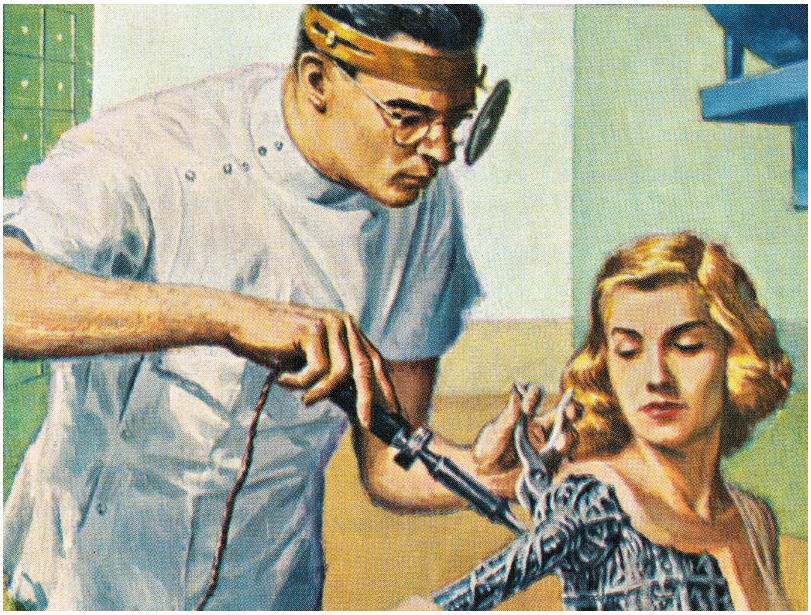

PMHx

Visions of the medical future, from the past

Looking back at science fiction BY TRISTAN BRONCA

There is a website called "Technovelgy," probably one of a few like it, that catalogues many of the medical technologies dreamed up by science fiction authors and the years they first appeared in print.

Some were, as you might expect, predictive. There's the Dixon Pump, which appeared in 1960 in *Dr. Futurity* by Philip K. Dick. It's believed to be one of the earliest references to an implanted artificial heart. Or Rabbit-Paper, an instant pregnancy test, from Dick's 1963 work *The Game Players of Titan*, published nearly a decade before the discoveries that made the first home pregnancy test possible. Spray-on surrogate skin from Robert Heinlein's *Puppet Masters* published in 1951, was one of the many fictional forerunners to today's 3D printed skin used in plastic surgery—technology which itself seems pulled from science fiction.

According to the database, the first reference to telemedicine came in 1909 in *The Machine Stops* by E.M. Forster. In one scene, the massive apparatus tumbles out of the ceiling towards the sick patient to take her temperature, administer medication and deliver soothing advice from the doctor from afar. (Almost miraculously, real telemedicine predates this; in 1905 Dr. Willem Einthoven, the Dutch cardiologist and inventor of the electrocardiogram, used a telephone to perform the earliest form of telecardiology.)

Other dystopian examples highlight our anxieties about the future of medical science: Clones used for nefarious purposes, like the ones in Kazuo Ishiguro's *Never Let Me Go* or Harry Harrison's *Make Room! Make Room!*; widespread use of powerful and addictive pharmaceuticals to render the public more agreeable, as in Aldous Huxley's *Brave New World* or Margaret Atwood's *Oryx and Crake*; memory and mind manipulation, as in Cordwainer Smith's *A Planet Named Shayol* and Philip Dick's *We Can Remember It For You Wholesale*.

Wind back the clock to the late 19th and early 20th century, to the beginnings of the genre, and you'll find stories like *The Island of Dr. Moreau* by H.G. Wells. Published in 1896, it speculates about what a diabolical doctor could do if he tried to push emerging surgical methods to their extreme. Even Edgar Allan Poe had written stories that occupy the borderland between classical horror and sci-fi. His short story *The Man that Was Used Up*, published in 1839, is about a great military general who (spoiler alert) must be assembled every morning, his body made mostly out of prostheses.

But by far the oldest entry in this particular database comes well before the dawn of science fiction. In *The Consolidator*, published in 1705, Daniel Defoe envisions a machine called "The Cogitator" or "The Chair of Reflection." He describes it as a "strange and extraordinary piece of art" containing "a multitude of springs and screws" that carries the person sitting in it "into vast speculations, reflexions, and regular debates with himself." The person would emerge from this mind-altering machine inexplicably wiser, refreshed, and healed. He called it "a cure to our Deism, Atheism, Scepticism and all other -cisms," more effective for its intended purpose than another less mysterious medical machine he calls the "Italian engine," which delivers a cure for gout by cutting off the diseased parts.

It doesn't require a huge stretch to see a resemblance between The Cogitator and the medical pods of science fiction, proper—those comforting beds into which we all hope to one day climb, to press a button, and to emerge fully healed. In a 2015 essay for Motherboard, Brian Merchant discusses how healthcare is treated in science fiction; how the nuances are glossed over so that these devices might fulfill our fantasies.

"That's the techno-utopian dream," he writes. "Just like the medieval dream—fix the body, in a flash, like a magic spell." **MP**

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