Retirement speech

Quartier Vert restaurant, Bristol, 25 September 2008

If I'm run over crossing the road tomorrow, I'll be stereotyped in the newspapers as "Pensioner and grandfather". Until the last moment, you think it will never happen. I'm still in denial.

When people occasionally ask "Where did you grow up?", I tell them that I never did. But the closest to growing up has been my forty-three years in which our beautiful department has been my home. I arrived in 1965. There were builders all over the place, and the 'new wing' was half-made. Our address was still the Royal Fort – or, as in letters I received over the years, the Royal Foot, the Royal Fork, the Royal Fart (from Japan), my American Express bills were addressed to H H Wills la Oratory, and my favourite: M V Berry, H H. I remember my first meeting with Cecil Powell, standing side-by-side in the third-floor men's toilet. "The plumbing in this room has been leaking since they built the place in 1927", he said. That was in 1965. As half of us know, it still leaks after eighty years.

And now, when (as Bob Evans [head of Bristol physics] delicately puts it) I make the "smooth transition to University Research Fellow and Emeritus Professor", it's once again amid the bustle of builders. My grand challenge for him is: get that plumbing sorted.

I have been enormously fortunate. First, to have enjoyed free education. Without that, I would never have considered going to university (only one of my twenty-five cousins had a university education), and might have ended up in my uncle's shop selling trousers ("Why waste time reading all those books?"). And fortunate in coming to Bristol, almost by accident. I had been awarded a Fellowship to move from my Ph.D, in St Andrews, to Sussex (Bob Chambers [a Bristol professor] was on the interview panel in London). My supervisor, Bob Dingle, told me about a young professor, newly arrived in Bristol, who I might enjoy meeting: one John Ziman. I read the first of John's science and society books, 'Camford Observed'. This identified in Oxford and Cambridge exactly the stifling traditionalist mindset I had disliked in St Andrews, so although I had no interest in the condensed-matter physics he was doing I thought he might be an interesting person, and came here to visit him. What an inspiring day! Lunch with him and the entomologist Howard Hinton and the philosopher Stefan Körner –all of them have died – this was the intellectual life I had dreamed of at university but had never experienced. With John's encouragement, I decided that day to transfer my Fellowship here. It was a good move.

Two years later, John pointed out that my Fellowship was coming to an end. "Oh is it?" – employment was something I hadn't thought much about, despite having a young family and a huge mortgage (£3000). "Your teaching seems satisfactory, so would you like a permanent job?" "Ok, why not? Thank you." So easy – and a sweet irony, since Bristol had rejected me as an undergraduate eight years before.

My intellectual trajectory was unusual. I hadn't worked, and didn't want to work, on mainstream physics - condensed matter or high-energy or particle physics. In my Ph.D, Bob Dingle gave me an optics problem that he hoped could be solved

with the mathematical methods he had developed. When these didn't work, he left me alone to sort it out myself. I needed his help occasionally, and in those few conversations (I could count them on the fingers of one hand) his advice was perfectly focused, and indispensable. In Bristol, I pursued weird visions about connecting quantum and classical physics using that same mathematics I had learned from Dingle in St Andrews. I didn't fly abroad until I was nearly thirty – hard to imagine now, when my carbon footprint rivals Tony Blair's, or Naomi Campbell's. I didn't attend a physics conference until I was thirty, and didn't collaborate with a scientist senior to me until even later. John Ziman somehow appreciated my physics enthusiasms, and protected me when I was publishing papers on unfashionable topics. A mentor, in a way, though we never collaborated scientifically.

The senior scientist I collaborated with was John Nye. From him I experienced first-hand what I was already absorbing from Charles Frank: thinking about physics geometrically and simply (as Einstein is reputed to have said: "as simple as possible, but not simpler"). From John Nye I learned what it means to be a scientific gentleman – how to treat other scientists respectfully, how to collaborate decently, how to disagree robustly without being disagreeable – a role model hard to live up to.

Actually I do have a contribution to particle physics. I announce it now. A new particle: the elementary particle of sudden understanding – the *clariton*. Any scientist will recognise the "Aha!" moment when this particle is created. But there is a problem: all too frequently, today's clariton is annihilated by tomorrow's *anticlariton*. So many of our scribblings disappear beneath a rubble of anticlaritons.

I have been very lucky with wonderful colleagues – not only John Nye as mentioned, but my students and post-docs. Their arrival has often coincided with new phases (no pun intended) of my scientific life, which I've been able to develop in collaboration with them. These have been the happiest interactions – continuing now with those who have remained in Bristol or returned to Bristol: the Johns – Hannay, Keating, Robbins – and Mark Dennis – not forgetting those who have made successful careers elsewhere: Alfredo Ozorio de Almeida, Bernard Buxton, Francis Wright, Colin Upstill, Michael Wilkinson, Chris Howls (who ran off with my secretary), Duncan O'Dell, Mike Jeffrey, and many others. I insist on acknowledging their contributions to any success I have achieved. In some ways I'm an intellectual loner, avoiding fashionable or over-populated subjects and large collaborations – not because I disparage them (far from it) but because I'm not very competitive and also because I need quiet mental space to get deeply into problems. But even for a loner science is still an intensely collaborative activity (only nutters think otherwise), and having day-to-day interactions with colleagues who have learned how I think has been indispensable.

This is a rather large department, and I have benefited from that. Even before my Research Professorship began in 1988, my administrative and teaching loads were light. The wisdom of successive heads of the department has protected us from tortures from the managerialists and the accountabilitarians. My secretaries have been quietly supportive: Lilian for many years, Dianne (the lean years, for those who remember her), Vicki, Abla, Jenny, Maggie, and now Tracie. And also indispensable have been the other support staff: from our administrators to porters and cleaners, all working in the background to help us do our work. I'm grateful to to all of them.

Domestically I've been fortunate too – though perhaps not as well off financially as if I'd been a binary professor. 'Binary professor'? – that's a professor with zero or one wife. In this subject area lurk multiple mischiefs, so I must mind what I say. I've enjoyed the love of several women who have to their credit tolerated and supported my obsessive absorption in this weird activity. You scribble for months, write papers incomprehensible to most human beings, and magically acquire air tickets to the world's exotic places (I just returned from Crimea and Istanbul; next week it's Uzbekistan), dinners in the best restaurants – including this evening – altogether the most delightful life. But this can leave your loved ones feeling (if not being) neglected. For more than a quarter-century, this support has been from Monica, who has her own scientific life as many in this department know, and who in spite of not being the world's most patient person has tolerated me. At the risk of embarrassing you, I thank you publicly now.

You haven't seen the last of me. I'll still work full-time in the department when I'm not flying here and there singing my songs while people still want to hear them and while the juices still flow. I dreamed, and still dream, of making one piece of physics ('making' is the right word – we aim to discover things about the world, but our theories are human creations nevertheless) – making one piece of physics as beautiful as a single note from Louis Armstrong's trumpet. But I recognise the dangers of self-delusion: we all know, but don't always admit, this logical truth: after a certain age, every day that passes increases the probability that our best work is behind us. Balazs Gyorffy might recall that many years ago he and I made a pact: to each tell the other if we detect signs of flakiness or intellectual senility.

My genes are not auspicious. I've outlived most of the men in my family by many years. So even though I'm nowhere near 100, as the jazz musician Eubie Blake claimed to be (mistakenly, as it turned out), I echo what he said: "If I'd known I would live this long, I'd have taken better care of myself." So far so good. Thank you all.