

Actuarial Futurism Hidden in Plain Sight

Actuaries are generally known to be reflective, detail oriented, critical thinkers¹, but does this leave blind spots?

Christopher Chabris and Daniel Simons in their famous experiment found that a numeric focus can lead to missing things in plain sight. <https://www.youtube.com/watch?v=vJG698U2Mvo&feature=youtube>

Our brains filter out information we are not looking for.

So, with actuaries under pressure to get sensible answers quickly from complex models, what information is missed? It may not be restricted to gorillas (big things unprocessed). It could include elephants in the room, like known flaws in traditional actuarial methods. It could also be something more subtle as per the philosopher Wittgenstein's words:

(PI 129) "The aspects of things that are most important for us are hidden because of their simplicity and familiarity. (One is unable to notice something -because it is always before one's eyes.)"

We can try to be more vigilant, but if our attention is already stretched whipping observed information into shape, then perhaps we need help? We may already work with people who see things differently. Comparing their diverse views to our assumptions might help us to more plainly spot things we might miss, like model weaknesses.

What if we worked with them more effectively and added diversity to their mix to help unblock our mental filters? What if we became more strategic ourselves in the way we work?

Inspired by Wittgenstein's ideas around "nonsense" and "surveyability", the Sensing and Responding to Change and Nonsense Working Party (SRChN) calls this type of organized comparison nonsense detection.

The quotes are below. He speaks of the philosophy of language and grammar; his thinking easily extends to mental models and how we apply them.

PI 119. "The results of philosophy are the discovery of some piece of plain nonsense and the bumps the understanding has got by running up against the limits of language. They – these bumps – make us see the value of that discovery. "

PI 121. "A main source of our failure to understand is that we don't have an overview of the use of our words. – our grammar is deficient in surveyability. A surveyable representation produces precisely that sort of understanding which consists in seeing connections. Hence the importance of finding and inventing intermediate links."

Putting this together into a process:

- Organize our view of things and how they are connected (make it surveyable). This may uncover inconsistencies directly.
- Line the survey up with others' and compare to find further gaps and nonsense.

¹ Personality Types of Actuaries, Leonie Tickle, Macquarie University, Presented to the Institute of Actuaries of Australia April 2009

“To repeat: don’t think, but look!”²

Our sources should include underwriters, claims adjusters and etc. who are focused on the granular events that underly our numbers. We just need to be curious and make use of what they see as important to find what is hidden in plain sight.

Note his reference to the limits of language. Another nonsense is taking language for granted. Identical words may be understood differently by others or they may have useful new ones. For example: do the words forecasts and projections really mean the same thing? As we will see later, futurists do not think so.

Following this practice led to a “wow” moment as I was researching Covid 19 reserving impacts for our GIRO 2020 presentation. I came across this excellent futurist article by #JoshCalder, Christopher Kent, and Kristin Nauth: “After COVID-19, Nothing Will Be the Same”

<https://medium.com/@calder.josh/after-covid-19-nothing-will-be-the-same-2ec9697c3c0f>

In it, they ask an important question: “So how can we detect what the pandemic will truly change versus what is likely to fade along with the virus?” and present a powerful framework for distinguishing between futurist forecasts that are credible from those that are more questionable by listing some common characteristics of each.

Questionable:-

- A temporary balance assumed to be permanent
- Goes against human nature and deep-seated cultural norms
- Assumes vested interests will readily transform the systems that serve them
- Reflect the forecasters own agenda

Credible:

- Aligns with trends already underway
- Is based on something useful the pandemic revealed
- Notes the breakdown of outdated or artificial barriers
- Accounts for psychological needs that may have changed.
- Acknowledges what is irreparable.

This helps us vet Covid (or other) predictions we see or create and could become a valuable addition to our actuarial toolkit. -Especially considering the author’s quote; “The longer a society or industry is subjected to disruption and stress by a discontinuity like this pandemic, the more drastic and lasting the changes are likely to be.”

But the article also illuminates something sometimes hidden about actuarial method, hidden in plain sight. This is uncovered by mapping what actuaries vs. what futurists say about themselves:

As per the IFOA: “Actuaries and analysts are experts in risk management. They use their mathematical skills to measure the probability and risk of future events and to predict their financial impact on a business and their clients.”

² Wit

As per the article: "As professional futurists, we don't do predictions. Rather, we help people understand the possible range of futures and equip them to make smart choices about those futures."

The futurist work I have seen works to establish credible alternative possible futures, not range estimates of numbers. Maybe scenarios should not be just a part of risk management, but form a mainstream part of reserving and pricing work? If we think of a prediction as a statistical extrapolation of assumed facts that may have a range, maybe we need to statistically extrapolate different sets of assumed facts in multiple predictions, especially in times of disruption, and use futurist techniques to help us select assumption sets appropriately?

Given the severity of change we are living through it sounds like we have a great deal to urgently learn from Futurists, and that some of our prediction processes could be useful to them.