

JUDGMENT / DECISION MAKING

NOVEMBER J/DM MEETING. . .

The Annual Meeting of the Society for Judgment and Decision Making will be held November 19-20, 1989 at the Hyatt Regency Hotel in Atlanta. The J/DM meeting will begin Sunday afternoon and will conclude mid-afternoon on Monday. The program and abstracts are listed on Pages 17-16 of the Newsletter. **PLEASE BRING YOUR PROGRAM TO THE MEETING.**

Also of interest to J/DMers is the meeting of the Psychonomic Society, which, as usual, is being held just before the J/DM Meeting in Atlanta, November 17-19. On Pages 15-16 we have listed some of the sessions of particular interest. J/DMers should note that this year there are **three** sessions specifically devoted to judgment and decision making. The first one is being held on Friday afternoon.

Serious J/DMers will want to come early in the week to attend the Society for Computers in Psychology Meeting which is being held at the Hyatt Regency on November 16. Of special interest will be papers on the applications of expert systems and the organization of knowledge in experts. In addition, there will be a workshop on computers as a research tool. For further information, contact Paula Goolkasian, Department of Psychology, University of North Carolina-Charlotte, Charlotte, NC 28223. (fpy00pag@UNCCVM.BITNET).

PROPOSED CHANGES IN BYLAWS. . .

As directed by the Executive Board at the last meeting of Society, the bylaws of the Society have been reviewed and some changes have been proposed. These have been endorsed by the Executive Board. Members of the Society will vote on these changes at the Business Meeting in November. Please review the proposed changes on Pages 6-8. Although the proposed changes will be presented at the Meeting, you may want to contact individual Board members with your questions and comments.

SPECIAL JOURNAL OFFER. . .

In this issue we are pleased to include special journal subscription rates for members of the Society for Judgment and Decision Making. *Organizational Behavior and Human Decision Processes* again has an offer for our members that is simply too good to turn down. Information on the special rates is inside.

CONTENTS

From the Editor.....	2
News from NSF.....	3
Proposed Bylaw Changes.....	6
Special Subscription Rate for OBHDP.....	8
Recent Philosophical Literature.....	9
Call for Papers -- Forthcoming Meeting.....	10
Call for Papers -- Journal of Business.....	11
Research Opportunities.....	13
Positions Available.....	13
Psychonomic Society Meeting Sessions of Special Interest.....	15
Program and Abstracts for the Atlanta J/DM Meeting.....	17
Special Announcement.....	28
J/DM Dues Form and Address Change & Meeting Registration.....	29

=====
SUBMISSION DEADLINE FOR THE NEXT J/DM NEWSLETTER: NOVEMBER 30, 1989
=====

NEWSLETTER

Vol. VIII
Number 4
SEPTEMBER 1989

SOCIETY FOR JUDGMENT AND DECISION MAKING

EXECUTIVE BOARD

Robyn Dawes, *Chairperson*
 Lola Lopes, *Chairperson-Elect*
 Kenneth R. Hammond, *Past-Chairperson*
 Baruch Fischhoff, *1989-91*
 Duncan Luce, *1987-89*
 Paul Slovic, *1988-90*
 Stephen E. Edgell, *Secretary/Treasurer*
 N. John Castellan, Jr., *Newsletter Editor*

J/DM NEWSLETTER

Editor:

N. John Castellan, Jr.
 Department of Psychology
 Indiana University
 Bloomington, Indiana 47405

(812) 855-4261

BITNET: castellan@IUBACS

Addresses & Corrections:

Stephen E. Edgell
 Department of Psychology
 University of Louisville
 Louisville, Kentucky 40292

(502) 588-5948

BITNET: seedge04@ULKYVX

FROM THE EDITOR. . .

The *J/DM Newsletter* welcomes submissions from individuals and groups. However, we do not publish substantive papers. Book reviews will be published. If you are interested in reviewing books and related materials, please write to the editor.

There are few ground rules for submissions. In order to make the cost of the *J/DM Newsletter* as low as possible, please submit camera-ready copy. This means that the copy should be typed single-spaced on white 8½ by 11 paper. If possible, use a carbon or film ribbon. Please mail flat -- do not fold.

Subscriptions: Subscriptions are available on a calendar year basis only. Requests for information concerning membership in the Society for Judgment and Decision Making should be sent to Stephen Edgell.

Address correction: Please check your mailing label carefully. Because the *J/DM Newsletter* is usually sent by bulk mail, copies

with incorrect addresses or which are otherwise undeliverable are neither forwarded nor returned. Therefore, we have no way of knowing if copies are delivered. Address changes or corrections should be sent to Stephen Edgell.

Mailing Labels: Some readers may wish to sent reprint lists or other material to people listed in the directory. Contact Stephen Edgell for details.

Electronic Mail: The editor may be reached through BITNET at "castellan@IUBACS." [Some users may find it either necessary (or more convenient) to address the editor using only the first 8 characters (castella).] BITNET addresses also can be reached from most of the university and research networks. I check for mail several times a day, and a prompt reply to electronic messages is assured. To add your name to the *J/DM Electronic Mail Directory* (or to receive a copy of the electronic directory) contact the Editor.

NEWS FROM NSF'S

DECISION, RISK, AND MANAGEMENT SCIENCE PROGRAM

James Shanteau and L. Robin Keller

The National Science Foundation's Decision, Risk, and Management Science (DRMS) Program has completed another successful year under the direction of Program Director Howard Kunreuther and Associate Program Director Robin Gregory, who completed their terms of service this summer. Dr. Kunreuther has returned full-time to his Wharton responsibilities and Dr. Gregory has returned to Decision Research. We wish to thank them for their outstanding service to the decision, risk, and management science community.

We would also like to introduce ourselves at this time. James Shanteau is the new Program Director and L. Robin Keller will be the new Associate Program Director. Jim is on leave from Kansas State where he is a professor in the Department of Psychology and Robin is on leave from the Graduate School of Management at the University of California, Irvine, where she is an associate professor of decision sciences.

We have both arrived in Washington, DC, and look forward to keeping in touch with the members of the decision, risk, and management science community. We plan to attend the conferences of the constituent groups that represent the DRMS field. We can also be reached by telephone, mail, electronic mail, and facsimile:

Dr. James Shanteau, Program Director
Telephone: (202) 357-7417; Bitnet: jshantea@nsf
Internet: jshantea@note.nsf.gov

or

Dr. L. Robin Keller, Associate Program Director
Telephone: (202) 357-7569; Bitnet: lkeller@nsf
Internet: lkeller@note.nsf.gov
Facsimile: (202) 357-7745 (include name, DRMS, and room 336)

Mailing address:

Decision, Risk, and Management Science Program, Room 336
National Science Foundation
1800 G Street, N. W.
Washington, DC 20550

Program Overview

Research proposals are solicited on fundamental issues in management science, risk analysis, public policy decision making, judgmental processes, behavioral decision making, organization design, and decision making under uncertainty. Target dates for proposals are January 15 and August 15 each year. A Decision, Risk, and Management Science Program statement flyer is available from the Program Directors.

The review and evaluation process for proposals requires about six months. It includes ad hoc evaluations by outside reviewers and the recommendations of the advisory panel. Members of the DRMS Advisory Panel for 1989-90 are Dr. Janice M. Beyer, Dr. Warren H. Hausman, Dr. Ralph L. Keeney, Dr. Kenneth R. MacCrimmon, Dr. M. Granger Morgan, Dr. Donald G. Morrison, Dr. John W. Payne, and Dr. Stephen M. Pollock. We thank Dr. George Huber, Dr. Arie Lewin, Dr. Sarah Lichtenstein, and Dr. John D. C. Little, who have just completed their terms of service on the panel.

Preview of the New Joint NSF/Private Sector Research Opportunities Initiative

We are continuing the development of the new Joint NSF/Private Sector Research Opportunities Initiative of the Decision, Risk, and Management Science Program which was launched by Howard Kunreuther and Robin Gregory. By the time this is published, we should have received final approval on this initiative. Our plan is to fund up to five projects in 1990, the first target date is January 15, 1990. The awards would provide a principal investigator up to \$75,000 per year to match private sector financial support for qualifying DRMS research projects. The initiative is designed to encourage theory building through applied studies in private sector settings. Proposals submitted under this initiative differ from proposals normally submitted to DRMS in that they are required to have a key contact person within the cooperating private sector organization who is actively involved in the development of the proposal and in the conduct of the research process. The organization must also indicate an interest in providing funds to support the project should the proposal be approved by the National Science Foundation. Please contact the DRMS Program Directors for a copy of the Initiative announcement.

Highlights of Other NSF Programs of Possible Interest

There are many programs across the National Science Foundation which fund activities of interest to some members of the DRMS community. Two examples are the programs for funding doctoral dissertation and teaching programs.

Grants for Improving Doctoral Dissertation Research provide funds for items not normally available from the student's university or other sources. Allowable items include travel to specialized facilities, sample survey costs, specialized research equipment and services not otherwise available, supplies, payments to subjects, and rental for research facilities. There are limitations on the uses of funds. For example, the funds may not be used for a stipend for the student, for tuition, or for travel to scientific meetings. Contact the DRMS Program Directors for more information concerning support for dissertation work in fields covered by the DRMS program.

The Research Training Groups (RTG) Program provides funding to create new or enhanced multidisciplinary educational and research opportunities at an institution. Ph.D. granting U.S. academic institutions are invited to submit abbreviated proposals by Nov. 3, 1989, for the first round of the review process. Awards will be made for 5 years, and are expected to average \$250,000 annually, plus a one-time allocation of up to \$250,000 may be requested for special purpose research materials and equipment. Contact the DRMS Program Directors for more information concerning support for multidisciplinary research training programs in decision, risk, or management science.

PROPOSED CHANGES TO THE BYLAWS

OF THE SOCIETY FOR JUDGMENT AND DECISION MAKING

GENERAL COMMENTS ON RATIONALE FOR CHANGES:

- To permit students other than graduate students to be members of the Society.
- To change the name of the principal officer from chairperson to president.
- To add the chairperson of the Program Committee to the Executive Board.
- To clarify when newly elected officers assume their duties.
- To clarify language throughout the Bylaws.

Notes on the changes:

- Underlining indicates new words and dash indicates deleted words.
- Only sections to be modified by the proposed changes are listed here.

Article III. Membership

- D. A full time graduate student in good standing in any field who has interests in advancing the field of Judgment and Decision Making may become a student member. ~~be admitted to student membership upon sponsorship by a member and may continue as long as he or she remains in a full time student in good standing in any graduate school.~~
- E. Members and student members of the Society may vote on all matters before the Society, attend general meetings, and submit papers for presentation at meetings. Submissions will be reviewed for content and appropriateness by the Program Committee of the annual meeting. (Nonmembers may participate in the annual meeting to the extent established by the Executive Board.)

Article IV. Executive Board

- A. The affairs of the Society shall be managed by an Executive Board consisting of the Past President Chairperson, the President, Chairperson, the President-Elect, Chairperson Elect, the Secretary-Treasurer, the Editor of the newsletter, the Program Committee Chair, and three (3) elected members. The 3 elected members shall serve for a three-year term with one (1) new member elected each year, and cannot be elected to two consecutive terms. The terms of the 3 elected members begin and end at the close of the annual meeting of the Society.
- C. A Program Committee shall be responsible for setting the program of the annual meeting of the Society. Members shall serve staggered three year terms with a new member being appointed by the Executive Committee each year. Terms begin and end with the close of the annual meeting of the Society. The person in his or her second year on the Committee shall be the chair of the Committee.

Article V. Officers

- A. The officers of the Society shall be the Past ~~President Chairperson~~, the ~~President Chairperson~~, the ~~President-Elect Chairperson-Elect~~, the Secretary-Treasurer, and the Newsletter Editor. Elected and appointed officers shall assume their offices at the end of the annual meeting of the Society. At that time the current President-Elect shall become the President, the current President shall become the Past President, and the term of the current Past President shall expire.
- B. A ~~President-Elect Chairperson-Elect~~ shall be elected by mail ballot of the membership each year. Past Presidents (or Chairpersons) are not eligible for re-election as ~~President-Elect Chairperson-Elect~~.

Article VI. Elections

- A. Once each year, the Secretary-Treasurer shall canvass the membership by mail for nominations of a candidate to serve as ~~President-Elect Chairperson-Elect~~ and of candidates to serve on the Executive Board. Each member may nominate up to five persons for the Executive Board and two persons to serve as ~~President-Elect Chairperson-Elect~~.
- C. The names of the three persons receiving the greatest number of nominations, and who signify their willingness to serve as President, Chairperson, shall be placed on an election ballot, which shall be mailed to all members. Each member may vote for one person named on the ballot.
- D. Sixty days after the mailing of the election ballot the election shall be closed, and the ballots counted. The one candidate for the Executive Board receiving the greatest number of votes shall be elected for a three-year term. The candidate receiving the greatest number of votes for ~~President-Elect Chairperson-Elect~~ shall be elected for a one-year term.

Article VIII. Meetings

Meetings of the Society and of the Executive Board shall be held at such times and places and upon such notice as the Executive Board may from time to time determine. Ten percent of members present in person shall constitute a quorum at meetings of the Society, and a majority of the members of the Executive Board shall constitute a quorum at meetings of the Executive Board. The Executive Board shall determine the order of business at meetings of the Society. The Society shall have one regular meeting each year.

Article IX. Recall

Upon petition of ten percent of the membership, an election by mail ballot will be held on proposals with respect to the recall of members of the Executive Board, or of any elected or appointed officers. Such recall will be effective upon tabulation of a majority mail vote of all members of the Society who voted.

Article XI. Amendment

The Executive Board may propose to the Society amendments to the Bylaws ~~which have been submitted to each member at least thirty days before the Board takes~~

action thereon. Such proposed amendments shall be sent by mail or published in the Society's Newsletter at least thirty days before the Society meeting at which they are to be considered. A proposed amendment may be adopted by a two-thirds vote of the Members present and voting in person at a meeting of the Society.

Article XII. Acceptance of Bylaws

These bylaws shall become effective upon approval by mail ballot, by a majority of those voting from the paid subscription list of the *Judgment/Decision Making Newsletter*. Only ballots returned within 60 days of mailing will be counted. All those voting on such a ballot become charter members of the society in the appropriate membership category. ~~The informal Executive Board which has served to organize the Society shall serve as the initial Executive Board. Their terms of office shall be determined by lot. The first elected members of the Executive Board will be elected at or before the meeting of the Society following adoption of these bylaws. During the transition, the Executive Board will name a person to serve as Chairperson, and the Chairperson Elect will be elected in the first election.~~

SPECIAL SUBSCRIPTION RATES FOR OBHDP. . .

Special subscription rates to the 1990 issues (Volumes 45-46) of *Organizational Behavior and Human Decision Processes* are available for members of the Society for Judgment and Decision Making. Please send a PERSONAL CHECK MADE OUT TO ACADEMIC PRESS in the amount of \$76.00 (domestic rates) or \$94.00 (overseas rates) to:

Ms. Elinor Berner
Journal Division
Academic Press, Inc.
1250 Sixth Avenue
San Diego, CA 92101

Student rates are \$64.00 (domestic) and \$71.50 (overseas). Student subscriptions should be mailed to:

Academic Press, Inc.
1 East First Street
Duluth, MN 55802

When subscribing to the journal, please state that you are a current member of J/DM. Please note that University checks are no longer accepted by Academic Press -- only personal checks are accepted.

Questions regarding subscriptions should be made to the appropriate Academic Press office (see inside front cover of OBHDP for regular subscriptions or inside back cover for Society subscriptions).

1989 issues are still available at the \$62.50 (domestic) or \$78.50 (overseas) rates.

RECENT PHILOSOPHICAL LITERATURE. . .

Frank, R. H. (1988). *PASSIONS WITHIN REASON: THE STRATEGIC ROLE OF THE EMOTIONS*. New York: Norton. Pp. 304. (\$25)

You are about to do some deed - cheat on your taxes, cheat on your spouse, cheat on your diet, let an insult pass without retaliation, or strike a deal that is unfair to you but still better than no deal at all - but you are held back by some emotion: a feeling of guilt, love for your spouse, or anger at being treated unfairly. Where do such emotions come from? Can they be rational?

To answer these questions, Frank argues that emotions are commitment devices: they lead you to make decisions in certain ways. You do better individually (and we all do better collectively) with these emotions than without them because they protect your long-range interests, which you would otherwise tend to discount too much. They make your future interest an interest of your immediate present. They insure that you will maintain your reputations as a moral person, loyal mate, or tough bargainer, because if you don't have enough of them you will cheat or give in and sometimes get caught. And they give off somewhat reliable signals that others can perceive even without knowing your reputation, so you will be favored to participate in cooperative enterprises.

True, people can and do cheat. They can fake the emotions, and they can try to maintain their reputations by limiting cheating to cases in which they won't get caught. Frank argues, however, that the best way to avoid getting caught is to cultivate the emotions that prevent cheating even when there is no chance of getting caught. The costs of these emotions (in self-interest terms) are worth paying in the long run.

Emotions therefore convey a reproductive advantage because they lead to material prosperity in the long run (which, in earlier times, increased the chances of reproducing). Although Frank admits that culture and ideology play a large role in encouraging or discouraging helpful emotions, he does not regard cultural explanations as sufficient. He thus answers, in their own terms, those sociobiologists and economists who think that people are inherently selfish. Along the way, he cites extensive psychological evidence, so much as to make the book a useful supplementary text in social psychology.

Some of us - and I confess to this - have tended to think of emotions that affect decisions directly (as opposed to emotions that we seek or avoid) as unfortunate evolutionary vestiges, in the sense that we would achieve our goals better without them. Although Frank ignores the possibility that some emotions are vestiges, he has convinced me that many of our emotions are worth encouraging even though they constrain our options. These emotions are rational in the sense that they serve our long-term goals. (Frank uses the word "rational" to mean "serving immediate and selfish goals," so he would not agree with my last sentence as stated even though it is his main point.)

-- Jonathan Baron

First Announcement and Call for Papers

FOURTH INTERNATIONAL SYMPOSIUM ON DIFFERENTIAL GAMES AND APPLICATIONS

August 9 - 10, 1990, Helsinki University of Technology, Espoo, Finland

Program Committee

Raimo P. Hämmäläinen
(Chairman)
Helsinki University of
Technology
Espoo, Finland

Tamer Basar
University of Illinois
Urbana, Illinois, USA

Geert Jan Olsder
Delft University of
Technology
Delft, The Netherlands

Boleslaw Tolwinski
Colorado School of
Mines
Golden, Colorado, USA

Symposium Coordinator

Harri Ehtamo
Systems Analysis
Laboratory
Helsinki University of
Technology
Otakaari 1 M
SF-02150 Espoo,
Finland

Tel. (358-0-)451 3058
Telefax: (358-0-)465 077
e-mail:
mat-he@finhut.bitnet
telex: 125161 htkk sf

Address all
correspondence to the
Symposium Coordinator

Organizer:

Systems Analysis Laboratory, Helsinki University of Technology

With the participation of:

IFAC Mathematics of Control Committee
IEEE Control Systems Society

The Symposium is the fourth one in a series of meetings dedicated to the area of dynamic games. The aim of the meeting is to bring together researchers from various disciplines where dynamic game settings are studied, and to report the latest developments both in theory and applications. The symposium will take place immediately before the IFAC World Congress to be held in Tallinn, 13 - 17 August 1990.

The two-day technical program will consist of plenary sessions and presentations of contributed papers. The topics include, but are not limited to the following:

- | | |
|--|--|
| <input type="checkbox"/> Zero-sum dynamic games | <input type="checkbox"/> Dynamic games in economics |
| <input type="checkbox"/> Pursuit-evasion problems | <input type="checkbox"/> Energy and resource models |
| <input type="checkbox"/> Nonzero-sum dynamic games | <input type="checkbox"/> Decentralized dynamic |
| <input type="checkbox"/> Stochastic sequential games | <input type="checkbox"/> decision making |
| <input type="checkbox"/> Incentive strategies | <input type="checkbox"/> Interactive dynamic gaming |
| <input type="checkbox"/> Cooperative equilibria | <input type="checkbox"/> AI and dynamic game theory |
| <input type="checkbox"/> Dynamic bargaining models | <input type="checkbox"/> Applications in biology and |
| <input type="checkbox"/> Computational methods | <input type="checkbox"/> ecology |
| <input type="checkbox"/> Robust controller design | |

Prospective authors are invited to send a title and three copies of an extended abstract (approximately 500 words) for their proposed contribution to the Symposium Coordinator.

Deadlines:

Receipt of titles and abstracts by **February 1, 1990**.

Notification of acceptance of the paper by **March 1, 1990**.

Full paper by **May 1, 1990**.

Publication:

A collection of papers presented at the Symposium is intended to be published in Springer-Verlag's Lecture Notes in Control and Information Sciences.

CALL FOR PAPERS. . .

The Journal Of Business Research announces a Call For Papers for a Special Issue devoted to the Applied Experimental Analysis of Consumer Or Buyer Choice Behavior. There has been considerable recent interest in the design and analysis of choice experiments to model and predict likely changes in consumer or buyer behavior resulting from strategic and/or tactical marketing actions taken by one or more competitors in particular product classes. Theory and practice related to the design and analysis of choice experiments to study or predict consumer or buyer choices in real markets could benefit from research that addresses the following kinds of questions:

* How can the external validity of choice experiments be defined and tested? How is external validity affected by various controllable and uncontrollable factors that are associated with choice experiments?

* How do models estimated from revealed marketplace choices compare with models estimated from choices observed in experimental settings? How should such comparisons be made?

* How do various methods of design and administration of choice experiments compare with respect to predictive validity, ease of design and field administration, realism of task relative to the corresponding marketplace behavior of interest, and ease of respondents' task?

* Is there a relationship between predictive validity and design complication? Do more sophisticated designs that permit one to estimate and test a wider range of specifications lead to high predictive validity?

* How can one design choice experiments that allow one to test competing choice process models under field conditions? Are models that are statistically superior in experimental tests also significantly superior in predicting corresponding behavior in the field?

* Are violations of simple choice process assumptions observed in aggregate choice behavior due to real violations of properties like IIA, or are they the result of aggregating over individuals with disparate evaluation and/or choice strategies? If one suspects that one's results are affected by aggregation bias, how can one test this, and what are the implications of the tests for developing improved models of choice?

* How can one accommodate repeated measures and serial correlation effects in the estimation of choice models from designed choice experiments?

* What methods should be used to segment respondents in choice experiments? Are there optimal ways to segment respondents in choice experiments to maximize criteria like predictive validity, behavioral differences that imply different marketing actions, etc?

CALL FOR PAPERS (CONT). . .

* How can one design and implement choice experiments in field settings that will allow one to understand and predict changes in choice behavior caused by the introduction of new products or innovations? What limitations do choice experiments face in predicting trial and repeat choices of new product concepts, line extensions, "new-to-the-world" products, etc.? Are there practical ways that one can design or implement choice experiments to maximize predictive ability to such problems?

* How can one design choice experiments that are optimally efficient or nearly so for estimating the parameters of particular choice models? How efficient are various classes of experimental designs already proposed, such as fractional factorial designs used to generate alternatives and the choices sets into which to place them, for estimating and testing different choice process models? Can one design choice experiments for practical applications that permit one to efficiently estimate and test alternative choice process specifications?

* How can one design practical experiments to model the way in which consumers and buyers form consideration (choice) sets? Can we use such models to improve our understanding and prediction of consumer and buyer choices in real markets?

We welcome papers that address any aspect of the above questions, or that present novel applications of choice experiments to problems in field settings. All submissions, including theoretical or methodological papers, should contain empirical illustrations, demonstrations or applications that involve nontrivial choice problems. Research involving populations other than university students is especially welcome.

Authors should follow Journal Of Business Research guidelines for submission of manuscripts published on the inside cover of the Journal. As a general rule manuscripts should be less than 20 pages in length, including tables, figures, diagrams, footnotes, references and abstract. However, we will consider papers of exceptional quality of slightly longer length, provided that they do not exceed 25 total pages. The deadline for receipt of papers is February 15, 1990. Papers should be submitted to the editor of the special issue:

Jordan J. Louviere
Professor of Marketing and Economic Analysis
Faculty of Business
University of Alberta
Edmonton, Alberta T6G 2R6
Canada
Office phone: (403)-492-5172; FAX: (403)_492-3325.

ARI RESEARCH FUNDING OPPORTUNITY

The Army Research Institute's Office of Basic Research will have funds available for new awards beginning in FY'90. New program priorities that may be of interest to JDM researchers include Group Functioning and Communicative Processes, Human Error Determinants, Stress-bound Behavior, and Human Chronopsychology. The core program will continue to support work in Naturalistic Decision Dynamics, Learning and Problem Solving, System Design, and Organizational Design and Effectiveness. Work supported by this program will lead to theory development, new fundamental knowledge, and new methods and approaches that eventually will improve Army effectiveness through training, aiding, and system design.

Multidisciplinary collaborations are encouraged. Both short-term innovative efforts as well as longer-term programmatic research will be supported. Some funds will be available for conferences and workshops. The competition is open to all universities, non-profit and for profit organizations. Proposals are encouraged from Historically-Black and Minority Institutions that traditionally have been underfunded.

The deadline for formal proposals is December 12, 1989.

For further information, see the August 23 issue of Commerce Business Daily, available in many libraries, or write for a copy of ARI's Broad Agency Announcement. You may also contact one of the program managers to discuss your research ideas.

Dr. Michael Kaplan, Director	(202) 274-8641
Dr. Judith Orasanu	(202) 274-5590
Dr. Michael Drillings	(202) 274-5572

U.S. Army Research Institute, PERI-BR, 5001 Eisenhower Avenue, Alexandria, VA 22333-5600.

POSITIONS AVAILABLE. . .

The University of Oregon

Behavioral Decision Making: Assistant Professor. The Institute for Cognitive and Decision Sciences. The appointee will hold a regular tenure-related appointment in the appropriate department, and be an associate of the Institute. PhD required. Substantive focus: Empirical study of human decision-making--e.g.: behavior under risk and uncertainty, collective decision-making, social choice, information processing. Send resume, three letters of recommendation, selected manuscripts, statement of professional and research objectives, and other relevant materials, by December 15th, 1989, to: John Orbell, Decision Science Search Committee, Political Science Department, University of Oregon, Eugene, Oregon 97403. AA/EEO.

Southern Illinois University at Carbondale

EXPERIMENTAL PSYCHOLOGIST - APPLIED EXPERIMENTAL. The Psychology Department of Southern Illinois University at Carbondale is seeking an Applied Experimental Psychologist with interests in the application of cognitive psychology to real world problems. The candidate must have a demonstrated ability to conduct research in applied settings and to extend basic cognitive theory and research to the solution of applied problems. Possible areas of application include but are not limited to human factors, human computer interaction, decision processes, or organizational processes. The individual would be expected to teach undergraduate courses in cognition, or industrial/organizational psychology, teach graduate courses in area of specialty, and will have major responsibility for supervising research consulting and contract activities carried out by graduate students. It is expected that the individual will develop an active, externally funded research program. This is a continuing (tenure track) position at the Assistant Professor level to begin August 16, 1990, and applicants are expected to have completed all requirements for the Ph.D. by this date. Applicants should send their vita and have three recommenders send letters of evaluation to Dr. Gordon Pitz, Department of Psychology, Southern Illinois University at Carbondale, Carbondale, IL 62901-6502. The closing date for applications is November 15, 1989 or until an acceptable candidate is found. Southern Illinois University at Carbondale is an Equal Opportunity/Affirmative Action Employer.

Applied Cognitive Psychologist

Research Associate position available with a small research and development company doing innovative work in applied cognitive psychology. Areas of research include individual and team decision making in military, corporate, and hospital settings. The company is entering its twelfth year of operations. The successful candidate will have a Ph.D., excellent writing ability, and an interest in designing and implementing research in field settings, including military command-and-control. The position offers the opportunity to work in a collegial atmosphere in a small college community located between Cincinnati and Columbus, Ohio. Salary is \$35,000-\$38,000. Send a Vita, current references and a statement summarizing research interests to:

Gary A. Klein, Ph.D.
Klein Associates Inc.
P.O. Box 264
Yellow Springs, OH 45387-0264

PSYCHONOMIC SOCIETY SESSIONS. . .

JUDGMENT/DECISION MAKING I

Continental Ballroom South, Saturday Afternoon, 1:00-3:20

Chaired by Thomas S. Wallsten,
University of North Carolina, Chapel Hill

1:00-1:15 (294)

Performance on Pull-down Menus: Effects of Organization, Location, and Strategy. KENT L. NORMAN, *University of Maryland*—Pull-down menus are used in many human/computer interfaces. To understand performance in such interfaces, subjects selected target items in different configurations and types of pull-down menus using a mouse. Items were either organized according to an array specifying column and row, an alphabetic grouping, or randomly. Response times increased with list position, but showed decreases for alphabetic grouping at the end anchors. Randomly organized menus revealed a systematic left-right, top-down search.

1:20-1:30 (295)

Solving a Word Puzzle Makes Subsequent Statements Containing the Word Seem More Valid. HAL R. ARKES, JANE GRADWOHL NASH, & CYNTHIA A. JOYNER, *Ohio University*—Two groups of subjects searched for eight target words buried within four 15 x 15 matrices of letters. All subjects then rated the validity of 16 statements, half of which contained target words from the prior puzzles. For each group, a different set of target puzzle words was used, thereby cuing a different subset of statements. Sentences were rated significantly more valid when they were cued by the prior puzzle word than when they were not cued.

1:35-1:55 (296)

Learning to Solve Complex Problems: Patterns of Stability and Change. DOUGLAS A. HERSHEY & DAVID A. WALSH, *University of Southern California* (read by David A. Walsh)—Three groups of problem solvers, varying in their background knowledge of financial planning, were required to solve six complex real-world investment problems. Performance patterns on the first problem were consistent with previous studies examining expert/novice differences. However, changes in subjects' information search behavior on subsequent trials call into question a number of established findings in the areas of expertise, problem solving, and skill acquisition.

2:00-2:20 (297)

A Contingent Process Model for Task Effects in Risky Decision Making. BARBARA A. MELLERS, SHI-JIE CHANG, *University of California, Berkeley*, & MICHAEL H. BIRNBAUM, *California State University, Fullerton*—Subjects were shown a set of gambles and (1) rated their attractiveness, (2) stated buying prices, and (3) gave the strength of their preference for one gamble over another. A contingent process theory will be presented to account for the results. According to this idea, the process by which subjects combine information depends on the task, but measures of utility and subjective probability remain constant.

2:25-2:45 (298)

Applications of Decision Field Theory to Decision Making Under Risk and Under Uncertainty. JEROME R. BUSEMEYER & JAMES T. TOWNSEND, *Purdue University*—Decision field theory is a cognitive, dynamic, stochastic theory of the *deliberation process* used by individuals to resolve conflict among competing courses of action. This theory is able to provide precise quantitative predictions for (1) the probability of choosing each course of action as a function of deliberation time, (2) the mean deliberation time needed to resolve a conflict, and (3) the frequency of vacillation preceding the final choice.

2:50-3:00 (299)

Interpretation of Probability Phrases in Win-Place-Show Horse Races. THOMAS E. NYGREN, *Ohio State University*—Subjects made bets and estimated probabilities (win-place-show) for 20 horse races in which the probabilities were stated as phrases. Results indicated that subjects gave smaller estimates for phrases when these phrases were associated with low base-rate events (win) than for higher base-rate events (place or show). Showing an explicit phrase associated with losing had no effect on amount bet but produced smaller estimates for probabilities of win, place, or show.

3:05-3:15 (300)

Fault Trees and Baseball: A Study of Expertise and Omission Effects. RICHARD D. JOHNSON, RICHARD D. RENNIE, & GARY L. WELLS, *University of Alberta* (sponsored by Gary L. Wells)—Previous research has shown that subjects underestimate the probabilities of omitted items in a fault tree. Expertise did not improve performance, possibly because the probability values required for the task are not available or relevant to experts in these domains. A baseball task was employed in this study because of the widespread use of probability information by baseball decision makers. As predicted, experts' probability estimates were accurate, irrespective of list length; whereas, novices underestimated omitted outcomes.

JUDGMENT/DECISION MAKING II

York/Stuart, Sunday Morning, 8:00-10:50

Chaired by Thomas E. Nygren, Ohio State University

8:00-8:20 (436)

Feature Visibility and Detectability in Medical Images. RICHARD G. SWENSSON, STEVEN E. SELTZER, PHILIP F. JUDY, RICHARD NAWFEL, & IVA KAZDA, *Harvard Medical School, Brigham and Women's Hospital*—Feature "visibility" in noisy images (detectability at specified locations) is predictable from "signal-to-noise ratio" calculations, but visibility need not determine a feature's detectability when its location is unknown. An experiment measured radiologists' ability to detect and locate dark or bright simulated lesions (of equal measured visibility) in cross-sectional images of the liver. Performance was much worse for the dark lesions, which could be confused with normal anatomic features on these images.

8:25-8:40 (437)

A Forced-Choice Paradigm for Comparing Medical Risk Taking for Different Victim Groups. IRWIN P. LEVIN & DANIEL P. CHAPMAN, *University of Iowa*—Kahneman and Tversky's "Asian disease task" was transformed into a forced-choice paradigm by providing two treatment options, each to be assigned to one of two victim groups. From prospect theory it was predicted—and confirmed in several experiments—that assignment of a risky versus riskless option to each group would depend on the subject's frame of reference and the difference in subjective "worth" of a life saved or a life lost between the two groups.

PSYCHONOMIC SOCIETY SESSIONS (CONT) . . .

8:45-9:05 (438)

Warning: Fleeting Counterfactual Thoughts Can Be Hazardous to Your Case. ELIZABETH F. LOFTUS, JANE GOODMAN, JOHN M. MIYAMOTO, & SUSAN RHODES, *University of Washington*—Mock jurors read long summaries of civil wrongful death cases and returned individual verdicts concerning liability and damage. Some jurors were told that the defendant had briefly thought about counterfactual alternatives in which the death would not have occurred. The fleeting thoughts were legally and causally irrelevant. Nevertheless, they hurt the defendant by increasing judgments of damages against him. The results reveal the power that available counterfactual alternatives can exert on legal judgments.

9:10-9:25 (439)

Cognition and Affect in Dynamic Decision Making. MARY OMODEI & ALEXANDER J. WEARING, *University of Melbourne* (read by Alexander J. Wearing)—What is the relationship between affect and cognition in dynamic decision making? A simulated fire-fighting task was written. After participants reached a stable performance level, rates of change were in the task systematically varied. At completion, the performance record was replayed, with the participants stopping it at will and recalling their thoughts and feelings. Multiple questionnaires were also administered. Implications of the performance and verbal report results for various relevant theories are discussed.

9:30-9:50 (440)

Maximization of Pleasure, The Answer to a Conflict of Motivations. MICHEL CABANAC, *Laval University*—Subjects were placed in a situation of conflict where the pleasure of playing a video game clashed with the increasing discomfort of a cold environment. The time lapse tolerated could be predicted from the algebraic sum of the rating of displeasure aroused by the cold environment and the rating of pleasure aroused by the video game, obtained in different sessions. This result permits the conclusion that pleasure is the common currency which allows tradeoffs among various motivations.

9:55-10:10 (441)

Value Biasing in Probability Judgment. J. FRANK YATES, LAURA G. COLE, *University of Michigan*, & WAYMOND RODGERS, *University of California, Irvine*—Previous results indicate that people tend to think that events they value positively are especially likely to occur, particularly when those events are subject to human influence. The present research demonstrates reliable value biases even for uninfluenceable events. It also documents reversed value biases (i.e., higher judgments for negative outcomes) when the pertinent events are rare. These results are argued to be consistent with judgment via availability heuristics and related mechanisms.

10:15-10:30 (442)

Deductive Reasoning Through the Life Span: Effects of Belief Bias. ALBERTA S. GILINSKY, *University of Bridgeport*—College graduates, 20-89 years old, judged the logical validity of conclusions for abstract and for concrete (emotionally toned and neutral) syllogisms and later responded whether they believed or disbelieved the factual truth of those conclusions. Logical performance was significantly better on those conclusions that were in accord than on those in conflict with personal beliefs. Logical errors increased with age on belief-biased arguments and correlated significantly with deficits in working memory.

10:35-10:45 (443)

Moral Thinking: Absolute Versus Relative Patterns. RICHARD S. CIMBALO & LISA SIMONDS, *Daemen College*—Fifty-six undergraduates and 73 alumni were used to study relative versus absolute thought patterns. Ten questions about popular moral themes (e.g., abortion) allowed for three choices: (1) completely up to the individual, (2) legal banning (both absolute), or (3) permissible in certain situations (relative). It was hypothesized that men would be more absolute and the alumni more relative thinkers (Perry, 1970). No sex differences were found. Developmentally, the alumni favor more individual choices.

JUDGMENT/DECISION MAKING III
York/Stuart, Sunday Morning, 11:00-1:00

Chaired by Alexander J. Wearing, *University of Melbourne*

11:00-11:20 (490)

Relevance Overrides Nearly Everything in Conjunction and Disjunction. SUSAN K. MANNING, *Hunter College and the Graduate Center of CUNY*, & HELENE SCHREIER, *Baruch College and the Graduate Center of CUNY*—In a within-subject design, relevance of choices to a situation was manipulated using four item types. Subjects made probabilistic judgments involving conjunction and disjunction. The primary heuristic appeared to be "maximize relevance, minimize irrelevance," with a secondary heuristic of "two things are more probable than one." Performance was poor due both to improper heuristics and to little understanding of differences between conjunction and disjunction. Minimal training did not generally teach appropriate heuristics.

11:25-11:40 (481)

Fuzzy-Trace Theory and Framing Effects in Choice. VALERIE F. REYNA, *University of Arizona*—Prior research indicated that fuzzy-trace theory can explain framing effects in choice. This paper dissects processing in classic framing problems. Specific gist-extraction processes include truncation, conversion, and dichotomization. The latter are derived on the basis of several simplicity metrics: information load (less is easier than more), linguistic markedness, and a hierarchy of gist. The implication of such results is that ostensibly numerical framing problems are solved using nonnumerical gist.

11:45-12:05 (482)

Comparing the Quality of Verbal and Numerical Judgments. THOMAS S. WALLSTEN, *University of North Carolina at Chapel Hill*, DAVID V. BUDESCU, *University of Haifa*, & RAMI ZWICK, *Pennsylvania State University*—Probability judgments generally indicate overconfidence, that is, people are too certain their evaluations are correct. On the assumption of a two-stage process, first evidence is accrued to form an opinion that is then translated into a response; others have studied how the processing of evidence affects the judgment. We asked about the contribution of the response scale, by comparing calibration and error measures for numerical and verbal judgments. Surprisingly, no differences emerged.

12:10-12:30 (483)

Heuristics in Generating Random Binary Numbers. MICHAEL KUBOVY, *University of Virginia*, & DAVID GILDEN, *Vanderbilt University*—One hundred twenty six subjects tried to simulate 240 coin tosses. We found that behavior is well approximated by a fifth-order Markov process, and that a small number of heuristics are used in generating responses. These heuristics include minimizing run length and imbalance of the two alternatives, and maximizing number of runs. Subjects did not avoid symmetric or repetitive patterns. This constitutes a specification of what Kahneman and Tversky have called the Law of Small Numbers.

12:35-12:55 (484)

A Generic Approach to Multiattribute Utility Analysis. JOHN M. MIYAMOTO, *University of Washington*—Generic utility theory is a framework for the investigation of multiattribute models of subjective value. Because its assumptions are weak, empirical and theoretical results developed within the generic utility framework can be interpreted from the standpoint of many theories including expected utility theory, prospect theory, and the dual bilinear model. An experimental study will be presented to illustrate the usefulness of the generic utility framework.

ANNUAL MEETING SOCIETY FOR JUDGMENT AND DECISION MAKING

November 19-20, 1989
Hyatt Regency Hotel
Atlanta, Georgia

PROGRAM

SUNDAY, NOVEMBER 19:

1:45-2:00 Opening Remarks

FRANK YATES, Program Chairperson, University of Michigan

2:00-3:15 *Invited Presentation:* "Who Uses the Normative Rules of Choice?"

RICHARD NISBETT, University of Michigan.

Introduction: DANIEL KAHNEMAN, University of California, Berkeley.

Discussant: RICHARD THALER, Cornell University

3:15-3:45 Coffee Break

3:45-5:15 *Symposium:* "Judgment, Decision Making, and Global Security"

Organized by DAVID HOLTGRAVE, University of Oklahoma.

"Presidential Decision Making," DONALD HORNIG, Harvard University

"Studying First-Strike Stability with Knowledge-Based Models of Human Decision Making," PAUL DAVIS, RAND Corporation

"The Cognitive Characteristics of Negotiators and the Structure of Negotiations," JERYL MUMPOWER, SUNY-Albany.

Discussants: ELKE WEBER, University of Chicago, and WILLIAM K. ESTES, Harvard University .

5:15-6:15 Business Meeting

6:15-8:15 Poster Session (33 Presentations),

Syllabus Exchange, and

Reception with Cash Bar (All Society members are invited to bring copies of their judgment and decision making course syllabi.)

PLEASE BRING THIS COPY OF THE PROGRAM TO THE MEETING

MONDAY, NOVEMBER 20:

8:00-8:30 Continental Breakfast

8:30-10:00 *Symposium: "Insurance Decision Making"*

Organized by **HOWARD KUNREUTHER**, University of Pennsylvania.

"The Psychology of Buying and Selling Insurance," **GARY McCLELLAND & WILLIAM SCHULZE**, University of Colorado

"The Psychology of Crop Insurance Decisions: Why Isn't Anyone Buying?" **JAMES SHANTEAU & IDA M.L. NGUI**, Kansas State University

"Ambiguity Matters: Insurance Pricing Decisions," **HOWARD KUNREUTHER**, University of Pennsylvania, & **ROBIN HOGARTH**, University of Chicago.

10:00-10:30 Coffee Break

10:30-11:45 *Invited Presentation: "Case-Based Reasoning for Understanding and Improving Human Judgment"*

JANET L. KOLODNER, Georgia Institute of Technology.

Introduction: **REID HASTIE**, University of Colorado.

11:45-1:00 Luncheon

1:00-2:00 *Chairperson's Address: "Social Dilemmas and Economic and Evolutionary Theory"*

ROBYN DAWES, Carnegie-Mellon University.

Introduction: **LOLA LOPES**, University of Wisconsin.

2:00-3:30 *Symposium: "Violations of Procedure Invariance: Compatibility Bias and Task-Contingent Strategies in Judgment and Choice"*

Organized by **GREGORY W. FISCHER**, Carnegie-Mellon University.

"Strategy Compatibility, Scale Compatibility, and the Prominence Effect," **GREGORY W. FISCHER**, Carnegie-Mellon University, & **SCOTT HAWKINS**, University of Chicago

"Heuristic Processes in Judgment: Effects of Compatibility and Information Load," **ERIC J. JOHNSON**, University of Pennsylvania, **JAMES R. BETTMAN**, Duke University, & **JOHN W. PAYNE**, Duke University

"Reversal of the Preference Reversal Phenomenon: Adaptive Strategy Selection in Bidding?" **JEFF T. CASEY**, SUNY-Stony Brook.

3:30 Adjournment

ORAL PRESENTATION ABSTRACTS

Invited Presentation: "Who Uses the Normative Rules of Choice?" RICHARD NISBETT

People can apply the cost-benefit rules of normative microeconomic theory to their everyday decisions. Two factors are associated with rule use: 1) formal training in the rules, and 2) career success. These results indicate that extremely-general rules govern choices across a wide range of domains and the use of the cost-benefit rules can be improved through training. They also broaden the normative foundation of cost-benefit theory.

Symposium: "Judgment, Decision Making, and Global Security"

Recently, Kenneth Hammond challenged members of the Society to bring to bear their knowledge of human cognitive processes on the all-important problem of international conflict. This symposium is devoted to the consideration of such applications. The symposium speakers bring a broad variety of experiences and perspectives to the topic, as do the discussants. One discussant teaches decision making in the arms control process, and the other serves on a National Academy of Sciences Committee focused on using the behavioral sciences to help prevent nuclear war.

Symposium Presentation 1: "Presidential Decision Making," DONALD HORNIG

Having served as Science Advisor to Presidents Kennedy and Johnson, Dr. Hornig has first-hand experience in White House decision making. This service has given him a unique perspective on both normative and descriptive aspects of political judgment and decision making. In this address, Dr. Hornig will share some of his experiences and thoughts on presidential decision making, especially as related to global security.

Symposium Presentation 2: "Studying First-Strike Stability with Knowledge-Based Models of Human Decision Making," PAUL K. DAVIS

It is argued that efforts to understand and improve first-strike stability should be guided by a formal theory of human decision making that accounts for behavioral factors such as mindset, desperation, fatalism, perceptions, and fears. A natural way to express and communicate such a formal theory is to develop knowledge-based simulation models with enough flexibility to represent a broad range of alternative human behaviors. Previous RAND work has produced experimental models of national-command-level decision making with what appears to be the necessary flexibility and understandability. This talk outlines an approach using the concepts and methods of that prior work to explore the issues of first-strike stability in some detail.

Symposium Presentation 3: "The Cognitive Characteristics of Negotiators and the Structure of Negotiations," JERYL MUMPOWER

The underlying structure of negotiation problems is defined by the cognitive characteristics of negotiators. This paper discussed how relatively slight differences in how negotiators evaluate the utility of potential settlements can result in efficient frontiers with distinctly different shapes. It also presents results showing how negotiators persistently engage in behaviors which tend to lead to systematically suboptimal agreements.

Symposium: "Insurance Decision Making"

Insurance decision making is a particularly fruitful area for research in judgment and decision making. The three papers presented in this session provide empirical data from the laboratory and the field on the types of biases and heuristics influencing the decisions to buy or sell insurance. The studies suggest that the concepts of probability are not very well understood (e.g., the gambler's fallacy exists) and that individuals are greatly affected by ambiguity and context in ways not predicted by standard models of choice. An open discussion will follow the three presentations, focussing on the implications of these findings for prescriptive analysis and the role of insurance as a policy instrument for dealing with low-probability, high-consequence events.

Symposium Presentation 1: "The Psychology of Buying and Selling Insurance," GARY McCLELLAND & WILLIAM SCHULZE

Our experiments in insurance buying and selling in market auction settings reveal a characteristic violation of subjective expected utility predictions. Namely, insurance bids for low probabilities and for offers to sell insurance at any probability have a distinctly bimodal distribution. A maximin rule applied to losses usefully models these data. The appropriateness of the model is especially highlighted when comparing bidding behavior for insurance against losses to bidding behavior for purchases of positive lotteries with comparable probabilities and dollar amounts.

Symposium Presentation 2: "Ambiguity Matters: Insurance Pricing Decisions," HOWARD KUNREUTHER & ROBIN HOGARTH

This presentation reports on the findings of a recent survey of U.S. underwriters on their pricing decisions. Each of the underwriters was presented with a set of scenarios which varied the levels of knowledge concerning probabilities and losses for different types of coverage. Ambiguity in either probability estimates and/or loss estimates led underwriters to charge a considerably higher premium than for the case where there were precise estimates of these two parameters. Underwriters appear to be influenced in their premium setting process by the type of coverage (e.g., earthquake, hazardous waste) independently of the magnitude of the probability and loss.

Symposium Presentation 3: "The Psychology of Crop Insurance Decisions: Why Isn't Anyone Buying?" JAMES SHANTEAU & IDA M. L. NGUI

The purpose of this presentation is to describe research on perceived risk in crop insurance decisions. The results of several studies reveal that (1) for natural hazards, such as floods or droughts, there is a consistent tendency to underestimate the chances of a reoccurrence--the gambler's fallacy, (2) man-made events (an accidental flood) are viewed as more likely to reoccur--the opposite of the gambler's fallacy, and (3) willingness to buy insurance is unaffected by preceding events. Thus, once a low-probability natural event occurs, people feel "inoculated" against a repetition.

Invited Presentation: "Case-Based Reasoning for Understanding and Improving Human Judgment," JANET L. KOLODNER

Case-based reasoners solve problems by adapting old solutions to new problems. They understand new situations by comparing and contrasting them to old similar situations. Both experts and novices have been observed using case-based reasoning for problem solving and understanding, especially in ill-understood situations. Several computer programs have been written that implement case-based reasoning processes. We first present an overview of case-based reasoning and then discuss what it tells us about human decision making. We close by proposing a set of case-based tools to teach and aid decision making.

Chairperson's Address: "Social Dilemmas and Economic and Evolutionary Theory," ROBYN DAWES

Social dilemmas are collective situations in which egoistic incentives yield individually dominating strategies that converge on deficient equilibria -- that is, on outcomes that are less preferred by the chooser than are alternative outcomes (e.g., the 2-person Prisoner's Dilemma). The wide-spread existence of such situations in contexts of interacting individuals provides normative and descriptive challenges to both classical (Western) economic/political theory and to evolutionary theory based on sociobiological assumptions. The standard response to these challenges has been to postulate side-payments that make otherwise dominating strategies in social dilemma situations no longer dominating. This presentation describes a theoretical analysis of this response as well as experiments bearing on the issue.

Symposium: "Violations of Procedure Invariance: Compatibility Bias and Task-Contingent Strategies in Judgment and Choice"

The procedure invariance principle holds that preferences should not differ across strategically equivalent response modes. Two violations of this fundamental normative principle are well-known: the choice vs. bidding preference reversal in risky choice and the choice vs. matching preference reversal in riskless choice. The papers presented provide evidence of new violations of procedure invariance and also test compatibility bias and contingent strategies explanations of why procedure invariance fails.

Symposium Presentation 1: "Strategy Compatibility, Scale Compatibility, and the Prominence Effect," GREGORY W. FISCHER & SCOTT HAWKINS

We examine Tversky, Sattath, and Slovic's (1988) compatibility explanation of the prominence effect by studying a broader range of response tasks: not only choice and matching, but also minimum selling price, rating scale, strength of preference, and difference comparison judgments. We also extend their work by testing the prominence effect with four-attribute alternatives. Finally, we use information acquisition and response time data to evaluate a contingent strategies explanation of the prominence bias.

Symposium Presentation 2: "Heuristic Processes in Judgment: Effects of Compatibility and Information Load," ERIC J. JOHNSON, JAMES R. BETTMAN, & JOHN W. PAYNE

In a judgment task, we examine how decision makers change strategies when faced with (1) changes in the compatibility between attributes and the response scale, and (2) changes in the number of attributes which describe the options. We present two studies which used process analysis to examine strategy changes caused by these manipulations, and examine how these strategy changes affected the resulting judgments. Specifically, we examine compatibility effects (Tversky, Sattath, & Slovic, 1988), and hypothesize that specific process mechanisms, in particular, anchoring and insufficient adjustment, may mediate these effects.

Symposium Presentation 3: "Reversal of the Preference Reversal Phenomenon: Adaptive Strategy Selection in Bidding?" JEFF T. CASEY

When bids are maximum buying prices and bets have large (\$100) expected values and minimum payoffs of \$0, the widely-replicated preference reversal phenomenon gives way to an opposite reversal pattern - the "safe" bet receives a higher bid even when the "long-shot" is chosen. The proposed explanation involves contingent selection of compatibility- or aspiration-based strategies in bidding. Task variables and alternative ways of framing the buying task that seem to affect strategies and reversals are discussed.

POSTER PRESENTATION TITLES, AUTHORS, AND ABSTRACTS

Presentation 1: "Apparency: Guiding Sequential Decision Making by Revealing Inherent Contingencies," KENT L. NORMAN & SCOTT A. BUTLER, University of Maryland

The effect of making apparent decision contingencies in a control system was investigated using computer menu selection. Thirty-two students were asked to perform functions that required three prior decisions. The system contained hierarchical constraints that dictated the appropriateness of 256 possible decision paths to four target functions. Showing all paths without contingencies provided no help. However, two guidance systems that revealed possible paths based on backtracking from the target cut the search in half.

Presentation 2: "Distinguishing Adding and Averaging Models When Interdimensional Correlations Vary," CAROLYN M. JAGACINSKI, Purdue University

A popular method of distinguishing adding and averaging models compares ratings of entities described by two dimensions to ratings when only one dimension is presented. The validity of this technique is questionable since evaluators often predict the missing dimension (based on the interdimensional correlation) rather than weighting it zero. Two experiments investigating methods of distinguishing these models found additive models with a negative interdimensional correlation, averaging models for a positive correlation and inconsistent results for zero correlation.

Presentation 3: "What's New in Nonmetric Multiple-Cue Probability Learning,"
STEPHEN E. EDGELL & RANDY D. BRIGHT, University of Louisville

Subjects' lag one recall of stimuli, that were previously found to have differential salience in nonmetric multiple-cue probability learning, showed a monotonic relationship between memory errors and utilization in the probability learning studies. This gives a possible explanation for the previously found saliency effects. Another study found higher (but not significantly) utilization of configural information when the relevant dimension was within the relevant pattern rather than outside it as was predicted by a recent theory.

Presentation 4: "Lens Model Analysis of Hemodynamic Status in the Critically Ill,"
THEODORE SPEROFF, ALFRED F. CONNORS, JR., & NEAL V. DAWSON, Case Western Reserve University

The lens model recently has been extended to consider multiple outcomes and sequential use of clinical information. We have used this extended model a) to describe the relationship between clinical information and physicians' assessment of hemodynamic status, b) to describe the empirical relationship between clinical information and physiologic measures of hemodynamic status, and c) to compare physicians' use of information with its empirical utility. The lens model describes limitations of physician judgment and helps explain how patient features relate to measured hemodynamic status.

Presentation 5: "Maximizing Judgment Accuracy vs. Maximizing Performance,"
REBECCA HENRY, Purdue University, & JANET A. SNIEZEK, University of Illinois at Urbana-Champaign

Three factors hypothesized to affect the degree of overestimation in judgments of future performance, and confidence in those judgments were studied. Individuals overestimated their performance levels the least, and were least confident, when perceived internal control was low and when no monetary rewards were involved. Public disclosure of the judgments had no effect. These results are discussed in terms of the dilemma of choosing between maximizing judgment accuracy vs. maximizing performance.

Presentation 6: "Out of Pocket versus Opportunity Costs: Framing Effects and Sunk Costs,"
HOLLY A. SCHROTH & DAVID M. MESSICK, University of California, Santa Barbara

Three experiments are reported in which subjects read scenarios about sunk costs. The sunk costs manipulated are either out of pocket costs or opportunity costs (foregone gains), compared to no sunk costs. The nature of the competing incentive provided to forfeit the sunk cost was also manipulated; in some cases, additional direct costs would have had to be paid to honor the sunk cost, while in other cases a monetary incentive was provided to abandon the sunk cost. With direct competing cost incentives, the sunk opportunity cost was comparable to the no sunk cost condition, but with positive incentives to relinquish the sunk cost, the sunk opportunity cost was similar to the sunk out of pocket cost. The findings are interpreted in terms of the different types of evaluative processes that are evoked by the different competing incentives.

Presentation 7: "Order and Framing Effects in Decision Making,"
DEBORAH FRISCH & SCOTT SHANNON, University of Oregon

Sixteen pairs of framing effects were presented to subjects. The two members of each pair were presented sequentially so that order effects could be examined. Three types of order effects were found: "dominant frame" effects, in which one version of the problem influenced the second version, but not vice versa, anchoring effects, and contrast effects. These results provide insight into which way of framing a decision is most natural to subjects.

Presentation 8: "Risk Aversion and the St. Petersburg Game,"
J. CARLOS RIVERO, New York University, & DAVID HOLTGRAVE, Harvard School of Public Health

Samuelson (1977) has proposed that risk averse buyers and sellers of the St. Petersburg game would never agree on a fair market price for the gamble. However, our study demonstrates that subjects, who otherwise obey prospect theory, fix St. Petersburg game buying and selling prices that are not significantly different. We are left to ponder: are these subjects not risk averse, or can a St. Petersburg market exist for risk averse subjects?

Presentation 9: "Beyond Prospect Theory: Time and the Valuation of Outcomes,"
MARYANNE M. MOWEN & JOHN C. MOWEN, Oklahoma State University

A mathematical model of time and the valuation of outcomes was developed and used to derive a wide variety of decision phenomena: including individual effects, sunk costs, and procrastination. Based upon concepts from approach-avoidance conflict theory (Miller, 1959), the model proposes that the prospect theory hypothetical value function changes as individuals consider outcomes that have occurred in the past, are about to happen in the present, or will occur in the future.

Presentation 10: "Conformity and Confidence: A New Perspective," **ORLANDO OLIVARES, New Mexico Highlands University, & WAYNE POWELL, Gonzaga University**

The conformity/confidence relationship has been part of psychological research for over thirty years. The general finding is an inverse relationship between conformity and confidence. In the conformity/confidence literature, confidence has always been measured as an amount. Measuring the amount of confidence is only one aspect; or dimension, of confidence; therefore, the relationship between conformity and confidence has been examined only in a limited sense. This paper introduces the concept of accuracy of confidence as well as the amount of confidence. This study, using predominantly Hispanic subjects, found no relationship between conformity and amount of confidence, or conformity and calibration. There was a pervasive finding of overconfidence, and males were significantly more confident, and more inaccurate in their assessment of confidence, than females.

Presentation 11: "Improving Group Judgment Calibration: Increasing Disagreement and Reducing Certainty," **JANET A. SNIEZEK, Cornell University, & PAUL W. PAESE, University of Missouri, St. Louis**

In this experiment, subjects first made judgments individually and then made the same judgments collectively in three-person groups. During the individual judgment stage, various anchoring manipulations were used to influence the amount of agreement in members' judgments prior to the group meeting. Results indicated that as disagreement among members' individual judgments increased, calibration in group judgment improved significantly. Group calibration was also positively related to the amount of explicit consideration given to individual judgments during the group judgment stage.

Presentation 12: "Framing, Group Decision Making, and Group Processes," **R. SCOTT TINDALE & SUSAN SHEFFEY, Loyola University**

Subjects had their initial frames of reference concerning a decision problem (Asian Disease problem, Tversky and Kahneman, 1981) manipulated in order to compose 4-person groups containing members with different frames of reference. Three different group compositions (number of members with gain-oriented vs. loss-oriented-frames) were used: 3 gain-oriented and 1 loss-oriented, 2 gain-oriented and 2 loss-oriented, and 1 gain-oriented and 3 loss-oriented. Results indicated a post-group discussion choice shift toward the risky alternative in the 2-2 and the 1-3 composition conditions. However, changes in members' frames of reference were unrelated to the preference changes. Group composition also affected group decision processes. Implications for theory in small group decision making are discussed.

Presentation 13: "The Role of Feedback and Experience on Negotiator Behavior,"
LEIGH THOMPSON, University of Washington

The effect of feedback on negotiation behavior was examined. Participants engaged in four integrative bargaining tasks. One-third received full feedback regarding the other party's interests following each negotiation; one-third received partial feedback; one-third did not receive feedback. The prediction was that negotiators not provided with feedback would make erroneous judgments about the other party and reach suboptimal outcomes; negotiators provided with feedback would make accurate judgments of the other party and achieve higher outcomes. Results generally supported the predictions.

Presentation 14: "Practical Intelligence Training, Audio-Feedback, and Managerial Success in Judgment/Decision Making," MILTON TAYLOR, International Behavioral Medical Center, & NAOMI KAMEI, Princeton University

This study evaluated the value of practical intelligence training as an educational technique. Training and presentation of audiofeedback were manipulated. A nonequivalent comparison group of executives represented a condition of no training, nor feedback. Business students were randomly assigned to a treatment group or delayed treatment group, representative of when feedback was presented to supplement training. Dependent variables were: number of problems solved, number of problems attempted, and thinking style rigidity. Delayed treatment subjects were more rigid than comparison subjects. Furthermore early treatment subjects were less rigid than delayed treatment subjects. Subjects' thinking style was not correlated with problem solving behaviors. Suggestions were made for improving practical intelligence research. An implication of the results was that providing delayed feedback makes subjects more rigid in their thinking style.

Presentation 15: "The Advisor-Judge Relationship: Social Influence in Decision Making," JANET A. SNIEZEK, University of Illinois at Urbana-Champaign, & TIMOTHY BUCKLEY, Cornell University

The quality of decision made by a judge after consultation with two advisers is investigated under varying conditions of information availability and processing on the part of the judge. The best decisions were made by judges who formed tentative opinions prior to receiving advice. However, judges were not confident about their choices when only their advisers, and not they, could bring expertise to the decision task. Further directions for theory and research on social decision making under uncertainty are suggested.

Presentation 16: "The Effects of Activity Level on Decision Strategies in Young Children," A. B. MILLER & A. C. BROBECK, Delaware State College

This study examines the impact of differing activity levels on the decision strategies of children between 3 and 5 years of age while they were engaged in a yes-no signal detection task. The results demonstrate the ability of children in this age range to utilize complex decision strategies in making probability judgments and the negative relationship between performance efficiency and activity level in a task requiring effective use of memory and attention.

Presentation 17: "Judgment in Motivation: Some Aspects of the Judgment-Behavior Link," FRED SWITZER, Clemson University

Earlier research (Switzer & Sniezek, 1988) found that judgments of contingent relations between motivation and expected performance were consistent with the operation of an anchoring and adjustment heuristic and its attendant biases (e.g., insufficient adjustment, use of irrelevant anchors, etc.). However, there were no concomitant effects on behavior. The present studies were designed to examine the link between judgment and behavior, including possible mediators of that relation.

Presentation 18: "Resource-allocation behavior under certainty, risk and uncertainty," HARVEY LANGHOLTZ & CHARLES F. GETTYS, University of Oklahoma

Resource-allocation behavior was studied in a simulated Coast Guard planning task under conditions of certainty, risk, and uncertainty which can be modeled using LP. Subjects in the certainty and risk conditions achieved over 90% of the payoff of an optimal allocation policy, while subjects in the uncertainty condition did noticeably worse. Subjects usually did not expend all of their resources, and tended to use more of their resources in the early stages of their mission.

Presentation 19: "A Study on Human Control in Stock-Adjustment Tasks," ERNST W. DIEHL & JOHN D. STERMAN, Massachusetts Institute of Technology

Decision rules are likely to vary with respect to the feedback structure of the task to be solved. In a computer-assisted laboratory study we investigated how subjects solve the same dynamic stock-adjustment task under different feedback characteristics. The feedback structure was varied along two dimensions: strength of feedback and delay of feedback.

Presentation 20: "Decisions About Retirement Planning: Influences of Prior Knowledge on Decision Quality," **DOUGLAS A. HERSHEY & DAVID A. WALSH**, University of Southern California

Three groups of decision makers, varying in their knowledge of financial planning, were required to make six complex investment decisions. In each of the six cases, subjects decided whether hypothetical individuals should (a) invest in a supplementary retirement savings plan, and, in cases where the investment was recommended, (b) determine how much income should be contributed. Analyses focus on deviations from optimality as a function of group membership, and the extent to which deviations correlate with self perceptions of decision quality.

Presentation 21: "Evaluating Money: Temporal Influences on Context," **TERRY L. BOLES & DAVID M. MESSICK**, University of California, Santa Barbara

The idea that a stimulus may evoke its own norms or context (Kahneman & Miller, 1986), was investigated in two experiments using a social context. Subjects unexpectedly received a dollar as payment for their participation. However, it was an unfair allocation that was supposedly made by another subject who had \$6 to divide between the two. Of interest was whether subjects would keep the unfair allocation or refuse it, thereby preventing the "other" subject from receiving any money either. An evaluative context that focuses only on the money should induce subjects to keep the dollar since one dollar is preferred to nothing, all else equal. A context that focuses on fairness, however, could lead subjects to reject the dollar since it falls below the \$3 that an equal division would allocate. Varied, in these experiments, was whether subjects received the dollar before, at the time, or after they received information about the allocation procedure. We found that temporal order, that is, receiving the dollar first, was successful in making subjects focus more on the money context, therefore keeping the money more often than when the focus was on the procedure first. The second experiment, which asked for judgments of the importance of different evaluative dimensions, suggests that the weights associated with the choice dimensions may be constructed after the decisions are made, not before.

Presentation 22: "The Effect of Emotional Involvement on WTA/WTP and Choice/Matching Differences," **JULIE R. IRWIN & GARY H. McCLELLAND**, University of Colorado

Three studies were designed to test whether environmental issues, which often induce a great deal of emotion, would produce greater choice/matching and WTA/WTP differences than would everyday commodities. In this first study, subjects were given 10 trades, 5 of which involved environmental conditions and 5 of which involved everyday commodities. For example, an environmental trade might involve trading dirtier air for cleaner air; a commodity trade might involve trading a 3-speed bicycle for a 10-speed bicycle. Subjects either ranked the 10 trades or gave monetary values for the trades. Also, the trades were framed in terms of WTP-gain (e.g., the most they would be willing to pay to trade up to the nicer bicycle) or WTA-loss (e.g., the most they would be willing to accept to trade down to the less nice bicycle). For both ranks and monetary values, the within-subject difference between the environmental trade values and the commodity trade values was significantly greater for the WTA condition than for the WTP condition (see graph below). There was no difference in ranks due to the rank/monetary value variable. These findings indicate that commodities inducing higher emotional involvement will show greater WTA/WTP differences. Current research includes an addition of WTP-gain and WTA-loss cells, as well as more specific tests for choice vs. matching differences due to emotional involvement.

Presentation 23: "Factors Affecting Tradeoff Difficulty," **JANE BEATTIE**, University of Chicago

We investigated why some attributes ("lives" and "money") are perceived as more difficult to trade off than others (e.g., "time" and "money"). Subjects rated each of 80 different tradeoffs for its difficulty, then rated it on 12 other features that were hypothesized to influence tradeoff difficulty (e.g., similarity and importance of alternatives). For most subjects, rating of difficulty could be successfully predicted from the ratings on the other features. Six factors were particularly useful predictors.

Presentation 24: "Multiattribute Decision Making Under Uncertainty," LINDA S. G. HYNAN, University of Illinois at Urbana-Champaign, & ELKE U. WEBER, University of Chicago

Present work in multiattribute decision making has been concerned with decisions made in contexts where alternatives and dimensions are presented as certain outcomes (e.g., selection of apartments). However, most real-life problem situations have alternatives with dimensions at probability levels different than 100%. An application of decision making in an uncertain context was presented to subjects using process tracing techniques. It was found that, as the number of dimensions and alternatives increased, processing became more dimensional.

Presentation 25: "Judging Recession: Are Professional Economic Forecasters Calibrated and Well-Resolved?" ILAN YANIV & PHILLIP A. BRAUN, University of Chicago

We analyzed judgmental forecasts (probability range 0 - 1.0) of negative economic growth made by 105 US firms from 1968 to 1988, quarterly. Short-term forecasts (current and one quarter ahead) were modestly calibrated; long-term forecasts (2-, 3-, 4 quarters ahead) were overconfident. The resolution and slope indices sharply declined as the forecast horizon increased. The "consensus" forecaster (group mean) outperformed most individual forecasters on all measures, and, also, "naive" benchmark tests.

Presentation 26: "Automaticity and Similarity in Judgment," KEVIN BIOLSI & EDWARD SMITH, University of Michigan

Tversky and Kahneman (1983) have posited computation of similarity as a type of natural assessment. If "natural assessment" can be equated with "automatic process," then similarity judgments should exhibit the properties of more classical automatic processes (see Stroop, 1935). In particular, we find that, when pitted against less natural probability-based computations, similarity assessments lead to interference (as measured by response times and error rates) when these assessments conflict with the probability-based response and facilitation when the two agree.

Presentation 27: "Cultural Differences in Decision Making," ROBERT BONTEMPO, University of Illinois

Yates et al. (1989) report calibration scores for subjects from Japan, the U.S., and the PRC. Wright and Phillips (1980) present calibration scores for subjects from Great Britain, Hong Kong, and Malaysia. These data are re-analyzed and correlated with a measure of cultural variation known as Uncertainty Avoidance, described by Hofstede (1980). 62% of the variance in cultural differences in calibration rates can be explained by cultural differences in Uncertainty Avoidance.

Presentation 28: "Diagnosticity of Evidence and Judgments of Guilt," LORI R. VAN WALLENDael, University of North Carolina-Charlotte

Subjects judged the guilt or innocence of accused criminals. For some decisions, all available evidence was highly diagnostic (e.g., "The criminal is almost certainly left-handed" - a trait which would be shared by few innocent persons), while for others, information was less diagnostic ("almost certainly right-handed"). Subjects requested as much information as they wished before passing judgment. Subjects exhibited greater confidence in decisions made with highly diagnostic information; however, the amount of information requested was NOT related to diagnosticity.

Presentation 29: "Motivational and Cognitive Effects in Hindsight Bias," TERRY CONNOLLY & ED BUKSZAR, University of Arizona

Hindsight bias is consistent with either motivational or cognitive explanations, the former stressing self-flattering assessments of one's predictive ability, the latter emphasizing more automatic information-processing limits. We report two experiments which, with other evidence, suggest that cognitive mechanisms predominate, and sketch implications for effective remedial strategies.

J/DM Society Meeting

November 19-20, 1989

Page 11

Presentation 30: "The Over-Under Confidence Paradox: High PI's but Poor Unlucky Me," JANET A. SNIEZEK, University of Illinois at Urbana-Champaign, & FRED S. SWITZER III, Clemson University

Research by Sniezek and colleagues has shown that people are more confident about each judgment or choice item than they are about the same items collectively. This study tests predictions from a dual-process model of confidence assessment in an attempt to explain this discrepancy. On item assessments, subjects were "overconfident," but overall they (a) under-estimated accuracy scores, (b) rated their task knowledge and confidence low, and (c) predicted poorer-than-chance performance.

Presentation 31: "Intentions, Decisions, and the Appropriateness of Confidence in Knowledge," PAUL W. PAESE & MICHAEL A. FEUER, University of Missouri-St. Louis

This research examines the appropriateness of confidence (i.e., subjective probability judgments) in knowledge that serves as the basis for voting intentions and voting decisions in the 1988 presidential election. Results indicated that, in comparison to knowledge that had no bearing on voting intentions or decisions, intention-relevant and decision-relevant knowledge was characterized by greater accuracy and worse calibration. In addition, actual voters were significantly more accurate and better calibrated than those who did not intend to vote. Implications of inappropriate confidence on decision making effectiveness are discussed.

Presentation 32: "Inverse Value-Induced Bias and Physicians' Judgments for Bacteremia," ROY M. POSES, Medical College of Virginia

We performed an observational study looking for value-induced bias affecting physicians' judgments of the probability of blood infections for 227 actual patients. The estimates had a negative correlation with the log of the computed doctors' assessments of the relative risk of death from bacteremia for each patient ($R = -0.244$, $p < 0.001$), persisting in multiple regression analyses to correct for confounding (coefficient = -3.1 , $p = 0.02$). Physicians considered bacteremia less likely for patients most at risk of its consequences, suggesting an inverse value-induced bias.

Presentation 33: "Probability Score Decompositions as Complements or Alternatives to ROC Analyses," J. FRANK YATES, University of Michigan, ILAN YANIV, University of Chicago, JU-WHEI LEE, & J.E. KEITH SMITH, University of Michigan

ROC analyses are commonly used to analyze the accuracy of rating scale judgments, with an emphasis on discrimination skill. This paper proposes that ratings be reported as probability judgments and that those judgments be analyzed using probability score decompositions as well as ROC methods. The appeal of this approach is supported by newly demonstrated properties of decomposition statistics and by empirical data suggesting that those statistics do not lose important ROC information.

PROGRAM COMMITTEE:

REID HASTIE, University of Colorado,
THOMAS WALLSTEN, University of North Carolina,
FRANK YATES, University of Michigan

Cambridge University Press Announces New Series

Cambridge University Press is pleased to announce that it will publish a series of edited books that will apply research findings in judgment and decision making to a wide variety of substantive disciplines, such as law, interpersonal conflict, medicine, psychology, etc. Ken Hammond, Jim Shanteau, and John Carroll—who comprise the Publications Committee—have already received 10 specific proposals for books for the series, and they welcome other ideas from members of the J/DM Society. Cambridge University Press expects that the series will attract academic and professional readers from a number of different disciplines, largely at the upper division and graduate student levels. The series will fit in with CUP's other anthologies in the area, such as *Judgment and Decision Making*, edited by Arkes and Hammond, and *Judgment Under Uncertainty: Heuristics and Biases*, edited by Kahneman, Slovic, and Tversky.

If J/DM Society members would like to discuss ideas with the Publications Committee they can contact Hammond, Carroll, or Shanteau individually, or write to Cambridge's in-house editor for the series: Julia Hough, Cambridge University Press, 40 W. 20th St., New York, NY 10011; 212-924-3239; email Cambridge@NYUACF.bitnet. The Publications Committee will also consider single-authored titles for the series. All royalties for edited books will go to the J/DM Society, as per the agreement recently reached with the publisher. J/DM Society members will receive a 20% discount off the list price of books in the series.

Julia Hough
Behavioral Science Editor
Cambridge University Press