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Change or Be Changed!

By Dave Snell

This is my eighth year editing our section newsletter. Frankly, I am as excited by this opportunity to spread the knowledge of our many talented members today as I was in 2009 when we resurrected the newsletter of the former Futurism Section. It had not been published in quite a while. Back then, it was a struggle to get enough articles for an issue. Four of us wrote seven articles so we could start publishing again.

This issue has 17 articles contributed by 18 authors. They cover many topics we never saw in actuarial study notes. In fact, some of our authors, with SOA board endorsement, are helping to get this new material onto the syllabus for future actuaries. This level of sharing, and advancing the profession, is an excellent way to keep the actuary viable in a rapidly changing world—a world that has seen many professions diminish in stature and economic practicality. We see taxi service replaced by Uber and Lyft, and soon by self-driving cars. An Oxford University study[1] of 702 occupations showed insurance underwriters in 698th place, with a 99 percent probability of computerization. They were safer from obsolescence by automation than only four occupations, including hand sewers and telemarketers.

Several authors talk about how important it is to change—as if that were easy. Yes, we humans often like to initiate change, but we tend to be somewhat change averse when we are the ones affected. The only person who welcomes being changed is a baby with a wet diaper.

In the spirit of embracing the more recent tools and techniques available, we conducted a Delphi study to choose our name, the Predictive Analytics and Futurism Section (PAF). The Delphi study eliminates the biasing influence of hierarchy and involves rounds of anonymized responses that form the input for the successive rounds until study participants stop changing their minds. The name that emerged better reflected our focus, and it attracted a lot of new members. The increase in PAF membership over the past year is 65 percent, and we are happy to welcome so many new members.

The article topics continue to impress me, and it is a challenge to learn enough about a new topic to edit an article on it and still meet our deadlines. In that regard, I wish to introduce Kevin Jones as my associate editor for this issue (likely becoming co-editor for our next issue). Kevin is a brand-new FSA with a master's degree in mathematics and lots of modeling experience. He also is a winner (twice) of the Reader's Choice Award in the Actuarial Speculative Fiction Contest, which we co-sponsor with the Technology and Actuary of the Future Sections. Please join me in welcoming Kevin to our expanded editorial staff. We hope to continue to bring you high quality articles for both beginners and experienced PAF practitioners.

Now, let's discuss the contents of this issue.

- **Chairperson's Corner**, by Brian Holland. Brian describes how our section membership has dramatically increased since the name change, and describes some of the major initiatives PAF has introduced or improved upon, including webcasts, seminars, SOA meeting sessions, podcasts, LinkedIn discussions and our newsletter. Read it and be proud of our many accomplishments! Also, check to see what areas Brian describes that you might have overlooked lately, or areas in which you can contribute more.

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- **Predictive Modeling Techniques Applied to Quantifying Mortality Risk**, by Vincent J. Granieri. Vince describes the Cox proportional hazards model and how actuaries and underwriters use this to establish debit and credit values in the underwriting process. An advantage of this model, as Vince tells us, is that it can accommodate data where some subjects leave or die along the way, others enter part-way through, and others have multiple underwriting events. Read his insights from a study of more than 80,000 lives tracked for up to 15 years through 200,000 underwriting events.

- **2036: An Actuarial Odyssey with AI**, by Dodzi Attimu and Bryon Robidoux. In this article, Dodzi and Bryon coin a new term: AI-calypse—the merger of artificial intelligence and an apocalypse. Will the continued progress of AI and machine learning lead to more prosperity for humanity or will the impact be negative? Read as they describe the Robo Actuary and the Robo Actuarial Analyst, what these new players might do in a typical day, and the impact this may have on the actuarial

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