

Happiness is a virtue.

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A soft alarm tone fills the room. Sound reaches every corner of this room but light seldom finds its way past the thick blackout curtains covering every window. A lined hand emerges from under the blanket and navigates the clutter of a small table. The owner of the hand knows this bedside habitat like the back of her... Gliding over a small notepad and pushing aside a smartwatch, she grabs an e-cigarette. Dr Atishi sits up and takes a deep apple-flavoured breath. A long exhalation and a stream of smoke prepare her to open her eyes and crawl out of bed.

She smoked her first e-cigarette when she was 27 - shortly after her bipolar diagnosis nearly six decades ago. She prefers her e-cigarettes over the instant gratification that comes from the dopamine injector built into her smartwatch. It's hard for someone who has been puffing dopamine into her system even before the 'tenth plague', to switch over entirely to these smart devices. But sometimes, that damn watch does its job and guides her out of the depths of meaninglessness.

Dr. Atishi limps past a mountain of laundry and pours herself a bowl of Happy Crunch cereal. Milk bounces off the sugar-coated flakes and falls on the counter. Staring deep past the milk-covered counter she begins to spiral into a long list of things that could go very wrong at work today. She reaches for a napkin and ends up cutting herself on the edge of a drawer. Blood slowly trickles down her palm and turns the blue cloth napkin to purple. A shade that spells devastation for the 83-year-old virologist - she found out 41 years ago that certain shades of purple are among her principal triggers for chronic depression. She asks her AI voice assistant to send an apologetic email of absence to her boss and limps straight back to bed. She covers herself with a blanket to keep her aching joints warm and puts on her smartwatch. An alert pops up suggesting she is at critically low levels of dopamine. The watch proceeds to give her an 'optimized' dose, place an order for replacement cartridges, and then play an advertisement for real estate in the Pantanal - 'Watch the sun set over endless fields of palm from the comfort of your infinity pool. Luxury awaits. Jaguar EcoHomes'.

In the warmth, Atishi freefalls into her mind. She floats through a labyrinth of thoughts. It's a water maze with purple-stained water, reflecting vivid videos of troubled memories. And like depressed mice, drowns willingly. She watches a memory of a young Atishi walking up to her favourite fig tree. Despite the dreadful traffic of urban Bangalore, a young Atishi found solace around the cluster fig trees at the Indian Institute of Science where she was pursuing a PhD in microbiology. Until, like everything else, that too became an entangled mess...

'BREAKING NEWS: Ukrainian refugee resettled in Nepal thought to be patient zero for EV-D73. The search for viral origins begins at the Beldangi refugee camp.'

The dim light of Dr Atishi's phone illuminates the inside of her linen igloo. A notification for a mandatory therapy session at 3 PM. Another notification rolls up underneath - Raj, the 61-year-old office security guard had just passed away. His family was holding a memorial service at 6 PM. Another excruciating surge of purple flashed in Dr Atishi's head. She realised she was spiralling because the comfort of hiding in bed was now being threatened by the idea of speaking to her therapist and attending an event filled with people. She felt no remorse for Raj's family, she was almost envious of him- the youngest employee at the office who no longer had to deal with this world. A watery screen comes to life with the scenery of her institute and a tall white building looming over where a cluster fig once stood.

Twenty years since her groundbreaking work helped unravel the mechanisms EV - D73 used to infect the brains of fetuses. Dr Atishi, now a professor, sat on the fifth floor of her lab at the institute. She had long forgotten about the fig trees and the happiness they once brought her. Happiness, *what art thou?* EV-D73 was as insidious as it was blatant. Global infant mortality rates had gone up to 307 per 1000 newborns in 2035; stayed at a horrific 230 per 1000 even after 15 years. In addition to infant mortality, EV - D73's infection surreptitiously reduced adult dopamine production, adding a physiological layer of sadness that permeated every corner of the world. Economies strained as their productivity slumped from the weight of individual sadness. Individuals struggled as they coped with slow economies and minds tending to pessimism. For minds already coping with

disorders like bipolarity, the only accessible road to survival was paved with chemically-induced happiness.

For nearly ten years after the discovery of EV-D73, the effects of the virus on adults went unnoticed as the rising cases of mild depression were attributed to a world of dying children and environmentally degraded human settlements. When it finally came to light, Greentech Pharma and Trust Social Technologies came together as G-TST to pull humanity out of the depths of despair and into the warm embrace of a subscription fee for happiness.

TIME Magazine 2076: Meet Dr Atishi, the scientist who uncovered the tenth plague. Following her retirement from academia, Atishi is all set to join G-TST as Chief Scientist and spearhead its wearables division...

'... I'm excited to dive into G-TST's work in neural chips. I believe data captured by G-TST's proprietary neural tech embedded in the brain can determine mental states and compensate for deficits with wearable injectors. We're also looking at healthier non-chemical alternatives to direct dopamine injection - our neural chips will make online shopping recommendations that could make doses smaller.'

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Everyone deserves a happy ending...

If Joe D Baugher were to be asked what that announcement on injectibles meant to him, as he often was at the time, his response, despite his own organization, the Center for Disease Control (CDC) insisting upon the public mandate, was always to disagree with the 'new' new-world law. He'd said 'It doesn't take a behavioural neuroscientist to know that putting the world's population under continuous dopamine 'guidance' as they are calling it, can't be without unknown fallout!'. 'Indeed.' Atishi Roy had thought, with a twinge of sadness.

Joe first met Atishi at Yale where he was a teaching assistant tutoring bright undergraduate minds like Atishi Roy. Since their first beer together on the old water tower, they had been each other's sounding boards, confession buddies, work collaborators and dating advice givers.

To avoid a family trip to France, he took Atishi up on her recommendation to spend at least a week in the Pantanal, a place she swore was a better wildlife destination than the Amazon.

It had been a 9-day tour starting at São Paulo and onto different lodges in the north and south Pantanal with safaris, walks and small boat excursions on the river Cuiaba at the heart of Pantanal in Port Jofre. Joe almost instantly hit it off with José, his local, self-taught nature guide and flautist. Joe and José had started an evening tradition at José's quaint home on stilts - Joe would make cachaça cocktails while José played melancholic melodies on the flute. After only 6 days of trying, Joe managed to play one of those haunting tunes on the flute. José gifted him the flute as a souvenir and threw in effusive compliments on his musical calibre - the real compliment for Joe was watching José's three nephews swaying to his tunes.

The Brazilian state of Mato Grosso do Sul (MGS) hosts most of the Pantanal. It had been in the news, sporadically over the past few decades for illegal cattle ranches that kept workers in slavery-like conditions. Following reports by a journalist, who had garnered a reputation for tracking illegal deforestation in the Amazon by loggers and ranchers, some ranches were shut down.

BREAKING NEWS: The bodies of award-winning investigative journalist Robert Phillips and his friend were found on a boat along the Paraná River. Local police have apprehended a suspect, but refuse to comment on his links to the Ferreira family.

The cattle ranch Joe was staying at was a pioneer of ecotourism and ethical meat production. A few miles away, however, sat a ranch run by the infamous Ferreira family. Helena Alice Ferreira had taken over from her father three years ago. Using her business school connections and credibility, she began supplying one of the biggest beef retailers in the US. The conditions for the workers, however, only got worse. An ex-classmate who visited Helena at her ranch covertly shot a gut-wrenching video of the workers' living conditions. The viral video sparked media outrage and forced Brazilian authorities to shut down the otherwise impregnable Ferreira Farms. Among the people freed during the raid were José's pregnant sister Adriana and her three children - now living in Jose's family home in their village.

Atishi had a talk at the International Conference for Emerging Infectious Diseases hosted by the CDC where she would present her work on post-COVID

complications. She was really looking forward to catching up with Joe, who insisted on picking her up at the airport.

Two days after Atishi's arrival, Joe fell sick. 'It's probably just the flu' he said on the phone. To be safe, his doctor had taken some swabs that tested negative for SARS-COV2, strep or pneumonia. Atishi remembered feeling a stab of foreboding.

She ran into an old classmate, now posted at the International Health Regulations (IHR) Focal Point in Brazil. Jen had some really troubling news: there had been thousands of cases of neonate and infant deaths, seemingly with neuropathies in MGS and nearby states. She seemed really harrowed and had set up meetings later in the week with officials at the CDC. Jen clearly needed support to evoke a sense of urgency to implement actionable protocols only the CDC/WHO could pull off internationally. Atishi was happy to help in every way, her Portuguese was functional.

Helena got a call from the CDC about visiting within a day or two to collect some samples from 'Ex-employees, their families, and animals you have in the ranch', the lady with a strange accent had said. Before she could ask how the CDC had any authority over this, her mind wandered to some local chatter she had been hearing - many infants and little children had died over the past couple of weeks. The government clinics were scrambling for an explanation. The room pulsed in and out of focus as the walls closed in on her holding a photograph of her children.

Atishi was roped into the research project and agreed to conduct phylogenetic studies and sequence analysis from samples collected in Brazil. Though feeling unsettled and slightly on edge, Atishi returned to Bangalore excited about her son Adi's 4th birthday. This would be his first proper birthday party with friends and family - chips, board games and balloons in his favourite colour - purple.

Two weeks after her return Atishi was down with a mild fever and throat infection. Adi seemed fine but the scientist and mother in Atishi sent Adi's stool samples for viral culture, fearing the worst. Every night she held Adi till he fell asleep and checked his vitals incessantly for as long as he was home.

Over the next few weeks, Atishi and Joe, joined by thousands of scientists worldwide, worked tirelessly to unravel the identity of this vicious virus. The disease procured an ominous common name, the tenth plague.

They made leaps in understanding the virus, but solutions would take longer. Too long for some. Children across the world fell seriously ill - the same symptoms of meningitis and encephalopathy. Only children older than six reacted well to existing antiviral treatment but manifested developmental delay, neurological problems needing lifelong medical intervention. A pandemic was well on its way and even with sophisticated treatment options, the world hopelessly watched as scores of children died.

Atishi poured herself into work to distract her from what was happening to Adi. Atishi and Joe identified the enterovirus and named it EV-D73, transmissible through faecal-oral, oral-oral or respiratory aerosols. Their most intriguing finding was that it could infect domesticated mammals, which didn't get sick but acted as its reservoirs. Nearly everyone with children chose to put down their pets or give them up.

A vaccine was eventually developed. The efficacy was a heartening 75% chance of preventing full-blown disease in very young children, even after exposure to the virus. However, all adult trials identified a high risk of severe autoimmune reactions and neuroinflammation. For nearly a decade, adults were thought to simply have flu-like symptoms from the virus and so, vaccines were only administered to children.

Curiously, fertility rates stayed abysmally low - alarming governments and economists about the looming threat presented by the loss of an entire working generation.

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Joe was never shy about regret. His greatest regret would always be not staying home when he was sick during the ill-fated conference. So when his phone rang nearly 10 years later with an invite to Atishi's lab in Bangalore, he didn't know what to feel. They had barely spoken after working together on EV - D73. Just the association to what happened to Adi had made it unbearable, for both. Sitting across the table, she asked him if he recalled the old Lake Ontario case, where the E.coli infections arising because of the flooded lake had eventually led to a mass depression 10 years after. Although etiologically unrelated, she showed him results from brain autopsies of people whose children had died of EV-D73 "...the samples had been collected for a retrospective genetic study. The ventral tegmental area has tested positive for EV-D73 antigen and 2-photon microscopy shows its presence

inside dopaminergic neurons. Dopamine is inherently hard to measure in blood samples." said Atishi.

"We were so busy scrambling to make antivirals for children, following the funding..." trailed Joe.

"Nobody monitored adults," Atishi said as she completed Joe's thought.

As soon as their findings were published, a sociology study combed through a decade of social media data and found a disturbingly clear pattern - the whitepaper by Trust Social Technologies found a whopping 90% of all women of childbearing age found motherhood to be a sombre prospect. The results indicated that men were unable to find joy in any personal pursuits. Men and women had no interest in improving their performance at work.

Informed by Atishi's study and commissioned by governments across the globe, Greentech launched the Happy Band, a smartwatch with an inbuilt dopamine injector. Greentech held the patent for a brain-permeable dopamine-containing nanoparticle as well. Happy Bands would inject dopamine, first thing in the morning as rising cortisol levels indicated waking up.

The smartwatch enabled happiness in a mind naturally devoid of it and productivity in a society devoid of youth. Happiness was virtually restored.