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Professor Richard Schilling CBE in interview with Max Blythe
Oxford, 25 November 1987

MB Professor Schilling, it's rather nice to be talking to you in 1987. This is your golden jubilee year in occupational medicine, but I'll return to that in due course because we have plenty to say on that. But, first of all, can I take you to Norfolk and to early days: your parents, your early interests?

RS Yes. My father was a general practitioner, actually in Suffolk, on the borders of Norfolk and Suffolk. And we were a family of four; I was the youngest of four. And even at an early age, in my teens, I wanted to do medicine. I felt this is what I wanted to do. I wasn't quite sure why, but I used to go into my father's surgery and read his books and, I'm afraid, I rather enjoyed looking at the gruesome pictures and so on!

MB This fitted very well.

RS Yes. And he was opposed; he didn't want me to do medicine.

MB Oh, really?

RS Yes. And I think it was not that he thought it was an unworthy - which of course it wasn't - occupation. I think he was concerned about the cost, frankly. And he arranged through a relation of his, who was a high up person in Barclays Bank, for me to get a job in Barclays Bank. And this was put down on paper: 'excellent prospects', and I turned it down. And I got the support of my mother. My mother said, 'Don't make him a banker, he doesn't want to be a banker.'

MB Right.

RS Well, fortunately, I was at school at Epsom College, where there were wonderful prospects for a young schoolboy who wanted to do medicine, because if you got through first MB at school, then you could get a scholarship worth free medical education at one of the London … And I got a scholarship to Thomas' and from then on my father's attitude changed, quite surprisingly.

MB Immensely supportive.

RS He became supportive, and I think he thought that here is somebody who's going to help him in his practice, which happened quite suddenly and unexpectedly, because I'd taken my conjoint, and I was about to take my London MB, when literally the next day there was a phone call to say, 'Your father has died, you must come down and take on the practice.' So a friend drove me down. The old man had actually died at a confinement, and I was in the surgery the next day, at the nine o'clock surgery, and I think all the local patients were surprised: they were horrified, because the old man was dearly loved by the people.

MB Right. A horrendous experience, to walk in on that, straight after qualifying.

RS Well, it was. I was, really, just qualified, inexperienced, aged twenty four, and here I was being the general practitioner in a village where I'd been brought up as a child, and I had to administer to this population. Now, rural people are pretty good, but, at the same time, they'd tell me where I got off, you know: 'This ain't the right stuff, Richard. You want to be giving me some of that stuff your father gave me.' That sort of attitude. Well, it was a horrendous experience, and I stayed for six months so that my mother could sell the practice, because in those days you bought and sold practices, and a death vacancy was worth half of what a …

MB Really.

RS So I left, and I went back to Thomas' to do house jobs. And I thought, 'Well, I'm going to do general practice, but if I'm going to do general practice, I'm going to do an obstetric job,' because I didn't want to go through the horrendous experience of doing midwifery in people's cottages in a rural area without enough experience.

MB That was the real tricky bit of your early experience.

RS That was the tricky bit, yes. And so I did the midwifery job. I did a house job at Cambridge, at Addenbrookes, and I was all set to go into a general practice in Crawley.

MB Right. Pleasant Sussex!

RS Pleasant Sussex.

MB This was all negotiated?

RS Yes, negotiated through somebody at Thomas'. And at the last minute the senior partner said, 'Well, we've drawn up this agreement, but I want to change it.' And he changed it not in my favour, so I said to my wife-to-be, I said, 'I don't think I want to work for a bloke like that.' So I turned it down. I was without a job. I wanted to get married. And a friend told me there was a job going in ICI Metals Factory in Birmingham as an assistant medical officer in industrial medicine. So I applied for the job and I came up for the interview there. And I went into the St. Thomas' library to have a look round because I was having quite a bit of time to spare, and, quite by chance, I opened the current number of the *British Medical Journal*, April 7th, 1937, and there was an article by Donald Hunter, the great hospital physician with an interest in diseases of occupations, on the practice of medicine in a factory. And I went across the river to Millbank House in my best suit and was there ready to be interviewed, and a man as big as myself, the other candidate said, 'I'm very sorry to tell you that I've been offered the job.' So I thought …

MB Not a great start!

RS A poor start! And I thought, 'Well, you know, why am I here?' So I went into the interview and the first thing I was asked: 'What do you know about industrial medicine?' So I said, 'Quite a lot.' And they looked absolutely aghast! And they said,

'Well, tell us about it.' And out came Hunter's article, which I don't think they'd read, fortunately, and I got the job!

MB Terrific! I wonder what happened to the other chap.

RS I don't know what happened to him, I didn't see him again. But the man who had offered him the job, Donald Stewart, became a very good friend of mine. I mean, he accepted me and …

MB And that went well?

RS Yes.

MB Yes. So you went to work for ICI?

RS ICI, for just about two years, yes.

MB Was that a good experience?

RS It was a good experience, but much of it was very boring medicine, because I was examining … I did something about two or three thousand examinations a year, of pre-employment, because the industry was expanding. And I changed it a bit, in that I thought, 'Well, why am I doing this?' So I rather went out and looked to see what the jobs entailed, so that instead of turning down people who had a little bit of high blood pressure or varicose veins, I would pass them fit.

MB Right. Anyhow, Richard, can I just come in on one point?

RS Yes.

MB You actually looked for this job because you needed to get married.

RS Yes.

MB Can you tell me about your wife? You got married in 1937.

RS Yes.

MB This was the time you went into occupational medicine.

RS Yes. That's it.

MB Can you tell me a little bit about your wife, before we go on?

RS Yes, certainly. I met my wife through her brother, who was at Epsom with me and at Thomas', and I went down to his family for the weekend. Her father was a doctor. It was a wonderful family. And the extraordinary thing was that I was eighteen, she was fifteen, and I helped her with her Latin prep. For some reason I was quite good at Latin; I think I'd been well taught. And that started something. And at

that time, she was a girl of fifteen, rather big, if you might say, but I met her three years later and she was absolutely stunning! So that was it.

MB From then on.

RS That was it.

MB And it's been so for fifty years?

RS Yes. And I think that, like most people who have had a good career, I think I've owed a lot to the tremendous support I've had from my wife, and being told off at times when necessary, you know. It's not all sort of, 'Well, if you'll do it, I'll do it,' and so on.

MB Right. But anyway, the marriage started, and you'd been at ICI for two years.

RS Yes.

MB But you then moved away from the humdrum.

RS Yes. Well, then I thought, 'Well, I ought to get a change.' So I applied for a job as a medical inspector of factories, and I went to Manchester. I was only - what was I then? - twenty-eight: very inexperienced, just had the experience of working in this factory. And as a government inspector in Manchester, this was how one really learnt occupational medicine, because you had to deal with every type of industry, large and small, and they thought that you knew what you were talking about, being a government inspector. So, time and again, you know, I went in and I had to have an air of authority, this sort of young man, but I didn't really know! But it was unlike general practice because you could go back and ask a colleague, or look it up, and say, 'Well, I'll have to think about this.' But in general practice, you had to take an immediate decision. It was quite a different type of responsibility. Anyhow, I did that job. Then I was called up into the army, because I was in the Territorial Army, and I went out to France with a …

MB This was right at the beginning, this was '39?

RS '39. I went out in early 1940 in a Lancashire Field Ambulance, and that was quite an experience. Fortunately, as a unit, we had no casualties. We dealt with a lot of casualties, but we were casualty free. And the thing that I could stand about it was, that I didn't have to actually kill people myself, you know, because I wouldn't have … I don't think I would have been very good at that.

MB Were you at Dunkirk?

RS Yes. I came out of Dunkirk on about the 1st or 2nd June. I was getting on one of the last routes to get out of the harbour.

MB So a pretty fierce baptism about warfare.

RS It was, yes. Now, I came back, and shortly after I came back, I was put on a course in tropical medicine, which looked as though I was set for the Middle East.

MB Yes. A natural observation, yes.

RS Yes. And quite suddenly, out of the blue, I had a … my army unit had a telegram from the War Office to release me to my civilian job as a medical inspector of factories. The reason was, of course, that it was realised that the health and safety of people making munitions was important. There were very few people who had had any training in this at all. At least I'd had two years in a (?) position and nine months as a medical inspector. And so back I came to Manchester.

MB Manchester is beginning to become quite a part of your life.

RS A very important part. I mean, altogether, I've been there and back about four times, but this was the second time back. And after I'd done that for a year or two, I was then asked to apply for a post at the Medical Research Council, to be secretary of the Industrial Health Research Board. This was a board which had to organise and research into occupational health matters, and publish reports and so on. And I wrote to Edward Mellanby, who was the secretary of the Medical Research Council, and I turned it down because I thought it was too big a job for me. I didn't think I could do it; I hadn't got the experience. And then I discussed it with my wife and she was, you know, somebody who said, 'Well, think again.' And I thought, 'I ran a general practice single-handed at the age of twenty-four, I'm not going to turn this down.' So I wrote and asked to be reconsidered and I got the job. And it was the best thing I ever did.

MB What was the MRC like at that time? I mean, Mellanby was the presiding figure, great figure.

RS Yes. Yes. It was a great organisation then, because it hadn't got anything like the grant, even allowing for inflation. It was small, it was extremely well run, and it had some very great people, great scientists working there for it.

MB For example, we might talk about some of the people that you ran into there.

RS Well, Mellanby, himself, was a quite outstanding man. He was a physiologist with an interest in nutrition, but he had this broad approach to medical problems. He was one, and I had enormous respect for him. The second one was Bradford Hill, who later was to be a very great influence in my career. And people like Alan Drury, and Fred Bartlett, Sir Frederic Bartlett, the psychologist who worked at Cambridge, and did a lot on training pilots, that sort of business. And the other person who was interesting was Donald Hunter. It was through Donald Hunter that I really got in. And Donald Hunter set up a Department of Research in Industrial Medicine at the London Hospital, supported by the MRC. And I got very close to him and, in fact, I began to play, you might say, second fiddle in some of his research. In addition to doing my administrative job, I was helping in their research. And I had a number of other interesting things: helping people like Charles Fletcher. Now, this was a very exciting time because, first of all, the MRC had decided to set up a new Pneumoconiosis Research Unit.

MB Right. We're just at the period after the war now?

RS This was about 1945.

MB Right. And it may have been '44, it was towards the end of the war. And Mellanby told me and D'Arcy Hart to find somebody. And we raked the universities and everywhere and said, 'Look, these are the people.' But Mellanby, quite off his own bat, said, 'Oh,' he said, 'they're not the right people. We want somebody with a bit of go,' and he said, 'I'm taking Morley Fletcher's son, Charles.' And so Charles was appointed. Now, to me, it was a … I think I would say a privilege and a great experience to help a man like that set up this new unit.

MB Yes. In Cardiff?

RS In Cardiff.

MB Can you explain to me, one of the things I'm interested in, that was a very important unit at the time?

RS Yes.

MB As mining has changed and as treatments have changed, that influence has been eroded. Looking back, it was important in '45. Were there great pressures from the mining industry to look at the diseases there, at that time?

RS Absolutely. Tremendous pressures, particularly from the government, you might say was preparing to set up a Coal Board, and also the Miners Union. One of the outstanding personalities at that time was Arthur Horner, who was the … I think he was the … the Scargill of the … I mean, he was a communist, but he had a lot of very political, good political intuition. And he took to Charles straightaway: no question about it at all. And Charles impressed these people, and Charles got this unit going, which was absolutely fascinating to see, this coming from nothing. People like Archie Cochrane coming in, and so on.

MB And you from London, providing MRC support all the time.

RS Providing MRC support.

MB Because the unit grew from being about one, two, three people, to being about eighty people.

RS It grew into an enormous unit with an international reputation.

MB And look what came out of it: colossal research finds.

RS Yes. I mean, it went downhill later, but that doesn't matter. I mean, but it made its mark, and it made an enormous contribution to coal-workers' pneumoconiosis and to the investigation of chronic disease among workpeople. They developed, they were responsible for developing the epidemiological techniques. Anyhow, there was that. Then the other sort of excitement of being in the MRC was, Mellanby said to me, 'Here

is an article by Morris and Titmuss[1], on the …' - I think it was the 'Mortality of People with Peptic Ulcer', the way it changed and so on. He said, in his rather sort of Mellanby fashion, 'I think this is a bit of rubbish really, but we ought to do something about it.' He didn't think it was rubbish.

MB And so Morris and Titmuss got set up in this?

RS So I was helped to set up this Social Medicine Research Unit at the Central Middlesex Hospital, in a very minor way, but it was wonderful to be in contact with those sort of people.

MB A great time. A great time to be there.

RS Yes, a great time. Now, all the time I was doing this, I said, 'This is not enough for me.' I said, 'I don't want to be the chap organising the show, I want to be part of the show. I want to go into academic medicine.'

MB And be a researcher.

RS Be a researcher.. And so I went to Farrer-Brown, who was the director, I think that was his title, of the Nuffield Foundation, whether he was the secretary or not, he was the director, he was the person who ran the Nuffield Foundation. And they'd set up two chairs, or three departments of - university departments - of occupational health, and they decided to offer fellowships for young people in academic medicine. And I went to him and I got a fellowship in industrial health for two years. The first thing I did was, I went to the School of Hygiene, and as a student with Jerry Morris, we did the DPH [Diploma in Public Health] course at the London School of Hygiene. And it was … it had a profound effect on me in a number of ways. First of all, the course was a bit like the curate's egg: some of it was brilliant, but some of it was awful! And the bits that were awful were, I thought, because the people doing it hadn't really taken the trouble to organise their stuff they were going to teach. But the best part of it was Bradford Hill's teaching of epidemiology and statistics. Now, he didn't just teach us how to do a test of significance. He gave us a philosophy. He told us how to organise research. Well, he didn't tell us, he pointed this out. And he, that man, has had a profound influence on myself, Archie Cochrane, Richard Doll, John Nolden…you can mention … and that is the … that was the thing that really got me.

MB It conveyed a spirit of thinking to a generation.

RS That is it. It's the spirit of thinking, plus a wonderful humour and humility that went with it. There was nothing … he wasn't the least bit pompous or anything like that at all. So I did that, and I was fortunate enough, within a year, to be able to get the DPH.

MB Right.

[1] Morris J N, Titmuss R M. *Lancet* 1944; ii: 841.

RS And I think I learnt a lot from the teaching. I learnt a lot from working with Jerry Morris, we were co-students together and we both got distinctions in the DPH which, I think, was … I think we helped each other!

MB Yes. A good team!

RS A good team. And also, I was able to take the MD in state medicine, and get the DIH [Diploma in Industrial Health].

MB All in one year?

RS All in one year. But, now, that gave me the right credentials for being a research worker. Before, I just simply had an ordinary qualifying degree. And Charles probably won't remember it, but Charles asked me to go to the Pneumoconiosis Research Unit, but I got an offer from Ronald Lane to join his department[2] in Manchester, so off I went to Manchester.

MB The third time.

RS Yes, third time. 1947 I went to Manchester as his, really, his number one, as you'd call it in naval terms. And the first thing that happened was, that I was presented on a plate with a subject to research. J B S Haldane, great biometrician, had written an editorial in the *BMJ*, saying that cotton workers were dying of hypertension, or a group of diseases in which the common factor was hypertension, as a result of cotton dust exposure. Robert Platt, the professor of medicine at the university [Manchester], wrote a letter immediately in the *BMJ* saying that this high mortality from hypertension in Lancashire cotton workers could as easily be explained by an inborn … inbreeding in this Lancashire population. So I thought, 'Right. Well, let's have a look.'

MB This was set up, wasn't it?

RS Yes. So off I went and did the field study on cotton workers, with the idea of studying whether there was any evidence of hypertension, taking cotton workers exposed to dust, and cotton workers not exposed to dust. There was nothing in the hypertension, but the thing that really hit me between the eyes was the very severe disability, among the older cotton workers, from chest disease, from work-related … or called byssinosis. Now, what was interesting was, that this was thought to be a thing of the past, it was thought that it had been cured by improved dust control. But it clearly had not. Now, this started something off. And I learnt - coming back again - I got a lot of help later on in these studies, from the Pneumoconiosis Research Unit, with whom I'd got close contacts. They came in and we did a lot of the work together.

MB An interest in dust in common, then.

RS Yes, an interest in dust. And, really, the important thing was that they provided a lot of the resources which I hadn't got, like X-rays, and lung function testing, and so on. But that started something. And you might say that has been my main …

[2] The Department of Occupational Health, the University of Manchester.

MB That was a massive, massive study.

RS Yes. That's been my main research interest throughout my life and it's led to studies, literally, all over the world – in the United States and Spain and Africa, and so on.

MB What was the main central point that you could offer workers in these industries? Obviously, you changed their lives because you made a lot of recommendations.

RS Yes.

MB How has this actually worked?

RS Well, what has happened is, that there has been … I don't know whether it's a result of … you know, it's very difficult, and I don't think one needs to bother about measuring what effect you had, but what is important is that the conditions have improved enormously. There's much better dust control in our country: it is not so good if you go to the developing countries. But it has happened and it can be done. And that, I think, is one of the things that we were able to achieve.

MB But some of the legislation that has come out of your work and colleagues' work makes it possible for people in the Third World to have a future, and to think on …

RS Yes, that's it. I mean, the other interesting thing was that when we started, only one hundred per cent disabled men were eligible for compensation from byssinosis. When we showed that women suffered from it as well, then they got compensation. And so we added other groups of workers, as a result of our investigations. No, the interesting thing now is there is a very … there's a controversy going on at the moment as to whether this disease causes permanent disability. We certainly saw it in the 1950s, but does it occur today? And the answer is that we don't know because nobody's done the necessary follow-up study.

MB Do you think there's still plenty of room for this?

RS Oh, there's tremendous room for it, and particularly in other countries too. Because, you see, coming back later to the School of Hygiene, we've had from the School, I've had contact with countries all over the world, and teaching. And I think we have got a responsibility for seeing that these sort of conditions are dealt with in developing countries.

MB I mean, up to the forties, very little had been thought about dust.

RS Very, yes.

MB And yet the industrial hazard is just so colossal.

RS Yes. No, there's been a tremendous improvement and there's always room for improvement; there's never enough done. And it is people who are identifying hazards that have got to show that there is more and more that needs to be done.

MB Very difficult, politically, sometimes.

RS Very difficult indeed. I mean, I've run into problems here. But what I've tried to do is to identify hazards on, you might say, a factual basis, to produce the figures to show that here is a risk. Well, that was Manchester. That was, really, the most exciting thing that happened in Manchester to me. And I also had a, which I'll come back to later, I had a part-time job in an engineering works, which was, again, was very important indeed.

MB Right, we'll come back to this. But after virtually a decade in Manchester, you …

RS I came to London.

MB … moved south again.

RS What happened was, that Bradford Hill, who was now the dean of the London School of Hygiene and Tropical Medicine, he said, 'We've got the money from the Rockefeller Foundation to set up a unit of occupational health at the London School of Hygiene. What about it?' So I applied for the job, and I got it. This was in 1956. So I came from Manchester to London in 1956. And, as a start, I was … my department was part of the Department of Public Health, and if we were going to develop it, we had to get out of that department as quickly as possible, and in two or three years we were a separate Department of Occupational Health.

MB Right.

RS Now, this was exciting because, first of all, we had to develop a postgraduate teaching programme. And what I was determined to do, having had my previous experience at the school, of the curate's egg aspect of teaching, I thought, 'Well, let's get rid of the bad parts.' And so I introduced a student evaluation system of all teaching courses. Every lecture that was given was evaluated by the students on a three-point scale, with an X if they were asleep, you know. And this had a profound effect on me. I mean, I thought, 'Well, goodness! I've really got to pull my socks up and teach as well as I can.' But it had a very profound effect on other people, particularly the part-timers. And I think it raised the whole standard. They knew they were being evaluated by the students. Because I think bad teaching is not necessarily due to lack of knowledge, it's due to bad preparation, and not having the thing organised, and the enthusiasm to put it forward. And I think we improved our teaching no end.

MB The results were quite impressive, you had a lot of postgraduate students go through your department.

RS I worked it out, and I looked at the figures. We started our course, our first course, in 1959 and it took me three years to get that going, and by the time I left in

1966, we'd had four hundred and one postgraduate students. And of those, two hundred came from other countries than the United Kingdom. And of the two hundred, more than half came from developing countries.

MB So occupational health was really being exported very widely.

RS It was. And we were fortunate to be in the position at the School of Hygiene, where we had this enormous reputation for … not in occupational health, but in teaching epidemiology and statistics, which is an essential part of occupational health. And I think, looking back on my career, that I think that this has been one of the things that I look back on with more pleasure, the fact that I have now got friends in countries all over the world, as a result of them coming on our course at the school. I mean, you know, I go to Singapore, or I go to Melbourne, and I can sit down dinner to with eleven old students: which is something, isn't it? And, you know, I think we're giving something back to the Third World countries.

MB Richard, what about your research in this period? You were giving back in terms of a lot of teaching that was useful. What about the research, how did that do?

RS Well, I still went on. I still went on with the textile workers. I got a number of other things going. I think the most notable one was the one on the carbon disulphide exposure in the viscose rayon industry, where we showed that there was a mortality excess from coronary heart disease.

MB This changed that industry as well?

RS That is now … I mean, the standards, the environmental standards have been halved, and I think … I doubt whether there is a risk now, or there shouldn't be, anyhow. But I think one of the other things that crosses my mind is that what I had to do is run the department, and in running a department you've really got to be the prodder and the helper of other people doing research.

MB Yes, the real anchor man.

RS Yes. And one of the interesting bits of research that came up was that the White Fish Authority contacted us as a department, and said, 'We're in trouble. The Lowestoft fishermen are suffering from a serious skin complaint, and they're refusing to man the trawlers.' So we set up Molly Newhouse, one of the fortunate people I had, an experienced person on my staff, she went down to Lowestoft and did an epidemiological study of two hundred and fifty fishermen as they came off the vessels. Now this takes…

MB What was happening to these fishermen?

RS They were getting a very, very serious skin disorder: faces blowing up; trawlers turning round because the men were so … they couldn't see out of their eyes

MB This is a massive effect.

RS This is a massive effect. And this was much after my … the person I admire most in epidemiology, Archie Cochrane, she had this quality of getting people to co-operate.

MB This is Molly Newhouse?

RS Yes. Now, to go down to a harbour, and having to find fifty trawlers that you're going to examine the crews, and to get ninety five per cent of those men to be examined as they came off the trawlers, is fantastic.

MB Colossal achievement, it is, yes.

RS It is a fantastic achievement. And she wrote a beautiful paper[3] on the epidemiology, of showing the incidence of Dogger Bank Itch[4] and how serious it was, but then somebody had to go to sea to look at conditions, and they said it was simply impossible for a woman to go out on a trawler.

MB So, Richard, you go to sea?

RS I went to sea. And I went to sea with these fantastic men. And I started off as 'the Doc', and by the time I'd finished, I was Dick! You know, we got on to that sort of wavelength. And the first thing they said to me was: 'You know, you're studying the wrong thing.' They put it in typical East Anglian words. They said, 'You scholars have got it wrong.' They said, 'What you ought to be studying is the accidents.' They said, 'Our sister ship went down in February, with all hands lost. Charles went over the side last week, and Arthur crippled himself handling dangerous machinery. Why aren't you doing that?' Now, I had a look round these men. They fished for … continuously, except for about two or three hours break, and it was fairly heavy work. And the thing that really, you might say, put me in my place, perhaps, was, I was watching these men, and I thought, 'My goodness, that man looks old: an old deck hand.' And I asked him how old he was. I thought he looked about seventy, and he said he was fifty-six. Well, at that time, I was fifty-six. So I said, 'You and I are the same age.' And he looked me up and down and he looked again at my white hair, and he said, 'Go to hell,' he said, 'I thought you were ten year older than me!' So out went my theory about senility in fishermen!

MB You did a lot of work, you enjoyed the work with the fishermen?

RS Yes. Now, what happened was this. I came home, and I looked at the Registrar General's figures - the occupational mortality. A fisherman was a fourfold mortality excess from accidents. It was ninth in the list of dangerous occupations. Mining, constructional engineering, level crossing men and so on came higher.

MB So a fairly high SMR [Standardised Mortality Ratio]?

RS A fairly high SMR. But what I did discover was that the deaths at sea were not included in these figures published by the Registrar General.

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[3] Newhouse M L. Dogger Bank Itch: A survey of trawlermen. *BMJ 1966*; i: 1141-1142.

[4] Dogger Bank Itch – an allergic condition caused by contact with a sea-chervil found on the sea-bed in the North Sea, and brought up in the fishing nets.

MB They were missed out?

RS They were missed out because they were recorded by a separate Registrar General of Shipping and Seamen, in Cardiff.

MB So the figures weren't even …

RS No. So I wrote to the Registrar General of Shipping and Seamen, in Cardiff, and paid a nominal sum to get all their figures, put the things together, and it showed that instead of the standardised mortality ratio being fourfold, it was seventeenfold. And I published this in … I gave a paper to the Royal Society of Medicine, and I published a paper in the *Manchester Guardian*.[5]

MB When was this, Richard?

RS This was about 1965, about then. It may have been '66. But, anyhow, it was published.

MB There was an inquiry into shipping?

RS No, that came later. What happened was that the next thing that happened to me was that a principal of a polytechnic, a marine biologist, said he wanted to come and see me about my fishing figures. And so I said, 'Please come.' So he came, and he stood at the door, an enormous man, with a stick, and he pointed his stick at me, and he said, 'We're fed up with this nonsense you're publishing about the mortality of fishermen.' So I said, 'Wait a minute, come in, sit down.' And I said, 'Who sent you?' And he said, well, he was sent by the employers. And I said, 'Well, let's look at the figures. You say that they are rubbish.' 'But,' he said, 'you're including things that have never been included before.' And I said, 'I'm including things that should have been included before.' Well, there was a hell of a stink! But three months later, I think it was in 19 … it was in the early part of the year of 1966, I think, three trawlers went down in the space of three weeks, with a loss of fifty-eight lives, just boing, like that. And this was the freezing conditions, and the superstructure of the trawler becomes frozen up, it topples over, and that's it. Now, this created a … it's like the King's Cross disaster, fifty-eight lives in a few days, and there's immediately a committee of inquiry. And there was a Committee of Inquiry into Trawler Safety. And much to the annoyance of the owners, because they thought I was biased, I was put on the committee of inquiry. And they tried to stop me, but Tony Crossland, who was the Minister in charge and knew a lot about fishing because he was he was the MP for Grimsby, said, 'I'm not taking any notice of that.'

MB So Crossland made sure you were on that board.

RS And we had a very good committee; we had a marvellous chairman, an admiral of the fleet, and we made a lot of recommendations. Now, a lot of them were put into effect. What I found was that when I looked at our mortality figures from accidents among fishermen, there were enormous peaks, and the peaks were the bad weather. I

[5] Schilling R S F. 'In Peril on the Sea', the *Guardian* 29.12.1966.

looked at the figures of the Federal Republic of Germany, and there were no peaks. And the reason was that they had their meteorological advice from ships that went out with the trawlers, with the fishing fleet. And you never tell a skipper what to do, but you advise him, and they were advising skippers that there were going to be these conditions, don't get out. So they didn't lose vessels in this way.

MB So they retreated?

RS Yes. They went off, they got out of the area, particularly around Iceland, which was being fished then. Now, we do that now. And I haven't looked at the figures lately, but I think that - of course, the fishing industry is reduced - but that was …

MB But from those findings, you were able to recommend that a meteorological input was available.

RS Yes. And there were a lot of recommendations. And I think that the admiral was really … he was a very well chosen chairman because he had the presence to, you might say, influence the owners. And we published a very good report[6]. At least, I thought it was good.

MB Richard, you've continued at the London School of Hygiene, and in these research fields, well into the 1970s: still working with cotton, still doing …

RS Still doing a bit. I mean, I'm still now analysing data and, you might say, shaping up to the arguments that the medical witnesses who say there isn't any permanent disability, and those like myself who say there is. And, as a result, I go on various cases. Now, the interesting thing to me is that, here, in the medical profession in this country and in the United States, you get experts, medical experts: one group is prepared to say it doesn't cause any disability, the other that it does. Now, who makes the decision? Well, certainly, there are trained people, judges, they have to decide on this medical evidence. They look at it as a whole. They are experienced in dealing with conflicting evidence. And both in the United States and in our country, the court, the two judges have decided for the workman and not for the employer, that, in fact, their cotton dust exposure did cause disability.

MB Right. So you got the message, essentially, across.

RS Yes, I think so. And I think, now, we need to … which I hope I … I won't be active in it, but I hope I can get something going where we have a forward-looking study to see what is happening in present conditions. That, I think, is the important thing.

MB Right. Richard, you, in about 1976, retired from the London School of Hygiene to do harder work elsewhere.

RS Yes.

[6] Holland-Martin D. Trawler Safety: Final report of committee of inquiry into trawler safety. London: HMSO, 1969. Cmnd 4114.

MB But that was, effectively, your retirement from academic life and the bench, at that stage.

RS Yes. Yes.

MB You, perhaps, would round up on that experience at the London School of Hygiene. It was a long time you were there: twenty years?

RS Well, it was a very interesting experience, and I'll tell you why. Because when I went there, I started as a unit in the public health department, I became a separate department, and then we amalgamated with the old Department of Applied Physiology, and then a very interesting thing happened. The TUC wanted to celebrate their centenary, and they wanted to set up a laboratory in the School. And I said, 'No way.' I said, 'If you want to have something in the School, it's got to be part of the Department of Occupational Health.' I said, 'We can't have a separate team in the School, but if you want to do this …' So, to cut a very long story very short, they gave us the money to build another floor on the … or half floor, on the roof of the School, they gave us the money to start an Information Advisory Service, which we hadn't had before.

MB This is to industry generally?

RS This is to industry generally, not just to the union. And so we became the TUC Centenary Institute of Occupational Health. Now, I tried to get a comparable match from the employers, but it wasn't to be. So I, with Spooner, who was the dean of the School, had to make a decision: 'What do we do?' And Spooner said, 'This is an enormous opportunity to make your department really viable. And so we took it. And we safeguarded it in a number of ways. I mean, it was terribly important to have union sympathy and support for our institute, and so we had an advisory committee with them represented on it, and a marvellous chairman by the name of Harold Collison, who had been a farm worker, had run the Agricultural Union, and eventually went into the House of Lords. And so we got off to a good start. And there was a bit of, you might say, flak from people saying, 'Well, you've sold yourself to the union.' And I said, 'No we haven't. We're going to work closely with the unions.' And we never gave our academic independence to anybody; that was maintained.

MB But you did provide a central advisory unit for industry?

RS Yes. But, you see, the other thing that it did was, because what I said was, 'I'm not going to have the information advisory service, or the labs that we set up, I'm not going to have them separate from the rest of the department, they're part of it.' And so we were able to increase our teaching, and it was at about this time, or just before, that we set up our own masters courses in occupational medicine and occupational hygiene. And we became, as I say, a go-ahead, viable unit, with a good teaching and research programme, and an information advisory service.

MB Richard, since retirement in, I think it was '76…

RS Yes.

MB you've gone on to do some other exciting things.

RS Yes I have.

MB Including, you have a consultancy or a directorship with Possum [Controls Ltd.]?

RS That's it. Well, now, when I was in Manchester, at the University, Lane said, 'I want you to do a job, part-time job in a factory.' And I did a part-time occupational physician to the Simon Engineering Group. And my boss there was a man called Sir Patrick Hamilton, and we became very good friends. We had a … I had to make it perfectly clear to him when we started, because he didn't know what the function of an occupational health service was, that I was there to advise and not to be the, you might say, the policeman of management; that it was an advisory service, and this is where they would …So we became very good friends. And when I came to London, after … I can't remember, it must have been about ten or so years ago, he said, 'Look, I provide the money through a charity for a thing called Possum Controls Ltd., which makes electronic equipment for severely disabled people. Would you care to come on the Board?' And I said, 'Well, it's not really my field. I mean, this is disability and rehabilitation.' He said, 'Oh, it doesn't matter,' he said, 'you come on.' So I went on. I became interested. And the chief executive, who's a fantastic man, I mean, a real ball of fire, said, 'Richard, I want your help. I don't want you just sitting on the board, reading the papers.' So I said, 'Well, what do you want me to do?' He said, 'I want you to come and work here part-time, I want to get your advice.' So I said, 'All right. Well, you've got to give me a crash course in your equipment, because I've just been fiddling about with it, you know, just sort of looking at it.' So I did a couple of days crash course, and for the last two years I have been advising them and trying to get things going. It's an amazing organisation because, first of all, they have to develop new machinery, new equipment for helping disabled people. There are two ways, two main ways in which you help disabled people. You might be a quadriplegic; in other words, you've got no movement at all in your arms or your legs. But by a device of sucking and blowing, which is the input into the machine, you can telephone, you can draw the curtains, you can open the front door, and do all these sort of things. Now, the second group are the people who have got defects in communication because they're blind, or they're deaf, or they can't speak because they've got cerebral palsy or a motor neurone disease. Now, they can be given electronic equipment whereby they can communicate with a typewriter; using the same sort of devices, they can type letters. So that has been the really exciting thing which I've been doing in the last two years.

MB Yes. Making all kinds of new things possible.

RS Well, my really … advice, is to try and get this equipment more widely used.

MB Yes. I've seen it only in a few centres of excellence, but it will … you think it will grow and become more widely available?

RS Well, I think it's got to, because what I think is, we are an ageing population, we have got to help older people to have, where possible, some measure of independence, and improve their quality of life. And this is what it can do. If an old

person is entirely dependent on other people, the person on whom they are dependent may like it, but they don't. They want to feel they can do something.

MB Yes. So, Richard, in some way, your life has gone from defending people against the effects of machines, to actually helping people to use machines to resolve things.

RS That's exactly right.

MB It's quite a nice turnabout, isn't it?

RS It is a turnabout, and it's interesting in that, you might say, it's a new interest in the … you might say, in the swansong of your life. Here you are with a lot of …

MB It doesn't look as though you're into the swansong, Richard!

RS Well, I'm seventy-seven, nearly seventy-seven.

MB Yes. But it looks as though you're still pretty in the thick of it.

RS Yes, well …

MB Richard, looking forward from this point, where do you see occupational medicine, occupational health, going, from now? I mean, you've given some indicators already. You'd perhaps like to give me your view forward?

RS Well, I would like to see it become much more closely linked with medical care. It is separate from the National Health Service. One of the ways in which it is not separate, in that hospitals and local health authorities are now setting up their own occupational health services. But the actual occupational health service in a factory is something quite separate from the National Health Service. And it may be that this will come because the great majority of work-people work in small organisations, which can't afford to have a whole-time medical officer, like ICI or Central Electricity Generating Board. Now, the people who do that are the general practitioners. Now, why shouldn't that be part of something that is part and parcel of the health centre in an area? And this has been done in Harlow, through … do you know Lord Taylor, Lord Taylor of [Harlow].

MB Stephen Taylor? Yes, I know him quite well, actually.

RS Well, I mean, he started this, and I was, I think I helped him to get this going many years ago. He's a personal friend of mine.

MB Looking back, as we finally come to the end of our interview, looking back over half a century of work in occupational health, what were the big steps? You've given us … but just …

RS The big steps that I see are, first of all, the application of scientific methods to, first of all, measuring what is happening to people - epidemiology - which was pioneered by people like Archie Cochrane and Charles Fletcher, in this country. And

secondly, the scientific measurement of environmental exposures. We used our noses, our eyes, when I first started, now we measure things. And the other important thing is that these two are coming together, so that one can begin to get reliable standards of environmental control, occupational exposures, by looking at exposure response curves, if you see what I mean. And this, I think, has been the main thing. The other thing I think is, there's been a change through teaching, through their own medical officers, of the attitude of management of the Health Service. When I started, a number of people said to me, you know, 'You are part of management,' but this is going. The good (?) physicians and the nurses are not part of management, they're advisory to management, they're advisory to the whole, you might say, the whole community that they serve. This, I think, has been a big change.

MB So socially, medically and administratively, there's been something of a revolution?

RS Yes. But what I think we need is, and we need desperately to have a bigger resource in research and in teaching. You see, the number of university departments in this country; well, there's London, a new good one in Birmingham, and there's one in Manchester, which is … it's future is doubtful, and there's another small one in Newcastle.

MB But that's all?

RS That's all.

MB So expansion on that front is still needed?

RS It's still needed, and it needs … it can't be done without financial resources. You see, one of the things, if I may say so, about the present government, is that people have got to find their own money. Now, you can find money, you can earn money by giving advice, but this must not take priority over research. And if you're going to do research, it's got to be funded. And it's got to be funded in a way … it's got to be funded without any tags attached to it. In other words, you've got to say, 'This is a good piece of research, let's fund it.'

MB Richard, it's been marvellous talking to you about this. Thank you very much for spending time.

RS Well, I've enjoyed talking to you, I must say.

MB Thank you.