

Moss v. Computers

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My email service just updated my inbox again. Touting a new, easy to understand, interface, boxes popped up onscreen and blared the message that my service was now “new and improved.” I am supposed to be thrilled. I am supposed to be amazed. I am supposed to get up from the keyboard and do a “new and improved” dance before I go back to work. What do I actually feel? Impatience and annoyance is what I feel. The new and improved version is harder to read, the font is less legible, and my old eyes are tired. I just got used to the old version. This version had achieved the venerable old age of six months, three days, and five hours! I was used to it. It was like my ancient fleece blanket, now worn to a soothing softness. I am not against genuine improvement, just meaningless, stir-crazy updates that continue to tweak and adjust without actually making the software more useful.

Whenever I make the mistake of trying to share my unease about the accelerating pace of updates, I am told that I am behind the curve, ungrateful for the immense benefits of the information age, and worse, a fossil. This last implies that my kind will go extinct because we did not adapt to the cutting edge of modern technical mastery.

So, I go back to my email, squinting and fretting, doing my best to accept the inevitable. I try to accept that I have no choice in the matter; that the market-share of Luddites like me is just too small to ever register with the head honchos of the information age.

Time itself is being compressed. Since when is six months *old*? Since last September 10th at 2 p.m.? That should be about right. The intervals continue to shorten. Faster and faster, new software and webpages emerge. At the same time, new operating systems and interface options emerge so quickly that they are rather unfinished: full of glitches and in need of internet repair patches. How long can this go on before we are moving so fast we meet our own backsides? How long before we compress time so far that all of our slick modernity disappears into the quantum void?

I resist! My old laptop is now more than a decade old. I typed these musings using word processing software dating from the same year, 2007. The copy of Adobe Photoshop® that I purchased around the same time is primordial, I confess, it is CS3! I continually pray that my computer does not go belly-up, because the software that I own is as powerful as I need it to be. It is more than sufficient for my writing needs and for me to create digital artwork. Even

more subversive, I work off-line – my computer is now so old that I have retired it from the internet – it became too difficult to update the virus protections and firewall.

Am I just a grouchy old woman? Am I just another disaffected curmudgeon? I will not deny it – it is too obvious that it is true. Yet, I am struck by the acceleration of change. I am struck by this not only for reasons of personal convenience, but for reasons that stem from the fact that I have been a lifelong student of nature. I have lived in many places, working as a teacher and guide on public lands. At each locale I learned the names of the plants, the animals, and the geological layers. In short, I was a “stamp-collector”, working amid the living things of Earth. This label, referring to philatelic indulgence, was originally delivered as a sneer by a famous twentieth century physicist. He, in effect, dismissed any and all science that was not based on a rigorous combination of experiment and mathematical proof. It was a jab aimed at nature study. Sigh, I am a fossil, a Luddite, a curmudgeon, and a mere stamp-collector! The insults accumulate and begin to weigh me down. How can I persist in the face of such a barrage? I can and I will persist, because being a student of nature gives me an altogether different sense of what constitutes old and new. It gives me a different appreciation of time.

This is especially true because my particular interest, as an amateur in love with natural things, has been the history of life on Earth. This discipline was once called, in the Victorian era, natural history. It is the study of the history before “history,” an imaginal plunge into deep time. And it is my immersion in this study, more than any other single factor, that causes me to doubt the unquestioned supremacy of the continued intensification of technological change. Living close to wild nature, contemplating the resilience and persistence of life over 4.6 billion years, what I have been impressed by, again and again, is the tendency of nature to *conserve* innovation. To see this, imagine yourself standing in a forest, a particular kind of forest: a rainy, damp conifer forest on the coast of Oregon.

Giant sitka spruces rise over 250 feet above. Shafts of sunlight penetrate the gloom, spotlighting sword ferns and salmonberry bushes growing on the spongy forest floor. Lichens, ruffled and gray-green, cluster on the branches of the spruces. Massive tresses of club-moss hang down from ancient maple trees. And beneath it all, on the trunks, the stones, the forest floor, plush cushions of moss swaddle everything in sight.

All these creatures, except for, perhaps, the salmonberries and the maples, are way “out of date”; their warranty has been expired for an amount of time that would make a programmer dizzy, if he or she could pause long enough in their onrushing attempt to update the code. The spruces are part of an ancestral lineage that goes back at least 300 million years before the present – the ferns, 360 million; lichens, over 600 million; club-mosses, 390 million; and true

mosses at least 320 million and probably a lot more. As for the salmonberries and the maples, they are among the most modern and advanced of plants living today, their ancestors going back a *mere* 225 million years before the digital age. Nature has retained all of these lineages. In doing so, Nature reveals a profoundly *conservative* aspect – the older versions are allowed to continue existing, they are conserved, side by side with more recent types.

Okay, okay, I can guess that many of you are uncomfortably shifting in your seats just about now. What in heck, you might ask, has some grungy moss in a forest have to do with the latest app on your smart phone? My point has to do with how we view innovation – as an unmitigated good. Any spiffy new icon, or a change in font is seen as an automatic improvement, a panacea for all the world's ills. It is trumpeted and touted whether or not there is an actual improvement in output. Nature handles innovation differently: multiple options are retained. The future is built from a combination of holding on and moving forward. The plants of the Oregon forest described above serve as a prime example. Each of the plant groups represents the advent of a remarkable innovation in the plant kingdom.

Conifers invented the seed and ferns the leaf. Club-mosses perfected internal water transport and mosses are the *ur*-plant, among the very first plants to successfully move from sea to land. The flowering plants, represented by those salmonberries and maples, are the most diverse and ubiquitous plants today. They invented the flower and a new kind of seed, filled with nutrients. Both these inventions gave them an edge in reproducing and spreading their kind. They now grow in every environment on Earth. Flowering plants may now be dominant but none of the other lineages have disappeared – conifers and ferns and mosses are *still here*. It is the fact that all of these groups, with their vastly different tool-kits, still grow side by side and on top of one another, that I find so remarkable. In trying to express how remarkable this is, natural scientists resort to terms like “living fossil,” or “relic of the past.” Because none of these major lineages has gone extinct, you can see them all in a short walk through the Oregon forest.

To be sure, within each of these groups, individual species have become extinct and new species have continually developed. All the while, diversity has increased by many thousands of species. Yet, at the same time, each major group has been retained along with the innovation that it represents. Nature has been both boundlessly creative *and* bounded by tradition. Together, advent and continuity have resulted in a natural world of infinite diversity and infinite relationship. As I contemplate this wonder, I cannot escape the suspicion that our one-sided emphasis on innovation is misguided. Varied strategies are the hallmark of resilience – the tendency to maintain an even strain, to keep living and functioning, in the face of new pressures.

So this fossil is not sure she wants that latest update. At least, I want to choose which updates are useful to me and which are not. There was a time, not so long ago, when the “customer was always right.” Now, if I demur – if the creative demands of my artwork and writing do not conform to the latest upgrade, then it is my art that must accommodate the software and not the other way around. We careen forward at high speed making no distinction between genuine creativity and mere busy-work. And as we move forward, we often de-construct the best work of the past. One reason that I still use software that is 5 to 10 years old is that I find that it is actually better and easier to understand. Some of the newest applications have become, in my opinion, over-complicated.

Nature dances between the poles of conserving the past and inventing the future. In so doing, living nature has persisted in the face of many reversals and setbacks. My understanding, derived from a life spent contemplating the wonder of the natural world, is that both tendencies are the key to the persistence of life. What of us then? Will we persist? In my heart, I know that we *can* persist. But only if we become aware, as we were during the tens of thousands of years of our gestation as a species, that we thrive only when we remember that life, well-lived, moves both forward and backward.