



Dorothy Hodgkin by Maggi Hambling (1985). © National Portrait Gallery, London. 93.2 x 76.0 cms.

UNFREEZING TIME

Patricia Fara

Apparently a moment frozen in the present, this picture also captures elements of the past

and of the future. The pressures of passing time pervade the canvas. Absorbed in her work, an elderly woman is frantically busy, as if trying to complete her life's mission before it is too late. In reality, over the following eight years she became increasingly frail but

made few concessions to age and illness, even insisting on travelling to Beijing in a wheelchair. The snowy sky glimpsed through the window seals off her room from the outside world and accentuates the impression of looming darkness – the end both of a short winter's day and of a long career. From elbow to hand, each arm is blurred and painted twice, suggesting the rapid movements of an animated cartoon character. The artist has further conveyed a sense of urgency by using dry brush strokes applied with virtuosic speed and freedom.

The only British woman yet to have won a Nobel Prize in science, Dorothy Hodgkin (1910–94) deserves to be far better known. A pioneer of X-ray crystallography, she was one of the earliest experimenters to use computers for the long complex calculations that translate black dots on flat photographs into three-dimensional representations of atoms inside large molecules. Although the deliberations of the Nobel Committee are kept secret, it does seem that she was sidelined several times until the protests of other eminent scientists led to her award in 1964, long after she had unravelled several molecular structures, notably penicillin and Vitamin B12. Ironically, she learnt the news from two curious journalists: then living in Ghana, she only received the Stockholm telegram three months later.

Hodgkin was most proud of her success in solving the still more difficult problem of analysing insulin. Following 35 years of effort, she finally cracked the code in 1965, and in this picture her ball-and-stick model dominates the large, cluttered desk in front of her. The artist, Maggi Hambling, deliberately arranged the scene so that the scientist would seem to be channelling light from the window onto her greatest achievement. Engaged in several tasks simultaneously, Hodgkin ignores the artist's presence as she hastily makes notes, peers through a duplicated magnifying glass and refers to a paper in her hand. Even inanimate objects reinforce her preoccupation: the sloping books and folders on the shelves, the piles of computer print-outs, the discarded sandwich.

The most poignant features of this portrait are Hodgkin's four hands, their twisted shape echoing the gnarled branches of the trees

outside. She was only 28 when she suffered her first acute attack of rheumatoid arthritis, which continued to cause severe attacks of disabling pain throughout her life, especially under stress. In 1978, when the Royal Society commissioned Henry Moore to create its first image of a female Fellow, he insisted on producing pencil drawings of her hands rather than a conventional portrait. Although the face is traditionally the mirror of the soul, here Hodgkin's distorted fingers – so essential for manipulating delicate equipment – reflect her determination to persevere and her dedication to research.

As viewers, we may feel privileged to peer in at the private study of a busy scholar. Decades later, we can perceive what she was perhaps choosing to ignore. The only item that will survive is the molecular replica of insulin – and even if that is destroyed, the scientific knowledge that it represents will last for ever. In contrast, lying next to the model is a reminder of impermanence, the half-eaten sandwich that is already stale and will soon disintegrate. With her tousled white hair and lined face, Hodgkin is herself a transient figure who cannot postpone death for ever.

To paint this picture, Hambling stayed with Hodgkin in her Warwickshire cottage for five days, later remarking that this distinguished yet unassuming scientist bore the closest resemblance to a living, walking saint that she had ever encountered. Paradoxically, perhaps such virtue explains why she is not more famous. It seems that scientists only become iconic when they are misfits, supposedly reclusive like Isaac Newton or absent-minded like Albert Einstein. Married with three children, the woman in this portrait made light of the difficulties she had confronted during her long career, but introduced support systems to ensure that the future would be brighter for her female students.

Dr Patricia Fara is an historian of science and has been President of the AHS since 2016. This is the second in a series of short articles in which she discusses a number of images, each illustrating a different way of incorporating time and its passing within a picture without showing a clock.