

# 2018 The Year in Review

Wednesday, December 31, 2018

For this year's review, I'm going to wax more philosophical, so this screed may be longer than usual. For the tl;dr; (too long, didn't read) version you can just read the short paragraphs.

Again, we are extremely fortunate to have nothing to report in the life-changing-events category. Time passes, for sure, but I can't think of anything really bad that happened this year. Others have not been so lucky.

Just like watching the news might give you a sense that the world is going to hell in a hand-basket, listening to the stories of other people's trials and tribulations actualizes life's worst case scenarios and tends to lead one to adopt a shitty world view. But, if asked to individually identify such adversities in my own life, I come up empty. Is this statistically improbable? My opinion is that I have started in a privileged state, such that the number and frequency of such events is normally, over a lifetime, on average, very diffuse or rare. Coming from such an advantaged state, I can't help but feel an overwhelming sense of thankfulness. Life's good in the grand scheme. Conversely however, there were no identifiable magic happenings either. The fairy tale "lived happily ever after" ending cannot be true because we are all mortal; a fact which increasingly colors my behaviour and the choices and decisions I make. Entertaining thoughts of starting an orchard, or renovating a fixer-upper have fallen to the guillotine of time. But it's OK because there are many other less long term projects still on the to do list.

I've been doing art and writing a lot more lately. My Facebook friends will have seen some of the "art" and short writing pieces.

To be a creative involves getting the work out there – for what is art without an audience, even if it only your future self. So, I've started to publish. In doing so I'm leaving my comfort zone because it exposes the vulnerable soul. But, the external motivation of feedback augments the internal motivation that is necessary but not, for me at least, sufficient to keep creating. Therefore, you poor souls are in for more exposure to cringe-worthy art. This is the fourth year's end review that I've been working on a short story/book, and I swore I would have it finished by now, but alas, not yet. Which is a subtle way of saying I'm still learning how to be a writer and probably will be for life. If you're curious – or into masochism – the ongoing version is [available online](#); although my advice would be to wait a bit while I soften up some of the tech heavy writing. I've found that creating an outline/timeline helps. I started with an outline, but it wasn't detailed enough and didn't have any dates and times associated with it, so chapters were (and to some extent still are) out of sequence. But I have an ending now; weak, but an ending. Otherwise, without a proper ending, like kids stories go on and on, it just trails off into oblivion. I think the next task will be cutting out whole chapters and yet managing to keep the plot points and tighten up the ending. Probably, the chapters to be excised will be the technical ones – nobody wants to read those.

The small software company we operate is back in the black, and 2019 seems to have much more work in store.

The work – if you can call it that – that I do is getting more and more interesting. Electric network grids are currently balanced on a knife edge where supply (coal, hydro, nuclear, gas, wind and solar powered generators) must be adjusted to exactly equal demand (people charging their cell phone and electric toothbrush). But several trends are changing this dynamic. First, the good news is that coal is dying and being replaced by renewables because they are cheaper. Previously they were only cheaper to build, so new plants were tending to be renewable based rather than hydrocarbon based, but now it's cheaper to replace existing coal generation because renewables are cheaper to operate. Solar panels have come down that much in price. This gives me great optimism for the reduction of future CO<sub>2</sub> emissions, which is the newest current existential crisis facing humanity. It's not all good news, since China and particularly India are still bringing large numbers of coal plants online, but it's my belief that these will be white elephants in the near future and subject to replacement. The grid-scale influx of solar capacity is only one aspect of the falling costs of solar panels. Businesses, apartments and homeowners are all increasing their solar infrastructure too. The trouble with solar is that it is only a fair-weather friend; producing only when the sun shines. Fortunately, another massive trend is the falling costs of battery storage led by electric vehicle demand. Storage avoids the knife-edge balance problem by absorbing power when the sun shines and providing it when it's needed. There are grid-scale battery installations, but I believe the real trend will be towards micro-grids where solar capacity and battery storage will be installed together and used locally – what they call “behind the meter” because it is not seen or billed by the electric company. The really interesting possibility is for these micro-grids to be federated into distributed grid-scale storage, where the electric company acts as a broker providing arbitrage services between those with power and those without. This will require a fairly sophisticated real-time analysis of network topology (what is connected to what) and optimal routing computations (keeping voltages nominal and power flows within the capacity of the connecting cables and transformers while satisfying price constraints) which is where we see our little company helping in a baby-step by baby-step fashion. Of course other much larger companies will be entering this space and probably be very successful, but we have the advantages of open source software and nimble execution. My philosophy is unabashedly pro open source software. People distrust closed sourced solutions which are inevitably tied to customer hostile digital rights management or expensive subscription based solutions. I believe there will be more than enough lucre with focused bespoke projects based on open source code. And maybe it will score a big win eventually, but we'll cross that chasm if and when it's encountered.

We're still getting the most out of our GA, touring Switzerland.

I just can't justify buying a 1<sup>st</sup> class General Abonnement (all-you-can-eat rail/tram/boat/funicular pass) because it's too expensive for the added benefits, but we continue to use the 2<sup>nd</sup> class GA to visit Sam and Alex, and to get to places like: Fribourg, Murten, Payerne, Sechseläuten, La Côte, Bürgenstock, Lac d'Émosson, Grosser Aletschgletscher, Solothurn, Saxon, Schloss Landshut, Trubschachen, Twan, Toffen, Como, Niederhorn, and Neuhausen am Rheinfall. Each of those could be a paragraph of exposition, but the usual story is to travel in the morning to get to a hiking trail, tourist attraction, or a local fair/event/dégustation, then spend a pleasant day walking around, eating and drinking before returning home at night in time for dinner. We also did some international travel: to Seville for vacation, Ljubljana to attend a conference, Heidelberg to participate in a dance festival, and Le Pradet to visit Jacqueline's mom. Traveling is one of the perks of the affluent. We

try to avoid flying as much as possible, since it's one of the biggest sources of CO<sub>2</sub> that individuals can control. We also try to hike as much as possible, eschewing the “eco-tours” with their diesel four-by-fours and two stroke ATV's. The vegetation still gets trampled by the locals and the millions of tourists, but mainly by hiking boots. There are just too many people for it not to have an effect. I'm heartened however, by negative population growth rates in Europe and some projections of peak world population within my lifetime. A sustainable future needs a finite population.

I failed to cash out my bitcoin at the peak, so now I have to HODL with everyone else while it recovers.

I'm not a fan-boy, but yes, I do think it will increase again. The utility of bitcoin remains non-zero, so the conversion rates to fiat currency will reflect that fact. As an investment goes you could do a lot worse – unless you bought in at the recent peak. If you want a fungible currency, it's probably not for you. On a more pragmatic note, as we get closer to retirement age, we'll need to do the assessment of the equilibrium point between available capital and lifestyle costs for expected lifespan. So far, I'm pretty sure it hasn't tipped toward the favourable side, but that's mostly a lifestyle choice.

Following on last year, I've been going to the gym on a regular basis – most days when I'm not traveling.

Going to the gym in the mornings before starting work is not too boring yet. I signed up for a one year membership rather than continue to pay quarterly. We'll see if the novelty wears off in another year. It has led to a better physique, despite still being overweight. We generally lead non-sedentary but not extreme-sport-type lives. Jacqueline is into Lindy-Hop, Balboa and Jazz dancing. At a minimum, we get out and about a couple of times per day for after-meal walks. We bike around fairly often but, having a GA, rarely bike into Bern any more. I'm still riding a standard bicycle, despite a (I would guess) seventy percent penetration rate of “electrik-velo” among commuters in my area. Maybe this year, cheap Chinese e-bikes will drive the price down enough to flip me to the dark side. I've mostly stopped playing Ingress since they introduced Ingress Prime (a new version). Its use as an exercise program has mostly been replaced by the gym. In general, I think I'm more fit than I've been over the last ten years.

Sadly, my resolutions from last year were mostly unfulfilled, although to be honest, it's a process rather than an end goal.

I could simply repeat most of the new-years resolutions, but I'll make the following slight modifications. I have made a few friends so I can lower the target number. I have a working version of my short-story, putting it in the end-game state. I did learn Octave (a better MatLab), and took a MOOC course on neural networks (by Geoffrey Hinton who was a professor at University of Toronto when I was a kid) so I can reduce continuing education goals by half.

- make forty new friends
- sign up for German lessons with Alemania and pass the B1 exam
- revise the *More Stainless Steel Rat* short story and release it publicly
- take MOOC courses on Python and Kubernetes