JUDGMENT / DECISION MAKING

newsletter

The success of the J/DM Newsletter depends upon you. In order to have a useful publication, we are dependent upon submissions from you for inclusion in the newsletter. We are willing to publish a large variety of notices. Although many of you have sent materials which we have included, the following topics are of general interest and contributions would be welcome.

We would like to have summaries or synopses of the decision making aides and materials available through computer-based information systems...   If you attend a professional meeting, or conference which features decision making presentations, we would like to receive a brief summary... If you know of outstanding examples of applications of Judgment and decision research which could be featured in a short article, please send a very brief abstract -- or better yet -- submit a one or two page description...

The announcement in the last J/DM Newsletter about book reviews resulted in positive response. We have received several books for review. However, the number of volunteers to review was very small. Many of you must be reading new books. Perhaps as you read one, you would be willing to provide a brief review. If so, either call or write so that we know what you are willing to do.   If you are willing to write a short review of recent books, drop me a note indicating the particular areas in which you are willing to review.

Finally, if you have any suggestions for improving the J/DM Newsletter, please let me know. The deadline for receipt of material for the next newsletter will be September 15, 1982.

J/DM CONFERENCE SET FOR NOV. 13-14

The 3rd Judgment and Decision Conference will be held in Minneapolis on November 13-14 1982. The meeting will be held at the conclusion of the Psychonomic Society Meeting.

Registration and other information will be published in the next J/DM Newsletter. Plan to attend!

INSIDE THE NEWSLETTER...

Editor: Addresses & Corrections:

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FROM THE EDITOR...

The J/DM Newsletter welcomes submissions from individuals and groups. However, we do not publish substantive papers. See Page 1 for an announcement concerning book reviews.

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 8 1/2 by 11 paper. Please leave good margins--1 inch at the sides and bottom and 2 inches at the top. If possible use a carbon or film ribbon. Please mail flat--do not fold.

Subscriptions: The current rate for the J/DM Newsletter is $2.00/year. This should cover the cost of about 4 issues. We are dedicated to keeping the cost at a minimum, but must emphasize that recent increases in postage rates will cause problems unless as many readers as possible pay. Please send your subscription to the editor. If you do not know whether or not you have paid for your subscription, check your mailing label. If it has an X, you have not paid for your subscription.   Checks should be made payable to the Indiana University Foundation.

Foreign Subscriptions: The cost of foreign subscriptions is necessarily higher than domestic subscriptions. Copies will be sent airmail to foreign addresses for $5.00 (U. S.) per year.

Address Correction: Please check your mailing label. Because the J/DM Newsletter is sent by bulk mail, copies with incorrect addresses or otherwise undeliverable are neither forwarded nor returned. Therefore we have no way of knowing if copies are received. Any changes (or errors) in addresses should be reported to Gary McClelland.

Mailing Labels: Some readers may wish to send reprint lists or other material to people listed in the directory. Gary McClelland has agreed to provide sets of mailing labels for $5.00 to individuals employed by non-profit institutions.

NEW BOOKS...

Brams, S. J. <u>Biblical Games: A Strategic Analysis of Stories in the Old Testament</u>. Cambridge (MA): MIT Press, 1980. ISBN: 0-262-02144-7 (hard), 0-262-52074-5 (paper)

Elementary tools from the theory of games are used to elucidate the rational calculations of biblical players and show precisely the manner in which they sought to achieve their most preferred outcomes. On the basis of story-by-story strategic analyses, a detailed assessment of God's character and motivations is offered at the end, with reasons given for His frequently wrathful behavior.

Bursztajn, H., Feinbloom, R. I., Hamm, R. M., and Brodsky, A. <u>Medical Choices, Medical Chances: How Patients, Families, and Physicians Can Cope with Uncertainty</u>. New York: Delacorte Press/Seymour Lawrence, 1981. ISBN: 0-440-05750-7, $14.95.

Every medical decision is a gamble. The stakes are high. With no absolute guarantee of cure or comfort, doctors put their reputation and expertise on the line, patients put well-being and even life on the line. The authors of this pioneering book show that to work together effectively both doctor and patient must acknowledge that they are gambling and not perpetuate the illusion of total certainty.

                                             ...from the jacket

Hogarth, R. M., (Editor) <u>Question Framing and Response Consistency</u>. San Francisco: Jossey-Bass, 1982. ISBN: 87589-911-0. $7.95 (paper)

It is well known that people often respond inconsistently to the same question asked at different times and that alternative forms of semantically identical quesitons can induce systematically different responses. Less well known, however, are the conditions under which inconsistencies and distortions occur.

                                    ...from the Editor's notes

Kleiter, G. D. <u>Bayes Statistik: Grundlagen und Anwendungen</u>. Berlin: de Gruyter, 1981. (German) ISBN: 3-11-008273-X

Kmientowicz, Z. W. and Pearman, A. D. <u>Decision Theory and Incomplete Knowledge</u>. Aldershot (England): Gower Publishing Co., 1981. $31.00.

The book develops an approach to decision-making suitable for circumstances intermediate between the conventional extremes of pure risk and pure uncertainty. Practical rules of actions are derived for decision-makers facing an uncertain environment, and which do not require an unrealistic amount of information about the probabilities of future states of nature. The theory is general with potential application in any situation where systematic decision-making in uncertain conditions is involved. The environment assumed by the theory is similar to that met by decision-makers in management, business, finance, social choice, politics, transport, etc. Applications of the theory are discussed in the penultimate chapter of the book to illustrate the usefulness and versatility of the new approach.

BRIEF REPORT...

Large-Scale Application of Information Integration Theory: Rating Demand for New Television services in Australia

Kent L. Norman
University of Maryland and IMG Consultants, Sydney Australia

An information integration task was presented to decision makers in 1102 households in 5 television markets in Australia as part of a major study on new television services conducted by IMG Consultants for the Australian Broadcasting Tribunal. Respondents were given five pieces of information about the new services and their costs and then rated the attractiveness of subscribing to each service on a 9-point scale. The five attributes were

- Type of Carrier: Radiated Subscription Television (RSTV) or Cable Television (CTV)
- Number of Pay Channels: 0, 1, 3, or 4
- Two-Way (Interactive) Service: Present or Absent
- Service Connection Fee: Free, $50, $100, or $150
- Monthly Cost: Free, $20, $40, or $60

Sixteen scenarios of new services were generated using an efficient fractional factorial design. A multilinear information integration model incorporating the linear and, if applicable, quadratic component of each main effect as well as four linear by linear interaction components was fit to the 16 data points for each individual. Among the more policy-relevant results were the following:

- CTV is valued more highly that RSTV.
- Adding more pay channels has a greater effect on ratings of RSTV systems than on CTV systems.
- The average respondent was about four times more sensitive to monthly cost than to service connection fee.

A number of other findings were related to socio-demographic characteristics of the market and to regional differences.

Individual models were used in a simulation of demand for the new services in a micro-economic system. Predicted ratings for scenarios of interest to the Tribunal were generated from the individual models. A multinomial logit model that relates interval scale ratings to choice probabilities was used to estimate the percentage of households that would subscribe to each system. These predictions will to be used by system designers to select a configuration of attributes that will maximize market penetration. Finally, the percentages were projected over a six year growth function to help planners decide when and where to introduce RSTV and/or CTV. The conclusion drawn from this research is summarized quite succinctly by the Australian expression, "It's a goer, mate!" (Translated: It's a sure thing!). Market penetration of the most likely configuration and pricing of CTV was predicted to be about 60% one year after introduction.

REQUESTS...

HELP WANTED: J/DM course materials with applied emphasis. A dedicated effort is being made to structure a J/DM course with an applied emphasis. Course syllabi or reading lists would be appreciated. Joseph A. Smith, Dept. of Psychology, Shippensburg State College, Shippensburg, PA 17257.

REPRINTS AND INFORMATION AVAILABLE...

We have received some information concerning recent and interesting developments in networking. The materials we have seen have broad implications for those working in the judgment and decision making, particularly in the area of policy.

The following documents are available from Johnson-Lenz, 695 Fifth Street, Lake Oswego, Oregon 97034:

A. Microcomputer Networking for Social Change
B. Form and Flow in Electronic Networks
C. Microcomputer Information Support Tools--The Networker's Electronic Toolchest

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Letter to the Editor:

I would like to raise an issue that has concerned me for some time. Like most researchers, I have had my share of nonhelpful and downright nasty reviews of manuscripts, grants, etc. Fortunately, I haven't received any such reviews lately, so perhaps I can write this note somewhat dispassionately and without citing personal examples.

My major concern is not negative reviews -- after all, since no one can produce a publishable paper every time, negative review decisions are going to be inevitable. Rather, I'm concerned that many of us have been the recepient of some extremely caustic reviews that have apparently been written by people within the JDM circle; the knowledge of the literature shown by these reviewers make it unlikely that someone outside of the area is involved. If this is so, the obvious question is why are we so anxious to chop each other's papers apart?

Let me make two suggestions. The first is that we follow a policy (modified somewhat from the old childhood saying) of: "If you can't say anything helpful, don't say anything at all." I'm not suggesting that reviewers should accept something just because it's in the JDM area. But, why not have reviews which help, rather than attack, a paper or an author.

My second suggestion is that it might be helpful if all reviews were written as if the reviewers name were going to be sent to the author(s). This would hopefully establish an orientation to reviews that would be more like a personal letter. If negative comments must be made, then make them like you would make them to a friend.

In short, let's see if we can't build up the quality of reviews in the JDM area and eliminate the damaging "hatchet jobs."

James Shanteau

SCHOOL OF MANAGEMENT

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DEPARTMENT OF MANAGEMENT SCIENCE AND SYSTEMS

REQUESTS SHOULD BE ADDRESSED TO

    Prof. Stanley Zionts
    Dept. of Management Science & Systems
    State University of New York
    201 Crosby Hall
    Buffalo, NY 14214   May, 1982

TO: Members of The List and Other Colleagues

    Following is a list of recent working papers that colleagues and I have written.

    ·We shall be glad to send you one copy of each paper you would like. We do ask that you pay for Working Paper No. 454 (four dollars to a U.S. address, five dollars to a foreign address). Please make checks payable to the School of Management - Account 90255. All papers will be mailed at the printed materials rate via surface mail.

    Your comments on any of the papers are most welcome.

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Working Paper No. 454 - S. Zionts, "Multiple Criteria Decision Making: An Overview and Several Approaches," Revised, January, 1982.

    A 5-chapter manuscript of more than 100 pages overviewing and presenting various mathematical methods of multiple criteria decision making. There is a charge of four dollars for U.S. destinations for this manuscript and five dollars elsewhere.

Working Paper No. 462 - S. Zionts, "A Multiple Criteria Method for Choosing Among Discrete Alternatives," September, 1980, published in the European Journal of Operational Research, 7, (1981), pp. 143-147.

    This paper describes an interactive method for solving a discrete alternative multiple criteria problem under certainty. The method is based on the approach of Zionts and Wallenius. A computer program embodying the method has been written. Extensions to the case in which some of the criteria are not readily quantifiable are also encountered.

Working Paper No. 483 - Mark Karwan, Vahid Lotfi, Jan Telgen, Stanley Zionts, "A Study of Redundancy in Mathematical Programming," January, 1981, published in Operational Research '81, (J. P.Brans, editor), North-Holland Publishing Co., 1981.

    This paper describes a project on redundancy in mathematical programming. Its purpose is to evaluate a large number of methods. The project includes development of computer programs implementing the method, as well as a comprehensive testing of the methods. The report is a progress report. The complete results will be presented in a volume currently being completed.

Working Paper No. 498 - Pekka Korhonen, Jyrki Wallenius, Stanley Zionts, "Some Theory and a Method for Solving the Discrete Multiple Criteria Problem," Revised November, 1981.

    This paper describes a method for solving a deterministic problem of choosing among a set of discrete alternatives involving multiple objectives. The decision maker is assumed to have an implicit, quasi-concave utility function of nonsatiable objectives. The paper includes relevant theory and an example.

Working Paper No. 521 - Herbert Moskowitz, Jyrki Wallenius, Pekka Korhonen, Stanley Zionts, "A Man-Machine Interactive Approach to Collective Bargaining," August, 1981.

    In this paper we propose a formal man-machine interactive approach· for structuring a labor-management collective bargaining process. The approach is based on some of our earlier research findings in multiple criteria decision making. Two experiments using the method in a decision situation were conducted. The results of the experiments are described.

Working Paper No. 530 - Mark Karwan, Bernardo Villarreal, Stanley Zionts, "An Improved Interactive Multicriteria Integer Programming Algorithm," April, 1982.

    An improved interactive branch and bound approach to solve the multi-criteria integer linear programming problem is presented. Extensive computer solution of randomly generated problems shows that the method is feasible for solving practical problems of modest size. Computational results illustrate how various options in the method have been implemented. Based on experience to date, it appears that the approach may be a viable alternative for solving multicriteria integer linear programming problems.

REQUESTS SHOULD BE ADDRESSED TO

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