

The all-natural quantum infused editorial

By Bill Kilpatrick

I have received a couple responses from my critical analysis of aspects of the wellness industry. One of my favorite responses so far has come from a self-proclaimed 'healer' who stated, 'The point is you are entirely wrong to spread your division and shame to a medical community you don't understand.' Then in all capitals they wrote, 'Everything is medicine. Know that.' But my favorite part was when they said, 'I don't doubt your 'good intentions,' [the very fact that you put quotes around it shows you do] and I realize you are just an idiot promoting your medical savoir, so be well Bill?? Wow, tell me what you really think.

The problem with emotion filled retorts like these is that they tend to always end up into personal attacks. I had hoped to have a reasonable rational argument regarding the merits and limits of science, but comments like 'everything is medicine' and 'the system is burning to the ground. It will be my people that are sought out for healing. You will be most welcome,' don't exactly invite dialogue.

I found it interesting that this person referred to my criticisms as holding up science as a 'saviour,' and in a way I am, but that does not mean that the scientific community is not wrought with its own problems. There is one big difference between the alternative medicine community and the mainstream medical community though. One at least strives to do good science, whereas the other, tends to avoid it, ignore it, or use it in an exploitative way to make money. The comedian Tim Minchin said it best when he said, 'You know what we call alternative medicine that's been proven to work? Medicine.' While science has its issues it's still the best way we have as humans to assess truth from falsehood. As Timothy Caulfield, author of 'The Certainty Illusion: what you don't know and why it matters' said, 'The process of science, when done well and with humility remains, as Carl Sagan famously put it, 'a candle in the darkness.' A systematic approach for building our knowledge of the world.' Caulfield then asks rhetorically, 'If not science, what? Astrology? Tea leaves? Your buddies hunches?'

In his book Caulfield examines how information is created, developed, critiqued, and put to good use, but he also examines how it is manipulated, exploited, and used for nefarious purposes. He says, 'It isn't just dark in our information universe, it's a hurricane of lies, twisted facts, misleading marketing, and politicized rhetoric. We need something more than a candle, we need bright and trustworthy beacons, blaring sirens, and clear guideposts to see us through the storm.' He pointed out that what we all strive for, what we all desire, is certainty in an uncertain world and in an age of mass information, where we have more information available to us than at any other point in history, we also seem to be more uncertain than at any other point in history. Caulfield says, 'The more we desire trustworthy information to inform our decisions, the more the information economy is incentivised to spin that information. Paradoxes abound. As we turn to science as a guide through the dark, the motivation to use science, good, bad, distorted, or fake, as a tool not to inform but to market, pursued, or deceive is heightened, thus reducing the power and ultimately the social value of science. 'the more we seek certainty the harder it is to find.'

Part of this problem Caulfield says, is that the knowledge production system has been 'incentivised to deceive us' and those incentives most often come in the form of monetary incentives. The global health care industry was valued at \$8.5 trillion in 2020 and the pharmaceutical industry alone was valued at \$1.6 trillion in 2023. When people say follow the money this is often what they are referring too, but those same people often ignore that the wellness industry was valued at \$6.3 trillion in 2023. These are both massive industries and they are competing for our trust and our money.

Caulfield points out that the highly competitive academic environment where much of the information comes from that we rely on to make decisions has been corrupted multiple ways, but one specific example is something he calls 'hype.' Which he describes as making overblown predictions of the efficacy and applicability of the scientific findings in order to gain an advantage when it comes to applying for grants to do research. It's often this 'hype' and excitement about new discoveries that the alternative medicine and wellness industry exploit for profit, something that Caulfield calls 'scienceploitation.'

He gives multiple examples of people and industries who hop on the latest hype train and use specific cutting-edge words to sound

more science-y and thus sell more products. He says, "Magnetism and electricity were used, as quantum physics is today, to explain supernatural and pseudoscientific phenomena." Caulfield points out that terms like "quantum" when combined with product names and when used to sell products or services is always bunk and scientifically meaningless. Perhaps, I just don't understand quantum mechanics you say. Well, you'd be correct, but neither does anyone else, according to Richard Feynman, who won the Nobel price in 1965 for studying quantum electrodynamics. Caulfield quotes him as saying, "If you think you understand quantum mechanics, you don't understand quantum mechanics."

Caulfield cites numerous examples of scienceplotation such as quantum homeopathy, quantum reiki, quantum reflexology slippers, quantum beauty spray, quantum water, and on and on. Recently I saw a reiki master who claimed to be a "certified level 2 quantum healing hypnosis technique practitioner." I really want to ask the practitioner if this just works on the atomic or sub-atomic level and how you can tell the difference.

But one of the main examples that he cites of scienceploitation came in 1920 to 1930 after the discovery of radioactive material. "The public," he says, "was fascinated by the mysterious properties of the element radium and the research done by pioneers like Marie Curie. Predictably this led to the marketing of a host of radioactive products including, radioactive bread, chocolate, jewelry, soap, jock straps, and even condoms." (For fun, check out this webpage that lists all the different radioactive products that were produced during this craze, you will be both surprized and horrified. <https://www.nrc.gov/docs/ml1008/ml100840118.pdf>)

One product that was quite popular was a radioactive water drink called Radithor. Caulfield tells the story of a golfer named Eben Byers, a rich well-educated socialite who began drinking Radithor in 1927, on the advice of his physiotherapist, after he fell off a bed and hurt his arm. In fact, he drank some 1,400 bottles of it until he died in 1932. Caulfield says that the Wal Street Journal article that spoke about his death noted, "the radium water worked fine until his jaw fell off." I guess this means that not everything is medicine and now I know this.

Byers' story is a warning for those who like to be at the cutting edge of new and exciting untested products or want to ignore the science or lack of scientific testing. Marie Curie who discovered radium in 1898 warned people to not experiment with it because too little was known about it, but those who wanted a quick buck, simply ignored her warnings, jumped on the band wagon and ended up killing people by using the naturally occurring element radium in a host of products.

People are free to choose either alternative or mainstream medicine for their treatments, but, my advice, if you're going to choose alternative medicine or wellness products, just make sure you're not falling for the next quantum infused, radium water, do-it-yourself natural coffee enema to cleanse your colon and enhance your microbiome. Unless of course it's backed up by good science, which it won't be.