

2 Surviving the Computation Bomb

by Manul Laphroaig

Gather round the campfire, neighbors. Now is the time for a scary story, of the kind that only science can tell. Vampires may scare children, but it takes an astronomer to scare adults—as anyone who lived through the 1910 scare of the Earth’s passing through the Halley’s comet’s tail would plainly tell you. After all, they had it on the best authority¹ that the tail’s cyanogen gas—spectroscopically confirmed by *very prominent bands*—would *impregnate the atmosphere and possibly snuff out all life on the planet*.

But comets as a scare are old and busted, and astronomic spectroscopy is no longer a hot new thing, prominent bands or no. We can do better.

Imagine that you come home after a strenuous workday, and, after a nice dinner, sit down to write some code on that fun little project for your PoC||GTFO submission. Little do you know that you are contributing to the thing that will doom us all!

You see, neighbors, there is only so much computation possible in the world. By programming for pleasure, you are taking away from this non-renewable resource—and, when it runs out, our civilization will be destroyed.

Think of it, neighbors. Computation was invented by mathematicians, and they tend to imagine infinite resources, like endless tapes for their model machines, but in reality nothing is inexhaustible. There is only a finite amount of atoms in the universe—so how could such a universe hold even one of these infinite tapes? Mathematicians are notorious for being short-sighted, neighbors.

You may think, okay, so there may not be an infinite amount of computation, but there’s surely enough for everyone? No, neighbors, not when it’s growing exponentially! We may have been safe when people just wrote programs, but when they started writing programs to write programs, and programs to write programs to write programs, how long do you think this unsustainable rush would last? Have you looked at the size of a “hello world” executable lately? We are doomed, neighbors, and your little program is adding to that, too!

Now you may think, what about all these shiny new computers they keep making, and all those bright ads showing how computers make things better, with all the happy people smiling at you? But these are made by corporations, neighbors, and corporation would do anything to turn a profit, would they not? Aren’t they the ones destroying the world anyway?² Perhaps the rich and powerful will have stashed some of it away for their own needs, but there will not be enough for everyone.

Think of the day when computation runs out. The Internet of Things will turn into an Internet of Bricks, and all the things it will be running by that time, like your electricity, your water, your heat, and so on will just stop functioning. The self-driving cars will stop. In vain will your smart fridge, previously shunned by your other devices as the simpleton with the least processor power, call out to its brethren and its mother factory—until it too stops and gives up its frosty ghost.

COMET’S POISONOUS TAIL.

Yerkes Observatory Finds Cyanogen in Spectrum of Halley’s Comet.

Special to The New York Times.

BOSTON, Mass., Feb. 7.—Astronomers at the Harvard Observatory have not yet made a photographic spectrum of Halley’s comet, which is rapidly approaching the earth, but a telegram received there to-day from the Yerkes Observatory states that spectra of the comet obtained by the Director and his assistants show very prominent cyanogen bands.

Cyanogen is a very deadly poison, a grain of its potassium salt touched to the tongue being sufficient to cause instant death. In the uncombined state it is a bluish gas very similar in its chemical behavior to chlorine and extremely poisonous. It is characterized by an odor similar to that of almonds. The fact that cyanogen is present in the comet has been communicated to Camille Flammarion and many other astronomers, and is causing much discussion as to the probable effect on the earth should it pass through the comet’s tail. Prof. Flammarion is of the opinion that the cyanogen gas would impregnate the atmosphere and possibly snuff out all life on the planet.

Only once, as far as known, has the

¹The New York Times. Your best source for the science of how the world would end most horribly and assuredly real soon now.

²Searching the New York Times for this one is left as an exercise to the reader.

A national mobilization of the senior folks who still remember how to use paper and drive may save some lives, but “will only provide a stay of execution.” Nothing could be more misleading to our children than our present society of affluent computation!³

To meet the needs of not just individual programmers, but of society as a whole, requires that we take an immediate action at home and promote effective action worldwide—hopefully, through change in our value system, but by compulsion if voluntary methods fail—before our planet is permanently ruined.⁴

No point in beating around the bush, neighbors—computation must be rationed before it’s too late. We must also control the population of programmers, or mankind will program itself into oblivion. “The hand that hefted the axe against the ice, the tiger, and the bear [and] now fondles the machine gun”—and, we must add, the keyboard—“just as lovingly”⁵ must be stopped.

Uncontrolled programming is a menace. The peeks and pokes cannot be left to the unguided masses. Governments must step in and Do Something.

Well, maybe the forward-thinking elements in government already are. When industrial nations sign an international agreement to control software under the same treaty that controls nuclear and chemical weapon technologies—and then have to explicitly exclude *debuggers* from it, because the treaty’s definition of controlled software clearly covers debuggers—something must be going on. When politicians who loudly profess their commitment to technological progress and education demand to punish makers and sellers of non-faulty computers—maybe they are only faking ignorance.

When the only “Advanced Placement” computing in high schools means Java and only Java, one starts to suspect shenanigans. When most of you, neighbors, barely escaped courses that purported to teach programming, but in fact looked like their whole point was to turn you away from it—can this be a coincidence? Not hardly, neighbors, not by a long shot!

Scared yet, neighbors?⁶

Garlic against vampires, silver against werewolves, the Elder Sign against sundry star-spawn. The scary story teaches us that there’s always a hack. So what is ours against those who would take away our PEEK and our POKE in the name of expert opinions on the whole society’s good?

Perhaps it is this little litany: “Science is the belief in the ignorance of experts.” At the time that Rev. Feynman composed it, he felt compelled to say, “I think we live in an unscientific age ... [with] a considerable amount of intellectual tyranny in the name of science.” We wonder what he would have said of our times.

But take heart, neighbors. Experts and sciences of doom come and go; so do killer comets with cyanogen tails,⁷ the imminent Fifth Ice Age, and population bombs. We might survive the computation bomb yet—so finish that little project of yours without guilt, send it to us, and let its little light shine—in an unscientific world that needs it.



³Cf. Paul Erhlich, “The Population Bomb,” 1968, p. xi, which begins with “The battle to feed all of humanity is over. In the 1970s hundreds of millions of people will starve to death in spite of any crash programs embarked upon now. At this late date nothing can prevent a substantial increase in the world death rate. . . .” The 1975 edition amended “the 1970s” to “the 1970s and 1980s,” but—as the newer and more fashionable kinds of school math teach us—never mind the numbers, the idea is the important thing!

⁴Oops, that one was a quote, too. No wonder that story was a best-seller!

⁵Ibid., p. xiii

⁶If you think that the “non-renewable computation” argument makes no sense, you are absolutely right! But, do the arguments for “golden keys” in cryptography or for “regulating exploits” make any more sense? No, and they sound just as scientific to those inclined to believe that actual experts have, in fact, been consulted. And sometimes they even *have* been, for a certain definition of experts.

⁷But I bet CyanogenMod is in your Android. Coincidence?