Everything we know is wrong

Change is not always for the best.

On 1 April 2057, workers found the body of Dr Albert Lorry, Nobel laureate in physics, slumped over his desk. Few mourned his passing; fewer still regretted that he had neglected to download his memory imprints to the world repository before firing a rail-gun projectile through his formidable brain and ending his own life. Newspapers reported that he left one unintelligible message, but in truth he left two, both perfectly intelligible.

Many people concluded his last words were the ravings of a man driven insane by professional failure. Dr Lorry was, after all, the inventor of the Lorry Terrafirming Cycle, the only machine capable of efficiently scrubbing and sequestering atmospheric carbon on a massive enough scale to alter climate patterns. But what initially held such promise for reversing the effects of global warming, winning him the Nobel and numerous other awards and accolades, and making him one of the most celebrated men on the planet, ultimately proved to be a failure and his own undoing. A failure no one could explain, least of all Dr Lorry.

The Lorry Terrafirming Cycle should have worked, and it did, in fact, work as expected. Better than expected — pumping out chunks of limestone the size of houses useful for any number of building needs. It was self-powered, using methane and other greenhouse hydrocarbons scrubbed from the atmosphere, and producing fresh water and oxygen as waste. Atmospheric carbon levels were halved in little more than a decade. It was nothing less than a miracle. The citizens of Egypt built a fourth great pyramid in Dr Lorry's honour using limestone generated by the Sinai LTC facility.

But global temperatures continued to rise. Venice was lost, along with Bangladesh, countless islands in every ocean, and most of Florida and Denmark. Desertification progressed at an alarming pace — the Sahara gobbled up a Switzerland-sized chunk of equatorial Africa every year. By 2057, the year of Lorry's suicide, India had largely been depopulated by famine, disease, war and massive human migration. Australia was an uninhabited wasteland, except for a few science stations in the south. Americans hugged their coasts and huddled underground to escape the dust storms that had buried Chicago, Cleveland, Denver and Dallas. The Lorry Terrafirming Cycle chugged merrily along, while Dr Lorry's reputation withered and his research funding dried up. Not that he needed money — he was already the world's first and only limestone billionaire. But there had been a petition published in *Nature* that year to have his Nobel revoked. He slaved 20 hours a day trying to explain his failure, but no one would publish his papers any more. Old friends stopped returning his text messages and phone calls.

He videoed me on the afternoon of 28 March. I had just got out of an editorial meeting for *Metrologia*. I had known Dr Lorry briefly at Cambridge before he became famous, so I hardly expected him to remember me, much less call upon me for a favour. It was indeed an enormous favour he asked of me, but because of his reputation, and because I wasn't entirely certain his recent troubles were his own fault, I agreed. I arrived in London on the 30th and dropped off an official 2055 copy of the kilogram at his office. He wasn't in at the time, and I had business of my own at Oxford, so I never had the opportunity to see him alive. But as soon as I returned to London, I heard of the disaster and went straight to his office to recover the prototype. As the official representative of the Bureau International des Poids et Mesures, I was allowed to view the scene while Dr Lorry's body was, quite literally, still warm.

JACEY

His shattered and bloody head lay on his desk next to the official kilogram I had brought from Sèvres, as well as an old national copy that I later learned he'd obtained from the British Museum. Under his hand lay a brown paper bag, apparently what he'd carried the British copy in, onto which he had scrawled his final words — *everything we know is wrong*. The rail gun lay on the floor in a pool of water next to a shattered glass beaker. After answering several questions from the detective-inspector in charge, I collected the kilogram measure and returned to France, deeply saddened but not at all surprised.

The following Monday morning, Dr Lorry's second message arrived in the post. That was remarkable enough in and of itself. The letter began in the usual melodramatic fashion of these things — *By the time you read this I will be dead.* Then he wrote:

I ask you, in your official capacity, to compare your official copy of the kilogram with the international prototype cast in 1875. Don't use modern instruments. Take each and place it in a litre of water. You will find a measurable difference between the volumes of the two kilograms, but not their weights, just as I have discovered, to my horror.

I'm certain the implications of this have not escaped you. The gravitational constant has shifted in the past 175 years, and no one has noticed because we always assumed our tools were in error, not gravity itself. We recalibrated, just as we were taught. Nature, however, cannot recalibrate. This is the reason for global warming, my friend — shrinking atmospheres and orbits, but who will believe me now, after all that has happened? Look instead to Mars and Saturn for the same global symptoms.

Everything we thought we knew is wrong. Gravity is changing, and we can't stop it.

A year passed before I showed the letter to the director and asked permission to conduct Lorry's experiment. My request, of course, was denied.

Jeff Crook

Jeff Crook spends his days cloning ponies and wrestling with the Semmelweis Reflex, wondering about the future, and wandering about the office.