Editor's Letter

Mike Larsen,
Executive Editor

Dear Readers,

This issue is the final issue of the 22nd year for *CHANCE*. Included are two puzzles and entries on a variety of subjects: medicine (EEG wave classification, phase II clinical trials, and home care services), sports (soccer, volleyball, and golf), insurance (viatical settlements), history (Pascal and Fermat's letters), graphics, and probability (Weldon's dice).

This issue also has what I believe to be a first: associated with the article on Weldon's dice experiment by Zac Labby is a YouTube movie. Go to *www.youtube.com/watch?v=95EErdouO2w* and view Labby's dice-throwing machine in action. Weldon's original data were used by Karl Pearson when developing the chi-square statistic. Labby developed the machine as a project for Steve Stigler's History of Statistics course at The University of Chicago. Stigler recommended the article for *CHANCE*, and I am glad he did. Persi Diaconis of Stanford University commented that this is the experiment he has wanted to do for 40 years.

Wanli Min and Gang Luo present methods for classifying EEG waves and applications, particularly in sleep research. As you may recall, two quite different articles about sleep research appeared in issue No. 1 this year. If you want to read the trio together, you can find those (as well as the current) articles at *www.amstat.org/publications/chance*.

Andreas Nguyen and Kelly Fan discuss ethics associated with phase II clinical trials. Their particular focus is stopping rules, or when to terminate a trial due to early success or failure of a new treatment.

In Mark Glickman's Here's to Your Health column, Douglas Noe, Ian Nelson, Shahla Mehdizadeh, and John Bailer look at classification tree methods for predicting disenrollment of patients from home-care services to nursing homes. There are significant costs, both personal and monetary, involved.

Fred Vars posits probability models for scoring a goal in soccer. The process of shooting for a goal in soccer is so complex that simplifying assumptions must be made when estimating chances of success. Vars compares his results to data and suggests richer data sets.

Mark Schilling asks whether streaks exist in competitive volleyball. The existence of streaks is challenging to prove, and Schilling discusses why. Meanwhile, Bill Hurley looks at the odds of the outcomes of a golf tournament and whether a victory by the United States in the Ryder Cup was really amazing.

Mark Haug and Heather Ardery tell us about viatical settlements, or the sale of life insurance policies to third parties. Has anyone ever asked you if you would bet your life? Well, in this case, people do.

Virginia Vimpeny Lewis relates and explains the content of letters between Pascal and Fermat. This historic correspondence played a key role in the development of probability. Lewis provides detailed tables that would be useful in the classroom.

Howard Wainer, in his Visual Revelations column, critiques a graphic that appeared in *The New York Times* in May of 2009. Illustrations such as the one discussed are appealing for their color and context, but it is a real challenge to accurately communicate information with a fancy graphic.

Jonathan Berkowitz, in Goodness of Wit Test, brings us a variety cryptic in the bar-type style. Also, Jüergen Symanzik submitted a statistically based puzzle. See if you can decode the data and provide an explanation and graphic. Winners will be selected from among the submissions submitted by January 28.

In other news, *CHANCE* will add new editors in 2010: Michelle Dunn (National Cancer Institute), Jo Hardin (Pomona College), Yulei He (Harvard Medical School), Jackie Miller (The Ohio State University), and Kary Myers (Los Alamos National Laboratory). Additional editors will help keep reviews of article submissions quick and effective and enable editors to take time to write articles and recruit articles on special topics. The editors will bring fresh perspectives and ideas to *CHANCE*. I welcome them and thank them for agreeing to serve. Additional information about the new editors is available at *www.amstat.org/publications/chance*. Of course, I am grateful to the current editors; they deserve ongoing thanks for their good work.

We look forward to your submissions and suggestions.

Enjoy the issue!
Mike Larsen