

Editor's Letter

Mike Larsen,
Executive Editor



Dear Readers,

This issue of *CHANCE*, the first of the 23rd year for the magazine, focuses on a few hot-topic issues while also including some lighter, amusing articles.

Walter Mebane writes about statistical evidence suggesting fraud in the recent Iranian presidential election. Analyses are presented at the district-, town-, and ballot-box levels, comparing elections in 2005 and 2009. A variation of the so-called Benford's law concerning the distribution of digits is used to judge the counts. Unfortunately, it will take more information than will likely ever be public to explain the unusual data patterns.

Michela Baccini, Sam Cook, Constantine Frangakis, Fan Li, Fabrizia Mealli, Don Rubin, and Elizabeth Zell describe missing data issues and a multiple imputation approach in the Centers for Disease Control and Prevention's Anthrax Vaccine Research Program clinical trial. The study is ongoing. Producing the imputations for missing items is important, but so is the process of evaluating the quality of the resulting imputations and inferences.

Bob Bell, Yehuda Koren, and Chris Volinsky discuss their ensemble approach to winning the \$1 Million Netflix Prize. Is their approach to one challenging problem the way to the fastest progress in many areas of study? Steve Lohr of *The New York Times* comments and adds perspective.

Todd Remund illustrates digital filtering and signal processing with examples of car motion and rocket firing. It is interesting how the sound record of a rocket firing can be used as data and analyzed statistically.

Götz Gelbrich, Annegret Franke, Bianca Gelbrich, Susann Blüher, and Markus Löffler answer the important question: Are the color and flavor of gummy bears related? If you teach, students might want to try to replicate the results. Even if you do not teach, you still might want to try this experiment. We use this article as an opportunity to include a comment about the CONSORT guidelines for clinical trial reporting.

Paul Kvam examines the Electoral College and how the distribution of electoral votes across the states has evolved. A simple

multinomial model of counts does not fit, but Kvam suggests a promising alternative. He also makes a radical suggestion for reorganizing the electorate. Perhaps after Congress deals with health care legislation ...

In Mark Glickman's Here's to Your Health column, Andreas Krause describes efforts at modeling and simulation for evaluating the effect of drugs and therapies on a "virtual patient" in pharmacodynamic/pharmacokinetic trials. Modern drug development is time consuming and expensive. Statistical simulation and modeling aim to improve the drug development process in both of these dimensions.

In his Visual Revelations column, Howard Wainer explains how a simple graph can have three substantially different interpretations. In doing so, he gives a brief historical account of item response theory and introduces us to Schrödinger's cat.

Peter Loly and George Styan present examples of Latin square designs in stamps, taking us around the world and characterizing the 4x4 Latin squares of experimental design. Color versions of the stamps are available in the online version at www.amstat.org/publications/chance.

Finally, Jonathan Berkowitz's Goodness of Wit Test challenges us with a variety cryptic in the bar-type style. The puzzle is subtitled "Figure It Out." We encourage you to try to do so.

In other news, former *CHANCE* editor Dalene Stangl of Duke University will present a webinar March 9 at 2 p.m. Eastern time about teaching statistics with articles from the magazine. The topic was the focus of Stangl's article in the 20th anniversary issue (Vol. 20, No. 4), which is available at www.amstat.org/publications/chance for subscribers who are also members of the American Statistical Association. Information about the webinar can be found at www.CAUSEweb.org/webinar.

I look forward to your suggestions and submissions.

Enjoy the issue!

Mike Larsen