

[I Have Seen My Death] by Paul Wombell

There are moments in life when you become more aware and sensitive to the world around you. That moment came to the photographer Reiner Riedler on seeing his newborn son in hospital for the first time. He became acutely aware of the human life that he was now responsible for, but also of the array of machines that are part of the modern hospital experience. This was his motivation to make the photographic project *Will*, which portrays the appliances, instruments and devices that are now central to medicine.

The exploration of the human body by technological instruments started at the beginning of the nineteenth century with the invention of the endoscope to look inside the canals and cavities of the body. Later would come the stethoscope to listen to the sounds of the body and then the ophthalmoscope to look inside the retina of the eye. From these instruments more sophisticated ones were developed which, rather than visible light, used a wider range of the electromagnetic spectrum. By the end of the nineteenth century Wilhelm Röntgen had accidentally discovered X-rays and made the first X-ray image on a photographic plate, depicting the bones in the hand of his wife Anna Bertha Ludwig. It is reported that when she saw the photograph Anna said, 'I have seen my death'. Now, at the beginning of the twenty-first century, X-ray and other machines have been combined to create systems that can see even further inside the body and are capable of predicting death, as well as systems that externalise the organs of a living body and assist in prolonging life.

Riedler's pictorial style, using a dark background to isolate each medical machine from their usual environment—the hospital ward, the operating theatre—emphasizes the materiality of each machine. We see computed tomography scanners, heart valves, kidney dialysis machines, pacemakers and ventilators, each with their unique character. Some of these machines are in many respects cameras: they look, they monitor and they investigate in places that could not be reached without the aid of technological devices. They really can see into the soul and seek out the secrets hidden within our bodies. This examination of the interior of the human body is comparable to the exploration of outer space: both enhance human vision with the use of 'seeing machines' that travel to inhospitable places. And that these medical machines should look like space probes ought not to be surprising, as their job is to orbit planet Human.

For those with little knowledge of medicine these machines might seem slightly sinister and uncanny. This is emphasised even more in Riedler's photographs by the absence of any recognisable living human presence—we see no doctors, nurses or patients. This leaves space for our imagination: how does the body connect to these machines? Do we fully understand what these machines do? Do we have control over their operations? At the same time, however, these are strangely wonderful objects, not only in the sense that they save human lives but also in aesthetical terms, with the shapes of their tubes, wires, pumps and integrated circuits. They feel like they have a life of their own.

At times some of these machines appear to have recognisable human features, such as faces, arms and legs. This anthropomorphism—attributing human characteristic to inanimate objects—is easily explained because these plastic and metal artefacts are intimately connected to bodily parts of flesh and blood, and in many respects are meant to replicate functions of the human body. When they are

switched on they also have a voice. They speak in short sentences of electronic blips which are graphically displayed on monitors that can be read as a face. Through these sounds and signs doctors and nurses interact with the body, using the machine as intermediary and leading the patient along the pathway of care.

The differences between the human and the inanimate virtually collapse altogether with the appearance of anatomical models and humanoid robots. These forms of human representation perform the role of the patient and are used for medical training and research. The anatomical models are a form of mapping of the human body at the service of a discipline we could call ontography—the branch of knowledge concerned with the way in which the different parts interact in the physiology of the human body. Some of these models can be completely dismantled—what in product design is described as ‘teardown’: the piecing apart of complex objects to see how they function and interconnect together. Humanoid robots take human representation further: they can simulate breathing, pulse rates, emotion, heartbeats and comas. They can also switch roles, not only aiding care but also administering it. More complex computational-based humanoid robots can take blood tests, collect diagnostic data and perform surgical operations. NASA has The Robonaut 2, a humanoid robot working on the International Space Station, which is being tested to perform medical tasks in space. Robots have become doctors and nurses.

The photographs in this book also speak to something quite profound, the desire to prolong human life, which today is managed with the aid of technology. However, this has created a distance in the doctor-patient relationship as the use of medical machines has become more widespread both in terms of administering healthcare and collecting data for future research. The aim of this research is to control the nature of the human body and ultimately to deny death. This can be seen in two ways, extending the longevity of individual life beyond one hundred years of age and the development of machine life.

Immortality, once the prerogative of the gods, is now becoming the business of large corporations. Bill Maris, the CEO of Google Ventures, stated in 2015, ‘If you ask me today, is it possible to live to be 500? The answer is yes’. Google Ventures is the investments arm of Alphabet, the parent company of all Google companies, which also includes Calico (California Life Company). Formed in 2013 and supported with money from Google Ventures, Calico aims to reverse-engineer the biology that controls lifespan and enable people to lead longer and healthier lives. *Time* magazine put this more succinctly: ‘Calico hopes to cure death’. Larry Page, the CEO of Alphabet and one of the key initiators of the Calico project, predicts that by uniting new advances in technology it will be possible to solve the problem of ageing in the future. Page has also appointed computer scientist and futurist Ray Kurzweil to be an adviser to Calico and work as director of engineering for Google. Kurzweil predicts that we are only fifteen years away from a tipping point in longevity where we shall add more than a year every year to our life expectancy. The biomedical gerontologist Aubrey de Grey, co-founder and chief science officer of Strategies for Engineered Negligible Senescence (SENS) Research Foundation (also based in California) which is concerned with the diseases of aging, also thinks that human life can be indefinitely extended. He compares the human body to a machine with moving parts, not dissimilar to a car or an airplane, which accumulates various types of damage over time. As with machines, the damage to the human body can be repaired, thus

reversing the ageing process. De Grey believes that new biomedical technologies will eliminate genetic damage and physiological decay, leaving humans biologically young into an indefinite future. He has said that the first person to live one thousand years may already be alive.

Therefore, anyone born over the last ten years in any western society is entitled to expect to live until they are one hundred years of age. This means that Riedler's son could well live beyond 2110. However, with further advances in medical technology and with the assistance of Calico and SENS, that could easily be extended to 2200 or even 2600—halfway through this millennium, or even longer! Riedler might well have considered naming his son Methuselah, who according to the Hebrew scriptures lived for 969 years. This development in the longevity of the human species due to medical technology is rarely discussed, never mind considering the wider implications for other forms of life on this planet and the resources required to support human life beyond 'three score years and ten'. Though this book is ostensibly about medical machines, it might be more appropriate to say that *Will* is about the future of the photographers' son and humankind in general, wherever this might be, either on this planet or in outer space.

Reiner Riedler's photographic project laid out in this book implies that another form of life is emerging. From the wires, plastic and metal more recognisable prosthetics features are seen: vertebral columns, eyes, heads, hands, legs and arms come into view. From these different components a fully functioning mechanical life is being fabricated. Waiting in the shadows is a different notion of the body based on another concept of life, a body without pain or blood.