

Sweet are the uses of adversity

Dreich. That's how I remember that day. For those not well versed in the Scots dialect, "dreich" describes the sort of dull, miserable weather that leeches all colour from the landscape. It is, unfortunately, synonymous with the Scottish summer.

And on as dreich a day as this, I have completed my first year of medical school. A milestone such as this deserves some recognition, but being on a student budget, I forego any lavish celebrations and instead visit my favourite second-hand book shop in Glasgow's west end. An autobiography catches my eye: *Stephen Hawking. A Life in Science*¹. Hastily, I buy the book and catch the bus back to my hometown. As the bus judders into life, I open Hawking's autobiography to begin reading, and note a faintly scribbled Shakespearean quote, scrawled by the book's previous owner: "*Sweet are the uses of adversity*"².

Long before I started my medical career, as a schoolboy, Hawking had kindled my interest in science. Having discovered an aptitude for the natural sciences, I began reading *A Brief History of Time*³ during my summer holiday. Hawking's ability to distil the complex laws governing the universe into a simple anecdote that could be understood by an ordinary boy such as myself ignited my passion for science by making this esoteric world of hypothesis and observation accessible and intriguing. First and foremost, Hawking was an extraordinary scientist, with a brilliant mind. Yet, as I rolled along the motorway reading the story of his life, I was reminded that it wasn't just his genius that inspired me, but rather his capacity for accomplishment in the face of immense hardship. That Hawking became the great science communicator of his time when suffering from amyotrophic lateral sclerosis (ALS), which robbed him of his ability to verbalise, is testament to that perseverance.

Adversity waylays every clinician at some point in their career. The example of Hawking's triumph has always inspired me to keep going when circumstances seemed to conspire against me. My final year at high school was a critical juncture, where I needed to attain top grades and make applications to medical schools. My mother being diagnosed with cancer and my father suffering a heart attack within days of each other threatened to derail my medical career before it had even begun, but realising that my misfortune was trivial by

comparison with Hawking's, I carried on and was admitted to study medicine, and used my experience as inspiration to forge a career in oncology.

Despite being diagnosed with ALS, Hawking continued to study for his PhD at Trinity Hall, Cambridge, where he first began to articulate his theories on the expansion of the universe. He never allowed his own hardship to impede his work or his enjoyment of life. Hawking once described witnessing the death of a boy from leukaemia during his time in hospital, and remarked that "*Whenever I feel inclined to be sorry for myself, I remember that boy*"⁴. Fast-forward to the present day, and it is no coincidence that my own career has taken me to a clinical research post in Cambridge, where Hawking's fledgling scientific career took flight. And, perhaps subliminally influenced by Hawking's remarks about that young boy, I now find myself engaged in leukaemia research and working at the very hospital where Hawking himself was frequently treated. Stephen Hawking was a passionate advocate for the National Health Service (NHS) in the United Kingdom. Shortly before his death, he addressed the Royal Society of Medicine, where he extolled the virtues of the United Kingdom's universal health care, explaining that he "*would not be here today without the NHS*"⁵.

Thus it is now, more than ever, that Hawking's words inspire me. I write this essay from my apartment: the normally bustling street outside is eerily empty, as we enter a period of lockdown in the face of a global coronavirus pandemic. The conferences I submitted research to have been cancelled, laboratories I had been working in have closed their doors, and clinical training and progression has been postponed indefinitely as the NHS prepares to meet the greatest challenge since its inception. This week, I have been recalled to clinical duties in the NHS from my ivory tower of academia, seemingly extinguishing any hopes I had of completing my research. Frankly, I am scared for the challenge that awaits us as the cases of COVID-19 begin to soar. But then I think of Hawking, and how he not only overcame hardship, but used it to fuel his own creativity and discovery. Time, then, to dust myself down, don my protective mask, and begin a new study, with the aim of identifying predictors of severe COVID-19 from patients' admission blood samples. After all: sweet are the uses of adversity.

References

- 1 White M. and Gribbin J. (1992) *Stephen Hawking. A Life in Science*. Penguin Books. Pages 56-74.
- 2 Shakespeare, W. *As You Like It*. Ed. Seneschal, H, Bate, J. and Rasmussen, E. Royal Shakespeare Company (2007) Page 486.
- 3 Hawking, S. (1988) *A Brief History of Time: From the Big Bang to Black Holes*. Bantam Books.
- 4 Hawking, S. W. *My Experience with ALS* (privately produced pamphlet)
- 5 Hawking, S. W. (2017) *Talk NHS: a public debate on the past, present and future of the NHS*. Royal Society of Medicine, London. 19th August, 2017. Available from: <https://www.youtube.com/watch?v=uPtd1vIQr0Q>