

Radu's Ride: Flying Like a Bosstatistician

Contributing Editor Radu Craiu (University of Toronto) writes:

This Summer's spirit was airborne. And by that I don't mean that it went up in smoke, European heatwaves notwithstanding, but rather that it was a summer of freedom—an imponderable feeling that is, alas, most relished when it is seriously threatened. I have no idea about others' use of a shackle-free environment, but my decision was to take to the skies, a place that once upon a time used to be friendly. As in all aspects of life¹, some statistical terms helped me to, if not navigate various sides of the mess, at least find the right labels for them.

Planning a trip used to start with introspection, inclination, and prediction. Now it is more about others' expectation: what will they want/need from me and how many regulatory hoops will I need to jump through? Travel was always messy and random so that even in BC (Before Covid) times I was considering it similar to a Brownian motion with a drift. Now that we're driftless, the chaos some have experienced in airports this year is no longer surprising. See, I bet you're already feeling better about that checked-in suitcase you optimistically waved goodbye to, unaware of the absorbing state it was about to enter. In response to these black swan stories that seem to multiply like rabbits, I have lasso-ed my packing habits into a carry-on suitcase regardless of the space-time process my itinerary is supposed to follow. If you are curious about the penalty I used, be aware that the details are unpleasant and involve tuning of my lumbar vertebrae and my ability to reach my laces' loose ends.

After the brutal interval censoring our travel plans succumbed to, I was looking forward to lifting my arms in

sweet surrender at the security scanner. For most, airport excitement comes from the challenge of navigating various competing risks, among which I mention the successful journey through security while keeping one's pants on. If you don't want to end up only with your bootstraps, steer clear from mentioning your expertise in jackknife. The security scanners follow a branching process that rhymes with madness, and one cannot avoid the thought that if we were to use the random sampling of airport security for Bayesian computation, we would sample mostly from the prior. To add insult to insult, lately I seem to hold my liquids badly given the intense scrutiny I experience from the terminal authorities. It turns out that the hazard of trouble is proportional to my contempt of authority. When the awaited thumbs up are finally visible, I move along feeling thoroughly cross-validated.

The celebratory post-security sprint to freedom has evolved into more of a change point problem in which COVID-related requirements play whack-a-mole with our dreams. Uncertainty mis-calibration, along with its propagation, is likely the reason some feel they must choose between staying put or developing an ulcer. For me, an unforgettable memory—in the medical sense—is the blessed day when my daughter turned 18 years old above the Atlantic so that the two-shots vaccine regimen she had dutifully followed was no longer sufficient for the country we were hoping to visit.

A regime switch is not only what we would like to see happen politically in various parts of the world, but also what occurs when we go from taking off to holding off departure for a few hours. That's the time when some regression towards the mean is badly needed, but spurious hopes are not helping when immovable is the word of the day. While stranded in the middle of

an airfield, with no food, little water, and a meager trickle of fresh air, I ponder the practical importance of accepting a false hypothesis or using the wrong predictive model, and start to entertain the statistically sacrilegious thought of swapping the strong signal of an empty cockpit for the white noise of a working airplane engine.

Is such a predicament predictable? I think not, although after five consecutive occurrences, one could modify their prior by adding a few pessimistic spikes to their otherwise optimistic slab. Speaking of cake, airplane food is not it. A meal coming from an airplane's bowels is no black swan, although it does belong in the left distribution tail of all things even remotely edible. Since avoiding the stable taste of plastic has become a central tenet of my diet, I usually chose to sample the terminal-bought sandwich and enjoy the stupendous variability of its taste. Canonical trade-offs make room for less obvious ones. For whatever reason—perhaps conscience—flight attendants endorse my food decision by pouring copious amounts of mediocre beverages.

There was a time when from the airport you would head directly to your quarantine place to wait for your test results while hoping that its ROC will not throw you a curve ball. Happily, those times are over and once disembarked one can enjoy, without any additional worries, or luggage, the joys of being elsewhere and with other people.

And so I would like to congratulate all the brave souls who have, against all odds and omens, managed to organize an in-person conference this Summer. The energy and joy I have experienced as a participant to some of these events has transported me back in time to those days when I was learning to walk in the park and making new friends every 10 minutes. You, dear organizers, have given hope and impetus to many, so that hair loss was totally worth it.

¹ See my *Valentine's special from 2021 for a statistical guide to love*.