DECISION ANALYSIS
Vol. 5, No. 1, March 2008, pp. 1–4
ISSN 1545-8490 | EISSN 1545-8504 | 08 | 0501 | 0001

informs

DOI 10.1287/deca.1080.0109

From the Editor...

L. Robin Keller
Operations and Decision Technologies, The Paul Merage School of Business, University of California, Irvine, Irvine, California 92697-3125, lrkeller@uci.edu

This issue of *Decision Analysis* begins with an article by Philippe Delquié, "Interpretation of the Risk Tolerance Coefficient in Terms of Maximum Acceptable Loss." The risk tolerance coefficient is an exponential utility function's parameter, which is positive for risk averse decision makers. Next is an article titled "Optimal Betting Strategies for Simultaneous Games," by Andrew Grant, David Johnstone, and Oh Kang Kwon, which examines how to bet on two or more games (such as sports events or political outcomes) at once. Our third paper, "Decision-Analytic Approach to Knockout Auctions," by Yigal Gerchak, examines an approach for bidding on a single jointly owned indivisible item (such as a cherished item in an estate with multiple heirs). Our fourth paper develops a method for evaluating bids. Carlos A. Bana e Costa, João C. Lourenço, Manuel P. Chagas, and João C. Bana e Costa use a multiple objective value function approach in their article "Development of Reusable Bid Evaluation Models for the Portuguese Electric Transmission Company." We end with an article by Jason R. W. Merrick which presents an approach for "Getting the Right Mix of Experts" when they give possibly correlated probability judgments.

Key words: bid evaluation; decision analysis; Dirichlet process mixtures; exponential utility; forecasting: combining; gambling; games-group decisions: bidding-auctions; Kelly betting; knockout auctions; maximum acceptable loss; multiattribute value theory; objectives: structuring of; parimutuel betting; probability: applications; risk aversion/tolerance; utility functions: assessments; utility functions: multiattribute; editorial

Following the French proverb that "He who turns aside avoids danger," or the American proverb that "It is better to be safe than sorry," decision makers may state a very low maximum acceptable loss when facing a risky decision. But, excess risk aversion may be detrimental, since, as hockey player Wayne Gretzky said, "You'll miss 100 percent of the shots you never take."

Philippe Delquié's paper, "Interpretation of the Risk Tolerance Coefficient in Terms of Maximum Acceptable Loss," points out that a discussion of the maximum acceptable loss may initiate examination of whether a person is *too* risk averse. Observing that users of exponential utility functions often seek a concrete meaning for the single parameter (labeled the "risk tolerance coefficient") in the exponential utility function, Delquié (2008) shows how this coefficient may be interpreted as the maximum loss the decision maker is willing to be exposed to at a stated probability level.[1] He also briefly discusses the maximum acceptable loss under hyperbolic utility and logarithmic utility. Exponential utility functions and the risk tolerance coefficient have been addressed earlier in *Decision Analysis* by Smith (2004), Bickel (2006), and Kirkwood (2004). See also Rabin (2000) on the possibility of excess risk aversion.

As baseball manager Sparky Anderson said, "You're gonna lose some ball games and you're gonna win some ball games and that's about it." Our next paper examines how to bet on two or more games (sports events, political outcomes, stock movements, etc.) at once. For example, one might place a single bet that both UCLA *and* Stanford win their first football game in Fall 2008.

Andrew Grant, David Johnstone, and Oh Kang Kwon derive and illustrate "Optimal Betting Strate-

[1] So, clients may be convinced that "Qui ne risque rien n'a rien," or "Nothing ventured, nothing gained." Although Mieder (2000) points out that the popularity of using such proverbs has gone up and down over the centuries, he observes that they were even used regularly by Lord Chesterfield, despite being quoted as advising his son that "A man of fashion never has recourse to proverbs." Despite facing the risk of being out of fashion, I like proverbs since they can capture in a short phrase concepts that we emphasize in decision analysis.

gies for Simultaneous Games," assuming a "Kelly" bettor (one with a logarithmic utility function). They also consider a negative power utility function ("fractional Kelly" bettor). Both logarithmic and power utility functions have the property of constant relative risk aversion (CCRA). As Grant et al. (2008, p. 15) point out, "The distinctive practical characteristic of CRRA utilities is that the decision maker risks a fixed proportion of his wealth w at any given decision point, regardless of (i) the amount of w, or (ii) the investment opportunities available to him in any future period. The second of these attributes is known as myopia and allows a gambler to treat every period or single bet as terminal." Johnstone's (2007) previous paper in *Decision Analysis* presented the parimutuel Kelly probability scoring rule, a modification of the scoring rule introduced earlier in this journal by Kilgour and Gerchak (2004). At this point, maybe one of our readers can explain to me the French proverb: "There are two great pleasures in gambling: winning and losing."

According to Plautus in his text *Asinaria* (I, 3, 65), "He who seeks for gain, must be at some expense," or, in the original Latin, "Necesse est facere sumptum, qui quaerit lucrum." Our next paper examines an approach for bidding on a single jointly owned indivisible item (such as a cherished item in an estate with multiple heirs), in which the winner who gains the prize incurs some expense to compensate the losers.

Next, Yigal Gerchak presents a "Decision-Analytic Approach to Knockout Auctions." A knockout auction is one where the joint owners bid for the item, then the highest bidder wins it and pays the others their share of the winning bid. Gerchak (2008) follows a decision analytic, rather than a game theoretic, point of view, as advised by Rothkopf (2007) in *Decision Analysis.* Gerchak previously contributed to *Decision Analysis* in his work on competitive probability scoring in Kilgour and Gerchak (2004).

Thinking about dividing an estate among heirs who want the same item makes me think of the old television show *Dallas*, which was about oil-rich estates, which leads me to this issue's trivia question.

Trivia question: The late Irving H. LaValle (1970, 1978) of Tulane University: (a) was the founding editor of the *Decision Analysis Newsletter*, (b) received the 1996 Ramsey Medal, the "Nobel Prize" of decision analysis, (c) submitted an unsolicited episode to the *Dallas* TV show with a professor character, (d) has an Erdös number of 2, (e) wrote his dissertation on "Strategic situation theory: a Bayesian approach to an individual player's selection of strategies in noncooperative games," or (f) all of the above.[2]

In our next paper, Carlos A. Bana e Costa, João C. Lourenço, Manuel P. Chagas, and João C. Bana e Costa (2008) developed a method for Portuguese authorities to make repeated similar decisions in "Development of Reusable Bid Evaluation Models for the Portuguese Electric Transmission Company." Using the MACBETH multicriteria software, an additive multiattribute measurable value function was constructed, to be used in repeated decisions at the Portuguese Electric Transmission Company (REN) for selecting a contractor from a set of bidders. Particular attention was paid to the approach for weighing benefits against costs. Thus, these authors do not follow the Portuguese phrase, "Gostos não se discutem." Their method does not advise "You don't discuss tastes," rather, it follows in the decision analysis tradition of explicitly expressing tradeoffs.

Our final paper is by Jason R. W. Merrick, on "Getting the Right Mix of Experts," when they give probability judgments which may have dependencies between the experts' judgments. This paper contributes to the stream of research reviewed in Clemen and Winkler (1999) on combining experts' judgments with the decision maker's prior information using a Bayesian aggregation framework. Merrick (2008) proposes a hierarchical structure different than those previously proposed, with the mixing distribution being treated nonparametrically with a Dirichlet process, then demonstrates the approach on previously published expert judgment data. So, this paper adds to

[2] *Trivia answer*: (f) all of the above. (a) for recent newsletters, see http://decision-analysis.society.informs.org/Publications/PublicationsArchive.html; (b) for a list of all Ramsey medal winners, see http://decision-analysis.society.informs.org/Activities/ActivitiesAwards.html; (c) Irv made *Dallas* bingo cards for his students to use while watching episodes of the prime-time drama that aired from 1978 to 1991; his script featured a professor much like Irv himself, but it was not accepted by the producers; (d) he is a co-author with Peter Fishburn, who has a number of 1, see the December 2007 trivia question (Keller et al. 2007) for more on the Erdös number. For more information on Irv's life, see http://www2.tulane.edu/EditorialNewsDetails.cfm?EditorialID=77.

our knowledge of how to use possibly correlated but conflicting information from experts.

As Virginia Woolf said, "When a subject is highly controversial… one cannot hope to tell the truth. One can only show how one came to hold whatever opinion one does hold. One can only give one's audience the chance of drawing their own conclusions as they observe the limitations, the prejudices, the idiosyncrasies of the speaker." Merrick (2008) provides us a tool for updating our conclusion based on the idiosyncrasies of multiple experts' judgments. Merrick's earlier papers in Decision Analysis include Merrick et al. (2005a), on correlated expert judgments, and Merrick et al. (2005b), on a multiple-objective watershed improvement decision.

Our *Decision Analysis* editorial objectives and audience are printed on the inside back cover of every issue. I strongly encourage submissions of manuscripts from the wide array of decision research fields. Whenever topics from a broadly related field are aimed for the journal, the focus should be on potential contributions to prescriptive decision analysis. Such manuscripts should include a discussion of implications of the work for aiding decision making, and a literature review to demonstrate how the manuscript's field relates to the decision analysis literature.

Decision Analysis is now using Manuscript Central, the online manuscript submission and review system for all new submissions. Our Managing Editor, Kelly M. Kophazi (kmkophazi@earthlink.net), has worked very hard on setting up the system for our journal. Please check our website (http://da.pubs.informs.org/) for the latest information on the submission process.

All published issues of the journal are available via the website http://da.journal.informs.org/. This site allows you to search by issue, author, and keyword. Titles and abstracts are available for free, and full papers are available through subscription to INFORMS Online, library subscriptions, or direct payment for an individual paper. Also, we are now adding a section to each issue with the authors' short biographies. The entire text of the "From the Editor..." column and the "About the Authors" section are available free on the site.

We are pleased to announce some additions to our editorial team for 2008. New associate editors are John Butler of Tulane University, Philippe Delquié of INSEAD, and Jason R. W. Merrick of Virginia Commonwealth University. New editorial board members are Phillip C. Beccue of Baxter BioScience, Kazuo Ezawa of Daiichi Sankyo Pharma Development, Thomas Langer of University of Muenster, and Miley W. (Lee) Merkhofer of Folio Technologies, LLC.

As I completed this editorial, we received the sad news that Michael H. Rothkopf had just passed away from an apparent heart attack suffered during his regular morning swim. His passing hits particularly close to home for our journal. In addition to his recent article in our September issue being an inspiration for the paper in this issue by Gerchak (2008), Prof. Rothkopf was a former president of INFORMS and very active in many aspects of our Institute. I am currently serving on an INFORMS committee he was chairing on strategic planning for INFORMS publications activities. Our Managing Editor, Kelly Kophazi, worked with him in her dual role of Managing Editor of *Interfaces*, since he was the immediate past Editor in Chief of *Interfaces* when she began that role. We will miss him and his wise leadership.

References

Bana e Costa, C. A., J. C. Lourenço, M. P. Chagas, J. C. Bana e Costa. 2008. Development of reusable bid evaluation models for the Portuguese Electric Transmission Company. *Decision Anal.* **5**(1) 22–42.

Bickel, J. E. 2006. Some determinants of corporate risk aversion. *Decision Anal.* **3**(4) 233–251.

Clemen, R. T., R. L. Winkler. 1999. Combining probability distributions from experts in risk analysis. *Risk Anal.* **19**(2) 187–203.

Delquié, P. 2008. Interpretation of the risk tolerance coefficient in terms of maximum acceptable loss. *Decision Anal.* **5**(1) 5–9.

Gerchak, Y. 2008. Decision-analytic approach to knockout auctions. *Decision Anal.* **5**(1) 19–21.

Grant, A., D. Johnstone, O. K. Kwon, 2008. Optimal betting strategies for simultaneous games. *Decision Anal.* **5**(1) 10–18.

Johnstone, D. J. 2007. The parimutuel Kelly probability scoring rule. *Decision Anal.* **4**(2) 66–75.

Keller, L. R., M. Baucells, K. F. McCardle, G. S. Parnell, A. Salo. 2007. From the editors. *Decision Anal.* **4**(4) 173–175.

Kilgour, D. M., Y. Gerchak. 2004. Elicitation of probabilities using competitive scoring rules. *Decision Anal.* **2**(2) 108–113.

Kirkwood, C. W. 2004. Approximating risk aversion in decision analysis applications. *Decision Anal.* **1**(1) 51–67.

LaValle, I. H. 1970. *An Introduction to Probability, Decision and Inference.* Holt, Rinehart & Winston, New York.

LaValle, I. H. 1978. *Fundamentals of Decision Analysis.* Holt, Rinehart & Winston, New York.

Merrick, J. R. W. 2008. Getting the right mix of experts. *Decision Anal.* **5**(1) 43–52.

Merrick, J. R. W., J. R. van Dorp, A. Singh. 2005a. Analysis of correlated expert judgments from extended pairwise comparisons. *Decision Anal.* **2**(1) 17–29.

Merrick, J. R. W., G. S. Parnell, J. Barnett, M. Garcia. 2005b. A multiple-objective decision analysis of stakeholder values to identify watershed improvement needs. *Decision Anal.* **2**(1) 44–57.

Mieder, W. 2000. "A man of fashion never has recourse to proverbs": Lord Chesterfield's tilting at proverbial windmills. *Folklore* **111**(1) 23–42.

Rabin, M. 2000. Risk aversion and expected-utility theory: A calibration theorem. *Econometrica.* **68**(5) 1281–1292.

Rothkopf, M. H. 2007. Decision analysis: The right tool for auctions. *Decision Anal.* **4**(3) 167–172.

Smith, J. E. 2004. Risk sharing, fiduciary duty, and corporate risk attitudes. *Decision Anal.* **1**(2) 114–127.