Eat, Drink, and be Merry

Well, the end of 2021 has finally come and, in all the essential measures, it hasn’t been better than 2020 and, in some ways, worse. COVID has resurged with the appearance of the delta and omicron variants, inflation is a forty-year high, US foreign policy is in tatters, crime rate spiking, and a double standard, autocratic ‘rule for thee and not for me’ mentality seems to be in full swing within the ruling class. But, despite these metrics painting such a pessimistic picture, as we stated last month, we remain cautiously optimistic, perhaps even bullish. The tide seems to be turning against those who talk out of both sides of their mouths, begging and even demanding for the luxuries afforded them in the US while biting the hand that feeds them with pseudo-intellectual sophistries. Average people seem to be reacquainting themselves with their God-given rights and their commons sense. It is with this sense of hope that we wish everyone a very happy Christmas: Eat, Drink, and be Merry.

Now onto the columns.

With the basics of Monte Carlo error analysis firmly in hand, [[[Aristotle2Digital](http://aristotle2digital.blogwyrm.com/?p=1231)](http://aristotle2digital.blogwyrm.com/?p=1362)](http://aristotle2digital.blogwyrm.com/?p=1394) expands on the basic method by looking at the concept of importance sampling. The idea here is to draw random samples more often in regions where the integrand is big and less often otherwise. Of course, these random samples still need to be done consistently in an unbiased way but the results of adapting the sampling to the integrand proves to be very powerful in minimizing (or even eliminating) estimation errors..

The common wisdom we often hear in the media is that competition is generally to be discouraged and cooperation encouraged. This gets frequently translated into a Capitalism bad/Socialism good dichotomy. But is cooperation good at any cost? This month’s [[[CommonCents](http://commoncents.blogwyrm.com/?p=902)](http://commoncents.blogwyrm.com/?p=916)](http://commoncents.blogwyrm.com/?p=922) looks at how the wrong kind of cooperation can lead to terrible consequences by examining how an old adage and the new business of doing science intersect.

After a brief detour into field theory, [[UnderTheHood](http://underthehood.blogwyrm.com/?p=1615)](http://underthehood.blogwyrm.com/?p=1626) returns to looking at entropy. The perspective here is to go back to the pre-quantum days (prior to any controversy over distinguishable versus indistinguishable particles) when all that the scientist of the day had to guide them was experiments on the bulk properties of matter and the emerging discipline of thermodynamics. Three key players will be central to the opening act of the drama: Sadi Carnot, Rudolph Clausius, and Lord Kelvin.

Enjoy!