Article from:

The Stepping Stone

February 2015 – Issue 57

The Zen Actuary Installment 5: "The Sands Are Always Shifting"

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Author's Note: This is the continuation of a series[1] adapted from the book *Awake at Work* by Michael Carroll, covering the application of Buddhist teachings to situations encountered in a modern corporate workplace setting. This series addresses challenges frequently encountered by practicing actuaries.

This installment centers on the core Buddhist principles of change and impermanence. Examples abound all around us. Seasons change. It gets warmer one day, colder the next. Sometimes it's dry; other times there's a lot of precipitation. Machines, automobiles, homes, electronics and other man-made conveniences all experience wear and tear, break, and ultimately become obsolete. All living beings, including humans, experience the life cycle of birth, aging, sickness and death. Even the ground we walk on, which seems so solid and lasting, is subject to the vagaries of tectonic plate movements. Indeed the geologic history of planet Earth indicates an active and dynamic infrastructure.

So how does all of this relate to the work of an actuary? Well, in all ways. An actuary's work exists precisely because no one knows exactly what will happen next, and some of the things that could happen have financial and other consequences that humans want protection from:

- We are all aware of our common mortality, but the time of each individual's death is unknown, and it is the possibility of an untimely or premature demise that drives the demand for life insurance.
- The possibility of unanticipated longevity creates financial uncertainty that can be mitigated through the purchase of a life annuity.
- The potential for the human body to experience a costly severe illness or total disability generates the need for medical and disability insurance.
- The inability of the human body to perform activities of daily living due to the aging process creates the interest in long-term care insurance.
- Man-made objects that greatly enhance our modern lifestyles are subject to depreciation and obsolescence that cause financial loss, motivating the design and marketing of property and warranty coverages.
- While the intentions of human beings' actions are usually benign, accidents and mistakes happen every day, some of them with significant financial consequences. Thus arises the motivation for liability insurance.

In summary, an actuary's world is spawned by change and impermanence.

But for the practicing actuary, these principles go well beyond the core duties of product design, pricing and valuation. Experience studies point to the shifting sands of change itself. Mortality improvements have been evidenced for decades in actuarial analysis, driving the ongoing reduction in life insurance prices. Will these trends continue? Is there an upper limit on how long a human being can live? Is there a potential virus or cellular mutation that can slow or even reverse these gains? Or will advances in cancer treatment accelerate increases in life expectancy?

Health actuaries have experienced a sea change in their practice area, especially those designing and pricing individual medical policies, due to the implementation of the Affordable Care Act. This legislation brought initial challenges with the introduction of minimum loss ratios and rebates of experience below such ratios. But this seems straightforward when compared to the market reforms of guaranteed issue, no pre-existing conditions, mandated benefits and rating restrictions combined with three government-run risk-sharing programs ("the 3 R's") with materially different objectives.

And the implementation of all this was subject to almost daily revision by the government, such as President Obama's proclamation in late 2013 that those insureds who were happy with their policies did not have to purchase a plan meeting the minimum requirements under the law. This proclamation took place after open enrollment began and insurers had policies filed and rates approved for 2014, and was further complicated in that not all states handled this extension consistently. Talk about uncertainty!

Investment-oriented products are yet another area where change and impermanence are pervasive. When I began my career in the late 1980s, yields on investment grade corporate bonds hovered around 10 percent. Insurance companies set minimum interest rate guarantees on interest-sensitive policies such as universal life and fixed annuities from 4 to 6 percent. The 4 percent guarantee seemed like almost a throw-away, given how out of the money that floor was at the time. But over the course of a generation, interest rates have generally declined and are now at levels not experienced in almost 50 years! I've been hearing (and admittedly find myself saying) that rates have to rise someday. But I don't really know that they will, just as I don't really know that they will stay where they are or drop to even lower levels. All I know is where they are right now.

Similarly, equity markets are currently at all-time highs, but that doesn't mean they will remain there tomorrow. Indeed stock prices provide daily lessons in changing perceptions of value, and with the advent of electronic trading, market movements can be more dramatic than ever. We are not that far removed from the financial crisis of 2008, which took down such financial bastions as Bear Stearns and Lehman Brothers. That crisis had a profound impact on a number of aspects of actuarial practice. The proliferation of equity-based guarantees, particularly on variable annuities, was scaled back and the risk management of such guarantees evolved into more dynamic hedging strategies. Valuation techniques are becoming more and more sophisticated in response to the increased complexity of the products being sold. The development of principle-based reserves brings life and annuity valuation practice into the same realm of actuarial judgment as valuation of non-life products.

The practice of risk management itself has expanded tremendously with the formalization of enterprise risk management. While corporate models are not a new concept, their extensive application within an ERM framework did not exist several decades ago. Their use in developing risk appetite, exposure limits and thresholds that are weaved into a risk governance process has brought the actuarial function to a brand new frontier.

How an actuary practices continues to change with each passing moment. Technological advances provide actuaries opportunities to expand the practice, looking at the data structures and models that depend on them in new and exciting ways. Smartphones, iPads, tablets and notebooks offer more data and analysis in increasingly convenient formats. And actuarial software continues to tap into this increase in computing power and convenience, giving actuaries more access to data and model refinement than ever before. Just imagine the possibilities that actuaries would have with a quantum computer!

Not only do our practice areas continually change, but so do the companies and industries we serve. Merger activity has accelerated over the last few years, and private equity is providing the capital in many cases that is fueling new portfolios of business with distinct strategies and operational models. Some of our employers are in growth mode; others are seeking to shed lines that are either unprofitable or deemed non-core; while yet others are doing some of both to better re-align the portfolio with the strategic vision. These moves cascade down to our jobs and the day-to-day execution of our responsibilities. One day our boss is someone we've known and worked with for many years; the next day it's someone we never met before. One day we are working on a business line that is core to the enterprise; the next day that same line is put into run-off.

The truth is that even our very jobs, our livelihood, may exist one day and be re-structured or downsized the next. We just don't know. The actuarial profession itself, long considered recession-proof, is undergoing change and increased competition from other quantitative professions. Actuarial jobs are now being outsourced to lower cost areas. The concept of permanent job security is an illusion.

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Contemplating the essential truth of impermanence and change can be challenging since some potential changes may be understandably viewed as negative. There may be a temptation to throw our hands up and leave our destinies to the winds of fate. However, such an attitude keeps us from seeing the potential opportunities that may be available in the sea of uncertainty. Staying in the present and acknowledging life's vicissitudes rather than tuning out allows us to remain open to that next career move when it presents itself. Or it may inspire us to find that next change to the business model or product design that improves the economics of the business we're in and thus the security of our jobs.

In any case, we accept that change is the only thing constant and continue to work with it rather than resist, confident in our ability to adapt as needed. For it is the process of change itself that gives birth to actuarial work, motivating its practitioners to design products and programs that aid our employers and customers in managing through a variety of difficult scenarios.

ENDNOTE

[1] The first four installments in the "Zen Actuary" series, "Balancing the Two Efforts," "Be Authentic," "Don't Just Check the Box" and "Embrace the Chaos" were published in the November 2013, February 2014, August 2014 and November 2014 issues of *The Stepping Stone*, available online at *www.soa.org/mpd.*