

# 5. The transhumanists as tribe

Greg Klerkx

Just a few years into the new century, Russian biologist Elie Metchnikoff believed he had discovered the key to achieving immortality. And, more excitingly, Metchnikoff was convinced that by doing so he was on the verge of ushering in a new phase of human evolution. Bypassing *elixir vitae* and the fountain of youth, Metchnikoff literally went with his gut. What stood between mortality and potential immortality, Metchnikoff claimed, was the large intestine, which he viewed as one of evolution's more dangerous leftovers: a cesspool of waste and, critically, the human body's primary breeding ground for bacteria. To Metchnikoff, bacteria were the real enemy. Remove them, and you remove one of the chief causes of natural death in humans.

Metchnikoff's idea quickly gained traction both in the scientific community and among the public. He gave speeches; he wrote books. And he performed experiments – on humans – to test his theory. He surgically removed the bowels of several ill patients and claimed they were the better for it, even though some promptly died.<sup>1</sup>

If Metchnikoff's methods seem outdated and extreme, it is probably because the 'new' century in which his life extension theory took hold was the twentieth, not the twenty-first. But far from being a well-meaning crank, Metchnikoff was among the most prominent scientists working at the dawn of biology's modern golden age. He was an associate of Louis Pasteur (and eventually a director of the

Pasteur Institute) and he shared with Pasteur an obsession with microbes and their role in disease. Metchnikoff made his own indelible contribution to biology by identifying phagocytes, or white blood cells: the body's first line of defence against infection. For this achievement, Metchnikoff was awarded the 1908 Nobel Prize for Physiology/Medicine.

Metchnikoff didn't shy away from suggesting that science had brought humankind to the brink of a new and remarkable era. 'The human condition as it exists today, being the result of a long evolution and containing a large animal element, cannot furnish the basis of rational mortality,' he wrote in his 1910 book, *The Prolongation of Life*. 'The conception which has come down from antiquity to modern times . . . is no longer appropriate to mankind.'<sup>2</sup>

In most of the ways that count, Metchnikoff was the first modern transhumanist. At the least, he was the first modern populariser of a very old aspiration: to use technology and, later, science to transcend what nature has endowed us. He also neatly framed transhumanism as a temporary state between old and new: between the incremental progress of natural development and a future in which humans took every aspect of their destiny, including their biology, firmly into hand. But even this idea, though seemingly rooted in modern bioscience, has very ancient antecedents: Icarus's wings were, if nothing else, an early expression of a primitive transhumanist yearning.

### **Modern day Metchnikoffs**

These days, transhumanists take many forms: from nanotech enthusiasts who envision armies of microscopic robots inside our bodies, forever detecting and destroying disease, to head-freezing cryonicists who believe that science will one day revive the dead. But all share a basic belief that would undoubtedly resonate with Metchnikoff: that as technology and medicine advance, humans will live significantly longer and healthier lives while realising greater intellectual and social achievements. As a result, there will be a profound change in what it means to be human.

The term 'transhumanism' had no real purchase on popular

culture in Metchnikoff's day, although references to it can be found as early as 1312, when in *The Divine Comedy* Dante Alighieri used *transumanar* to describe what happens to someone who experiences a holy vision.<sup>3</sup> But our modern sense of the word is more clearly associated with the revolution in biological science of which Metchnikoff was an early leader. Even in Metchnikoff's day, the headiness of this revolution, which seemed to match fantastic claims with amazing achievements, infected both the academy and the masses. Reflecting on Metchnikoff and his writings, in 1903 the *Times* confidently stated that, 'We should live till 140 years of age. A man who expires at 70 or 80 is the victim of accident cut off in the flower of his days, and he unconsciously resents being deprived of the 50 years or so which Nature owes him.'<sup>4</sup>

Certainly, Metchnikoff's position as one of the world's pre-eminent biologists helped give his ideas currency, but today's transhumanists do not lack their eminent 'mainstream' representatives. Ray Kurzweil, one of the most vocal promoters of transhumanism, is an accomplished technologist who has been awarded prize after prize for inventions as important as the flatbed scanner and machines that help the blind use computers. Another eminent transhumanist is Marvin Minsky, founder of the MIT Media Lab and a leading light in the development of artificial machine intelligence. Kurzweil in particular has been successful, with books and talks, in painting a convincing picture of a near-term world in which humans will be repaired, enhanced and advanced by bioscience to such an extent that our children, or theirs, will effectively be immortal.

Kurzweil, Minsky and their peers are at the forefront of what might be called transhumanism's third wave. Like Metchnikoff, they are sounding a clarion call that radically improved and longer-lived humans are imminent, and they are basing such claims on optimistic extrapolations from relatively new science and technology. Whereas Metchnikoff was excited by microbes, Kurzweil and company are enthusiastic about the possibilities deriving from rapid advances in computer and materials technology and the decoding, in 2000, of the human genome.

But the new transhumanists differ from Metchnikoff in a critical aspect. They are convinced that transhumanism is not a surprising byproduct of modern science; they believe it is an evolutionary inevitability and, critically, the only way in which humankind can be saved from its worst impulses. In this, what fuses the first and third waves of the transhumanist movement is the second wave, which gave rise to the modern definition and common use of the term itself.

### **Second wave optimism**

At the head of this second wave of transhumanism was a former Olympic athlete turned novelist and futurologist who began life with the name Fereidoun M Esfandiary but ended it, in 2000, with a far more ethereal moniker: FM-2030. The son of an Iranian diplomat, Esfandiary had lived in 17 countries by the time he was 11 years old, and while he would spend most of his life in the United States, his early nomadic existence clearly defined him and the philosophy he would bring to the transhumanist *oeuvre*. As a reviewer of his first novel, the best-selling *Day of Sacrifice* (1959), wrote, ‘Esfandiary is an optimist. He has hope, because he has a deep faith in man. He is convinced that technological progress, the contact of cultures, etc . . . will free man from his present miseries. Given time, man will even deliver himself from his supreme tragedy – death. Man can be made perfect.’<sup>5</sup>

Optimism was one of Esfandiary’s critical contributions to the progress of transhumanism. The other was inevitability. Esfandiary was convinced that longer-lived humans were a necessary byproduct of the wave of sci-tech breakthroughs that had rocked the twentieth century. Conveniently, he dismissed the era’s darker technological products, like nuclear weapons, as aberrations of human progress. To Esfandiary, radically extended life, not to say immortality, was the essential next step in humanity’s escape from the randomness of natural evolution to a new place where it would assume true control of its destiny.

Esfandiary was not the first to espouse this viewpoint. In his 1957 essay ‘Transhumanism’, biologist Julian Huxley used the term to

describe a future point when humankind would find itself ‘on the threshold of a new kind of existence, as different from ours as ours is from that of Peking man.’<sup>6</sup> But Esfandiary took Huxley’s essentially evolutionary cast of transhumanism and moved it a step nearer to the *zeitgeist*: the tipping point from human to transhuman didn’t exist in the hazy future, Esfandiary insisted. It was already happening. ‘Today when we speak of immortality and of going to another world we no longer mean these in a theological or metaphysical sense,’ Esfandiary wrote in his 1973 book, *Up-Wingers*, which largely set the tone for all transhumanism to come, ‘We now need new conceptual frameworks and new visions to guide us as we venture into uncharted spheres which are potentially full of hope.’<sup>7</sup>

At the time, few scoffed at Esfandiary’s radical claims for an imminent transhuman awakening. The years preceding *Up-Wingers* had seen the introduction of the birth control pill and humans landing on the moon; the term ‘Up-Winger’ was a specific reference to spaceflight, which Esfandiary saw as a harbinger of the transhumanist revolution. Political establishments seemed bereft of answers to the woes of the planet; in the future, science would lead the way, and society would follow. The use of the word ‘up’ was Esfandiary’s deliberate attempt to redefine human ambitions in the context of ‘the right-left establishment’.

The years following the ‘Up-Winger Manifesto’, in which Esfandiary published best-selling books with titles like *Telespheres* (1977), *Optimism One: The emerging radicalism* (1970) and *Are You a Transhuman?* (1989), would see the first artificial heart transplant, the first use of genetic engineering, the popular emergence of the internet, exponential advances in computing technology, and the embryonic demonstrations of artificial machine intelligence. Thus, Esfandiary’s brand of transhumanism advocated a deliberate and aggressive acceleration of the pace at which human science and technology took positive control of the world: controlling weather cycles, manipulating human biology and colonising planets were just the beginning.

Only a few years before *Up-Wingers* was published, the first human

was cryonically ‘suspended’, an action seen by many as the first modern act of applied transhumanism. Esfandiary himself, after dying of pancreatic cancer in 2000 – and thus falling short of living until 2030, as his moniker ambitiously proclaimed – had himself placed in suspension at the Alcor Life Extension Foundation, Arizona. He remains there to this day in the hope that, some day, science and technology will become sufficiently advanced to bring him back to life.

Most scientists don’t believe that Esfandiary or any of his fellow ‘cryonauts’ will ever be anything more than expensively frozen flesh. Like the cryonauts themselves, by the late 1970s, Esfandiary’s brand of optimistic transhumanism was largely spent as a cultural force. Its fading was gradual but, in many ways, predictable. However hopeful Esfandiary himself might have been about the human condition, the transhumanist movement he created was philosophically yoked to other utopian movements of the late 1960s and early 1970s that were effectively hoisted on their own high-tech petards. The Space Age didn’t deliver the population relief, societal unity or new energy sources that it once promised, via massive rotating colonies and mining operations on the moon. Neither did the Whole Earth movement, which was largely sparked by the astounding pictures of the Earth from space, significantly slow human development or our rapaciousness for environmental resources.

### **More than human**

Throughout the 1980s and 1990s transhumanism, like dreams of colonising the stars and achieving Gaian connectedness, was largely the province of fringe organisations. Most prominent and influential among these was the Extropy Institute, founded in 1988 by Bristol native Max More, who positioned transhumanism as something actively pursued by increasing numbers of people. ‘Transhumanism reaches beyond the sphere of humanism in its goal to improve the human condition,’ More wrote. ‘We seek to improve ourselves and the species of “human”.’<sup>8</sup> (As for ‘extropy’, it’s an optimistically loaded neologism – an intended antonym to entropy – that neatly reflects More’s determinist view of transhumanism.)

From the start, More saw the potential of information technology to spread his gospel of transhumanism. He launched the Extropians List, an ongoing discussion of transhumanist issues, in 1991 – the same year that Sir Tim Berners-Lee established the World Wide Web. Since then, the institute’s site has expanded to become one of the more comprehensive sources of information on all things transhuman. This also helped to establish transhumanism as an idea for the twenty-first century, in concert with the explosion of the internet and its quasi-utopian trappings. It is no surprise that many of the most enthusiastic modern transhumanists are also internet pioneers. Some, like Oracle Software founder Larry Ellison, are substantial funders of transhumanist research projects.

Indeed, it seems likely that first true ‘transhuman’ will be someone like Larry Ellison, who combines the ambition, willpower and wealth to achieve a new lease on life. In this respect, modern transhumanism is less utopian than its previous iterations, and more reflective of an atomising society in which only the strong (for which, read: very rich) survive. By contrast, Esfandiary and the other leading lights of transhumanism’s second wave were, essentially, New Age socialists. Enhancement leading to virtual immortality was to be for all, to the betterment of the species. There would be no haves and have-nots.

Transhumanism’s third wave didn’t begin in earnest until 2000 with the decoding of the human genome. Already, it combines a dizzying array of scientific disciplines and research spanning the globe. It also encompasses political and cultural faultlines, with issues ranging from the availability of AIDS drugs in Africa to the opposition, among Christian conservatives, to stem cell research in the US. Given the complexity of modern transhumanism, it is perhaps no surprise that the third wave is exemplified by someone who feels equally at ease working within the methods and frameworks of bioscience, engineering and even philosophy. Like Metchnikoff, Cambridge genetics researcher Aubrey de Grey (profiled earlier in this volume) is a scientist, holding a PhD in biology. Like Kurzweil and Marvin, de Grey is also a technologist, a software engineer who ran a high-tech start-up company in the 1990s. And like

More and Esfandiary, de Grey does not shrink from making radical transhumanist claims that enrage as often as they attract: more than once, he has claimed that science and technology are close to achieving breakthroughs that will allow humans to live for 1000 years.

But even if we can use science and technology to extend our life spans and natural abilities, the big unanswered question is do we really want to? Third wave transhumanists cannot see many downsides to these developments, despite ample evidence that the products of modern science have been used at least as often for harm as for good. At the end of the day, they insist we will become transhuman simply because it is our destiny. ‘We didn’t stay on the ground, we didn’t stay on the planet, we’re not staying within the limits of our biology,’ says Kurzweil. ‘We’re a species that instinctively seeks to go beyond our limitations.’<sup>9</sup>

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### Notes

- 1 Details about Elie Metchnikoff’s research are from MR Rose, *The Long Tomorrow: How advances in evolutionary biology can help us postpone aging* (London/New York: Oxford University Press, 2005).
- 2 E Metchnikoff, *The Prolongation of Life* (London: W Heinemann, 1910).
- 3 From the *Paradiso*, Canto I, verses 64–72.
- 4 Preface to E Metchnikoff, *The Nature of Man: Studies in optimistic philosophy* (London: W Heinemann, 1903).
- 5 From [www.fm2030.com](http://www.fm2030.com) (accessed 4 Jan 2006), a website dedicated to the life and work of FM-2030 (born FM Esfandiary).
- 6 Julian Huxley’s essay was published in *New Bottles for New Wine* (London: Chatto & Windus, 1957).
- 7 FM Esfandiary, *Up-Wingers* (New York: John Day Company, 1973).
- 8 From [www.extropy.com/faq.htm](http://www.extropy.com/faq.htm) (accessed 6 Jan 2006).
- 9 From author interview, March 2005.