

## Society for Judgment and Decision Making

## Annual Meeting Schedule

November 18-20, 2000

Hyatt Regency

New Orleans, LA

**Saturday, November 18, 2000**

3:00 – 5:45 pm SJDM Registration *Regency Foyer*

5:30 – 7:00 pm Graduate Student Social Event *Meet at SJDM Registration*

6:00 – 9:00 pm      Board Meeting

**Sunday, November 19, 2000**

8:00 – 9:00 am Continental Breakfast *Burgundy AB & Burgundy CD*8:00 – 1:00 pm Registration *Burgundy AB & Burgundy CD*9:00 – 10:30 am Paper Session Ia *Burgundy AB*

## Paper Session Ib *Burgundy CD*

### Paper Session 1c *Dauphine*

10:50 – 12:00 noon      Paper Session IIa *Burgundy AB*

Paper Session IIb *Burgundy CD*Paper Session IIc *Dauphine*

12:00 – 1:30 pm Break

1:30 – 3:00 pm Poster Session I *French Market*

3:00 – 4:00 pm Plenary Session: Invited address by Asher Koriat *Regency ABC*

4:20 – 5:50 pm Paper Session IIIa *Burgundy AB*Paper Session IIIb *Burgundy CD*Paper Session IIIc *Dauphine*6:00 – 7:30 pm Poster Session II *French Market* (Cash Bar)

**Monday, November 20, 2000**

8:00 – 9:00 am Continental Breakfast and Business Meeting *Regency ABC*

9:00 – 9:30 am      Presentation of the Einhorn Award by Lola Lopes *Regency ABC*

9:40 – 10:50 am Paper Session IVa *Burgundy AB*Paper Session IVb *Burgundy CD*Paper Session IVc *Dauphine*

10:50 – 11:20 am	Break
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11:20 – 12:30 pm Paper Session Va *Burgundy AB*Paper Session Vb *Burgundy CD*Paper Session Vc *Dauphine*

12:30 – 2:00 pm      Luncheon *Regency ABC*

## Student Poster Award Announcement by JD Jaspers

# Presidential Address by Tom Wallsten

2:10 – 3:20 pm Paper Session VIa *Burgundy AB*Paper Session VIb *Burgundy CD*Paper Session VIc *Dauphine*

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Paper Session Ia *Burgundy AB* (Chairperson: F. Gibson, University of Michigan)

The delay-of-game effect: The self-imposed costs of impatient responses to negotiation slowdowns

Sally Blount (University of Chicago) & Gregory Janicik (New York University)

The effect of time on the evaluation of decision outcome

Ilana Ritov (Hebrew University)

Lock-in over time: The impact of time preferences and failure to predict switching costs

Gal Zauberman (University of North Carolina)

On the relationship between decisions in one-shot and repeated tasks:

Experimental results and the possibility of general models

Ido Erev (Technion University/Columbia University) & Greg Barron (Technion University)

Paper Session Ib *Burgundy CD* (Chairperson: J. Koehler, University of Texas)

The impact of feedback frequency on risk taking: How general is the phenomenon?

Thomas Langer (University of Mannheim) & Martin Weber (University of Mannheim)

Evaluating choices: The effect of mixed feedback

Tom Meyvis (University of Florida) & Alan Cooke (University of Florida)

Modeling the effects of cue diagnosticity and base rate on calibration: An illustration of random support theory

Lyle Brenner (Rice University), Dale Griffin (University of British Columbia), & Derek Koehler (University of Waterloo)

When wrong predictions provide more support than right ones  
Craig R. McKenzie (UC San Diego) & Marsha B. Amin, (UC San Diego)

Paper Session Ic Dauphine (Chairperson: D. Rude, University of Houston)

A behavioral approach to the asset allocation puzzle

Martin Weber (Universitaet Mannheim) & Niklas Siebenmorgen (Universitaet Mannheim)

Risk propensity theory, measurement and application in finance decision making  
Nigel Nicholson (London Business School), Mark Fenton-O'Creevy\* (Open University Business School), Emma Soane (London Business School), & Paul Willman (Oxford University)

On the causes of debt aversion: Consumer self-management of liquidity constraints

Klaus Wertenbroch (INSEAD), Dilip Soman (HKUST), & Joe Nunes (University of Southern California)

The mental accounting of sunk time: Why time is not like money

Dilip Soman (HK University of Science and Technology)

10:50 – 12:00 noon

Paper Session IIa Burgundy AB (Chairperson: J. Soll, INSEAD)

Overconfidence from the judgment consumer's perspective

Eric R. Stone (Wake Forest University) & Paul C. Price (California State University, Fresno)

Overconfidence in judgment for repeatable events

Winston R. Sieck (University of Michigan) & J. Frank Yates (University of Michigan)

Decision readiness and decision matrices

Beth Veinott (University of Michigan), J. Frank Yates (University of Michigan), & Richard D. Gonzalez (University of Michigan)

Paper Session IIb Burgundy CD (Chairperson: M. Tsiros, University of Miami)

Aspiration levels and risk taking by government bond traders

Zur Shapira (New York University)

The dark side of goal setting: The role of goals in motivating unethical behavior

Lisa Ordonez (University of Arizona), Maurice Schweitzer (University of Pennsylvania), & Bambi Douma (University of Arizona)

Money, kisses, and electric shocks: On the affective psychology of risk

Yuval Rottenstreich (University of Chicago), Christopher K. Hsee (University of Chicago)

Paper Session IIc *Dauphine* (Chairperson: V. Reyna, University of Arizona)

Multi-attribute decision making by constraint satisfaction

Dan Simon (University of Southern California), Daniel C. Krawczyk (UCLA), & Keith J. Holyoak (UCLA)

Customization decisions

John Godek (University of Michigan), J. Frank Yates (University of Michigan), & Seigyoung Auh (Symmetrics Marketing Corporation)

An analysis of decoy effects on decision processes

Janet A. Schwartz (Rutgers University) & Gretchen B. Chapman (Rutgers University)

12:00 – 1:30 pm      Break

1:30 – 3:00 pm      Poster Session I *French Market*

3:00 – 4:00 pm      Plenary Session: Invited address by Asher Koriat (University of Haifa) *Regency ABC*  
The study of the feeling of knowing: Some theoretical implications for metacognitive monitoring and control  
(Introduced by Maya Bar-Hillel)

4:20 – 5:50 pm

Paper Session IIIa *Burgundy AB* (Chairperson: K. Chinander, University of Miami)

The framing effects of bundling

S. Ramaswami (Singapore Management University) & A. V. Muthukrishnan (Hong Kong University of Science and Technology)

Framing, risk, and health decisions: The influence of survival outlook

Monica D. Barnes (University of South Florida), Sandra L. Schneider (University of South Florida), & Andrea L. Washburne (University of South Florida)

Public perceptions of environmental risks

Michael L. DeKay (Carnegie Mellon University) & Henry H. Willis (Carnegie Mellon University)

Evaluating a mixed lottery with both gain and loss outcomes

Young-Hee Cho (California State Univ., Long Beach), R. D. Luce (University of California, Irvine), & Lan Truong (California State University, Long Beach)

Paper Session IIIb *Burgundy CD* (Chairperson: L. Van Wallendael, UNC-Charlotte)

Brain activation across choice settings: Neuronal substrates for ambiguity, risk, certainty, gains and losses  
Kip Smith (Kansas State University), John Dickhaut (University of Minnesota), Jose Pardo (Minneapolis VA Hospital), & Kevin McCabe (University of Arizona)

Risk and the frontal lobes  
Alan Sanfey (University of Colorado) & Reid Hastie (University of Colorado)

The unpacking effect in evaluative judgments  
Leaf VanBoven (University of British Columbia) & Nicholas Epley (Cornell University)

The rebirth of anchoring as effortful adjustment  
Nicholas Epley (Cornell University) & Thomas Gilovich (Cornell University)

Paper Session IIIc Dauphine (Chairperson: R. Gonzalez, University of Michigan)

Retribution in a cheap-talk experiment  
Gary Charness (UC Santa Cruz) & Jordi Brandts (UC Santa Cruz)

Experimental practices in economics: A challenge for psychologists?  
Ralph Hertwig (Max Planck Institute for Human Development) & Andreas Ortmann (Charles University, Prague)

Logrolling without understanding why: Effects of anchoring, experience and perspective taking  
Simone Moran (Ben Gurion University) & Ilana Ritov (Hebrew University)

The dark side of sanctions: The influence of a sanction's mere presence on sanction support, on pessimism and on future behavioral intentions.  
Laetitia B. Mulder (Leiden University), Henk A.M. Wilke (Leiden University), & Eric van Dijk (Leiden University)

6:00 – 7:30 pm          Poster Session II *French Market* (Cash Bar)

**Monday, November 20, 2000**

8:00 – 9:00 am          Continental Breakfast and Business Meeting *Regency ABC*

9:00 – 9:30 am          Presentation of the Einhorn Award by Lola Lopes *Regency ABC*

9:40 – 10:50 am

Paper Session IVa Burgundy AB (Organizer: G. McClelland, University of Colorado, Boulder): Symposium: JDM on the Web

Judgment and decision-making research on the web  
Michael H. Birnbaum (California State University, Fullerton)

Studying decisions made on the web

Gary H. McClelland (University of Colorado, Boulder) & Barbara Fasolo  
(University of Colorado, Boulder)

Aiding decisions and collecting opinions on the web  
Raimo P. Hamalainen (Helsinki University of Technology)

Paper Session IVb Burgundy CD (Chairperson: A. Goodie, University of Georgia)  
Partition dependence in judgment under uncertainty  
Craig R. Fox (Duke University)

The desire for information as a driving mechanism for selection of categorical  
decision strategies  
Ilan Fischer (Ben Gurion University)

Magnitude of violation in image theory's compatibility test  
Lehman Benson (University of Arizona/Georgetown University), Lee Roy Beach  
(University of Arizona) & John Payne (Duke University)

Paper Session IVc Dauphine (Chairperson: R. Keller, University of California,  
Irvine)  
Cross-cultural variations in decision making standards  
J. Frank Yates (University of Michigan), Xiaolan Fu (Chinese Academy of  
Science), Ju-Whei Lee (Chung Yuan University), Takashi Oka (Tokyo  
University), & Jason Riis (University of Michigan)

Identity-based choice: Who I am determines what I choose  
John Wright (University of Chicago) & Chip Heath\* (Stanford University)

Positive affect and strategic decisions under uncertainty  
Aparna Labroo (Cornell University) & Alice Isen (Cornell University)

10:50 – 11:20 am      Break

11:20 – 12:30 pm

Paper Session Va Burgundy AB (Organizer: E. Weber, Columbia University):  
Symposium: New perspectives on value  
Making a good decision value from fit  
E. Tory Higgins (Columbia University)

On the priming of preferences: Implications for the construction of value  
Eric J. Johnson (Columbia University) & Naomi Mandel (Arizona State  
University)

Multiple goals and integrated value  
David H. Krantz (Columbia University)

Preference as memory: An alternative to indifference curves as carriers of value

Elke U. Weber (Columbia University) & Eric Johnson (Columbia University)

Paper Session Vb *Burgundy CD* (Chairperson: R. Croson, University of Pennsylvania)

Deliberating about dollars: The severity shift

David Schkade (University of Texas, Austin), Cass R. Sunstein (University of Chicago), & Daniel Kahneman (Princeton University)

Social information processing in strategic decision-making

Susanne Abele (University of Mannheim), Karl-Martin Ehrhart (University of Karlsruhe), & Herbert Bless (University of Mannheim)

Why do people suggest what they don't want? Using menus to strategically influence others' choices

Rebecca W. Hamilton (University of Maryland)

Paper Session Vc *Dauphine* (Chairperson: D. Gigone, Duke University)

Group versus individual use of configural information in multicue decision making

R. Scott Tindale, Elisabeth Anderson, Amanda Dykema-Engblade, Helen Meisenhelder, Catherine Munier, & Andrea Krebel (Loyola University Chicago)

Simple heuristics for social interactions

Jorg Rieskamp (Max Planck Institute for Human Development)

Video-conferencing technology and group decision-making: Studying the effects of discussion manipulation on the individual and group judgment

Oleksandr S. Chernyshenko (University of Illinois at Urbana-Champaign) & Janet Snizek (University of Illinois at Urbana-Champaign)

12:30 – 2:00 pm

Luncheon *Regency ABC*

Student Poster Award Announcement by JD Jaspers

Presidential Address, Thomas Wallsten (University of Maryland):

A Critical Look at Research on Probability Judgment: Are We Asking the Right Questions?

2:10 – 3:20 pm

Paper Session VIa *Burgundy AB* (R. Zwick: Hong Kong University of Science and Technology)

Preference shifting under stress and accountability: Who shifts, when, and why?

Jennifer S. Lerner (Carnegie Mellon University), Mark D. Spranca (RAND), & David J. Algranati (Carnegie Mellon University)

Detecting regime shifts: A study of under- and over-reaction

Cade Massey (University of Chicago) & George Wu (University of Chicago)

Ease, endorsement, and endowment: Three sources of default effects in choice  
Christina Brown (University of Michigan) & Aradhna Krishna (Univ. of Michigan)

Paper Session VIb Burgundy CD (Chairperson: S. Curley, University of Minnesota)

Testing the descriptive meta-model of decision making

Yuri Tada (Ohio State University) & Elke Weber (Columbia University)

Changing plans dynamic inconsistency, experience and the reference point

Rachel Barkan (Ben-Gurion University) & Jerome R. Busemeyer (Indiana University)

Feeling our way through a complex world: Individual differences, physiology, and choice

Ellen Peters (Decision Research/University of Oregon) & Robert Mauro (The University of Oregon)

Paper Session VIc Dauphine (Chairperson: M. Lipe, University of Oklahoma)

Post decisional regret and the comparability of 'what is' and 'what could have been'

Eric van Dijk (Leiden University) & Marcel Zeelenberg (Tilburg University)

Retroactive pessimism: Using hindsight tactics to mitigate disappointments

Orit E. Tykocinski (Ben Gurion University)

Inaction inertia: Avoiding regret through the avoidance of action

Thane S. Pittman (Gettysburg College) & Orit E. Tykocinski (Ben Gurion University)

\* Indicates the presenting author whenever the presenting author is not first



## **JDM Paper and Symposium Abstracts**

### **Paper Session Ia**

#### **The Delay-of-Game Effect: The Self-Imposed Costs of Impatient Responses to Negotiation Slowdowns**

*Blount, Sally (University of Chicago, Janicik, Gregory (New York University)*

This paper predicts and finds that when negotiators with explicit pacing preferences encounter unwanted slowdowns in bargaining, they often experience negative emotional responses and over-react behaviorally. Study 1 finds that when negotiators who want to complete transactions quickly encounter slowdowns they get more impatient and perform worse than both (a) negotiators who want to complete transactions more slowly and (b) equally fast-paced negotiators who do not encounter delays. This underperformance is significantly correlated with impatient emotions. Study 2 demonstrates that these emotional and behavioral reactions are unaffected by changes in the actual monetary costs associated with the delays.

#### **The Effect of Time on the Evaluation of Decision Outcome**

*Ritov, Ilana (Hebrew University)*

The present research investigated the time course of decision evaluation, by examining satisfaction with specific real choices made by participants at varied times between a few months and ten years earlier. In separate studies two decisions were evaluated the retaking of an exam in introductory psychology class in order to improve one's grade point average, and the choice of the undergraduate major. The results suggest that the impact of forgone options on the evaluation of decision outcomes grows stronger with time. Increased regret for omissions in the distant past can be viewed as a special case of this general effect.

#### **Lock-In Over Time: The Impact of Time Preference and Failure to Predict Switching Costs**

*Zauberman, Gal (University of North Carolina)*

In order to examine search and choice over time, we conceptualize the information environment with two temporally distinct search-cost categories that are traded off initial set-up costs and on-going evaluation costs. This tradeoff drives initial selection, as well as the propensity to search for, discover and adopt new options. Lock-in occurs in two stages. First, due to time preferences and a failure to anticipate the impact of switching costs, people will select the lower set-up cost option. Second, once the set-up cost has been incurred, people are less likely to consider and switch to a (superior) new alternative.

#### **On the Relationship Between Decisions in One-Shot and Repeated Tasks: Experimental Results and the Possibility of General Models**

*Erev, Ido (Technion University/Columbia University), Barron, Greg (Technion University)*

Six experiments are presented that explore the effect of repetition on decision-making under uncertainty and risk. The results reveal that three of the best known behavioral regularities observed in one-shot decision tasks, the certainty effect (Allais paradox), the reflection effect, and underweighting of small probabilities can be reversed by feedback. Reversal occurs even when the initial behavior maximizes expected value. It is shown that this, apparently complex, pattern of results can be captured by a joint quantification of the assumptions of Prospect Theory and recent adaptive learning models.

### **Paper Session Ib**

#### **The Impact of Feedback Frequency on Risk Taking: How General Is the Phenomenon?**

*Langer, Thomas (University of Mannheim), Weber, Martin (University of Mannheim)*  
GneezyPotters (1997) and Thaler et al (1997) provided experimental evidence for the fact that more frequent outcome feedback decreases the willingness to make risky choices in repeated investment decisions. This result is predicted by the concept myopic loss aversion (BenartziThaler, 1995). However, LangerWeber (1999) recently demonstrated that a myopic evaluation does not always decrease the attractiveness of a lottery sequence. We translate these findings to the feedback situation and present experimental evidence for the fact that the impact of feedback frequency on risk taking is not a general phenomenon, but depends on the risk profiles of the involved lotteries.

#### **Evaluating Choices: The Effect of Mixed Feedback**

*Meyvis, Tom (University of Florida), Cooke, Alan (University of Florida)*  
When people assess their satisfaction with a chosen option, they consider both the obtained outcome and the outcomes of foregone alternatives. Often, some alternative outcomes are more favorable than the obtained outcome, while others are less favorable, resulting in mixed counterfactual comparisons. Studies of regret suggest that people will focus on the unfavorable upward comparisons, whereas studies of hypothesis confirmation suggest that people will focus on the favorable downward comparisons. This research explores the necessary conditions for regret and confirmation effects to occur by examining the effect of mixed feedback in a store choice task.

#### **Modeling the Effects of Cue Diagnosticity and Base Rate on Calibration: An Illustration of Random Support Theory**

*Brenner, Lyle (Rice University), Griffin, Dale (University of British Columbia), Koehler, Derek (University of Waterloo)*

We present four studies of probabilistic prediction using a simulated stock market paradigm. Participants used four economic cues to predict whether a company's stock price would rise or fall. Within and across studies, we varied the base rate of increasing stock prices, the diagnosticity of cues, the presence of outcome feedback, and whether base rates varied within-subjects. Levels of base rate and diagnosticity strongly influenced the calibration of probabilistic predictions, and these effects were only slightly qualified by outcome feedback or within-subject variation. The data are well-characterized by random support theory, a stochastic extension of support theory that models calibration.

### **When Wrong Predictions Provide More Support Than Right Ones**

*McKenzie, Craig R. (UC San Diego), Amin, Marsha (UC San Diego)*

Correct bold predictions are normatively more supportive of a hypothesis than correct timid predictions. Three experiments showed that participants were sensitive to the boldness of a prediction. Indeed, they often found incorrect bold predictions more supportive than correct timid ones. Participants were often willing to tolerate inaccuracy when predictions were bold. This was demonstrated in the context of competing forecasters and in the context of competing scientific theories. A normative account can explain the current results and provides an alternative account of similar results that have been explained using a psychological model that trades off accuracy and informativeness.

### **Paper Session Ic**

#### **A Behavioral Approach to the Asset Allocation Puzzle**

*Weber, Martin (Universitaet Mannheim), Siebenmorgen, Niklas (Universitaet Mannheim)*

The Asset Allocation Puzzle describes the phenomenon that popular financial advice tends to be inconsistent with the mutual-fund separation theorem. While the economic literature tries to explain this puzzle by examining the rigid assumptions of the CAPM, we follow another idea. Learning from Benartzi and Thaler (1998) about naive diversification we find evidence that the puzzle can be explained by this behavior. We distributed questionnaires among several investment consultants who gave us their market expectations and three asset allocation recommendations. The data shows that their recommendation strategies seem to be influenced by naive diversification. We finally examine losses of efficiency.

#### **Risk Propensity Theory, Measurement and Application in Finance Decision Making**

*Nicholson, Nigel (London Business School), Fenton-O'Creevy, Mark (Open University Business School), Soane, Emma (London Business School), & Willman, Paul (Oxford University)*

Do individuals differ in risk propensity? How much of this variance is dispositional and how much circumstantial? What consequences does it have for decision making in applied settings? Research on City of London traders by a team from London Business School has explored these and related questions. A new model of risk propensity and its theoretical underpinnings are presented. Results from a new measure are described, including relationships with the Big Five personality factors as measured on a comprehensive validated measure with a sample of over 1,000 managers and professionals. Data from traders are compared and their significance is discussed.

#### **On the Causes of Debt Aversion: Consumer Self-Management of Liquidity Constraints**

*Wertenbroch, Klaus (INSEAD), Soman, Dilip (HKUST), Nunes, Joe (University of Southern California)*

We develop a multi-period mental budgeting model of consumer debt aversion as a self-control strategy. Financing current consumption is more likely to lead to total consumption (across periods) in excess of one's mental budget for hedonic than for utilitarian goods. That's because financing (or delaying payment for) current consumption artificially inflates the liquidity available for future consumption, and because hedonic

goods are more tempting to consume in the absence of liquidity constraints. Therefore, consumers with a need for self-control avoid going into debt in an attempt to control their hedonic consumption. Evidence comes from four experiments and a field study.

### **The Mental Accounting of Sunk Time: Why Time Is Not Like Money**

*Soman, Dilip (HK University of Science and Technology)*

The sunk cost effect has been documented widely in the domain of monetary costs. In this paper, I study the effect of past time investments on current decisions. In three experiments using choice situations, I demonstrate that the sunk-cost effect is not observed for past investments of time. I further propose that this pseudo-rational behavior is due to an inability to account for time in the same way as money. In three additional experiments, I facilitate the accounting of time and show that the irrational sunk-cost effect reappears.

### **Paper Session IIa**

#### **Overconfidence From the Judgment Consumer's Perspective**

*Stone, Eric R. (Wake Forest University), Price, Paul C. (California State University, Fresno)*

In three experiments, participants evaluated the likelihood judgments of two fictional financial advisors making judgments about the price movements of stocks. One of the advisors was well-calibrated and the other was overconfident. In each experiment, participants generally preferred the overconfident advisor to the well-calibrated one. Experiments 2 and 3 showed that the advisor's level of confidence influenced participants' perceptions of their knowledge and accuracy, which in turn influenced preference. Experiment 3 also suggested that need for cognition and right-wing authoritarianism are positively related to preference for the overconfident advisor. We conclude by introducing a quantitative model of advisor preference.

#### **Overconfidence in Judgment for Repeatable Events**

*Sieck, Winston R. (University of Michigan), Yates, J. Frank (University of Michigan)*

People are overconfident in their judgments about repeatable events. A neural network-based probability judgment (NBPJ) model and an exemplar-based probability judgment (EBPJ) model were developed for these kinds of tasks, and accounts for overconfidence were derived from each. The NBPJ asserts that people's learning of ecological probabilities is veridical. However, their classifications are probabilistic, which results in overconfidence. The EBPJ proposes that people learn by storing examples, and that their judgments are often based on the first example they happen to retrieve. In this model, reliance on small samples of exemplars leads to overconfidence. Three experiments uniformly supported the EBPJ.

#### **Decision Readiness and Decision Matrices**

*Veinott, Beth (University of Michigan), Yates, J. Frank (University of Michigan), Gonzalez, Richard D. (University of Michigan)*

The reported research addressed decision readiness, willingness to decide immediately instead of waiting to decide later. Consideration of factors such as ambiguity avoidance led to the prediction that the construction of decision matrices (alternative attribute

displays), like those common in multiattribute utility theory applications, would increase decision readiness. Predictions like these were tested via conditions in which participants considered decision problems after either (a) thinking hard, (b) constructing lists of alternatives and considerations, or (c) assembling decision matrices. Contrary to expectations, decision matrix construction tended to reduce decision readiness, not increase it. Conceptual analyses and practical implications are discussed.

### **Paper Session IIb**

#### **Aspiration Levels and Risk Taking By Government Bond Traders**

*Shapira, Zur (New York University)*

Abstract Government bond traders work in a very volatile and fast moving market. They are compensated by a base salary plus a bonus which relates to the profit and loss (PL) they create for the firm on the securities they trade. Recent models of risk taking (Kahneman Tversky, 1979 March Shapira, 1992 Shapira, 1995) suggest that risk taking is affected by the targets or reference points that people use to evaluate risky prospects. These predictions are tested using data on actual purchase and sell decisions made by government bond traders. Implications for risk management are discussed.

#### **The Dark Side of Goal Setting: The Role of Goals in Motivating Unethical Behavior**

*Ordonez, Lisa (University of Arizona), Schweitzer, Maurice (University of Pennsylvania), Douma, Bambi (University of Arizona)*

A substantial literature has demonstrated that goal setting improves task performance (Locke Latham, 1990). In this paper, we explore the proposition that challenging goals motivate not only constructive behavior, but also undesirable behavior such as lying and cheating. We conducted six survey studies and an anagram experiment, and find support for our thesis. Subjects in the goal conditions were more likely to lie or cheat than were subjects in the do your best conditions. We explain these results in terms of the reference point adoption process, and find that loss aversion alone motivates unethical behavior.

#### **Money, Kisses, and Electric Shocks: On the Affective Psychology of Risk**

*Rottenstreich, Yuval (University of Chicago), Hsee, Christopher K. (University of Chicago)*

Prospect theory's S-shaped weighting function is often said to reflect the psychophysics of chance. We propose an affective rather than psychophysical deconstruction of the weighting function, emphasizing affective reactions to potential consequences. The affective approach implies that weighting functions will be more S-shaped for lotteries involving affect-rich than affect-poor prizes. That is, people will be more sensitive to departures from impossibility and certainty, but less sensitive to intermediate probability variations for affect-rich prizes. We corroborate these predictions by observing probability-outcome interactions an affect-poor prize is preferred to an affect-rich prize under certainty, but preferences reverse under low probability.

### **Paper Session IIc**

#### **Multi-Attribute Decision Making By Constraint Satisfaction**

*Simon, Dan (University of Southern California), Krawczyk, Daniel C. (UCLA), Holyoak, Keith J. (UCLA)*

This research examines how people make decisions in complex situations that contain numerous ambiguous and contradictory attributes. Using materials requiring a choice between two competing job offers, we find changes in subjects preferences and in the weights they assign to the attributes, all in the direction of stronger support for the job offer they actually choose. These findings are consistent with the idea that decisions of this sort are based on constraint satisfaction processes.

### **Customization Decisions**

*Godek, John (University of Michigan), Yates, J. Frank (University of Michigan), Auh, Seigyoung (Symmetrics Marketing Corporation)*

Customization refers to the process where items are built or altered to meet individuals specifications. In this paper we discuss how customization and non-customization decisions differ and offer hypotheses as to how and why these differences may affect both decision-makers perceptions, judgments, and behavior. We describe three experiments, with results showing, contrary to popular belief, that customization may lead to perceptions of fewer alternatives, consideration of fewer alternatives, lower levels of satisfaction, and a lower price that decision-makers are willing to pay for the customized alternative they select, relative to decision-makers in non-customization conditions.

### **An Analysis of Decoy Effects on Decision Processes**

*Schwartz, Janet A. (Rutgers University), Chapman, Gretchen B. (Rutgers University)*

New options can influence existing preferences and result in decision biases. Based on previous research, where we demonstrated a particular process measure (target acquisitions) mediated the attraction effect, but not the compromise effect, we investigated whether this mediator was driven by A) asymmetric dominance, or B) a tie among two options. Process-tracing comparisons revealed the attraction effect, using tied and untied decoys, was fully mediated by increased target acquisitions. However, tied decoys were associated with increased acquisition that was equally distributed across features, but untied decoys were associated with unequal distribution- suggesting an attribute re-weighting *strategy* for untied, but not tied, decoys.

### **Plenary Session**

#### **Invited Talk: The study of the feeling of knowing: Some theoretical implications for metacognitive monitoring and control** *Asher Koriat (University of Haifa)*

In many everyday situations we monitor the state of our knowledge, and control our actions accordingly. We do that during learning, during the search of memory for a solicited answer to a question, and following the successful retrieval of a candidate answer. Because such metacognitive assessments have measurable effects on behavior, it is important to examine their accuracy as well as the processes that lead to them. In this talk I will focus on the feeling of knowing that is often experienced when people fail to retrieve a solicited target from memory, and use it as a model for clarifying (a) the heuristic basis of experience-driven metacognitive judgments in general, (b) the processes that lead to valid and illusory feelings of knowing, and (c) the relationship between such feelings (monitoring) and their presumed effects on subsequent information processing and behavior (control). It will be argued that the study of metacognitive

processes discloses a unique, "crossover" function of subjective experience in general: Mediating between implicit-automatic processes, on the one hand, and explicit-controlled processes, on the other.

### **Paper Session IIIa**

#### **The Framing Effects of Bundling**

*Ramaswami, S. (Singapore Management University), Muthukrishnan, A.V. (Hong Kong University of Science and Technology)*

A number of different sales promotions are structured around the general theme of Buy X, get Y free. We conceptualize these types of promotions as a framing effect of a product bundle (X and Y). In seven experiments, we develop predictions of conditions that would lead to its effectiveness and examine the consequences of this framing for consumer choice. We demonstrate that in the right conditions, this framing may lead to consumers being more willing to pay for a bundle than for the two separate products, even when the bundle is priced higher.

#### **Framing, Risk, and Health Decisions: The Influence of Survival Outlook**

*Barnes, Monica D. (University of South Florida), Schneider, Sandra L. (University of South Florida), Washburne, Andrea L. (University of South Florida)*

Participants rated the quality and riskiness of six cancer treatment option pairs presented in either a positive or negative frame. Option pairs differed by the likelihood of short-term survival, and each pair involved a tradeoff between survival outlook and quality of life. Contrary to prospect theory predictions, participants chose the option they rated as less risky in both the positive and negative frame. The size and direction of framing effects differed dramatically as a function of survival outlook. Positive frame preferences were much more sensitive to changes in the odds of survival than negative frame preferences.

#### **Public Perceptions of Environmental Risks**

*DeKay, Michael L. (Carnegie Mellon University), Willis, Henry H. (Carnegie Mellon University)*

Although there has been a great deal of research on perceptions of health and safety risks, only a small handful of studies have addressed environmental risks, and none have attempted to characterize environmental risks for risk-ranking purposes. In a series of studies, we (a) generated a set of attributes for characterizing environmental risks (b) assessed the relevance of these attributes to a risk-ranking task (c) analyzed the relationships among a subset of these attributes using multiple analytic techniques and (d) analyzed the relationships between the resulting risk dimensions and judgments of overall riskiness, acceptability, and the need for additional regulation.

#### **Evaluating a Mixed Lottery with Both Gain and Loss Outcomes**

*Cho, Young-Hee (California State University, Long Beach), Luce, R.D. (University of California, Irvine), Truong, Lan (California State University, Long Beach)*

We investigate two editing assumptions about a lottery with both gain and loss outcomes. Duplex decomposition assumes that a mixed lottery can be edited into a joint receipt (JR) of a gain lottery and a loss lottery. General segregation assumes that a mixed

lottery can be edited into a JR of one lottery and one sure money. These assumptions were tested by investigating the equality between the CE of a mixed lottery and the CE of the corresponding JR lottery, estimated from 56 participants. The results indicate that general segregation holds well, but duplex decomposition does not hold.

### **Paper Session IIIb**

#### **Brain Activation Across Choice Settings: Neuronal Substrates for Ambiguity, Risk, Certainty, Gains and Losses**

*Smith, Kip (Kansas State University), Dickhaut, John (University of Minnesota), Pardo, Jose (Minneapolis VA Hospital), McCabe, Kevin (University of Arizona)*

We present PET images of brain activity of subjects making choices that exhibit risk and ambiguity aversion in gains and risk seeking in losses. Stimuli systematically varied Ellsbergs choice task in a within subjects complete block design. PET scans per condition were summed across subjects and compared across conditions and to a baseline. We found statistically significant differences in brain activation when an ambiguous gamble replaced a risky gamble, when a risky gamble replaced a certain gamble, and when choices were between losses rather than gains. These findings provide evidence that the brain does not treat beliefs independently of payoffs.

#### **Risk and the Frontal Lobes**

*Sanfey, Alan (University of Colorado), Hastie, Reid (University of Colorado)*

Poor social judgment and decision-making abilities have often been attributed to people who have suffered injury to the ventromedial prefrontal cortex. However, few laboratory tests of decision-making have been conducted on these patients, the exception being the Iowa gambling task developed by the research group of Damasio, which has often, but not always, demonstrated differential performance between patients and controls. Results from frontal patients on both the Iowa task and on an alternate test of decision-making will be presented. The findings provide new insights as to the patients' deficit, primarily that patients and controls demonstrate differential attitudes towards risk.

#### **The Unpacking Effect In Evaluative Judgments**

*VanBoven, Leaf (University of British Columbia), Epley, Nicholas (Cornell University)*

We examined whether unpacking a category, making it easier to consider constituent elements, produces relatively extreme evaluations. In the first three studies, participants who read or generated detailed descriptions of an event made relatively extreme evaluations. In Study 4, participants who were primed with constituent elements of a category made evaluations that were more extreme than those made by control condition participants. In Study 5, the magnitude of the unpacking effect varied with the personal relevance of the category. In studies 6 and 7, the unpacking effect moderated peoples tendency to overclaim responsibility for jointly performed tasks.

#### **The Rebirth of Anchoring as Effortful Adjustment**

*Epley, Nicholas (Cornell University), Gilovich, Thomas (Cornell University)*

People's judgments of uncertain quantities are commonly influenced by irrelevant values. These anchoring effects were originally explained as a process of insufficient adjustment away from an irrelevant anchor value. The existing literature provides no support for the



postulated process of adjustment, however, and a consensus has emerged that, in fact, none takes place. We argue that this emerging consensus is premature, and present evidence from several experiments that a process of insufficient adjustment produces anchoring effects when the original anchors are self-generated, rather than when they are provided by an experimenter or by some other external source.

### **Paper Session IIIc**

#### **Retribution In a Cheap-Talk Experiment**

*Charness, Gary (UC Santa Cruz), Brandts, Jordi (UC Santa Cruz)*

Notions of fair process and honorable behavior have potentially important implications for social and economic interaction. We use a two-person 3-stage game to investigate whether people choose to punish or reward another player by sacrificing money to increase or decrease the other person's payoff. One player sends a message indicating an intended play, which is either favorable or unfavorable to the other player in the game. After the message, the sender and the receiver play a simultaneous 2x2 game. A deceptive message may be made, in an effort to induce the receiver to make a play favorable to the sender. Our focus is on whether receivers' rates of monetary sacrifice depend on the process and the perceived sender's intention, as is suggested by the literature on deception and procedural satisfaction. Models such as Rabin (1993), Sen (1997), and Charness and Rabin (1999) also permit rates of sacrifice to be sensitive to the sender's perceived intention, while outcome-based models such as Fehr and Schmidt (1999) and Bolton and Ockenfels (1997) predict otherwise. We find that many people do send misleading messages and that people do sacrifice money to both punish and reward. Punishment rates are significantly higher when there has been a deceitful message of an intended favorable play, highlighting the importance of intention and process in one's dissatisfaction with a culmination outcome.

#### **Experimental Practices in Economics: A Challenge for Psychologists?**

*Hertwig, Ralph (Max Planck Institute for Human Development), Ortmann, Andreas (Charles University, Prague)*

We discuss four key variables of experimental design that tend to be realized quite differently in economics and in areas of psychology relevant to both economists and psychologists, such as judgment and decision making. On theoretical and empirical grounds, we argue that these different realizations, which concern enactment of scripts, repetition of trials, performance-based monetary payments, and the use of deception, are bound to produce divergent experimental results. We call for more research on the consequences of particular methodological preferences and to further this goal propose a do-it-both-ways rule.

#### **Logrolling Without Understanding Why: Effects of Anchoring, Experience, and Perspective Taking**

*Moran, Simone (Ben Gurion University), Ritov, Ilana (Hebrew University)*

This study explores how logrolling versus distributive initial offers are evaluated and responded to in multi-issue negotiations. Results suggest that the advantage of presenting inexperienced negotiators with logrolling initial offers does not necessarily require conveyance of a social message nor correct understanding of mutual interests, it may

simply be due to within-issue anchoring. Increased logrolling due to experience was not wholly accounted for by improved understanding. Understanding opponents general interests did not necessarily lead to correctly considering them during consequent negotiation. Moreover, while perspective taking played a role in enhancing logrolling responses, it was not a necessary condition.

### **The Dark Side of Sanctions: The Influence of a Sanction's Mere Presence on Sanction Support, on Pessimism, and on Future Behavioral Intentions**

*Mulder, Laetitia B. (Leiden University), Wilke, Henk A.M. (Leiden University), van Dijk, Eric (Leiden University)*

In the present paper the question is raised whether sanctions create their own need by giving the impression they are necessary. The results of an experimental study on public good provision show that a sanctions mere presence causes sanction support. Also, it makes people pessimistic about chances of obtaining the collective good. Moreover the data show that once a sanction is lifted, this leads to less cooperation than there would have been if there had not been a sanction at all. We conclude there a good reason to be weary about the instrumental function that sanctions are thought to have.

### **Paper Session IVa**

#### **Symposium: JDM on the Web**

*Organized by Gary McClelland (University of Colorado, Boulder)*

Anytime since the world-wide web has existed, a symposium speculating on the implications of the web for judgment and decision making would have been appropriate. Rather than speculations, this symposium presents three exemplars of innovative web projects relevant to judgment and decision making. All three use tools such as Javascript, Java, CGI scripts to create interactive sites for collecting responses from web users and returning dynamic feedback to them. Each presentation represents an area of judgment and decision making which a survey of websites reveals as being very active. (1) A number of researchers have implemented classical JDM studies (involving gambles, scenarios, hypothetical choices) on the web. Michael Birnbaum, whose many web experiments and books on the topic establish him as the leader in this field, will describe actual web experiments and how their results compare to previous JDM experiments. He will also discuss implementation issues as well as design and participant population issues associated with web experiments. (2) Many real decisions are made on the web each day. Gary McClelland and Barbara Fasolo will describe techniques for using log files to analyze user's decision processes and how commercial sites have (or have not) organized themselves to facilitate consumer choices based on JDM principles. (3) A growing number of decision analysts are taking advantage of the web's ubiquity to deliver software for aiding complex decision making directly to user's wherever they are. Raimo Hmlinen will describe and demonstrate some of the sophisticated web-based tools he and his colleagues have developed for aiding multiattribute decision making, facilitating negotiations and group decision making, and collecting opinions. (4) Educational uses of the web for teaching JDM should be a fourth area, but as yet there do not appear to be any sturdy exemplars on the web that have taken advantage of its interactive aspects. However, potential educational uses will be discussed.

- **Judgment and Decision-Making Research on the Web**  
*Birnbaum, Michael H. (California State University, Fullerton)*
- **Studying Decisions Made on the Web**  
*McClelland, Gary H. (University of Colorado, Boulder), Fasolo, Barbara (University of Colorado, Boulder)*
- **Aiding Decisions and Collecting Opinions on the Web**  
*Hamalainen, Raimo P. (Helsinki University of Technology)*

### **Paper Session IVb**

#### **Partition Dependence in Judgment Under Uncertainty**

*Fox, Craig R. (Duke University)*

The principle of insufficient reason states that if one can find no reason to favor one hypothesis over another then these hypotheses should be judged equiprobable. Although its normative status has been long since discredited, the principle has some descriptive validity. In several distinct studies judged probabilities are biased toward the ignorance prior probability, defined by the ratio of focal versus alternative elementary events in the partition of the event space that a person subjectively invokes. Furthermore, the judged probability of a particular event changes substantially in response to experimental manipulation of the relative salience of alternative partitions.

#### **The Desire for Information as a Driving Mechanism for Selection of Categorical Decision Strategies**

*Fischer, Ilan (Ben Gurion University)*

Driven by a Cognitive Classification Structure (CCS) model, which distinguishes between three operation modes Screening, Discrimination and Classification. The study contrasts the desire for fine tuned exhaustive information, with the desire to avoid negative feedback hypothesis, as driving mechanisms in the selection of categorical decision strategies. In two experiments, 83 subjects made 1800 decisions, revealing a dynamic use of all three CCS processes, with a strong preference for the Discrimination process. However after modification of the feedback structure, subjects drastically increase their use of the Discrimination process, in support of the desire for information hypothesis.

#### **Magnitude of Violation in Image Theory's Compatibility Test**

*Benson, Lehman (University of Arizona/Georgetown University), Beach, Lee Roy (University of Arizona), Payne, John (Duke University)*

Image Theory's compatibility test assumes that the decision maker compares the state of each feature of an option to a desired state (decision standard). A feature is said to 'violate' the standard if the discrepancy between them is sufficiently large, (violation threshold) and all magnitudes of discrepancy beyond that threshold have the same impact (all-or-none) on the decision (Beach, 1990). In contrast, Seidl and Traub (1998) have argued that the larger the discrepancy the larger the impact on screening (magnitude). We test whether Image Theory's compatibility test should incorporate the degree of discrepancy rather than simply the presence of violation.

### **Paper Session IVc**

#### **Cross-Cultural Variations in Decision Making Standards**

*Yates, J. Frank (University of Michigan), Fu, Xiaolan (Chinese Academy of Science), Lee, Ju-Whei (Chung Yuan University), Oka, Takashi (Tokyo University), Riis, Jason (University of Michigan)*

The work described in this talk examined cross-cultural variations in decision making standards. Participants in mainland China, Taiwan, Japan, and the United States were asked to bring to mind real-life instances in which they had used the term good decision. They were then requested to articulate their reasons for classifying those decisions as good ones. Analogous procedures focused on what participants regarded as bad decisions as well as best (and worst) decision makers. Results revealed numerous sharp cross-cultural differences, including different emphases on good decisions (a) meeting the approval of others, (b) being fast, and (c) conforming with moral principles.

#### **Identity-Based Choice: Who I Am Determines What I Choose**

*Wright, John (University of Chicago), Heath, Chip (Stanford University)*

Many choices are made based on consequences: people weigh the costs and benefits of various alternatives. However, following March (1994), we suggest that many choices are made based on identity. Such choices are less like cost-benefit analysis and more like rule following. People ask: Who am I? (identity) What situation is this? (situation) And then they choose the alternative that people with their identity would choose in that situation. In experiments, we demonstrate that identities and situations can be manipulated. Choices are more consistent with identity than consequence even in abstract, clearly-defined domains such as gambles and consumer products.

#### **Positive Affect and Strategic Decisions Under Uncertainty**

*Labroo, Aparna (Cornell University), Isen, Alice (Cornell University)*

Previous research suggests that mild positive affect systematically influences decision making. We investigate the impact of positive affect on strategic interactive decisions using repeated prisoners' dilemma type situations. Three experiments examine the role of affect in these repeated decisions, both in a gain frame and a loss frame, as well as look at varying perceived situational competitiveness. Results show that people in positive affect protect themselves by competing more often than controls, but only when they are in danger of a loss. Interestingly, they are quicker than controls to respond with cooperation to a cooperative change in their co-player's strategy.

### **Paper Session Va**

#### **Symposium: New Perspectives on Value**

*Organized by Elke Weber (Columbia University)*

Value is a central construct in almost every model of judgment and choice. The question of what imbues a choice option with value, thus increasing its probability of being selected or the price people are willing to pay for it, has some obvious, economic answers. JDM researchers (e.g., Kahneman, Fischhoff) have provided additional answers relating to attitudes and moral sentiments. In this symposium, we will attempt to integrate current thought on the topic of value (introduction by Elke Weber), and to add some new

perspectives. Tory Higgins will present his regulatory systems model (for which he won both this year's APA Distinguished Scientific Contribution Award and the APS William James Award), which predict that value derives not just from the worth of decision alternatives, but also from their fit to the regulatory system in operation. David Krantz will draw on his expertise in vision research to discuss the integration of attributes and goals in the construction of value. Eric Johnson will discuss the meaning of value in the context of the online construction of preference.

- **Making a Good Decision Value from Fit**  
*Higgins, E. Tory (Columbia University)*
- **On the Priming of Preferences: Implications for the Construction of Value**  
*Johnson, Eric J. (Columbia University), Mandel, Naomi (Arizona State University)*
- **Multiple Goals and Integrated Value**  
*Krantz, David H. (Columbia University)*
- **Preference as memory: An alternative to indifference curves as carriers of value**  
*Elke U. Weber (Columbia University) & Eric Johnson (Columbia University)*

### **Paper Session Vb**

#### **Deliberating About Dollars: The Severity Shift**

*Schkade, David (University of Texas, Austin), Sunstein, Cass R. (University of Chicago), Kahneman, Daniel (Princeton University)*

How does jury deliberation affect the pre-deliberation judgments of individual jurors? 509 mock juries of jury-eligible citizens judged punitive damage cases. Deliberation produced a severity shift in dollar awards, in which a jury's verdict was systematically higher than the median of its jurors' predeliberation judgments. This shift is attributed to a rhetorical asymmetry, in which arguments for higher awards are more persuasive than arguments for lower awards. When judgments were made on a scale of punishment severity, deliberation increased high ratings and decreased low ratings. Deliberation did not alleviate the problem of erratic individual dollar awards, but exacerbated it.

#### **Social Information Processing in Strategic Decision-Making**

*Abele, Susanne (University of Mannheim), Ehrhart, Karl-Martin (University of Karlsruhe), Bless, Herbert (University of Mannheim)*

In strategic decision-situations outcomes of decisions depend on all decision-makers involved. Imagine a situation, in which you choose simultaneously with another player. Would that be different from knowing that your opponent chose before you, but still not knowing what she did at the time you make your choice? In contrast to common sense and game-theory, empirical evidence suggests that the two situations have different effects. We present two experiments (N 144, N 256) that suggest that this timing-effect is

due to simultaneous versus sequential selective activated different concepts which in turn influences individuals' risk-aversion.

### **Why Do People Suggest What They Don't Want? Using Menus to Strategically Influence Others' Choices**

*Hamilton, Rebecca W. (University of Maryland)*

Why would people suggest alternatives to others that they don't want them to choose? Constructing comparisons for others can draw out tradeoffs among alternatives or create contrasts that influence others' choices. If such tradeoffs and contrasts have systematic effects, a person suggesting alternatives for a group choice might strategically influence the outcome by leveraging relationships among alternatives (e.g., making one alternative a compromise between more extreme alternatives) or by proposing unattractive substitutes. Experimental evidence suggests that people both understand how to construct menus of alternatives that influence others' choices and are willing to use such strategies to influence their friends.

### **Paper Session Vc**

#### **Group Versus Individual Use of Configural Information in Multicue Decision Making**

*Tindale, R. Scott (Loyola University Chicago), Anderson, Elisabeth (Loyola University Chicago), Dykema-Engblade, Amanda (Loyola University Chicago), Meisenhelder, Helen (Loyola University Chicago), Munier, Catherine (Loyola University Chicago), Krebel, Andrea (Loyola University Chicago)*

Groups and individuals were compared in their use of configural information in a multicue task. Participants rated 60 job candidates based on two cues. They received accuracy feedback after each judgement. Two types of configural information were addressed disjunctive and conjunctive. Two job types designed to produce different expectations (disjunctive vs. conjunctive) were used. Groups outperformed individuals but were no better at using the configural information. Conjunctive, as compared to disjunctive, information was easier to learn particularly when strong conjunctive expectations were present. Group superiority stemmed from their more consistent use of the linear cue-criterion relations as compared to individuals.

#### **Simple Heuristics for Social Interactions**

*Rieskamp, Jorg (Max Planck Institute for Human Development)*

Social interactions usually have an ongoing character in which individuals presumably use simple heuristics to make their decisions. In an indefinitely repeated two-person bargaining experiment, one participant had to decide repeatedly how much of an initial endowment he wanted to invest whereas the other participant decided how much of the then tripled investment she wanted to return. Fairness principles can't account for a predominant number of observed outcomes. Instead the participants' decision process was modeled with simple heuristics that predict the majority of outcomes. The main building blocks of these heuristics are initial trust, forgiveness, and reciprocity.

#### **Video-Conferencing Technology and Group Decision-Making: Studying the Effects of Discussion Manipulation on the Individual and Group Judgment**

*Chernyshenko, Oleksandr S. (University of Illinois at Urbana-Champaign), Sniezek, Janet (University of Illinois at Urbana-Champaign)*

This paper describes an empirical study of the Differential Cue Weighting model (Chernyshenko, Miner, Bauman, Sniezek, 1998) using collaborative technology for communication among group members and systematic manipulation of factors associated with specific components of the model. More specifically, the technology was used to control group discussion to test for the influence of enhanced social validation, recognition of novelty, and ego-centric bias. Implications for the DCW model and methodological advantages and problems with the use of video-conferencing technology are discussed.

### **Presidential Address**

**A Critical Look at Research on Probability Judgment: Are We Asking the Right Questions?** *Thomas Wallsten (University of Maryland)*

Following a brief summary of the major empirical and theoretical results on probability judgment, I discuss some of the methodological problems that have plagued this field in the past. When these problems are sorted out, the empirical regularities that are often observed suggest different research questions than historically have been pursued. I conclude by illustrating and integrating approaches to these questions that recently have appeared in the literature.

### **Paper Session VIa**

**Preference Shifting Under Stress and Accountability: Who Shifts, When, and Why?** *Lerner, Jennifer S. (Carnegie Mellon University), Spranca, Mark D. (RAND), Algranati, David J. (Carnegie Mellon University)*

An experiment investigated how decision makers cope with tension between motives to be true to ones own values and motives to please ones audience, examining the effects of accountability and stress on cognitive effort and on whether decision makers maintain stable preferences over a six-week interval or conform their preferences. Results revealed that preference stability hinged on the type of accountability and on the level of subjective stress. The discussion addresses both theoretical and applied benefits of clarifying who conforms, when, and why.

### **Detecting Regime Shifts: A Study of Under- and Over-Reaction**

*Massey, Cade (University of Chicago), Wu, George (University of Chicago)*

We investigate decision-making in dynamic environments. Specifically, we evaluate individuals' ability to recognize regime shifts, or discrete changes in environmental parameters. Using both judgment and choice methodologies we assess individual tendencies to over-react (to believe a regime shift occurs before it actually does) and to under-react (to believe a regime shift has not occurred when in fact it has). Ultimately we are able to characterize when under-reaction is more common and when over-reaction is more common.

### **Ease, Endorsement, and Endowment: Three Sources of Default Effects in Choice**

*Brown, Christina (University of Michigan), Krishna, Aradhna (University of Michigan)*

We show that choice increases if an alternative is the default--the option automatically received if a decider does not specify otherwise (i.e., Dell Computers supplies a particular monitor unless you request otherwise). Default differs from status quo bias (Samuelson and Zechhauser 1988) in that the default is supplied by an outside party rather than by a decider's previous actions. Some explanations (cognitive consistency) do not apply to default, whereas others (the endorsement implied by the outside party) apply to default but not status quo. Three experiments confirm that transition costs, loss aversion, and implied endorsement jointly create default effects.

### **Paper Session VIb**

#### **Testing the Descriptive Meta-Model of Decision Making**

*Tada, Yuri (Ohio State University), Weber, Elke (Columbia University)*

Several content-dependent descriptive models of decision making have been posited in recent years (e.g., Story model, Pennington Hastie, 1992). Using these models as strategies that individuals can employ in different situations, a meta-model of decision making was proposed to predict when each of these models is used. It was found, for example, that there was a relationship between important, time-consuming decisions and the use of rational decision strategies such as the MAUT-like strategy. Furthermore, individual differences measures (e.g., the Need for Cognition Scale) provided unique contributions to the prediction of decision strategy selection above and beyond situational characteristics.

#### **Changing Plans Dynamic Inconsistency, Experience, and the Reference Point**

*Barkan, Rachel (Ben-Gurion University), Busemeyer, Jerome R. (Indiana University)*

The paper tests a principle of decision-analysis called dynamic-consistency. According to this principle, experiencing planned paths and outcomes should not change the utilities associated with them while planning. This principle was tested in an experiment in which participants made a choice regarding a second gamble within a sequence of two gambles. Planned choices were made before the first gamble was played, and were conditioned on the outcome of the first gamble. A final choice was made after the first gamble was run. Frequent inconsistencies between the two choices are explained and reproduced with a dynamic change in the reference point.

#### **Feeling Our Way Through a Complex World: Individual Differences, Physiology, and Choice**

*Peters, Ellen (Decision Research/University of Oregon), Mauro, Robert (The University of Oregon)*

Affective processes were predicted to play a critical role in the construction of choices. Choices among gains and losses in a card selection task modified from Damasio (1994) will be examined using anticipatory electromyographic and skin conductance reactions as well as self-reported individual differences in reactivity to positive and negative events. Preliminary results corroborate some of the main hypotheses. While society has valued analytical, deliberative thought more than other emotional ways of knowing, individuals appear to rely in part on their feelings to recognize the best option in a choice situation.

### **Paper Session VIc**



## **Post Decisional Regret and the Comparability of “What Is” and “What Could Have Been”**

*Van Dijk, Eric (Leiden University), Zeelenberg, Marcel (Tilburg University)*

Regret results from comparing what is with what could have been. Surprisingly, previous research seems to have ignored the conditions under which people are able or willing to make this comparison. In two experimental studies we demonstrate the benefits of putting comparability of outcomes at the heart of regret research. Our first study shows that the more difficult it is to compare what is with what could have been, the less people may experience post-decisional regret. Our second study demonstrates that uncertainty about what could have been reduces post-decisional regret. Apparently, incomparability of outcomes protects people from experiencing severe regret.

## **Retroactive Pessimism: Using Hindsight Tactics to Mitigate Disappointments**

*Tykcinski, Orit E. (Ben Gurion University)*

When confronting disappointing events the realization that things could have easily turned out in our favor will probably make us feel much worse. If we decide however that what happened was in a sense inescapable or bound to happen the bitter outcomes may become more palatable. Thus, in order to cope with a bitter disappointment, people may sometimes change the perceived probabilities of relevant events post-facto, so that the disappointing reality appears almost inevitable and the more positive alternatives now seem highly unlikely. This retrospective pessimism effect is demonstrated in two studies.

## **Inaction Inertia: Avoiding Regret Through the Avoidance of Action**

*Pittman, Thane S. (Gettysburg College), Tykcinski, Orit E. (Ben Gurion University)*

Research on the inaction inertia effect suggests that when a bargain price is missed people are less likely to purchase the same product for its regular price, or for a less significantly reduced price. Why are we reluctant to settle for a good deal once we realize we have missed a real bargain? Is it because the available deal suffers from price contrast? Or is it because rejecting this deal allows us to avoid the anticipated bitter experience of regret? Three scenario experiments testing these two possible explanations supported the regret explanation for the inaction inertia effect.

*Poster Sessions*

**Poster Session I: Sunday, November 19, 2000, 1:30 – 3:00**

**1 An investigation of the influence of information attributes on judgments of relevance and reliability**

*Wilkin, Noel E. (The University of Mississippi); Browne, Glenn J. (Texas Tech University)*

Prior research has proposed a model of belief processing (in the context of subjective probability assessment) in which judgments of relevance and reliability form a screen through which information must pass before it is incorporated into a belief. Using information attributes that have been found to influence persuasion in a predictable manner, the present research evaluated whether manipulations of these attributes would also result in changes in relevance and reliability judgments. The findings indicate that relevance and reliability judgments do in fact act as filtering mechanisms in belief processing, and provide support for theories of belief formation and persuasion.

**2 Effects of Attribute Correlations on Web-based Choice Strategies**

*Fasolo, Barbara (University of Colorado at Boulder); McClelland, Gary (University of Colorado at Boulder)*

Positive correlations among choice attributes are hypothesized to make choice easier and the need for complex option-based strategies diminish. We hypothesize that negative inter-attribute correlations instead require decision-makers to consider trade-offs among different attributes and therefore to abandon fast-and-frugal attribute-based strategies in favor of more effortful option-based strategies. We also hypothesize that decision-makers unaware of this correlation will first approach choice in the fast-and-frugal way (because less effortful), but later adjust choice strategies depending on the perceived correlation among attributes. Initial data suggest support for these hypotheses. Implications for Web-based decision making are discussed.

**3 When Do Trivial Attributes Become Important? Interaction of Evaluability, Importance, and Response Mode**

*Brooks-Laber, Margaret E. (Bowling Green State University); Highhouse, Scott (Bowling Green State University)*

The evaluability hypothesis posits that a joint evaluation separate evaluation mode preference shift occurs because of differences in the evaluability of the attributes involved in the choice (Hsee, 1996). Our study extends this research to the job choice context, by examining job options that contain both easy and hard to evaluate, important and trivial job attributes. Of particular interest is not only how evaluation mode affects these preferences, but how the importance of the attribute interacts with this effect.

**4 Compatibility effects and judgments about companies The double-edged sword of corporate fame**

*Highhouse, Scott (Bowling Green State University); Brooks-Laber, Margaret*

*(Bowling Green State University); Mohr, David (Bowling Green State University); Russell, Steven (Bowling Green State University)*

Downs and Shafir (1999) showed that better-known (i.e., enriched) personages were more likely to have conflicting trait adjectives ascribed to them than were lesser-known (i.e., impoverished) personages. This suggests that enriched alternatives provide information that is more compatible with the tasks of both admiring and condemning than are impoverished alternatives. We examined student images of enriched and impoverished Fortune 500 corporations. Preliminary evidence suggests that people can simultaneously hold contradictory images of well-known companies.

## **5 Below the Radar Effect of Incidental Cues on Consumer Choice**

*Labroo, Aparna (Cornell University); Babbes, George (Cornell University)*

We examine the impact of incidental cues (metaphor, music, imagery) on consumer behavior. Importantly, subjects participate in an interactive on-line auction with their own money. Three schema conditions, auction as war, dance contest and neutral schema control were crossed with three levels of product attractiveness. Results indicate significant differences in representation (response latencies) and choice. For e.g., the war group bid almost 50 higher than controls and tried to capture products across the board. In contrast, individuals primed dance contest behaved selectively, bidding only on desirable products. Interestingly, these results occurred despite low recall of incidental cues by all groups.

## **6 Measuring Preferences for Radically New Products**

*Hoeffler, Steve (University of North Carolina)*

One of the most difficult tasks companies face today is the development and marketing of radically new products (RNPs). A significant barrier to success is that existing market research techniques forecast much less accurately for RNPs than for more conventional, incrementally new products (INPs). In a series of studies we find support for the notion that consumers' have higher levels of uncertainty when predicting the utility of a RNP. In addition, there is some support for the inclusion of both mental simulation and analogies in augmenting existing preference measurement techniques for RNPs.

## **7 Multiple pathways for contextual recruitment in social judgment**

*Pettibone, Jonathan C. (University of Alabama, Huntsville); Wedell, Douglas H. (University of South Carolina)*

When making judgments, context could be recruited from multiple sources. Context could be recruited through an activated category (Kahneman and Miller, 1986), the most recent set of experienced stimuli (Parducci, 1995), or through associations to prior judgments (Wedell, 1996). A series of experiments explored factors involved in contextual recruitment for descriptive and evaluative judgments. Results supported a model where the use of categorical context is more likely when individuating information is lacking (Huttenlocher, Hedges, and Duncan, 1991). Contextual effects for evaluative ratings occurred only when categories were learned separately, suggestive of separate contextual recruitment processes for descriptive and evaluative judgments.

8 **The Proportional Difference Choice Model and Context Effects**

*Reid, Aaron A. (Ohio University); Gonzalez-Vallejo, Claudia (Ohio University)*

A series of studies investigated the generalizability of the proportional difference model (PD) of decision making across choice domains. The domains included personal health decisions, (cancer treatment scenarios), and financial decisions, (investment option scenarios). The results are consistent with PD choice probabilities and strength of preference ratings are monotonically related to the difference variable defined by PD. The studies explored the effect of context on PDs decision threshold. For example, greater wealth can lead to an increase in risk seeking behavior. PD successfully estimates this change. Results show context effects on risk attitudes that are accounted for by PD.

9 **Where did 1850 happen first - in America or in Europe? A cognitive account for an historical bias**

*Avital Moshinsky (The Hebrew University, Jerusalem) ,Maya Bar-Hillel (The Hebrew University, Jerusalem)*

A professor of history noted that his pupils are often surprised to learn that a certain event in Europe happened at the same time as another in America, since to them the latter appears to have happened more recently. The validity of this anecdotal observation is first supported by experiments. It cannot be explained by Brown, Shevell & Rips' accessibility principle (i.e., that better known events appear more recent than less well known ones), nor as a category effect in estimation (Huttenlocher et al). Rather, it is explainable by noting that America is The New World, while Europe is The Old World. A generalized representativeness-based model is proposed, and independent experimental verification is offered.

10 **The Advantage of Bias Towards Reliance on Recent Events: Evidence from Judgment in Autocorrelated Ecologies**

*Matt Jones (University of Michigan), Winston R. Sieck (University of Michigan)*

Previous research has shown that people's performance in simulated medical diagnosis tasks is sub-optimal. However, the tasks used have predominantly incorporated independent sampling of patients. The pattern of results suggests that people rely heavily on recently seen patients in making their diagnoses and that such tendencies drive their sub-optimal performance. Here we further support this idea by demonstrating that subjects perform better when there is a positive autocorrelation in the disease sequence. The results raise the possibility that people's decision making processes are adapted to autocorrelated rather than independently generated environments, thus providing an alternative viewpoint to the 'sub-optimality' interpretation.

11 **Availability biases in frequency judgment A failure of source monitoring?**

*Dougherty, Michael (University of Maryland); Franco-Watkins, Ana (University of Maryland)*

A common finding in JDM is that peoples frequency judgments fail to map onto

objective frequencies. The present research examines the possibility that one source of this bias in frequency judgment is attributable to peoples inability to screen out irrelevant memory traces. In particular, this study investigated 1) whether judgments are influenced by extra-experimental experience, and 2) whether enhancing source monitoring improves judgment accuracy. Results suggest that bias in frequency judgment is due to failures of source monitoring and that manipulations directed at improving source monitoring improve judgment accuracy. Results are interpreted within the framework of MINERVA-DMs 2-pass memory system.

## 12 **Outcome Desirability and Hindsight Bias**

*Olson, Matthew H. (Hamline University); Dietrich, Dorothee (Hamline University)*

Undergraduate students rated the desirability of and estimated likelihoods for outcomes of controversial real events (the Clinton impeachment hearings and the Elian Gonzalez case). After predicted events had transpired, participants were asked to recall their original likelihood estimates. Substantial hindsight bias was observed after occurrence of events previously judged to be desirable, but likelihood recall was accurate after occurrence of events judged to be undesirable.

## 13 **The basic anchoring effect Fragile and easy to debias**

*Brewer, Noel T. (Rutgers University); Chapman, Gretchen, B. (Rutgers University)*

In 1996, Wilson et al. showed two new procedures for eliciting what they called the basic anchoring effect. In contrast to traditional anchoring effects, basic anchoring did not require that participants explicitly compare anchor and target. We attempted to replicate the basic anchoring effect in two experiments. The first experiment failed to replicate Wilson. et al's Study 3 but found basic anchoring under different and more limited conditions. The second experiment showed basic anchoring is easily disrupted by a trivial change in experimental procedure. Our findings suggest basic anchoring is a fragile phenomenon with limited impact on judgments.

## 14 **Anchoring in Time Estimation Tasks**

*LeBoeuf, Robyn A. (Princeton University); Shafir, Eldar (Princeton University)*

Participants estimated the time remaining until a future event (typically weeks or months away). Participants who estimated the number of days remaining estimated the time until the event to be substantially shorter than those who estimated the actual date of the event. Similar, albeit weaker, phenomena were observed for estimates of past events. Converging evidence from estimates of physical distance suggests that the number of days format encourages participants to anchor on and gradually (and insufficiently) adjust from a small number of days, thus leading to an under-estimation of time remaining. Implications for planning and debiasing are discussed

## 15 **Behavioral Strategies in a Repeated Pure Coordination Game**

*Zwick, Rami (Hong Kong University of Science and Technology); Alison King Chung Lo (Duke University)*

Considering counterfactual alternatives to reality can affect attributions of causality.

Participants read stories about four contestants in different final rounds of a game show. Each contestant picked one of four boxes either one, two, three, or four of the boxes contained a grand prize. When participants read all four scenarios, causality ratings for contestants' winning decisions decreased as the number of boxes containing the prize increased that effect was not observed between-subject. We believe that people assign causality based on how much an event changes the baseline probability of an outcome counterfactual reasoning helps people estimate that baseline probability.

**16 Apples and Pears The effect of (non)comparability of alternatives in ultimatum games.**

*Handgraaf, Michel J. J. (Leiden University); van Dijk, Eric. (Leiden University); Wilke, Henk A. M. (Leiden University); Vermunt, Riel. (Leiden University)*

In the social utility model (e.g. Messick Sentis, 1985), a distinction is made between an absolute payoff component and a relative payoff component. The first component requires an interpersonal comparison, the second an interpersonal comparison. In an experiment, recipients in an ultimatum game received unfair offers. They had to choose between accepting an unfair but favorable outcome and refusing (and consequently receiving a less favorable but fair outcome). We varied the difficulty of the interpersonal comparison. When this comparison was made more difficult, the interpersonal comparison became more important and resulted in a lower acceptance rate for unfair offers.

**17 Are Americans More Decisive Than Chinese and Japanese?**

*Ji, Li-Jun (University of Michigan); Oka, Takashi (Tokyo University); Yates, J. Frank (University of Michigan)*

Decisive individuals display little hesitancy about making a decision. Popular assumptions about Western and Asian cultures suggest that, on average, Americans should display greater decisiveness than either Chinese or Japanese. To test this expectation, a validated indecisiveness scale was administered to respondents in the United States, China, and Japan. Consistent with the expectation, American respondents were indicated to be more decisive than Japanese respondents. However, contrary to that prediction, Chinese decisiveness was not significantly different from American decisiveness but was stronger than that exhibited by the Japanese. Interpretations and implications in terms of cross-cultural variations in decision customs are discussed.

**18 International Differences in Trading Relationship Trust**

*Nancy R. Buchan (University of Wisconsin Madison); Peter R. Dickson (University of Wisconsin Madison)*

A prisoners dilemma set in the context of a trading relationship was conducted among populations in China, Japan, Korea and the US. We measured subject trust (the expectation of partner cooperation) and intentions to cooperate, across several experimental conditions. Manipulations included a Nash equilibrium priming, the introduction of a power shift, and the introduction of an innovation which promised much economic gain but required the cooperation of both

parties. Differences in levels of expectations and intentions were found across the countries, additionally, significant country by manipulation interactions were found, indicating that trust is influenced differently in different countries.

**19 Gender, Trust and Reciprocity**

*Croson, Rachel (Univ of Pa); Sara Solnick (Univ of Miami); Nancy Buchan (Univ of Wisconsin)*

This research experimentally investigates the effect of gender on trust and reciprocity. In the control treatment, men and women play the game paired with own and other genders but without knowing the gender of their partner. In the experimental treatments, participants are told the first name of their partner. Preliminary results indicate a significant old boy network men trust and reciprocate more when paired with other men than any of the other pairings.

**20 Causal Discounting Occurs Even With Reasons to Accurately Judge the Weaker Cause**

*Goedert, Kelly M. (University of Virginia); Spellman, Barbara A. (University of Virginia)*

We investigated whether discounting of a weak target cause, when presented with a strong alternative cause, would be eliminated if people were given a reason to accurately evaluate the weaker cause. Participants read stories describing the contingencies between two different treatments and patient survival. The target treatment was moderately related to patient survival and inexpensive to produce. The alternative treatment was either inexpensive or expensive and was either strongly related or unrelated to patient survival. Participants rated the target less causal when there was a strong alternative than when there was an unrelated alternative (discounting) regardless of the alternative's cost.

**21 Adjusting Causal Attributions In Light Of Counterfactual Alternatives**

*Meyers, Nadine M. (The University of Virginia); Spellman, Barbara A. (The University of Virginia)*

Considering counterfactual alternatives to reality can affect attributions of causality. Participants read stories about four contestants in different final rounds of a game show. Each contestant picked one of four boxes either one, two, three, or four of the boxes contained a grand prize. When participants read all four scenarios, causality ratings for contestants' winning decisions decreased as the number of boxes containing the prize increased that effect was not observed between-subject. We believe that people assign causality based on how much an event changes the baseline probability of an outcome counterfactual reasoning helps people estimate that baseline probability.

**22 Racial Politics Fail to Produce Base Rate Neglect**

*Weber, Bethany (Rutgers)*

Social pressure to avoid making negative judgments about a minority group member may influence probability estimates. Participants were asked to estimate the probability a criminal and a church leader were Black and the probability they were

White. In the criminal case, the estimates the individual was Black were lower than the estimates that he or she was White. In the positive case estimates were identical. It was hypothesized that social pressure would cause estimates the criminal was Black to remain constant regardless of the percentage of Black people in the population. However, this was not found to be the case.

**23 The Effects of Time Pressure and Personal Need for Structure on Performance on a Base Rate Task**

*Crooks, C. L. (University of Georgia); Williams, Cristina C. (University of Georgia); Goodie, Adam S. (University of Georgia)*

This study investigated the effects of personal need for structure (PNS) and time pressure on decision making on a base rate task. Research investigating PNS has found that it may be influenced by time pressure (Bechtold, Naccarato, Zanna, 1986; Kruglanski & Freund, 1983). One-hundred twenty undergraduates were randomly assigned to either a time pressure or no time pressure condition. Participants each completed one base rate session of 200 trials, followed by the PNS questionnaire. It was hypothesized that individuals both high in PNS and under time pressure would neglect the base rate more often than any other group.

**24 Decision Aids and Informed Consent in Prostate Cancer Screening**

*Morera, Osvaldo F. (Department of Psychology University of Texas at El Paso)*

Previous research has shown that the provision of detailed information about prostate cancer screening leads to reduced interest in screening (Wolf et al., 1996). A pilot study was performed to determine whether a decision aid influences interest in prostate cancer screening. Men who read a standard script were more interested in screening than men who read detailed information. Differences in interest between the decision aid condition and the standard script condition were not significant. The decision aid also led to increased knowledge about prostate cancer over the control condition.

**25 Risk defusing actions before or after the negative event - which type is preferred?**

*Huber, Oswald (University of Fribourg, Switzerland); Kiener, Sarah (University of Fribourg, Switzerland); Sammer, Verena (University of Fribourg, Switzerland); Stucki, Stephanie (University of Fribourg, Switzerland)*

A worst-case plan (e.g., medical treatment) need not to be initiated before and unless the negative event (e.g., infection) occurs, whereas a pre-event risk defusing action (e.g., a vaccination) must be initiated before occurrence. In our experiment, 36 subjects chose one alternative in each of three quasi-naturalistic decision tasks. One alternative involved a pre-, the other a post-event action. The probability of detecting the negative event in good time was varied 100, 95, 70. As predicted, in the 100-condition the majority of subjects chose the alternative with the post-event action. This percentage decreased significantly with decreasing detection probability.

**26 Estimating acceptable limits of risks**

*Saito, Kiyoko (Japan Atomic Energy Research Institute); Kato, Shohei (Japan*



*Atomic Energy Research Institute)*

The aim of this research is to estimate thresholds, which describe limits of acceptable risks. On this research, it is assumed a decision whether risk is acceptable or not is processed as follows. First people have set a threshold of acceptable level unconsciously. Secondly if the risk level is below the threshold they decide to accept it, on the other hand, beyond the threshold they reject it. On this research a new method of estimating thresholds by means of verbal probability judgment is proposed. The method is more natural and easier device than the direct numerical assessment.

**27 Perceived risk and risk preference: Associations with preventive health behavior**

*Coups, Elliot J. (Rutgers University); Chapman, Gretchen B. (Rutgers University)*

Associations between perceived risk and preventive health behaviors have been found in many studies. Although such behaviors typically have uncertain outcomes, their possible link with risk preference (tolerance for uncertainty) has not been investigated. Using a sample of 244 university employees, we examined associations between receipt of an influenza vaccine and both perceived risk and risk preference. Perceived risk was found to be related to vaccine acceptance, even after controlling for previous vaccination behavior. Risk preference was also related to vaccine acceptance, thus providing preliminary evidence for an association between risk preference and preventive health behavior.

**28 Risk perceptions of crop production methods Personal health vs environmental risks and willingness-to-pay**

*Moore, Colleen F. (University of Wisconsin); Geurkink, Heidi A. (University of Wisconsin)*

Do people distinguish risk to themselves and the environment, and which type of risk has more influence on willingness-to-pay (WTP) for food? Participants rated risk to their personal health, the environment, and WTP for food produced by methods created from a 2 (Worker Safety) x 2 (Consumer Safety) x 2 (Environmental Safety) design. The results showed that (a) consumer safety had the largest impact on perceived health risk, (b) environmental safety had the largest impact on perceived environmental risk, and (c) WTP was related to both perceived health and environmental risk. The results have implications for marketing and environmental regulation.

**29 Task Difficulty Effects on Comparative Evaluations**

*Burson, Katherine A. (University of Chicago, GSB); Larrick, Richard P. (University of Chicago, GSB)*

We examine the effect of task difficulty on the above-average effect and the opposite bias the below-average effect. Experiment 1 manipulates task difficulty, demonstrating its effect on the above-average effect and the mediating role of one's absolute ability and beliefs about the reference group. Unlike others, we find that participants are not anchoring on absolute ability and completely

neglecting information about others. Experiment 2 amplifies the difficulty effect and explores participants perception of themselves compared to their reference group. Together, the two experiments show that above- and below-average effects are due to difficulty, absolute abilities, and beliefs about the reference group.

**30 Subjects in Calibration Studies Are Insensitive to Task Difficulty**

*Doherty, Michael E. (Bowling Green); Brake, Greg (Microsoft); Kleiter, Gernot D. (Salzburg)*

Subjects who were either highly knowledgeable about baseball, as assessed by a test of baseball knowledge, were run in 4 conditions of a calibration experiment. Subjects who failed to meet the high criterion set for expertise were also run in the same conditions. Task predictability was manipulated by varying the amount of information available to the subjects, and measured by the hit rate of a multiple logistic equation. The subjects' mean level of subjective probability did not differ between conditions, suggesting that the ubiquitous hard-easy effect is partly due to subjects' failure to assess task difficulty in an appropriate fashion.

**31 Effects of feedback on calibration as function of learning contexts**

*Aaron Bonham (Ohio University); Claudia Gonzalez-Vallejo (Ohio University)*

Studies explored the role of feedback on calibration. Subjects compared either U.S. states or cities on a variable (e.g., property crime rate.)

Subjects selected the option with the higher statistics and provided confidence judgments. In two studies, subjects received no feedback, outcome feedback, or point feedback based on absolute or relative accuracy (i.e., calibration feedback). A third experiment changed the conditions for learning. The first two studies showed that calibration feedback moderated confidence; for other groups calibration improved as accuracy improved. In the third study outcome feedback did not improve calibration when learning was difficult. Only calibration feedback improved calibration.

**32 Confidence Ratings on Multiple Choice Exams in College Classes**

*Norman, Kent L. (University of Maryland)*

As a part of on-line testing in Web-based courses, students in six college classes rated their confidence of being correct on multiple choice items on exams taken during the semester for credit. Exams included from 20 to 30 questions. Students received extra credit if the correlation between their confidence rating and whether they were correct was greater than .30. On hard exams, less than 50 received extra credit on easy exams up to 80 did. For hard exams, overconfidence was observed for easy items and under confidence for difficult items. For easy exams, students seemed to be better calibrated.

**33 Resolving the paradox between overconfidence and risk aversion**

*Goodie, Adam S. (University of Georgia); Williams, Cristina C. (University of Georgia)*

The co-existence of overconfidence and risk aversion presents a paradox that has not received much attention. When displaying overconfidence, people act as if the likelihood of being correct were greater than it truly is, whereas under risk aversion, people act as if the likelihood of winning were less than it truly is. Participants assessed confidence in their answers to general knowledge questions, and then accepted or rejected bets that were handicapped to be fair if confidence were well calibrated. Participants were predominantly willing to accept bets when confidence is high, even though bets were most unfavorable when confidence was high.

**34 Ambiguity Preferences For Herbal and Pharmaceutical Medications**

*Duke, Jennifer (Rutgers University); Chapman, Gretchen (Rutgers University)*

Research suggests that people generally avoid ambiguous probabilities regarding outcomes. Results from a study of non-prescription medication use (N 320) revealed that decision makers prefer ambiguity about medication efficacy at low probabilities, but they avoid ambiguity about efficacy at high probabilities. Explanations for these variations in ambiguity preference across probability levels are explored. These results have implications for theory and applied work on ambiguous probabilities.

**35 Is preferred mode of workplace decision making a personality characteristic?**

*Goitein, Bernard J. (Bradley University)*

Goitein (1999) found individual differences in self-reported adherence to each of the seven distinct modes of effective workplace decision making identified by Kinston. The present study asks whether preferred workplace decision making mode is a vocational personality characteristic. Multiple Correlation coefficients were computed between preference for each decision mode and Holland's (1959 1997) vocational personality dimensions. A short form of Holland's Vocational Preference Inventory measured the vocational personality dimensions. The weak relationships found between preferred decision mode and the personality dimensions offer little support for the notion that workplace decision making mode is a vocational personality characteristic.

**36 Individual differences in risk and overconfidence**

*Williams, Cristina C. (University of Georgia); Goodie, Adam, S. (University of Georgia)*

This experiment explores the relationships between traits and behavior in domains of confidence and risk taking. Traits are assessed by questionnaires and behavior by standard overconfidence and risk aversion tasks. Individual differences in confidence and risk taking have yet to be juxtaposed and combined with their respective tasks. The bets made by an especially overconfident person would ideally be tempered by especially great risk aversion, not by risk seeking. The degree to which trait confidence is related to overconfidence is assessed and trait risk taking is related to accepting bets based on assessed confidence in general knowledge answers.

**37 Tracking Individual Differences in Decision Making A Progress Report**

*Levin, Irwin (University of Iowa); Gaeth, Gary (University of Iowa); Schreiber, Judy (University of Iowa); Rennekamp, Kristina (University of Iowa); Lauriola, Marco (University of Rome)*

We focus on the link between stable person characteristics and risky decision making in two separate studies, one using lottery choices (Italian subjects) and one using choices between alternative medical procedures (American subjects). In both studies, male subjects were more risk-taking than females, and the framing or reflection effect was greatest for those scoring high on a scale of neuroticism. Other personality traits from the Big 5 inventory, as well as a measure of intuitive reasoning, also showed relations to reactions to positively and negatively framed choices.

**38 Feeling, Thinking, Deciding: Effects of Individual Differences in Experience Temperament on Decision Strategies and Choices**

*Mauro, Robert (University of Oregon); Pederson, Stacey (University of Oregon)*

In natural environments, individuals make decisions using different strategies. The success of these strategies depends on characteristics of the individuals and on characteristics of the situation. Differences in cognitive and affective processing interact with experience in the domain to affect the success of different strategies. In this paper we explore how individual differences in temperament interact with domain experience to affect decision strategy and outcome. Two hundred pilots were lead through a simulated flight decision scenario. Differences in training, experience, and temperament were used to predict strategy and performance on the scenario. Preliminary results confirm some of the hypothesized relations.

**39 Responding to Uncertainty: Individual Differences and Personality Correlates**

*Washburn, David A. (Georgia State University); Smith, J. David (University at Buffalo); Raby, Pamela R. (Georgia State University); Baker, Lauren A. (Georgia State University)*

Individuals differ in the skill with which they make judgments, the confidence they have in these judgments, and the degree to which they even monitor and respond adaptively to confidence or uncertainty. We examined individual differences in the ability to respond adaptively to empirically defined levels of uncertainty. Undergraduate students (n 134) were tested on a battery of tasks, including a psychophysical judgment task, measures of the Big 5 personality variables, and other self-report and performance measures. The complex relation between the ability willingness to respond adaptively to uncertainty and these personality and temperament variables will be discussed.

**40 Why are some judges better than others? Individual differences in judgmental performance**

*Weaver, Elise A. (Center for Policy Research, University at Albany); Stewart, Thomas R. (Center for Policy Research, University at Albany)*

This study investigates multiple possible influences on individual differences in judgmental accuracy. Individual difference variables studied include accuracy, experience and training, crystallized and fluid intelligence, reasoning coherent with

logical and statistical rules, and ability to learn multiple cue probability tasks. Our hypothesis is that multiple cue probability learning is an important judgmental skill that is independent of crystallized intelligence and reasoning ability. After being tested for accuracy on a judgment task, subjects completed a battery of tests designed to capture cognitive abilities potentially related to judgmental skill. The relations between judgmental accuracy and tests of cognitive ability are reported.

**41 Individual and Group Differences in Judgments Involving Ambiguity**

*Stasson, Mark (Virginia Commonwealth University); Markus, Michael J. (Virginia Commonwealth University)*

Individuals working alone and three-person groups working collectively made judgments about and choices between prospects that varied in ambiguity. Prospects varied in terms of the probability of receiving a certain amount of money, and were presented in either a positive or negative frame. Groups and individuals were presented with pairs of prospects which were equivalent except that one was presented with unambiguous (exact) probabilities and the other with ambiguous probabilities. Desirability ratings for each prospect and relative preference judgments were obtained. Individual and group differences were dependent on the characteristics of the prospects.

**42 Individual differences in responses to repeated losses or gains resulting from chance events.**

*Ball, Christopher (College of William Mary)*

The current study required participants to repeatedly play a simple computer presented gamble of betting on a coin toss. The coin toss was manipulated by the experimenter to provide sequences of wins or losses for three bank conditions (well down from the starting bank, close to the starting bank, and well up from the starting bank). Participants also completed a battery of questionnaires that measured decision making styles and personality characteristics. Results suggest that stable response patterns to repeated losses or gains can be detected and that these individual differences can be explained by cognitive reasoning biases and personality characteristics.

**43 Assessing Implicit Inferences Through Savings in Relearning**

*Carlston, Donal E. (Purdue University)*

Inferences that people make naturally and spontaneously often influence their subsequent explicit judgments. Measuring such spontaneous inferences has proven difficult because (a) people are often not aware of these inferences, and (b) explicit questions can actually provoke these inferences. Recently, Carlston and Skowronski (1994) pioneered a method of assessing spontaneous associations and inferences based on Ebbinghaus' savings in relearning technique. Researchers have used this method to explore associative processes, spontaneous evaluation, categorization, perceptions of groups, etc. The present paper reviews and synthesizes recent work and suggests new avenues for its application in the area of human judgment.

**44 The Alternative-Outcomes Effect in a Learning Paradigm**

*Windschitl, Paul, D. (University of Iowa); Young, Michael, E. (Southern Illinois University); Jenson, Mary, E. (University of Iowa)*

The alternative-outcomes effect indicates that the perceived likelihood of a focal outcome is sensitive to variations in how evidence supporting nonfocal alternatives is distributed. Whereas previous research on this effect used a judgment paradigm in which participants read frequency information about possible outcomes and made nonnumeric certainty estimates, participants in the present experiments experienced outcomes themselves and provided numeric probability and frequency estimates for focal outcomes. Probability judgments exhibited alternative-outcomes effects even when frequency estimates did not, suggesting that the heuristic processes mediating alternative-outcomes effects for intuitive perceptions of certainty can also mediate more effortful estimations of probability.

**45 Evolving Q-Learning Strategies for the Iterated Prisoner's Dilemma**

*Bearden, J. Neil (University of North Carolina and University of Maryland)*

Genetic algorithms were used to evolve adaptive strategies for the iterated prisoner's dilemma (IPD). Populations of Q-learning algorithms (reinforcement learning) learned to play the IPD and were subjected to simulated natural selection. The poor strategies died out and the successful strategies mated to form new populations. The algorithms differed in their learning rates, memory for game history, and future returns discount factor. The populations tended to evolve toward slower learning rates (or skepticism) and memories that focused primarily on the behavior of the opponent. This method can be used to study the evolution of adaptive strategies in any matrix game.

**46 Practice makes perfect? Self-serving bias in learning from experience.**

*Bruine de Bruin, Wandi (Eindhoven University of Technology)*

Viewing the same football game, fans of both teams count more infractions by the other side than their own (Hastorf & Cantril, 1954). Monitoring their own performance, people emphasize their successes rather than failures (Ross & Miller, 1975). As a consequence of this self-serving bias, repeated task experience may unjustifiably increase confidence. In Experiment 1, participants took 100 shots at a basket. They gave increasing probabilities of making a shot, while their actual hit rate remained stable. In Experiment 2, participants rolled dice 100 times. Confidence did not increase, probably because participants perceived to lack control over the outcome.

**47 The Relative Learning Rates of Main Effects and Interactions in Predictive Learning**

*Young, Michael E. (Southern Illinois University)*

We examined learning of various relationships between two candidate causes and an effect. Participants learned one of six types of relationships: simple main effect (A, B-, AB), double positive main effect (A, B, AB), double negative main effect (A-, B-, AB-), inhibition (A, B-, AB-), positive patterning (A-, B-, AB), or negative patterning (A, B, AB-). Overall effect base rates were held constant through the use of additional, unrelated cues. The two interactions (positive and negative patterning) were the slowest to learn with negative patterning more difficult than positive

patterning, but additional differences were revealed in the reaction time analyses.

**48 The Role of Anticipated Regret in Missing a Deal The Influence of Avoidability and Deal Magnitude for the Same and Different Products**

*Tsiros, Michael (University of Miami)*

The paper examines how consumers behave after missing a sale. It shows that choice deferral is influenced by whether consumers anticipate to be exposed to the other (missed) alternative after the decision is made, as well as the difference between the missed sale and the current price of the product. Results from 5 studies show that when being exposed to the missed opportunity is unavoidable, consumers are more likely to defer. This is the case only when the difference in price between the two alternatives is large. Both goods and services as well as similar and different products were examined.

**49 Regret and Learning Inhibition in the Iterated Monty Hall Dilemma (IMHD)**

*Murphy, Ryan O. (University of Arizona); Douma, Bambi (University of Arizona)*

Anticipated and experienced regret may inhibit learning (by restricting experimentation) or facilitate learning (by increasing pain from a bad outcome). Previous research on the iterated Monty Hall Dilemma (e.g., Granberg and Brown, 1995) has shown that many subjects do not approach optimal behavior, even after much iteration. In the current study of learning in the IMHD, regret was manipulated by varying subjects decision responsibility. Results suggest that the proposed inhibition facilitation model may need further refinement.

**50 Regret and endowment in decisions to switch in the 3, 4, and 5-door Monty Hall problem**

*Franco-Watkins, Ana (University of Maryland); Dougherty, Michael R.P. (University of Maryland)*

The Monty Hall Problem (MHP) is a counterintuitive decision problem in which people 1) use a non-optimal choice strategy, and 2) fail to see how probabilities change after the initial choice. Three different versions of the MHP were used to investigate why choice is non-optimal and probability judgments seemingly inaccurate. Results suggest that fear of regret leads some people, and endowment others, to use the non-optimal strategy. Interestingly, probability judgments were based on an inaccurate mental representation of the problem space, not on a failure to apply the correct model.

**51 Regret Theory and Need for Cognition Accounting for Variability**

*Stark, Emily N (Hamline University); Dietrich, Dorothee (Dr.) (Hamline University); Olson, Matthew (Dr.) (Hamline University)*

This study elaborates on two effects relating to perception of regret namely, the action inaction and near miss effects. The Need for Cognition scale is given with regret scenarios to determine if an individual's Need for Cognition (tendency to engage in and enjoy thinking) or susceptibility to the availability heuristic mediates perception of regret, accounting for some variability found in regret research. Results

show conflicting evidence over the role that Need for Cognition and the availability heuristic plays in perception of regret. The discussion looks at possibilities of further research on regret to elaborate on the interplay of emotion and judgment.

**52 Anticipated regret and the Dutch postal code lottery**

*Zeelenberg, Marcel (Tilburg University); Pieters, Rik (Tilburg University)*

The Dutch postal-code lottery differs from other lotteries in that everybody has a ticket, namely, your postal-code. The decision in this lottery is therefore whether or not to validate your ticket. Contrary to other lotteries, this lottery provides feedback also when you are not playing (your postal-code can be drawn even when you do not participate). Effects on the anticipation of regret, and on participation decisions are the focus of this presentation. Using a representative sample of the Dutch population, we found differences between the postal -code lottery and the national state lottery on the effects of anticipated regret.

**Poster Session II: Sunday, November 19, 2000, 5:50 – 7:20**

**1 Minimizing Cost in Resource-Allocation Problems**

*Gonzalez, Roxana M. (The College of William and Mary); Langholtz, Harvey J. (The College of William and Mary); Sopchak, Barron (The College of William and Mary)*

Decisions about resource allocation are faced by us daily, but only recently has published research explored how people make resource-allocation decisions. Previous studies examined resource-allocation tasks where the goal was to maximize payoff with limited resources. In the present study, we extended the literature by examining resource-allocation problems where the goal was to achieve a fixed objective while minimizing resources. We asked participants to minimize cost by scheduling two aircraft with differing personnel and fuel requirements under conditions of certainty, risk, and uncertainty. Results indicated participants could solve such problems surprisingly well, performing best under certainty and worse under uncertainty.

**2 Do the Empirical Results from Prospect Theory Replicate After 20 Years?**

*Wang, Chongwei (Department of Psychology, Ohio State University); Mellers, Barbara (Department of Psychology, Ohio State University)*

College students from China and American made the same choices reported in prospect theory (Kahneman and Tversky, 1979) as well as three other sets that were linear transformation of the original set. The replication generally supports prospect theory's predictions Trends were in the same direction. Several factors not predicted by PT also influenced risk preferences. Chinese students were consistently more risk seeking than Americans. Males were consistently more risk seeking than females were. Students were consistently more risk seeking when one outcome in a gamble was zero. And students were consistently more risk seeking with smaller payoffs than large ones.

**3 Path Associative Networks and Bayesian Belief Networks A career decision**



**support tool.**

*Rohrbaugh, Clarence C. (Winona State University)*

Path Associative Networks and Bayesian Belief Networks A career decision support tool. The focus of this research is three-fold 1) proposal of a career decision model that incorporates a Bayesian Belief Network for presentation of career decision factors 2) description of modeling techniques used in development of the proposed career decision model, including cluster analysis, and path associative networks and 3) an empirical study designed to test the predictive ability of the proposed model. Results provide evidence for use of cluster analysis and path associative networks in the development of a Bayesian Belief Network when domain expert knowledge is unavailable.

**4 Utilization of Configural Signs**

*Stephen E. Edgell (University of Louisville & Jewish Hospital Health Care Services), William P. Neace (University of Louisville), Andrew S. LaJoie (University of Louisville & Jewish Hospital Health Care Services), Steven J. McCabe (University of Louisville & Christine M. Kleinert Institute for Hand and Microsurgery)*

Participants (333 students) learned to diagnose diseases from correct answer feedback in an artificial, simulated medical decision making task. Participants were better able to utilize configural information when it consisted of a third symptom dimension providing a sign as to which of the other two symptom dimensions was relevant, as opposed to the usual situation where the configural information modifies the validity of the dimensions, but not in such a balanced manner. That a unitary representation of symptoms better facilitates configural utilization than a spaced representation was replicated. Further, salience problems were once again found with some often-used representations.

**5 Non-monetary Awards and Motivation Why is Hawaii Better than Cash?**

*Jeffrey, Scott (University of Chicago)*

Economic Theory argues that there is no better gift than cash, yet many firms offer incentive awards such as vacations and other prizes. These firms must believe that these prizes are more motivating than the equivalent cash award. Two studies confirm this prediction and attempt to provide the theoretical reason behind the phenomenon.

**6 Examining Patterns of Reflection**

*Schiltz, Joel (Ohio University); Gonzalez-Vallejo, Claudia (Ohio University)*

The Proportional Difference model was used as a framework to explain and predict patterns of the reflection effect. Results showed that risk attitudes were well accounted by PD and its d levels. The mean number of preferences for the pair with the higher payoff increased linearly as a function of d both in gains and loss contexts. PD accounted for a more general reflection effect than that dealt by Prospect Theory via two different cognitive mechanisms. One mechanism described how individuals made tradeoffs between attributes the other described how context affected individuals sensitivities to value differences when making those tradeoffs.

7 **The Effect of Generating Alternatives on Limiting Hypotheses**

*Kincannon, Alexandra (Department of Psychology, University of Virginia); Spellman, Barbara A. (Department of Psychology, University of Virginia)*

Successful hypothesis testing depends on selecting diagnostic evidence that distinguishes the hypothesis being tested from plausible alternatives. Whereas most participants perform normatively when selecting evidence to generalize hypotheses, most do not when the task involves limiting hypotheses (e.g., Suppose you know that robins have X. What animal would you test to determine whether ONLY birds have X?). Participants' performance improved when they saw alternative hypotheses, then generated additional ones, before selecting a test. The different logical relationships between the test hypothesis and the most plausible alternative makes spontaneously finding relevant alternatives more difficult in the limiting than the generalizing task.

8 **Loss Aversion and Implementation Intentions As Motivators of Condom Use**

*Reitmeyer, Susan (University of South Florida); Schneider, Sandra (University of South Florida)*

Sexually-transmitted HIV infections are increasing. If more people used condoms consistently, these rates could be curtailed. We examined whether implementation intentions or a loss aversion intervention would increase reported condom use among a group of self-identified high-risk adults who sought anonymous HIV-testing. The study used a 2 X 2 between-subjects design and analysis of covariance. Endowment of condoms dramatically increased condom acceptance rates. There was also a suggestion that implementation intentions may have increased actual condom use behavior, but that the loss aversion intervention, if anything, decreased use. Results varied as a function of initial motivation to use condoms.

9 **The Effects of Pharmaceutical Care on Sunscreen Decisions**

*Jasper, J.D. (U of Toronto)*

One area that deserves far more research attention than it currently receives is that of nonprescription or over-the-counter (OTC) product decisions. The present work utilizes process tracing methodology (known as MouseTrace) to 1) examine how people arrive at these decisions, 2) assess how a pharmaceutical care intervention impacts the decision and decision process, and 3) explore how individual differences might mediate the results. Results indicate that pharmaceutical care changes the way people process sunscreen information, but not necessarily their final choice of product. Findings will be discussed in the context of the patient population selected and theories of pharmaceutical care.

10 **Satisfying the bottom line Minimal requirements as a missing factor in decision-making under uncertainty**

*Fiddick, Laurence (Max Planck Institute for Human Development, Berlin)*

Recently, evolutionary psychologists have begun to adopt models of decision-making under uncertainty developed in the biological literature. Specifically, evolutionary analyses of risk-sensitive foraging have been used to explain apparent biases in

human reasoning as an adaptive response to goal satisfaction. We present experimental evidence supporting the hypothesis that risk-preference reversals are part of an adaptive response. The results show that subjects switch risk-preferences in a manner that maximizes the probability of success, where success is a nonlinear function of expected outcomes.

**11 Do those who are older know more about how much they know?**

*Brougham, Ruby (Chapman University); John, Richard (University of Southern California)*

While recent studies of overconfidence and calibration have utilized more sophisticated methods of assessment, researchers have largely restricted studies of discrete probability assessments to 2-outcome events. We report an empirical study of old and young subjects that explores differences in overconfidence and calibration using 4-outcome multiple choice questions similar in format to those utilized in the television show, Who wants to be a millionaire? Using the cognitively richer 4-outcome domain, we explore a hypothesis that adults gain greater insight into the limitations of their knowledge as they age. Decomposition of the Brier score is extended to the 4-outcome events.

**12 The Fallacy of Affirming the Consequent The Logic Error that Divides Us**

*Rude, Dale (U of Houston)*

At the heart of the rationalist and behavioralist debate is a logic error. Rationalists offer a set of choice axioms and derive models of markets. This process can be symbolized as If P, then Q. If decision makers obey the choice axioms (P), the market model (Q) follows. The market predictions are tested. If the tests support the market model (Q is true), the findings are frequently interpreted as also supporting the choice axioms (P is true). This error in logic will be documented using relevant literature. Similar errors in logic will be identified in recent behavioral finance studies.

**13 Predicting MBA student performance A descriptive and prescriptive account of a graduate admissions process**

*Mertens, Dan (University of Arizona); Murphy, Ryan O. (University of Arizona)*

Business schools typically employ several different measures to predict the probability of an individual's academic success in a Masters of Business Administration (MBA) program. The purpose of this research is to evaluate the usefulness of these different measures in predicting an MBA student's performance. Further, we are interested in determining which, if any, of the measures prove to be more useful. The final aim of this research is twofold First, to provide a descriptive account of how admission officers actually select students and secondly, to provide a prescriptive account of what attributes actually predict a student's success.

**14 Beyond rationality and irrationality in decision-theory Insights from a predication model of human decision-making**

*Tate, Chuck (University of Oregon)*

Two experiments examined the usefulness of an alternative model to the classic rationality irrationality dichotomy in human decision-theory. This alternative model

is a predication model (Rychlak, 1994) and focuses on the individually defined goals in a game of chance paradigm in order to predict the pattern of fluctuations and stable choices, rather than the rationality or optimality of choices. Results from both studies suggest that rationality or optimality considerations may not accurately characterize or explain how people actually make choices because, in general, there was no difference in the occurrence of rational and irrational choices within fluctuating and stable choice patterns.

**15 Information processing in small group judgment Effects of information distribution, cue validities, feedback, and discussion primacy.**

*Gigone, Daniel (Fuqua School of Business, Duke University)*

A number of studies of group decision-making have shown that groups have difficulty dealing with unshared information. Because such facts are often not discussed, and may not affect the group discussion when they are, groups may make poorly informed decisions. But the link between this common knowledge effect (CKE) and decision accuracy has not been explored. The present study suggests that the CKE may help groups to make more accurate decisions, depending on characteristics of the task. The results also show that the CKE can be moderated by feedback, and by whether members' opinions or facts are discussed first.

**16 Mental ruler theory of contingent decision making Mathematical representation and some empirical findings**

*Takemura, Kazuhisa (Carnegie Mellon University)*

It is assumed that people construct a mental measuring stick to evaluate options for judgment and decision-making. Our mental ruler has two endpoints and is constructed in support of a subjectively framed situation that is dependent on a focused situation. Contrary to most utility theories and prospect theory, the evaluation function is an inverted S-shaped function, concave below and convex above a certain point between the endpoints of the support for the mental ruler. Experimental results in judgments of price, saved life value, probability and size of physical stimulus were in line with the inverted S-shaped evaluation function.

**17 Retrieval Cues Determine Whether People Make Diagnostic Comparisons**

*Chandler, Carla C. (Washington State University); Goodrich, Jami (Washington State University)*

Problems of diagnosis (e.g., Does a person have Penuria or Zymosis) are best solved by finding diagnostic attributes that occur in only one illness (e.g., Penuria). Participants asked to convince colleagues that a person had Penuria referred to diagnostic comparisons more often if instructed to consider facts known about Penuria-Zymosis in general, rather than comparing the person's symptoms to Penuria-Zymosis. These retrieval cues also determined whether people searched for diagnostic comparisons when some symptoms of Penuria-Zymosis were unknown. No transfer was observed between similar versions of the problem, indicating that the retrieval cues, rather than a conscious strategy, determine performance.

**18 On the Surprise of Probable and Improbable Outcomes**

*Teigen, Karl Halvor (University of Tromso, Norway); Keren, Gideon (Technical University of Eindhoven)*

Equally probable outcomes are not always equally surprising. In the case of uncontrollable events, positive outcomes are consistently rated as more surprising than equally probable negative outcomes. In the case of partly controllable events, negative outcomes (failures) are more surprising than successes. We conclude that surprise reflects a contrast between the actual outcome and generalized expectancies (of chance outcomes versus action outcomes) in addition to the specific probabilities involved. The contrast interpretation of surprise may further explain why low-probability events are sometimes considered unsurprising, and increased probabilities sometimes lead to more surprise.

**19 How Representatively Designed is JDM Research?**

*Dhmi, Mandeep K. (City University, London)*

Research may be internally and externally valid if stimuli are representatively designed (i.e., cue number, inter-correlations, ranges, distributions and validities match those in the participants' natural judgment environment). I reviewed 143 policy-capturing studies that were identified via six keywords used to search four databases spanning 50 years. These studies were coded for their attempts at achieving a representative design. The majority of studies presented participants with hypothetical cases where cue distributions, inter-correlations and validities were unrepresentative. Evidence shows that policies captured under representative and unrepresentative conditions may differ. This raises concerns about the validity of 50 years of research.

**20 Choosing for the long run - tradeoffs in multiperiod borrowing**

*Shu, Suzanne (University of Chicago)*

Consumer perceptions of intertemporal tradeoffs in savings and borrowing behavior has been examined in both traditional economic literature and behavioral decision making literature. This paper extends the research on intertemporal choice by asking how attributes other than discount rates influence multi-period borrowing decisions. A series of studies are presented that examine choices for loan payment schedules to determine whether people are attending to interest rates or to other attributes when choosing between loans results indicate that people choose between loans in a way that is inconsistent with both the normative economic model and the behavioral model of discounting.

**21 Dual Disjunctions in Support Theory**

*Kramer, Karen M. (University of Illinois, Urbana-Champaign)*

Support Theory usually examines subjective probabilities relating two events featuring a singular disjunction. In a singular disjunction only one of the events is broken down into subclasses. The theory implies that it can also explain dual disjunctions, in which both events are broken down into subclasses. This generalization, hinted at but never developed, is investigated here. An experiment that asked for peoples subjective probability of various events examined both singular and dual disjunctions. Results indicate the subjective probability predictions of Support

Theory generalized to dual disjunctions. These findings allow Support Theory to be applied to additional subjective probability domains.

**22 When false solutions can (and cannot) be disregarded**

*Dreier, Donna D. (University of Chicago)*

To test whether the mere presence of a false answer can influence the generation of alternatives, subjects were presented with non-word and word anagrams, including high frequency word anagrams (HFWA) and low frequency words (LFWA), representing three levels of availability of a to-be-disregarded answer none (non-word anagrams), low (LFWA), and high (HFWA). Availability was highly significant for accuracy. HFWAs were solved more slowly than LFWAs, but there was no significant difference between LFWAs and non-words, indicating only high-frequency words were difficult to disregard. Implications for the generation of comparisons and consideration sets, affecting both judgment and decision-making, are discussed.

**23 A Psychometric Assessment of Contingent Valuation Methodologies**

*Walker, Michael E. (Educational Testing Service and The Ohio State University); Morera, Osvaldo F. (Department of Psychology, University of Texas at El Paso)*

In contingent valuation (CV), people are asked to make judgments of their willingness to accept compensation (WTA) for the loss of a commodity or judgments of their willingness to pay (WTP) to retain the commodity. Few studies have looked at the psychometric properties of WTA and WTP judgments. In this experiment, judges were asked to provide WTA and WTP assessments for six environmental commodities on three separate occasions. Test-retest correlations were examined. A quasi-simplex model (Jreskog, 1970) was also fitted to obtain estimates of reliability and stability. Results indicate adequate psychometric properties for both WTA and WTP judgments.

**24 The Good, the Bad, and the Ugly Determinants of positive and negative features in choice**

*Willemsen, Martijn C. (Eindhoven University of Technology); Keren, Gideon (Eindhoven University of Technology)*

To account for choice behavior, options are often characterized as consisting of positive and negative features. However, the question of what makes an attribute positive or negative has been overlooked. We propose that whether an attribute is perceived as positive or negative is determined by two components (i) a 'natural' disposition regardless of the attribute value and (ii) a variable component determined by the specific value (positive or negative) of the attribute. We describe several experiments that support this distinction, including a matching-choice experiment showing a reversal of the prominence effect (Tversky et. al. 1988) for extremely negative attribute values.

**25 Mock Juror Verdicts and Lineup Procedures**

*Lori R. Van Wallendael (University of North Carolina at Charlotte)*

Advances in eyewitness research are leading to the use of more valid lineup procedures such as the sequential lineup. It is unclear, however, how well jurors will understand the advantages of new procedures. In this study, mock jurors gave verdicts after reading one of four scenarios describing a murder trial. In the control condition, no eyewitness was present. In the other three conditions, an eyewitness was present and later identified the defendant in a show-up, a simultaneous lineup, or a sequential lineup. Results indicate that improvements in lineup procedures may need to be accompanied by additional juror education.

**26 Assumptive help offered in response to physical disability in women**

*Rebecca J. White (DePaul University)*

Disabled individuals often report the dilemma faced when offered more assistance than necessary by non-disabled others. This research investigates the degree to which participants offer assistance, in the form of “hint” letters on a verbal task, to physically disabled versus non-disabled women. Results indicate that the contexts of disability and previous performance play important roles in the decision of how much assistance to offer. In conditions of high previous performance on a similar task, disabled women received more assistance than their able-bodied counterparts, and in cases of low previous performance the opposite trend emerged.

**27 Validation of a new technique for eliciting membership functions of probability phrases**

*Tzur Karelitz (University of Illinois at Urbana-Champaign)*

Membership functions represent the vague meaning of verbal probabilities, in particular contexts, to a specific individual over the probability line [0,1] (Wallsten, Budescu, Rapoport, Zwick & Forsyth, 1986). Budescu, Wallsten and Karelitz have recently developed and tested a new method for eliciting membership judgments. The new method was validated by comparing some of its features (administration time, consistency of judgments and smoothness of the functions) to the established techniques. Multidimensional Unfolding of the judgments confirmed the unidimensionality of verbal and numeric probabilities and the high consistency between the results of the two methods.

**28 Written Probability Gambles are More Certain Than Graphical Displays**

*Yoshizumi, Dean (University of Iowa); Levin, Irwin P. (University of Iowa)*

The preference for certain versus risky outcomes of equal expected value is well documented, and is known as the certainty effect. We examine experimental tasks where this tendency might be moderated. Choices between two-option gambles were examined with these three task display formats Standard (written), Wheel, and Jar task formats. The certainty effect was replicated in the Standard format. However, the risky outcome was selected more often, but less than 50, in the Jar and Wheel tasks. Participants selected the risky option the most often in the Wheel task. Possible reasons for the differences in the choices are discussed.

**29 Influence of sample space topology on judged probability under uncertainty**

*See, Kelly E. (Duke University); Fox, Craig R. (Duke University); Rottenstreich, Yuval (University of Chicago)*

We provide evidence that judged probability under uncertainty is influenced by the way in which people subjectively partition the relevant sample space. In several computer studies, participants observe multi-attribute objects flashed on the screen with various frequencies and are asked to judge the probability of target events. We find that these judgments are biased toward the ignorance prior probability suggested by the natural partition of the sample space. This natural partition depends on topological features of the set of events suggested by the attribute or category of the query.

**30 The truth hides in the eye of the beholder Accuracy measures for criterion lacking subjective probability judgments**

*Bogger, Ravid (Ben Gurion University of the Negev); Fischer, Ilan (Ben Gurion University of the Negev)*

Gurion University of the Negev) Accuracy measures of subjective probabilities calculate the correspondence between probability judgments and the proportion of correct decisions. However, many real-life situations lack the necessary criterion information because it is either covert or impossible to detect. Since traditional calibration measures are not applicable in such situations, our alternative approach replaces missing information with subjective judgments elicited from pre-defined reference groups. We modify the traditional measures, and replace the measures of Calibration, Bias and Slope with Normative Calibration, Normative Bias and Normative Slope. Experiment 1 evaluates the proposed measures. Experiment 2 utilizes the new approach to assess integrity of job applicants.

**31 Do stressed individuals know when they're stressed? Examining Accuracy of, and Confidence in, Cardiovascular Reactivity Estimates**

*Heidi B. Stayn (Carnegie Mellon University), Jennifer S. Lerner (Carnegie Mellon University), Shelley E. Taylor (University of California at Los Angeles)*

The ability to recognize one's stress level carries important health, decision making, and behavioral consequences, yet little is known about this kind of self-awareness. To address this gap, fifty participants completed measures of dispositional affect and (on a separate day) engaged in a series of stressful tasks during which heart rate (HR) and on-line affect were measured. Participants were told their baseline HR and asked to estimate their highest HR during each task and their confidence in the estimate. Results revealed significant affective moderators of accuracy and confidence: anxious and depressed participants consistently overestimated their HR.

**32 Negative Affect and the Status Quo Bias**

*Riis, Jason (University of Michigan); Norbert Schwarz (University of Michigan)*

We observe an increase in the prevalence of status quo selections on a difficult moral choice problem if the problem is preceded by another problem also involving a difficult moral choice. We suggest that this occurs because the difficult first problem involves a tradeoff, resulting in a negative affective



reaction no matter which choice is made. This negative affect then makes the participant more likely to avoid the subsequent tradeoff of the second problem, by choosing the status quo option.

**33 What Does It Mean to Be Optimistic?**

*Haskell, Valerie (University of South Florida); Schneider, Sandra L. (University of South Florida)*

Optimism has been described as a general positive orientation, a belief in good luck, or an egocentric bias in judgment. Can it simultaneously be all of these? In this study, we examined several measures that might be related to different facets of optimism. We included constructs such as life orientation, luck, realism, effort, control, affect, security potential, hope, rigidity, and the Big 5 personality characteristics. We describe differences in the nature of optimism based on its applicability to self versus others, specific contexts versus global outlook, internal versus external sources, and predictive versus interpretive connotations. The results should brighten your day

**34 Reference Point Conflict and Judgment The Influence of Mood**

*Boles, Terry L. (Univ. of Iowa); Ilies, Remus (Univ. of Iowa)*

The study examined the influence of induced transient affective states on outcome evaluations of gambles in the presence of conflicting reference points. Being in a happy or sad mood did not influence judgments of regret or decision quality, but did influence outcome satisfaction. Sad losers, who could have done worse by choosing another gamble, were more likely to focus on the losing dimension of their outcome than were happy losers, who focused on the counterfactual alternative which allowed them to evaluate the outcome positively. We investigate the conditions under which mood congruency and mood improvement strategies are used in judgment.

**35 Passing the Buck: Individuals, Groups, and the Strength of Emotions**

*Douma, Bambi (University of Arizona); Ordóñez, Lisa (University of Arizona); Irwin, Julie (University of Texas at Austin)*

A diffusion of responsibility occurs when decisions are made in a group. Because this decreases commitment to decisions made, people should be more likely to feel less negative emotion (specifically regret) when they experience a bad outcome from a decision made in a group than a decision made by an individual. Likewise, positive emotions (i.e., rejoicing) should be stronger when a good outcome results from an individual decision than a group decision. We use hypothetical scenarios and experiments with real outcomes to compare decisions made by individuals and groups in several different outcome conditions.

**36 Action, Argument and Emotion Cognitive Mediation in Decision-Related Regret**

*Connolly, Terry (University of Arizona); Reb, Jochen (University of Arizona)*

We report results from an experiment using scenarios which had previously shown action/inaction effects on regret. Subjects assessed eleven possible emotions and evaluated alternative arguments for each scenario. Findings show regret embedded in a cluster emotions associated with decisional self-blame. It is strongly mediated by

argument ratings, and strongly predictive of choice preference. The richer context reverses several earlier findings on action/inaction and regret. Regret is not a mechanistic response to action/inaction; it is a complex assessment emerging from the web of argument and meaning in which the decision and its outcome is embedded.

**37 The influence of frame and victim responsibility on physicians' evaluation of safe or risky treatment options.**

*Smith, H. David (Middlebury College); Byrnes, Abigail (U. of Cincinnati)*

A framing study was conducted in which sixty physicians served as subjects. Physicians completed a modified version of the Asian disease problem in which the victims' responsibility for contracting lung cancer varied in addition to frame. Some victims contracted the disease by smoking (high responsibility), while others had been exposed to carcinogens in the workplace (low responsibility). Results suggested that frame, but not victim responsibility, significantly affected choices (Chi sq. (1) 9.77,  $p < .01$ ). Continuous ratings of the choices were also obtained and will be discussed.

**38 A Framing-Induced Representativeness Bias in Disjunctive Probability Judgment**

*Mandel, David (University of Hertfordshire)*

It was hypothesized that disjunctive probability judgments are sometimes erroneously representative of base rates. In three experiments, four independent events (e.g., consecutive gambles) were described as having either uniformly high or uniformly low base rates. Then, participants judged an exclusive disjunctive probability that was either framed in terms of event presence or event absence. The correct response in each of the four conditions was constant. As predicted, in each experiment, probability estimates in the high-present condition were significantly higher than in the high-absent condition, and estimates in the low-absent condition were significantly lower than in the low-present condition.

**39 Framing-Effects as a result of decision-heuristics and information processing mode**

*Stoeckel, Volker (University of Mannheim SFB 504)*

In the Asian disease problem (Tversky Kahneman 1981) the outcome information for the same choice-option is presented incompletely. Also the missing information can be complemented by active thinking, actors in an intuitive information processing mode are using the relative accessibility of mentioned and unmentioned outcome components as a decision-heuristic. The determinants of the processing mode - motivation and cognitive ability - can be used to predict the emergence of framing-effects. The influence of the framing-conditions disappears, if the actors are both highly motivated and if they have high analytical abilities. In all other combinations strong framing-effects are observed.

**40 Whence Framing? The Roles of Strategy and Mental Representations in Decision Making**

*Rettinger, David A. (Middlebury College); Hastie, Reid (University of Colorado,*

*Boulder)*

The framing effect is proposed to be due to the effect of gainloss frame on mental representations of the decision problem. Participants received a version of the Asian disease problem, with or without an explanation of the origin of the options. The framing effect occurred in the no-rationale condition, but not when a rationale was included. This interaction did not hold for simple measures of memory, self-reported strategies, or use of reciprocal explanations, and so more complex causes are implicated. Computer simulations recreated the mental representations generated by subjects in each of the four conditions, providing support for our hypotheses.

**41 Differences in Effects of Attribute, Risky Choice, and Goal Framing**

*Reynolds, John W. (University of South Florida); Drew, Eugene W. (University of South Florida); Schneider, Sandra L. (University of South Florida)*

This study compared the effects of three different types of valence framing effects. Attribute framing focuses on the desirability of a single characteristic, risky choice framing focuses on the preference between options that differ in riskiness, and goal framing focuses on the persuasiveness of a message advocating an action. For each, a foreign disease scenario was presented, and participants evaluated the desirability of a risky option and a sure thing option. Results show clear-cut differences in how positive and negative wording influences option desirability as a function of the frame type. Differences in cognitive anchors and available contrasts are implicated.

**42 Why Isn't Framing Influenced by Personal Relevance?**

*Paddock, E. Layne (College of William and Mary); Langholtz, Harvey J. (College of William and Mary)*

Existing research using the Asian Disease Problem (Tversky and Kahneman, 1981) does not address the critical importance of personal relevance in decision-making. The present study attempts to investigate personal relevance in the context of the original problem, which is modified in two ways. First, it incorporates a target individual whose relationship to the participant is one of three levels of closeness, and, additionally, the target individual is included in or excluded from the group of individuals who will die. Results support Prospect theory, and, surprisingly, suggest that neither form of personal relevance has a significant impact on participant's decision choices.

**43 On the relevance of irrelevant information extensional vs. representativeness heuristic reasoning**

*Savadori, Lucia (University of Trento); Bonini, Nicolao (University of Trento); Legrenzi, Paolo (University of Milan)*

Forty-one students were presented with 3 conditional fully explicated rules and asked to draw an inference. Other 154 Ss were presented with, in addition, a stereotypic description that counterbalanced the rule's predictions. All Ss also filled in the Need for Cognition Scale. Virtually all individuals draw an inference congruent with extensional reasoning. However, respectively 29, 28 and 66 reasoned non-extensionally when the description was added to the rule. Results show that when presented with apparently inconsistent information individuals don't integrate the two

kinds of information rule and diagnostic information and extensional reasoning is impeded by individual need for cognition.

44 **Partitive formulation of information in probabilistic problems beyond  
Heuristics and frequency format explanations**

*Macchi, Laura (Universita degli Studi di Milano-Bicocca)*

I propose a simple theory of the use of base rate according to which neither heuristic nor frequentist factors underlie demonstrations of the occurrence of the base-rate fallacy. According to this view, what is crucial is what can be called a partitive formulation of the conditional likelihood datum. A partitive formulation indicates the set of which the numerical datum is a part (in terms of percentages or frequencies). Whether probabilistic or frequentist and independently on the supposed implied natural heuristics the partitive versions lead to an almost complete elimination of the bias which remains when non-partitive versions are used.