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Walden

Engineering trees for profit

By Wade Graham



Recent news that a San Francisco-based biotech startup has begun planting super-fast-growing, genetically-engineered trees that suck CO₂ out of the air 50 per cent faster than normal trees should cheer anyone worried about climate change, shouldn't it? After all, what could go wrong?

The company, Living Carbon, claims that its engineered poplars, having been shot up with undisclosed, non-tree genes, grow 50 per cent faster than wild poplars –thereby, it is assumed, sequestering 50 per cent more CO in the same amount of time. It achieved this by speeding up natural photosynthesis using genetic modification, thus "enhancing natural systems" to catch up with industrial humanity's speeded-up release of greenhouse gases. According to its website: "It is an opportunity to learn how to use technology to rebalance our ecosystems



The treeplanting offset market, so central to net-zero strategies, rests on falsehoods rather than further alienate us from them."

Such is Silicon Valley's boundless faith in technology, despite the glaring fact that it is technology that has unbalanced the planet and alienated us from it. It's like Elon Musk telling us that colonising Mars will help us to save a degraded Earth. Or a doctor prescribing whisky to sober up a drunk.

Doubts abound about GM trees. To begin with, the evidence is thin, coming from a single, five-month observation of some seedlings in a greenhouse. There are no peer-reviewed papers, and no field trials.

Further, Living Carbon effectively snuck around safety guardrails by using an older, more crude gene transfer method than current technologies, in order to take advantage of a since-closed loophole in US government safety regulations to rush the trees into the ground. Is this cutting red tape, or cutting corners? There are good reasons for caution when monkeying with ecosystems: ask an Australian about cane toads and rabbits. It's no surprise that China is the only country that has so far permitted uncontained planting of quantities of genetically engineered trees.

Moving genes from one species to another is even more fraught. Tweaking one gene to produce one result isn't all that hard these days. What is, is understanding what will happen in the complexity of natural systems, about which we remain fundamentally ignorant. The National Park founder John Muir is often quoted as writing: "When we try to pick out anything by itself, we find it hitched to everything else in the Universe." But the original sentence in his *Journal* read: "When we try to pick out anything by itself we find that it is *bound fast by a thousand invisible cords that cannot be broken*, to everything in the universe."

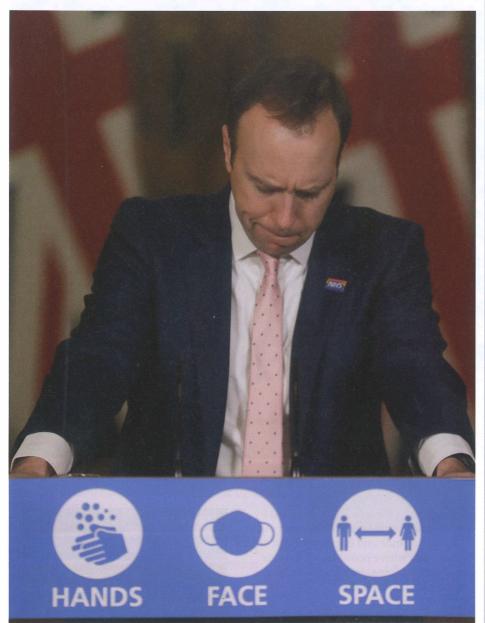
We are only beginning to learn how complex forests are, how trees are bound together with microorganisms, fungi, and other trees and plants in enormous, hyper-complex webs of nutrients and communications operating at molecular levels. These mechanisms, like photosynthesis, were honed by evolution over the entire history of life on Earth. Who are we to say they are inefficient and must be improved?

Venture capital-funded genetic entrepreneurs, that's who. The co-founder and CEO of Living Carbon previously worked for OpenAI, which developed the chatbot ChatGPT, in order to improve on humans, while making a profit. Funding for the four-year-old venture, to date \$36 million, has come from Silicon Valley investors, including OpenAI CEO Sam Altman.

Capitalists seeing a profit opportunity while saving the world... from capitalists, has a certain simple circularity that might be attractive to... venture capitalists. But, as they often seem to do, these VCs have failed to see that the business model is crap. True, the trees' doubled growth-speed would presumably attract landowners to be guinea pigs by promising to halve the normal timber rotation, which can be up to 50-

The covid questions

Three years on, how did the government do?



Former health secretary Matt Hancock's role during the pandemic is still stamped negatively on the UK's covid story $\ \ \, \ \, \ \,$

hree years on from the first lockdown, Covid, like Brexit, is a word mostly avoided in government circles, unless, like Brexit, it's mentioned in terms of success. Self-congratulatory mention of the UK's swift vaccine development is the typical response from ministers questioned on the benefits of Brexit. But this claim, like certain other Brexit boasts, is misleading, since those early vaccine actions were taken under European laws that still applied to the UK at the time. The eventual rollout was an undeniable achievement, with the UK leading the way amongst Western countries, but successive prime ministers and ministers would perhaps be wiser to focus on the vaccine facts of that period rather than adding Brexit-boosting fictions.

So how, then, has the UK fared overall in battling covid? Government failure to do more to stop the spread of covid early in the pandemic was later judged as one of its worse public health failures, according to a joint report by the Health & Social Care and Science & Technology committees. The government's initial approach, backed by its scientists, had been to try to manage the situation and in effect achieve herd immunity. The then prime minister Boris Johnson's infamous "take it on the chin" quote in March 2020 stilllingers bitterly in the memory of many, particularly those who lost loved ones at that time.

But the report itself also received criticism, with some claiming it focused too much on practical issues, such as problems with laptops, rather than on those who'd died. The role of the former health secretary and recent reality-TV star, Matt Hancock, is also indelibly stamped, mostly negatively, on the UK's covid story over the past three years. Despite numerous warnings from care-home providers, Hancock's department initially pursued the disastrous policy of discharging elderly patients straight back into care homes from hospital without testing them for covid, resulting in thousands of lost lives. And in October 2020 Hancock denied he'd broken the government's drinking curfew, despite reports he'd stayed in the Commons bar beyond 10pm. But that was nothing to the furore that erupted as photographs emerged of him embracing his then aide, Gina Coladangelo, in what appeared to be CCTV footage from inside the Department of Health and Social Care. Despite the very clear breaking of social distancing rules, Johnson refused to sack his health secretary, with a spokesman saying the prime minister "considered the matter closed" after Hancock had apologised. Parliament and the public felt-differently, and eventually Hancock resigned. Then there was "Partygate," the scandal of boozing and partying inside Number 10 during lockdown. Resignations and police fines followed, but like covid, Partygate refuses to go away, leaving another stain on the government's handling of the crisis.

No pain without profit

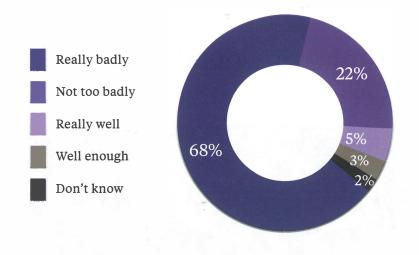
Why do political allies win, as nurses lose?

hen disaster strikes there are always people ready to profit from misery. And although many companies and individuals stepped up quickly and diligently to provide desperately needed PPE equipment when the covid situation worsened, the awarding of certain multi-million-pound government contracts, without competitive tender and via a fasttrack "VIP lane" (since declared illegal), led to outrage. Accusations of corruption and sleaze thundered around the corridors of power as friends and relatives of some politicians, as well as certain Conservative party donors, undeniably made vast amounts of money from the pandemic.

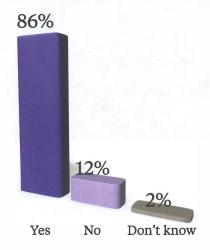
Perhaps the most notorious case is the continuing saga of Baroness Michelle Mone, a Conservative life peer. Mone and her husband Douglas Barrowman are said to have secretly received tens of millions of pounds from a company awarded a government contract to supply masks and protective gowns – which, incidentally, proved unusable. The couple deny any connection with PPE Med Pro, the company that received the contracts, with Mone taking a leave of absence from the House of Lords, in order "to clear her name of the allegations that have been unjustly levelled against her."

Meanwhile, the very same nurses who were applauded weekly at the height of the pandemic for their selfless and exhausting devotion to duty, have reluctantly taken strike action to get the pay rise most in the country believe they deserve. Both the current prime minister Sunak and then-incumbent Johnson clapped vigorously at the time, but then the government dragged their feet on fair-pay talks.

On the government's overall handling of the pandemic, which best reflects your view on how they dealth with it?



Should the government bring to justice individuals and companies that made billions from dodgy PPE deals?





Total covid worldwide deaths

UK Covid deaths, the highest toll in Europe Written off by government on unusable PPE

Source: Statista, 02/'23

Source: BMJ