization can proceed through other means. When there is a moderate number of alternatives, comparison is tempting but difficult, and rationalization falters. Three experiments demonstrate this non-linear relationship between number of alternatives and happiness.

(74) *Risk Perception and Risk Assessment: Relationship with Fear and Personal Experience*
Konczey, Kinga (University of Veszprem; Corvinus University of Budapest); Szanto, Richard (Corvinus University of Budapest)

A study of 296 individuals' risk assessment shows two defining dimensions in risk perception: seriousness, captured as perceived loss of life expectancy, and controllability. Our results indicate that rather than regarding risks as single items when comparing different risk factors, people think about clusters of risks (serious diseases, addictions, light risks, threatening events, and accidents) which are built up and structured around influencing factors such as fear, controllability, and self-confidence. Personal experience, fear and demographic factors influence the way in which people perceive all but the serious disease cluster, suggesting that the most serious risk factors are assessed relatively objectively.

(75) *Cuing different sets of information: Support for subset activation in conditional probability judgment*

Harbison, Isaiah (University of Maryland); Dougherty, Michael (University of Maryland)

According to Minerva-DM conditional probability judgments of the form $p(\text{hypothesis}|\text{data})$ are made by first activating a subset of traces in episodic memory and then assessing the relative memory strength of the hypothesis component within the activated set. We tested the subset activation assumption in two experiments. Experiment 1 revealed that priming participants with a relevant data component produced a speedup in the time to make a conditional probability judgment. Experiment 2 revealed that items within the activated subset were preferentially identified in a test of implicit memory. Both experiments support the subset activation assumption.

(76) *Over-predictions and under-predictions of future behavior based on strength of current intentions*

Poon, Connie SK (University of Hong Kong); Koehler, Derek J (University of Waterloo); Suen, Denise (University of Hong Kong)

Koehler and Poon (2006) suggest that self-predictions of future behavior overweight the strength of current intentions, and show that the degree of over-prediction increases as current intention strength increases. We hypothesize that where the translatability of intentions into behaviors is very high but imperfect, under-prediction occurs when current intentions is low, and over-prediction occurs when current intentions is high. Participants were asked to evaluate their current intentions and estimate the probability that they would visit a flu-information website. The hypothesized pattern of under- and over-prediction was observed among those who were promised and sent a reminder message by e-mail.

(77) *Expert judgments of pandemic influenza risks*

Bruine de Bruin, Wandi (Carnegie Mellon University); Fischhoff, Baruch (Carnegie Mellon University); Brilliant, Larry (Google Foundation, Seva Foundation); Caruso, Denise (Hybrid Vygor Institute)

In the absence of data, predicting the course of the potentially avian influenza pandemic is a highly uncertain enterprise. Yet, many experts have been willing to provide the news media with predictions,

often stated vaguely and seemingly varying widely. Using JDM procedures, we asked medical and non-medical experts to assess well-specified parameters from a pandemic prediction model. We examined their responses for coherence and for inter-individual agreement. We will report these results, a follow-up survey with lay people, and the role of such results in the policy process.

(78) *The Effect of Stopping Rules on the Evaluation of Audit Evidence*

Gillett, Peter R. (Rutgers University); Peytcheva, Marietta (Rutgers University)

Does the value of sample evidence depend on whether a fixed sample was taken, or sampling was stopped when some predetermined outcome was achieved? Statisticians debate whether stopping rules should matter; Bayesians say not, but frequentists may conclude differently about hypotheses in these two cases. We test empirically whether they do matter to decision makers in an audit context. In our study the stopping rule used strongly influences subjects' judgment: audit evidence obtained using an optional early stopping rule is attributed less weight than evidence obtained using a fixed sample, consistent with the frequentist paradigm, as proposed by Gigerenzer (1994).

(79) *Modeling sequential belief updating in normal and schizophrenic populations using a memory-based model of judgment.*

Harbison, Isaiah (University of Maryland); Dougherty, Michael (University of Maryland)

We modified Minerva-DM to account for belief updating in both normal subjects and delusion-prone schizophrenics. The model suggests that belief-updating in both populations can be accounted for by assuming that participants consolidate information from the presented sequence into a memory probe, but that the probe for delusion-prone individuals overly represents the most recently sampled information whereas the probe for normal controls represents a broader array of information. The model provides a novel account of belief updating and delineates conditions under which participants' judgments will be biased by the initial and/or most recent information in a sequence.

(80) *The probability weighting function for confidence estimates*

Haisley, Emily (Carnegie Mellon University); Moore, Don (Carnegie Mellon University)

The probability weighting function has been studied for both precise and ambiguous probabilities. No research to date has examined the shape of the probability weighting function for prospects that depend on one's intellect, ability, or skill. In a study that uses confidence estimates of trivia, we demonstrate this weighting function has a unique shape. Moreover, we show that the shape of this function can help explain Heath and Tversky's (1991) finding that at high confidence levels, people prefer to bet on their skill rather than an equiprobable lottery and for low probabilities they prefer the chance bet.

(81) *A Problems Approach to Teaching JDM*

Rude, Dale (U of Houston); Rude, Mari (Baylor College of Medicine)

In an applied business school setting, a problem solving approach is used which is modeled after classes in engineering, physics, math, etc. (see www.bauer.uh.edu/drude for samples). Students work problems for virtually every theory. Testing is problem based. The biggest advantage of a problems course is that higher levels of learning can easily facilitated and assessed. Most college exams promote rote learning at the lowest level--the knowledge category in Bloom's (1956 or <http://eduscapes.com/tap/topic69.htm>) taxonomy of cognitive learning. Problems enable instructors to promote higher order learning in the Bloom categories of comprehension, application, analysis, evaluation, and synthesis.

(82) *The Role of Positive and Negative Anticipatory States in Making Decisions About Future Outcomes*

Bruininks, Patricia (Hendrix College); Crowell, Adrienne (Hendrix College); Howington, Devin (Hendrix College)

Eighty-four participants read a story designed to elicit anticipation of a particular outcome. Throughout the story, they rated their hope, fear, optimism, and worry about the outcome on a 7-point scale. The story ended before participants knew the outcome, and they then decided whether or not to act in a way that would represent confidence in a positive outcome. Together, hope and optimism ratings predicted the decision to act confidently when the story ended with negative information but not when it ended positively. Hope was a stronger predictor than optimism, and fear and worry were not predictive in either condition.

(83) *The Robustness of Decision-related Attitude Changes Under Disruption*

Krawczyk, Daniel, C. (University of Texas at Dallas & UT Southwestern Medical Ctr.)

Attitude shifts accompany decisions and often support the choice and oppose the alternative. Can such attitude shifts be reduced? Two experiments are presented using a post-decision attitude test. Study 1 tested whether time pressure during post-decision attitude reporting reduced shifts. Results showed only a mild reduction. Study 2 investigated whether shifts reduce when working memory dual-tasks involving attentional-switching and maintenance, or maintenance only are imposed. Results showed disrupted shifts for the attentional-switching condition, but individuals who were successful dual-taskers showed shifts. Maintenance alone failed to disrupt shifts. These results indicate that shifts are robust even when attentional capacity is reduced.

(84) *National Science Foundation*

Leland, Jon; Meszaros, Jacqueline; O'Connor, Robert

(85) *American Cancer Society*

Elk, Ronit

(86) *National Institute on Aging*

Elias, Jeff