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WHERE IS OUR NATE SILVER?

BY JAY M. JAFFE

IN CASE YOU MISSED the 2012 presidential election in the United States, one election guru, Nate Silver, batted nearly 1,000 in predicting the state-by-state presidential results and just missed predicting the winners in all of the 33 Senate races. Silver's FiveThirtyEight blog is now the standard by which all other election predictions are measured.

For most people, statistical models have been and will probably always be a "black box." However, you don't have to be a certified mechanic to drive a car

nor do you need to have an advanced degree in statistics to appreciate the work done by Silver. Silver himself reminds the users of his work that he presents the probabilities of election results rather than a guarantee as to which candidate will win any particular election. In fact, in the state of North Dakota the eventual winner for a Senate seat had less than a 10 percent chance according to Silver but, nevertheless, she won the race. As all actuaries should know, sometimes a low probability event occurs and becomes "the exception which proves the rule."

But Silver did not just become a rock star level statistician as a result of his 2012 election predictions—he did two other things. First, Silver's work has changed the election landscape. For the foreseeable future, election predictions will be made using modeling tools and data such as used by Silver. And, second, he has established in the minds of the public the credibility of statistical models as a tool for predicting political events. This latter accomplishment is not only significant in and of itself, but also because it offers a golden opportunity for other statistical-based professions, such

Sears' Silver

IN EARLY DECEMBER 2012, Paul DePodesta was appointed to the board of Sears Holding Corp. DePodesta's full-time job is the VP for player development of the New York Mets baseball club, a Harvard trained economist, and the person who developed the statistical operational plan which nearly catapulted the 2002 Oakland As into the World Series. He is not a retail business expert!

Like the Oakland As, Sears is now a retailing underdog. But by appointing DePodesta to its board, it openly acknowledges that it needs new tools to manage its business along with an expert who can explain these tools to the board. Other than

probably having read *Moneyball* and/or seen the movie, it is doubtful if the current members of Sears' board have much firsthand knowledge of analytic business tools. On the other hand, it is almost certain that the members of Sears' board have had direct contact with actuaries in areas such as pension plans or health insurance. Yet, rather than selecting an actuary to join the board and bring analytic thinking to their organization, Sears chose DePodesta.

From this point forward, Sears will know exactly where to find its Nate Silver. It will have to look no further than its boardroom.

Let's Talk

LET'S START A DIALOGUE about how the SOA can be involved in this process. Please send us your suggestions for finding an actuarial version of Nate Silver. Send an email to theactuary@soa.org or join the conversation at <http://blog.soa.org/>



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as actuaries, to capitalize on this realization to improve how they interact with their various constituencies.

So, why does the actuarial profession need a Nate Silver? There are at least two good reasons it would be helpful to have one or more actuaries with the public presence and skills of a Nate Silver. The first reason is offensive and the second is defensive.

The first reason is to enhance the reputation and acceptance of the actuarial profession by the general public as well as the people who influence and set public policy. The actuarial profession has the expertise to bring better solutions to many individual and societal problems (e.g., Social Security, health care, etc.) which operate on actuarial principles. But we can't contribute at a high level to these areas if we remain a mystery profession. For example, when's the last time (or the first time) you saw an actuary on a popular (rather than technical) talk show discussing issues which are based on actuarial concepts? On the other hand, through his presentations Nate Silver has demonstrated that technical concepts and people can be accepted by the general public.

The defensive reason for finding a Nate Silver is readily illustrated by recent events in Italy, even though this is an extreme example. A court in L'Aquila, Italy convicted seven members of a

national "Great Risks Commission" for failing to adequately warn residents of a 2009 earthquake in which more than 300 people died. These convictions clearly reflect a misunderstanding of the capabilities of statistics and statistical predictions. But, the convictions also serve as a strong reminder that to minimize the possibility that governments or the public take out their frustration on anyone making either a statistical prediction which turns out to be "incorrect" or is not presented because an event has a low probability of occurrence, it is imperative to explain to the users of information that the statisticians are not making a guarantee that a particular event may or may not happen. A Nate Silver type of person will go a long way to imparting the capabilities of actuarial science because they have the skill set to convey the concepts of statistics in advance of any catastrophic event and when such events occur, to explain that what happened was not an inaccurate statistical prediction. If the actuarial profession is concerned about its reputational risk, and each and every one of us should have this concern, having a Nate Silver on our team is the first step to minimizing this risk.

So, how do we find our Nate Silver? The good news is that the actuarial profession has an abundance of well-qualified people to become Nate Silvers. The bad news, in

my opinion, is that presently we have few members who have been able to convert complicated actuarial concepts

into meaningful and understandable public communications and, as a result, advance the acceptance of the profession by the public into areas in which we have expertise.

The main purpose of this article is to stimulate the actuarial profession into taking the steps needed to find our Nate Silver. Creating our Nate Silver requires adopting several initiatives because we can't, nor do we want to, clone Nate Silver. Developing people with Nate Silver's skill set relies on a combination of factors including training, education, experiences, etc. It will also not happen overnight. We also need to recognize that we need to build many potential Nate Silvers because it is impossible to predict whether a specific candidate will eventually develop into a Nate Silver type person.

So, "Where's our Nate Silver?" Maybe in a year or two we'll be able to answer this question. **A**

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