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From the Editors…

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

Kelly M. Kophazi
Institute for Operations Research and the Management Sciences, Hanover, Maryland 21076, kelly.kophazi@informs.org

We review the past year in this issue's "From the Editors" column, which is coauthored with Managing Editor Kelly M. Kophazi. In our first article, Jason R. W. Merrick and Laura A. McLay ask "Is Screening Cargo Containers for Smuggled Nuclear Threats Worthwhile?" Next, Robert A. Dees, Matthew F. Dabkowski, and Gregory S. Parnell present a "Decision-Focused Transformation of Additive Value Models to Improve Communication." Our third article, "Valuing Multifactor Real Options Using an Implied Binomial Tree," is by Tianyang Wang and James S. Dyer. The next article, by the late Samuel Kotz (deceased March 2010) and Johan René van Dorp, is on "Generalized Diagonal Band Copulas with Two-Sided Generating Densities." In our final article, Ali E. Abbas and János Aczél discuss "The Role of Some Functional Equations in Decision Analysis."

Key words: applications: terrorism; common value; Cox's axioms; decision analysis; decision-focused transformation; elicitation; expert judgment; functional equations; implied binomial tree; invariance; invariant prior distributions; multifactor; multiattribute value; probability: applications; probability assessment; probability distribution; real options; utility theory; value of information; editorial

Time is the coin of your life. It is the only coin you have, and only you can determine how it will be spent. Be careful lest you let other people spend it for you.

Carl Sandburg

Another year has now passed and it is time for our annual "From the Editors..." column coauthored with Managing Editor Kelly M. Kophazi. In addition to introducing our articles, we report here on the past year from the perspective of the editorial office. As we entered 2010, we began the second and final three-year term of this editorship, for volumes 7, 8, and 9. In 2012, there will be a search committee appointed by the INFORMS Board of Directors to recommend a new Editor-in-Chief, following the standard procedures of our publisher INFORMS.[1]

As one indication of our success, we are pleased to report that *Decision Analysis* is now covered by the Social Science Citation Index, beginning with Volume 6, Issue 1 (March 2009).[2] In another indication of the worldwide awareness of the journal, our recent corresponding authors represented 18 different countries (among papers submitted via ScholarOne Manuscripts™—formerly known as Manuscript Central—for the year beginning April 1, 2009). Adding in all the coauthors on the submitted papers increases the number of countries represented.

Descriptions of the papers published in the last year are in each issue's "From the Editor…" column. The full text versions of these editorials are available, along with the "About the Authors" section (containing author biographies and photos) from our journal's online site.[3] Our first issue of 2010 was the Michael H. Rothkopf Memorial Special Issue on Auctions, which had a number of papers on auctions, some by former coauthors of Mike Rothkopf. See Bordley et al. (2010)

[1] See the journal site at http://www.informs.org/Journal/DA/Editorial-Office for contact information and photos of the editorial office team, including Production Editor Kimberly Anoweck.

[2] Our INFORMS Publications staff members are attempting to get coverage back to Volume 1; the back-coverage decision will be made in 2012.

[3] See http://da.journal.informs.org/ from HighWire Press®, which also offers anyone the option to sign up for free for *Decision Analysis* eTOCs (e-mailed Table of Contents) alerts. For the June issue, the "From the Editors…" column was coauthored with Managing Editor Kelly Kophazi (Keller and Kophazi 2009). Similarly, the December "From the Editors…" column was coauthored with all the associate editors (Keller et al. 2009), to emphasize their important role in the journal. The March and September (Keller 2009a, b) columns were sole-authored.

for the editors' column coauthored with special issue editors Elena Katok and Robert Bordley.

A broad variety of papers have appeared in *Decision Analysis*, spanning theory, application, assessment methodologies, experiments, and surveys.[4] We continue to have good turnaround times for our reviews. The average turnaround time to a one-round decision (of reject, revise, or accept) is 34.32 days.[5] The average number of days until the final decision is 82.32 days. The median is 41 days, with the minimum of 0 days and the maximum of 483 days.

New this year is a statement that all corresponding authors must agree to at the time of submission to all INFORMS journals:

> I acknowledge that in submitting this paper I am aware of INFORMS policy on plagiarism and copyright (http://authors.pubs.informs.org). Further I acknowledge that I will report to the editor(s) of the journal all of my manuscripts (e.g., prior publications, conference proceedings, book chapters, papers submitted to other journals) that have substantial overlap with the submitted paper. I also certify that the copyright for all portions of this paper can and will be transferred to INFORMS upon acceptance.[6]

You may have noticed that *Decision Analysis* has a new Web look. INFORMS and all of the journal websites are moving to a new content management system. The old *Decision Analysis* website at http://da.pubs.informs.org now resolves to http://www.informs.org/Journal/DA.

We widely disseminate information about papers published in the journal. For each issue, we announce the authors and paper titles with a brief description via e-mails to Decision Analysis Society[7] members and by posting on the Decision Analysis Web forum.[8] Journal news articles are also routinely placed in the *Decision Analysis Newsletter*.[9] We distribute a flyer advertising the journal at conferences, which you are encouraged to download and distribute among your colleagues.[10]

This year, we worked with INFORMS Director of Communications Barry List to generate a podcast interview with Stanford Professor Ronald A. Howard, available at http://www.scienceofbetter.org/podcast/howard.html, in conjunction with the printing of "An Interview with Ronald A. Howard," by Russ Garber (2009), in the December 2009 issue of *Decision Analysis*.[11]

In our first article, Jason R. W. Merrick and Laura A. McLay ask "Is Screening Cargo Containers for Smuggled Nuclear Threats Worthwhile?" In a prior paper in *Decision Analysis*, Bakir (2008) developed a decision tree model on countermeasures to secure cargo at southwest U.S. border entries. Merrick and McLay (2010) extend the analysis in Bakir (2008), by considering multiple objectives, multiple levels of screening, and the effect that screening has on discouraging terrorists. Other papers in *Decision Analysis* on terrorism are Feng and Keller (2006) and von Winterfeldt and O'Sullivan (2006). Prior papers in *Decision Analysis* by Merrick, who also serves as an associate editor, include Merrick (2009) on Bayesian simulation, Merrick et al. (2005b) on watershed improvement needs, Merrick et al. (2005a) on correlated expert judgments, and Merrick (2008) on the right mix of experts.

Just as Victorian novelist George Eliot wrote, "We must find our duties in what comes to us, not in what might have been," a decision analysis that starts with what possible alternatives might have been may be reframed once the actual alternatives are known, coming to us with their range of possible outcome levels.

Our second article, by Robert A. Dees, Matthew F. Dabkowski, and Gregory S. Parnell, presents a "Decision-Focused Transformation of Additive Value

[4] We are particularly pleased to publish practical applications of decision analysis. Over the years, we have successfully managed to have teams who have been honored with the DAS (Decision Analysis Society) Practice Award prepare papers for the journal. See http://www.informs.org/Recognize-Excellence/INFORMS-Community-Prizes-and-Awards/DAS-Practice-Award.

[5] This includes papers under all associate editors (both the official ones and the ad hoc ones) and includes some papers rejected without going to referees. This data covers papers submitted in 2008, 2009, and 2010, for which decisions were made by April 23, 2010.

[6] See http://www.informs.org/Find-Research-Publications/INFORMS-Journals/Author-Portal/Publications-Policies/Guidelines-for-Copyright-Plagiarism for more information.

[7] See http://www.informs.org/Community/DAS/Decision-Analysis-Journal.

[8] See http://www.syncopation.com/forums/viewforum.php?f=7.

[9] See http://www.informs.org/Community/DAS/Newsletter.

[10] See http://www.informs.org/Community/DAS/Decision-Analysis-Journal for the Decision Analysis Flyer.

[11] See http://da.journal.informs.org/cgi/content/abstract/deca.1090.0160v1.

Models to Improve Communication." If a "global" multiobjective decision analysis model is constructed before specific alternatives are known, the ranges of the value measures may be much larger than the range of the actual alternatives. This would result in the overall additive values of the alternatives to seem to be relatively close, in comparison with the broad range of possible overall values. Dees et al. (2010) show how the global model can be transformed to a local value model, which uses the full space defined by the specific alternatives to distinguish between alternatives. Prior papers in *Decision Analysis* by Parnell include Merrick et al. (2005b) on a multiple-objective decision analysis of stakeholder values to identify watershed improvement needs, and Ewing et al. (2006) on the Army base realignment and closure decision analysis. Parnell also has served as an associate editor for *Decision Analysis*, and currently serves on the editorial board.

Other papers in *Decision Analysis* using multiple-objective decision models include Brothers et al. (2009) on alternatives for immobilizing radioactive liquid process waste stored in Saluggia, Italy; Bana e Costa et al. (2008) on reusable bid evaluation models for the Portuguese Electric Transmission Company; Mild and Salo (2009), which combined a multiattribute value function with an optimization model for dynamic resource allocation for infrastructure maintenance; and Ewing and Baker (2009) on a green building decision support tool.

Now it is time for our *Trivia question*: True or false—Mark Machina has photos on his website of the following leaders in decision theory (state "true" or "false" for each person individually):

A. Maurice Allais
B. Kenneth Arrow
C. Duncan Luce
D. Daniel Ellsberg
E. Howard Raiffa
F. John Pratt

See the footnote for our *Trivia answer.*[12]

[12] *Trivia answer:* True: A, B, C, D, F. False: E. See Mark Machina's website at http://weber.ucsd.edu/∼mmachina/. For a photo of Raiffa, see Keller et al. (2008) "From the Editors" column from December 2008: http://da.journal.informs.org/cgi/reprint/5/4/173.

Ralph Waldo Emerson said, "For everything you have missed, you have gained something else, and for everything you gain, you lose something else." It seems that he might have been talking about the value of having real options. A key feature of the decision analysis approach is to plan for real options that may be exercised at later points in time, once some uncertainties have been resolved.

In our third article, Tianyang Wang and James S. Dyer present an approach for solving a multifactor real options problem in "Valuing Multifactor Real Options Using an Implied Binomial Tree." Wang and Dyer (2010) construct the binomial tree to be consistent with simulated market information. Their method provides an alternative approach to estimating the value of high-dimensional real options and can be used as a capital budgeting method for projects with managerial flexibility. Directly related papers on real options valuation in *Decision Analysis* are Brandão et al. (2005a, b) and a comment by Smith (2005). In addition to serving on the *Decision Analysis* editorial board, a prior contribution by Dyer to *Decision Analysis* is Butler et al. (2006) on using attributes to predict objectives in preference models.

Our next paper, on "Generalized Diagonal Band Copulas with Two-Sided Generating Densities," is by the late Samuel Kotz and Johan René van Dorp. (Samuel Kotz died in March 2010.)[13] Copulas (joint continuous distributions with uniform marginals) have been proposed to capture probabilistic dependence between random variables. Kotz and van Dorp (2010) address a specific type of copula, the generalized diagonal band copula, and provide an elicitation procedure and an application to a value of information example. Prior articles in *Decision Analysis* by van Dorp are Merrick et al. (2005a) on correlated expert judgments and van Dorp et al. (2007) on an elicitation procedure for a generalized trapezoidal distribution. Related articles in *Decision Analysis* include Abbas et al. (2008) on the fixed probability versus the fixed variable probability encoding method, Baillon (2008) on eliciting probabilities through exchangeable events, Kilgour and Gerchak (2004) on eliciting probabilities through competitive scoring rules, and Winkler and Clemen (2004) on combining correlation assessments.

[13] See http://www.seas.gwu.edu/∼kotz/index.html.

Our final paper, by Ali E. Abbas and János Aczél, is on "The Role of Some Functional Equations in Decision Analysis." Abbas and Aczél (2010) survey prior results and present new results on the use of functional equations to characterize utility and probability functions. This will be a valuable resource for mathematical decision theory researchers. In addition to his service as an associate editor, prior contributions by Abbas to *Decision Analysis* include Abbas (2009) on linear and log-linear pools of experts' judgments, Abbas et al. (2008) on probability encoding methods, Abbas and Hann (2010) on name-your-own price auctions, Abbas (2007) on invariant utility functions, and Abbas and Howard (2005) on attribute dominance utility.

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