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Sir Bernard Tomlinson CBE in interview with Lord Walton
Oxford, 26 June 1992

JW Sir Bernard, thank you very much for agreeing to be interviewed for this historical archive, being jointly prepared by the Royal College of Physicians, London, and the Oxford Polytechnic. Now, of course, we've known each other for very many years so I'm going to call you Bernard, and I hope that's all right.

BT I would hope so!

JW Bernard, your entry in *Who's Who*, to which one always refers on this kind of occasion, says that you were born in 1920, but it doesn't say where.

BT Oh well, in Nottinghamshire, a small mining village called Huthwaite, a few miles from Mansfield.

JW Not very far away.

BT Right.

JW What were your parents?

BT My father was always a manager within hosiery, wholesale manufacturing, and the major factory was in Huthwaite. He was not a manager when I was born, of course, he'd just come out of the Air Force. He'd been in the original Flying Corps during the war. But he continued as a manager in the hosiery industry all his life.

JW And so I suppose there was no medical background in your family at all?

BT None whatsoever.

JW And did you have brothers and sisters?

BT I have, yes, an older brother and two sisters. My older brother went into the Army at the beginning of the war and then went to Birmingham University to do medicine, after I'd qualified. And my sisters both went into nursing. They both went to London, one went to UCH, one went to King's, and, of course, remained in nursing until they married.

JW Are there any special memories that have stayed with you of your childhood? Any notable events that you can remember?

BT Oh, I think... I mean, there are many, in a way. We... immediately after the war, I remember extremely well. I think one of my most clear memories is of the 1926 Strike because the whole area... it was in the middle of the Nottinghamshire

coalfield, and Huthwaite was a small, and never an affluent village, but, of course, during the main Strike in 1926 it became extremely poverty stricken. And, you know, the children with bare feet and so on, they are very vivid memories to me. And the miners sitting on their haunches at the corners of the streets for days on end with nothing to do. I think that's almost the most vivid memory of my childhood.

JW You went to Brunts School in Mansfield.

BT That's right.

JW What kind of school was that?

BT That was a mixed grammar school. And my wife went there and was in the same form as me.

JW I see. So that's where you met?

BT Yes. That's right.

JW And is that when you started, as it were, courting as they say?

BT Well, not immediately. Yes, in the upper school.

JW In the upper school.

BT That's right.

JW And again, would you say that there was anybody, particularly, in that school, who was teaching, or [by] example, who influenced you in relation to your future career?

BT Perhaps one person influenced me greatly. That was our biology mistress - long dead, of course, now. But she was quite exceptional in my view. She, quite differently from the rest of the teachers, she had a continuing interest in anybody whom she thought was interested in biology. And every year, for instance, the lower sixth and the upper sixth, she went with them, and took the greater part of her summer holiday to Robin Hood's Bay, where Leeds University had a marine laboratory, and there'd be ten or twelve of us would go to Robin Hood's Bay for two weeks, sometimes for three weeks, and most of the days, most of the days, not all of them, were spent in quite serious marine biological study in modern laboratories, for those days. And it was almost a pre-university experience.

JW Is that when you began to be interested in human biology? Or can you recall any particular moment when you decided that medicine would be your choice of career?

BT Well, I find that very difficult to answer. My mother told me that I started to talk about being a doctor when I was about eight. I have no memory of that at all. I do remember from fourteen or fifteen, thinking that that's what I would like to do.

JW Now, I was brought up in a mining village in Durham County, not dissimilar from the one in which you lived, and I recall the Strike, being educated in a similar school to yourself. I went to the local medical school. You had never considered going to Sheffield or...? What was it that made you choose London?

BT Well, in some ways, that was an accident. I did higher school certificate in the usual way and after doing higher schools the proposal was made that I should do scholarship 'A' Levels and I went back to school to do that. And then somehow, I don't know how it was, my father learnt that if I got scholarship 'A' Levels it wouldn't help financially at all because he was over whatever the limit was. So he said, immediately, and it was about a month into the term, 'You've got to go to university.' So I went to see the headmaster and he literally sat down at the telephone and rang a number of places. And he rang, amongst others, University College in London and they said, 'Come and see us.' And it was one of the few invitations. It was late in the day, of course, but they still had one or two vacancies. So I went, of course, on the train, literally, down to University College and I saw the dean of medicine and he said, at the end of a very traumatic interview, that I could join on condition I started that day. And I said, 'I haven't got any clothes. I've come from Nottingham.' He said, 'I don't care about that. You either accept and you start, or you don't.'

JW Oh, really! Yes! A Lancelot Spratt kind of character, no doubt!

BT That's right.

JW Do you remember his name?

BT [Herbert Henry] Woollard was his name, Professor of Anatomy. I remember his name very well, partly because he was a fierce chap, but secondly, because I think he was the first man I saw die, most unfortunately. He died in the quadrangle in University College. He collapsed and obviously had a coronary. And that really world figure of physiology, [Charles] Lovatt-Evans, was with him at the time, and I and a few other students watched an attempt to revive poor Woollard.

JW By Lovatt-Evans, I presume.

BT I thought if you were going to be revived in those days...

JW How did you cope then over those few days? I suppose you were able to go back at the weekend to collect some clothes?

BT Well, my father had gone to London with me and I was meeting him, of course, to go back on the train to Nottingham and I met him at the station and said, 'I've got to stay.' Incidentally, I went, I literally went down to the anatomy session in the afternoon, but I found that very difficult and I left after about half an hour; it was a dissection. I left after about half an hour. But rather than be caught out apparently skiving, I went to a lecture and that was quite extraordinary. It was by a man called Sinclair Thomas, who had been a house surgeon at, I think, the first operation in UCH that had been performed with anaesthesia. And he was a man of about ninety at the time. But he had marvellous pictures, and, you know, he told us how a competent

surgeon could get off a femur in two minutes... get off the whole of the leg, of course and do a flap and get everything sutured. The pictures were almost as bad as this rotten anatomy room.

JW Were they? I see. So it was a baptism of fire.

BT It was, really. My father immediately said - well, I don't know what it was - 'Here's £10. You'd better go and buy pyjamas and a dressing gown, and enough to go into digs and find some digs.' And I literally found digs that evening.

JW In Gower Street?

BT No, just outside.

JW Just outside.

BT Just off of Gower Street.

JW Now, of course, University College has been one of the fountain heads of British medical science. Were there other teachers in your subsequent course who inspired you particularly?

BT I think Tommy Lewis¹ was the outstanding teacher at a clinical level. There was a fellow called L E Glynn, who did most of the teaching in pathology, and I found him a very good teacher. But Tommy Lewis was inspired, I thought.

JW Yes. The father of British clinical science.

BT Yes, I think he was.

JW That's what people often said of him.

BT Yes. I think so.

JW And so, of course, having gone to University College, you decided to stay in that medical school for your clinical course, and that was inevitable.

BT Yes, that's right.

JW And again, in the clinical field, were there any other notable teachers, apart from Lewis, that stand out in the memory?

BT F M R [Francis Martin Rouse] Walshe.²

JW Oh yes.

BT Yes, whom you will have known, of course.

¹ Sir Thomas Lewis (1881-1945)

² Sir Francis Martin Rouse Walshe (1885-1973)

JW Very well.

BT He, to some extent, taught by insult, if you know what I mean.

JW Yes, I do. I do. I do!

BT But nevertheless, of course, he was a witty and entertaining sort of fellow. But all... but you wouldn't have said he was desperately likeable. Tommy Lewis was very likeable. He was concerned about people and how they developed. I don't think... I don't think Walshe was, but he drove home a lot of lessons!

JW He did. I remember him saying once about a very bad paper that 'Dr X had taken us out into the wasteland of muscle disease and made us partners to his own confusion.' This was a typical Walshe remark.

BT Yes. Absolutely.

JW Very cutting, but at times one remembered...

BT Oh. Oh, absolutely.

JW ...what he had to say.

BT Yes, you're quite right.

JW Did your parents support you throughout the whole of your course?

BT Oh yes.

JW That was inevitable? There was no question of a scholarship, or even a local county major exhibition?

BT No, there wasn't. Well, you see, I was too late to apply for that year, anyway.

JW Of course you were, yes. Of course.

BT It all happened with such...

JW So you graduated in 1943?

BT Yes, that's right.

JW And that was with an MD, BSc, London?

BT That's it, yes.

JW And I was interested to learn that you were one of 1,100 people this week who actually went to the University of London to have your degrees conferred after nearly fifty years.

BT That's right. There were no congregations throughout the whole of the war, from '39 to '45. And I don't know why it's taken so long for them to decide. It's roughly the 50th anniversary, of course. But they decided this was something they'd got to do. There were, I think, 21,000 people graduated in London University, in all faculties, of course, and 1,100 applied to go to this ceremony. It's rather a sobering thought. A lot have disappeared, one suspects. But it was a very impressive ceremony and really quite emotional.

JW I'm sure. Yes, I'm sure. In the Senate House?

BT No, it was held in the Festival Hall.

JW Oh, in the Festival Hall, yes.

BT I should think there'd be well over 2,000 people there.

JW I see, yes. Oh good. Well, that, at least, is another event to add to the store of memories.

BT Yes.

JW Now, you were, I suppose, unusual in many respects in that you didn't do, as far as I know, house jobs.

BT I did one house job.

JW Oh, you did. I see.

BT Yes. I did a house job at Nottingham. I qualified... I think it was January '43. Anyway, I qualified very early in '43 and at that time, people were being called up in three months. And I decided not to apply for a job at UCH, which, I don't think, in retrospect, I regretted doing, but I wanted to live near home and particularly near Betty if it was only for three months. So I got a job in Nottingham as a house surgeon. And part of this story, I mean, my going into pathology was not a total accident, by any means, but it was partly an accident. In 1939, as soon as the war started, we were asked in a microbiology class if there was anybody who might wish to do pathology after the war, as it was realised that there was going to be a great growth in scientific medicine, and they would take the names of anybody who was prepared, or interested in pathology. And three of us handed in our names. A man who was a great friend of mine was amongst them. And, of course, we heard nothing. Naturally, we were told it would happen after the war. But I'd actually had my call-up papers when I got a letter from the Department of Health saying there was a post for training in Pathology in the Department of Health, would I be interested? So I said yes to that, straightaway. And I went to London, and the post was pure microbiology so I said, 'I'm sorry, I'm not interested.' And I returned to Nottingham and a week later I got a telephone call - because I'd made it clear I was only prepared to do morbid anatomy - and I got a telephone call to say that there was a job going in histopathology and morbid anatomy in the Charing Cross/Westminster sector and if I was interested there was an interview on the following week. So I went down and a week or so later I was told I'd got the job and that's how it occurred.

JW So it wasn't really the influence of a teacher that led you into pathology, it was a series of... or possibly Glynn, you mentioned.

BT It was Glynn, but it was much more than that, I really wanted to do anatomy.

JW Oh, did you? I see.

BT I was... I was absolutely engrossed, enthralled by anatomy. And, of course, there were no anatomists being taken on. You couldn't get into anatomy during the war.

JW No.

BT As far as I know, you couldn't. And I simply thought that histology, and pathology itself, was a very close second - that was my real interest. So it wasn't... I mean, the association was over the basic morphology.

JW A combination of circumstances.

BT That's right.

JW Now, did you spend... you actually worked in the Emergency Medical Service, didn't you, the EMS.

BT Mmm. Mmm.

JW Was that at Charing Cross and Westminster, or did you go elsewhere?

BT It was at the Charing Cross/Westminster Peripheral Section Hospital, which was at Ashford in Middlesex. But the... the laboratory was headed by H W C [Howard William Copland] Vines, who'd been the... who was the Professor of Histopathology at Charing Cross, and Noel Maclaghan, who later became Professor of Biochemistry at Westminster, he was the biochemist. And a chap called [Aaron] Gordon Signey was the acting senior pathologist in day-to-day charge. He was a haematologist primarily. He was the editor of the *Journal of Clinical Pathology* and became a very notable figure in clinical pathology later. And he, frankly, was the biggest influence in my pathology career. It wasn't Maclaghan or Vines, it was Gordon Signey.

JW I see. Now, you've mentioned Betty, of course. You met in school. When did you become engaged and when did you marry?

BT We married in 1944, that was the year after I qualified. We'd got engaged the previous year, and we... well, that was a curious set of circumstances. My parents were very much against my marrying before I'd got proper postgraduate qualifications and I could see that being a considerable disadvantage if things went wrong in the exams, really. So, in fact, we got married... we arranged to get married a month after the MRCP exams, in 1944.

JW I see. And you decided to take the MRCP, even though you had no intention of becoming a specialist physician. Why did you do that, just as a...?

BT Oh, because at that time it was the entrance to pathology.

JW Pathology, of course, yes.

BT I mean, the MD in pathology was, if you got it, was not considered to be a qualification that was most desirable.

JW And there was no such thing, of course, as a College of Pathologists, or a higher qualification in pathology.

BT There wasn't. There wasn't. No, there wasn't.

JW Well, now, what was Betty doing at that time?

BT She was teaching.

JW She was teaching. In Nottingham or somewhere nearby?

BT She was teaching in Nottingham when we married, but she immediately moved down to Ashford in Middlesex.

JW I see, so that you had a period of married life together before you went into the Army.

BT That's right. That's right.

JW So eventually, the Army caught up with you, as I know, in 1947, because as you will recall, we occupied adjacent beds in the transit camp at Crookham, in 1947, in the RAMC.

BT We did.

JW I was on embarkation leave, but had broken my wrist so I was taken off it and later moved elsewhere. You became a specialist pathologist in the Army. I can't remember where you went.

BT I went to the Military Hospital at Shaftesbury for a year. That wasn't a bad experience, but it wasn't a good experience. If you remember, there were some, there was some active work to do because there were still, of course, the remnant of the war in... I mean, it was a war, in Israel. There was still the remnant of that and quite a number of soldiers severely hurt were returned there. But I only spent a year there. It became fairly tedious, in many ways; you had to invent things to do, really, at work. But I did one or two interesting things in the lab, you know, surveys of healthy people, various haematological surveys that were easy to do. And then I was, I was only moved a short distance away to Tidworth, to the hospital at Tidworth. But close by was the Army Special Microbiological Reference Laboratory and I did go there not

infrequently. That was a very useful introduction. They had some very good people there who'd been drafted in, of course, during the war.

JW So you did two years in the Army and then were appointed directly as senior registrar in pathology in Newcastle? Was that the next move?

BT That was the next move to Newcastle, but that was... it's a curious, if slightly irrelevant, story but I applied for the job of deputy director of the laboratories at Newcastle General. That was a bit of a joke! I mean, the laboratories, if you remember, were the converted maternity isolation block. But I thought the words 'deputy director' meant that I was being appointed as a specialist. And I got that job and six months after I took it up, they did the review of appointments. I mean, the Health Service had just come in, and so this team of pathologists did a review of the people in pathology and I was graded as a senior registrar. And I took great exception to that, since I... I would almost certainly not have gone to Newcastle had I known that I was still going to be in a training...

JW You'd had no particular experience of Newcastle, I mean, it just happened to be a job that caught your eye in the advertisements. Or was that...

BT It was... no. My father, of course, in his job, did a lot of travelling. And there were two reasons why I thought Newcastle was worth it. There was a third, really. During the war, we had been in, for a time, in a small cottage by the Thames, Betty and I. And the owners of the cottage had suddenly wanted it back and we were turned out. And working in the same hospital at Ashford as me was Donald Court, and we got to know Donald quite well and Donald said, 'Come and stay with us,' in a typical generous way, and we lived with them for three years... for three months, not three years! And then we found another place to live. When Donald left Ashford, he went to Newcastle as the reader and we still had some contact with him. And so, although without his saying anything to us, Newcastle meant something in terms of medicine. That was one thing. But my father had been to Newcastle very often and had said to me, frequently, 'They are a splendid friendly set of people and they're... it's a nice place to go to.' So that was another reason. But Gordon Signy, I think, was the major influence, because he... he was an in-law relative of Manny [Manuel] Anderson, whom you will know well.

JW Oh, I see! Yes, of course. Manny Anderson, physician, painter, pianist.

BT Pianist.

JW And pianist, yes. A polymath. Yes, of course.

BT That's right. And so, I mean, Gordon said to me, 'Well, you'll like it up there. It's a good place to go.' I had tried to get a job in Winchester, which, in retrospect, of course, I was very lucky not to have obtained because things would have been very different.

JW Were you on the verge of leaving when you were graded as senior registrar, or... because you became a consultant the next year. How did that come about?

BT I did. Well, I went... I made a vigorous protest about the grading. I don't know if you remember the Regional Medical Officer at the time, a man called Patterson?

JW Yes, I remember him well.

BT Yes. I went to see Patterson and was told, more or less, not to be a silly boy and go away and just accept...

JW Avuncular.

BT Yes. I didn't accept it. I went to see my Member of Parliament and he made a fuss. He went to see... I afterwards learnt he went to see Patterson and said, you know, he didn't know anything about the grading of pathologists, but how damned stupid could you be to appoint somebody as a deputy director and then call him a trainee? That was not popular. Patterson sent for me and said, 'I've made a very foolish mistake in being so arrogant.' So I said, 'Fair enough. I'll leave.' And I applied for a job in the Westminster and, in fact, whilst that was pending, James Spence, who was chairman of the Medical Advisory Committee, sent for me and in the most delicate way told me how foolish it would be to go to the Westminster, there would be opportunities arising.

JW Yes, well, of course, James Spence was also one of my teachers and mentors, whom I admire greatly. So the opportunity came up in the next year.

BT Yes, that's right.

JW Had you, by then... was the first house to which you moved, the one that you now occupy in Low Fell?

BT Yes.

JW So you bought that straightaway?

BT We, we lived at the coast for six months in a rented flat. Again, Donald Court knew of it and told us where to go. And the only house we've bought at all, is the one we still live in.

JW Right. Well, we'll come back to that a little later. Who was the director of the pathological services then, at the [Newcastle] General?

BT Well, I mean, that, in a way, was one of the other cruelties, there wasn't a director. There was no one else in the department when I went there. On the day that I was interviewed for the directorship, there were several people - for the deputy directorship - there were several people interviewed, including Bernard Smith, whom you'll remember. And at the end of that, they gave me the job of deputy director and they offered Bernard another job as a consultant pathologist in the department. So I became the deputy director as a senior registrar and Bernard became a consultant pathologist, but under my direction. Now, you couldn't have anything dafter than that.

JW Machiavellian. Absolutely extraordinary. The sort of thing that Patterson used to love. Yes, I appreciate the point. Now, then, of course, you did become the senior consultant and director of the new Pathological Institute in 1953.

BT Mmm. Mmm.

JW When was that Pathological Institute completed?

BT Well, '55 it was completed. We moved... the old laboratory was in the path of the second wing, and so they completed the north wing, knocked down the old laboratory, and did the central branch of the lab, and then the south wing.

JW Now, you held that appointment as director of the Pathological Institute, for twenty-eight years.

BT Ah, I did. But there was a short period of two and a half years when a man called Patterson Smith came from Canada and was the formal director. I became, I became... he came in 1952, or late '51, and he was in the north wing as director, but he'd died by the time the place was completed. Yes. And he was a very valuable colleague. I mean, you'll know he had an unfortunate history, but he taught me a great deal.

JW Good. When would you think, during this career of yours in Newcastle and before, when was it that your interest in neuropathology began to flower and develop? Because we'd not had neuropathology in Newcastle.

BT No. Well, you will remember, I think, that around that time, much of the histopathology was sent to Edinburgh and all the neuropathology went to Edinburgh. And, of course, I was very anxious that the histopathology, in particular, shouldn't go, and that came over to us very quickly. But the neuropathology was... of course, I'd seen a fair amount, but I'd never done anything in a special way, so I think it must have been about '56, as soon as the new place was working that I got a senior histological technician seconded to Queen Square³ for six months, really, simply to learn the techniques. And she came back and I think we probably spent a year looking at neuropathology and sending the specimens still to Edinburgh, but as a sort of quality control.

JW Was that to Mahony or his predecessor?

BT No, it was to Mahony's predecessor and I honestly don't remember his name. Colonel somebody. He was an Army pathologist. But they gave a very good service.

JW So, effectively, your reputation, and I think it's not an exaggeration to say that you developed an outstanding international reputation in neuropathology, but essentially, you were self-taught in the discipline from early stages, with a little bit of help from elsewhere.

³ National Hospital for Nervous Diseases, Queen Square, London.

BT Yes, I think that's probably fair. The... the material... it was a great help... the situation was that the material had gone for many years to Edinburgh, but their diagnostic service included the return of duplicate slides. So there was a large store of duplicated material in the lab and I worked through a lot of that, of course. But otherwise, of course, having a technician who was very good, and very good at the techniques when she came back from Queen Square, was an immense help, of course. But I think it would be... it would have taken me a good many years before I began to feel fairly competent. It was a slow process.

JW Oh, indeed. And when we started to develop the neurological services from '58 onwards at the General and then the opening of the Regional Centre in 1962, with good radiology, neuroradiology under Gordon (?) and so on, I suppose, that again, helped to increase your interest in the field.

BT Well, I mean, I had, by that time, not become exactly obsessed, but it had become a dominant interest of mine, and I was reading a good deal. But, of course, those mixed sessions would have sparked anybody off, wouldn't they. I mean, you couldn't fail but be interested in the whole series of problems that became evident at those meetings.

JW Well, if I may say so, the quality of your presentations at our brain-cutting sessions and clinical pathological conferences was one of the, I think, major features of Newcastle neurology over the next twenty or so years, from which an enormous number of people profited. How was your relationship... of course, you became a university lecturer in 1960, but your personal chair in neuropathology, didn't come along until 1973.

BT That's right.

JW How was your relationship with the RVI [Royal Victoria Infirmary], the pathological department, the university department at the other hospital, during that time?

BT Well, I had not only good relationships with the successive professors in the department, the chair holders, [John] Duguid was always a friend in a fatherly way - I mean, a much older man than me. But I knew he'd supported me for the appointment, for instance. I don't mean for the initial deputy director's appointment, so-called, but for the director's appointment. I knew, indirectly, that he'd given me very heavy support for that job, and he'd been a friend and had always made open access. Gordon Heppleston⁴ followed, if you remember, and became quite a personal friend, though Gordon was not desperately interested in unification of the department. But then, if you remember, when he left, Angus Stuart came on the scene, and Angus was an enthusiast for... not enveloping, but for integrating the two departments, and it was to my... it was to me, a great disappointment when he left because he saw the advantages of having a single unit of neuropathology, for instance, and a single unit of dermatology at the RVI - dermatological pathology was the right answer to that particular field. And we would have... I'm sure, if he'd stayed, we would have gone along the process of... particularly, since there were then three major laboratories in

⁴ Alfred Gordon Heppleston (1915-1998) Professor of Pathology, University of Newcastle on Tyne.

Newcastle and ten histopathologists and that was a base from which you could have had a marvellously good service, I think. And Angus wanted that very much.

JW I know. I know he did. Now, as far as your research contributions are concerned, you became particularly interested in ageing processes of the brain, and in work on dementia – Alzheimer's disease. And in that, of course, collaborated with Martin Roth.⁵

BT That's right.

JW Which must have been interesting as an experience, and with his colleague.

BT Well, that's right. Well, in a way, that was an accident to some extent. I'd always... I don't know why, but when I worked with Gordon Signey, I got interested in, to some degree, in quantification of histological lesions, and I did some work with him that was never published, and should have been, because it was on the changes in the... in the appendix - histological quantitative changes in the appendix mucosa and muscle, during normal life. In other words, taken from autopsy specimens, and going into foetal - I mean, we eventually went into the foetal appendix and so on - and then in specimens sent in, from histological material, particularly from cases... if you remember, at that time, there was a very frequent favourite diagnosis, called 'chronic appendicitis'. And, of course, we rapidly came to the conclusion that it didn't exist, as a result of looking at numerous histological specimens. But that was the first exercise that I did in any detail of quantitative measurement of changes. And I did, I think, become obsessed with that because I thought pathology was based very often on subjective statements that possibly you couldn't substantiate if you tried to... if you tried to do the various counting measures. And I can't remember when it would be, it would be about 1960, when Martin Roth approached me and said, you know, he knew I was interested in neuropathology, was I interested in joining in a research, any research on old age? And I said, 'It depends what you mean, of course.' And he said, 'Well, we could set up a system whereby we estimated the retention of normal faculties into old age and we could grade them and quantify them to some extent, and we could later on, if necessary, quantify the degenerative changes, or the clinical evidence of deterioration in memory and concentration and so on, in people who were becoming demented. We'd be very interested to see if the brain changes in any way to fit with what we think are the clinical changes.' And I said, 'Well, if you mean I want to... do you want me to do some quantitative work on the brain? That would suit me down to the ground.' Exactly what I was looking for. And that's really how that started. We started, in fact, with the demented, which was, of course, the wrong way round. We should have started with the normal ones. But that, of course, came very rapidly along the same field.

JW So that then followed the work in which you developed this technique of measuring the number of senile plaques per high powered field in quantitative microscopy, and I think you were one of the first, were you not, to use the quantitative image analysing computer to actually count these changes in the brain.

BT Yes. Yes, we did. We used it over... in a difficult way. We used it to try and count... I think we were the first to publish on nerve cell counts in the cerebral cortex,

⁵ Sir Martin Roth, Professor of Psychological Medicine, University of Newcastle on Tyne, 1956-77.

using the Quantimet [image analysing computer system]. I think we got it wrong. I mean, all the evidence, I think, shows that we got it wrong! But that was... that was... I mean, if we'd gone on doing it we would have got it right because we didn't realise the complications of, you know, things like contraction. I mean, we knew about contraction, obviously, of histological preparations during preparation, but we made a basic assumption, that was partly wrong, which was that it would happen in all specimens to the same degree and that was one of the errors we made. We didn't take sufficiently seriously, the mathematical problems that are associated with counting of section... of material in sections that goes through several sections, so that in each section you've got fragments of what was really embedded in the previous section. I mean, it's a complicated business to do....

JW I understand. But then you learnt that very well, didn't you, because the work that you then did, and in which I was peripherally involved, on the spinal cord, where you took a series of sections of the spinal cord and you counted not the nuclei, but the nucleoli(?) which proved...

BT That's right.

JW You were counting the same cell twice.

BT That's right. That's right!

JW And that showed... well, perhaps you'd like to say what that demonstrated, the work on the spinal cord?

BT Well, in relation to normal... I mean, I really think the work in relation to the normal was the most interesting because it showed - as you know, we were restricted to the lumbo-sacral cord because the task was too big to do anything else - but it showed how, what consistent numbers were present in normal life, up to about the age of sixty, and then about a third to a half of normal people begin to lose anterior horn cells quite quickly, and some can lose up to fifty per cent. And the oddity of that is, and perhaps it's associated with the very long time span that that process probably takes, that some of the people with the most startling losses in that so-called normal group were functioning normally. But, I mean, we all know you've got a lot of reserve in these things.

JW Absolutely. But, on the other hand, that work, to some extent, at least explains why we get more tired after eighteen holes than when we were younger.

BT Yes.

JW Right. And then, of course, from that work on dementia, you went on to collaborate with the Perrys [Elaine and Robert] on the biochemical stage, and were amongst the first again in the field.

BT I... well, I think... yes, Elaine Perry, I mean, made such enormous strides in two or three years and I think her work did make a major impact in the field, because we had the techniques already in being for checking the normalities and the degree of abnormality in the brains. I mean, that was the background to getting Elaine to work

with us. We realised that we not only had material regularly coming in, that was clinically carefully assessed, because Gary Blessed, if you remember, was doing that almost as a lifetime's job. And we had techniques regularly set up in the laboratory, histologically, that no one else had. I think that was the...

JW Quite. But everyone, nowadays, quoting work on Alzheimer's disease, refers to your work and that of the Perry's on demonstrating the deficiency of acetylcholine in the cortex, in Alzheimer's disease.⁶

BT That's right.

JW So that work has really stood the test of time.

BT I think it has, yes.

JW Now, I think this was, perhaps... this work and others, other work that you did, which led to you being appointed as chairman of the research group of the World Federation of Neurology, on dementia.

BT Mmm.

JW That group is still functioning very well.

BT Oh yes. Yes, that's blossomed really.

JW It has. It has.

BT It's been a success.

JW And I've only just learned today from your dear Betty that in a couple of month's time you're going to Padua to receive a major award from the Italians, on...

BT Well, I don't know what they're going to do, what the award is. But I got this ... and I've written and asked them, of course, but I haven't had a reply so far.

JW No. No. But it is in Padua.

BT It's in Padua. It's the World Association for the Study of Dementia. And they said, the letter simply said that they wished me to go and be present at this ceremony and receive an award for the work I've done in relation to Alzheimer's disease.

JW Well, I think that will be a splendid and, I'm sure, a very enjoyable occasion.

BT Mmm. Mmm.

JW I'm going to change tack, Bernard, if I may, because one of the other features of your life and work in Newcastle was your very considerable involvement in local

⁶ Perry EK, Tomlinson BE, Blessed G, Bergmann K, Gibson PH, Perry RH, 1978. Correlation of cholinergic abnormalities with senile plaques and mental test scores in senile dementia. *British Medical Journal*, 2, 1457-1459.

affairs relating to the administration of the health service. You were successively chairman of the Medical Committee of the General Hospital, then the Medical Advisory Committee for the whole of the Area Health Authority, and what are your particular memories of those long evenings, spent in looking at health service...?

BT Well, I mean, Medical Advisory Committee at the General, and I was on the old styled... what was it called? Oh, Hospital Management Committee. They were relatively non-traumatic, and, I suppose, in many ways, relatively uninteresting. But, as you say, I chaired the first Joint Medical Advisory Committee, when there was, of course, the feeling that the hospital service in Newcastle had got to be unified in some way. That was a pretty traumatic period. As you know, there were two schools of thought and they both expressed themselves pretty freely.

JW Quite. Quite. Yes, between those who wanted to preserve the identity of the individual hospitals and all of their services, and those who wanted them integrated. And the idea of the divisions that went across all three hospitals was not easy.

BT That's right.

JW No. Quite. Do you think that the concept of one teaching hospital on three sites has worked in Newcastle?

BT I think it's worked as well as one would expect something as difficult as that, because I think that's difficult. I don't think you get...you don't get people of fifty-five and sixty changing their minds - not easily. And I think, of course, the logistics of teaching on three sites takes a fair amount of developing. It sounds easy now because people are used to it, but I don't think at the time it was. If you think that the students had no facilities at the General, initially, and until that small house was built in the grounds, there was no possibility of students being resident except in those wretched residence quarters, which were pretty terrible and overcrowded anyway. So I think it's worked. I think it's done well.

JW And you'll have memories, too, of the fight with the Department of Health over the question as to whether there should be two hospitals or three, and Mr [Richard] Crossman and his visits.

BT Ah, yes. In retrospect, in a way, I've admired the Department's reaction to that, and the Regional Health Authority's, because, if you remember, George Richardson, and Laurie Latimer and I, took a fairly public stance about it, and went to the Secretary of State, over the region's head. And, I mean, one knows that these things are permanent records. Nobody believes that you get away with that sort of thing without the record being kept straight. So I suppose that what happened later on was a pretty open-minded thing to happen. I mean, the Regional Health Authority appointment was pretty open-minded.

JW I'll come to that in a moment or two. But in those days of the Medical Advisory Committee and the Area Health Authority, can you recall any particular major problems or frustrations or any major achievements, do you think?

BT Well, I recall a number of things with great amusement, really. At the time when all this was going on, and things were a bit fierce, I mean, there were people who thought that we were totally out of line, and I suppose we were... but in the middle of that period, you remember Collingwood⁷...?

JW Very well. Sir Edward.

BT Sir Edward, yes... who was... he twice gave me the aristocratic treatment over that period. He asked me if I'd go and have lunch with him at his club in Newcastle, and we had a nice lunch and he gave me a very fatherly... you know, 'for your own good' sort of talk about not pressing issues of this kind upon the region. And, you know, I said, 'Well, I'm only acting in my... obviously, I'm acting in my own beliefs, and a number of us think the same.' And a little time later, he asked four of us - that was George Davidson, George Richardson, Laurie and myself - to go to his house up in Northumberland.

JW The ancestral home of all the Collingwoods, 'the Admiral' and so on.

BT That's right. That's right.

JW He, of course, was a mathematician, and treasurer of the Regional Hospital Board.

BT Yes, that's right. He was. Yes, he was. And very bright.

JW Very bright.

BT Terribly bright man. And he, again, gave us, in concert... in the great hall at this magnificent building. So that stands out. I mean, it didn't make much impression on us, on the whole, but he was a nice chap and he wasn't threatening or anything of the sort. Or if there were threats, they were gently expressed.

JW Well, of course, the University also, which at the time I was dean, took a very similar view.

BT That's right. I know.

JW So we were in concert on this, against the Regional Hospital Board.

BT Yes.

JW Of which, at one stage, I was a member, as you know.

BT Yes, yes.

JW Well, anyhow, we then come to one most stirring development and that was your appointment as chairman of the Regional Health Authority itself, despite all your brushes with authority. And you took that over in 1982?

⁷ Sir Edward Foyle Collingwood (1900-1970) He was known by his friends and contemporaries of Trinity College, Cambridge as 'the Admiral'.

BT That's right.

JW And held it for eight years.

BT Yes.

JW A time of stirring change in the National Health Service. What are your memories of that particular time?

BT Oh, numerous. But, I mean, if you say, 'What are the principal memories?' I think the first thing that surprised me was that Secretaries of State, and successive Secretaries of State, who met regional chairmen regularly, were extraordinarily open to suggestion and statement and even attack. I mean, you know, it was possible to say, 'You are quite wrong in what you say and this will be a disaster.' And all of them, and there were... well, there had been four whilst I was the regional chairman. They all behaved as though that is how they expected you to speak. They didn't, of course. I don't remember anybody being rude. I don't think you'd have got away with being... with being difficult, in that way. But argument was part of the order of the day. And I thought... that was a surprise to me. And I thought it was a splendid thing to see. I don't know that regional chairmen made much difference to policy, that's a different issue. But they were extraordinarily open to...

JW The four that you met would be John Moore, Ken Clarke, [William] Waldegrave and - and who have I missed out? - and Virginia Bottomley, of course.

BT Oh no, Virginia Bottomley is now five. Norman Fowler.

JW Norman Fowler, of course, yes.

BT Was the first.

JW Was the first, yes. And very different in their...

BT Very different. Yes, I mean, Norman Fowler extremely careful, very meticulous, didn't make his mind up quickly, but, having made it up, was firm and knew what he wanted to do, and I think in the end knew an enormous amount about the service.

JW Now chairman of the [Conservative] Party.

BT Yes.

JW And John Moore, who came back from Chicago, of course, and was thought of as a potential future Prime Minister, and is being introduced into the Lords next week, I see.

BT Is he? Is he?

JW How did you get on with him?

BT Well, I got on with him well enough. But he stayed a very short time because he was ill, as you know.

JW He was ill, yes.

BT He was ill over many months.

JW Yes. Which probably took off his cutting edge.

BT Well, I don't think he... he never had the grasp of the problems of the Department of Health that the others had, but he didn't have the opportunity, in a way. I mean, Ken Clarke had a magnificent grasp of what was going on because he'd been, for several years, minister with Norman Fowler, and then went on, of course, to be a highly... I think, a highly effective, if combative Secretary of State.

JW But he enjoyed it.

BT Oh yes. Oh, very much. He enjoyed argument.

JW He enjoyed conflict and argument.

BT Oh yes, very much.

JW But Waldegrave?

BT Well, very much quieter, more difficult to read, I think, in that his response was often, literally, to indicate that he would think about it. But... whilst... I saw very little of him, of course, until this recent inquiry.⁸ So my experience of him wasn't enough.

JW No. During the time that you were chairman of the Regional Health Authority in Newcastle, and looked after a region which, after all, is the largest in the country, extending from Barrow-in-Furness, up through Cumbria, and right down to North Yorkshire, and up to the Scottish Border... for what particular achievements would you like most to be remembered?

BT Eh, yes... I hadn't thought about it for this purpose, but I thought about it when I...you know, half way through the time as regional chairman, and I thought about it when I was about to leave. And I left because I thought I'd had enough, and I didn't want to do any more in that particular job. I set about, very rapidly, after I became chairman, I did a thing that I was told was unusual for chairmen to do. I insisted on going to every district and seeing every hospital on its site. It took a good many months, and going round and getting a personal view of how they were. I came to the conclusion, very rapidly, that we had, above all else, to spread the production of good hospital buildings throughout the whole of the Northern Region. I mean, hospital building is so costly that it tends... that a single massive development tends to take up a year's, or a year or two's total capital allocation. But, of course,

⁸ Sir Bernard Tomlinson chaired the inquiry into London's Health Service, Medical Education and Research. The report was published in October 1992.

Newcastle was capable of taking up the whole capital allocation for several years. And I thought, really, that a programme of spreading that, so that people didn't have to come to Newcastle from Alnwick and Berwick, and come in from the coast, and, I mean, the Barrow situation was absolutely appalling when the building started there.

JW That improved greatly.

BT Mmm, it did.

JW Now, Bernard, you've had a lot of honours. You're a Fellow of the Royal College of Physicians, Fellow of the Royal College of Pathologists... CBE 1981, and knighted in 1988, and Deputy Lieutenant of the town of Tyne and Wear, since 1988. These must have all given you great pleasure. And then you became chairman of the Joint Planning Advisory Committee for the Department, and did that for five years. That must have been a tough assignment.

BT Yes. I think that was... I don't think that quite compared in severity with that first Joint Medical Advisory Committee. But, of course, I was another... whatever it was, fifteen or twenty years older, and a good deal more difficult to disturb. But the JPAC exercise was, at times, a very rough exercise because it was doing something that couldn't please anybody.

JW Planning the distribution of junior posts in the Health Service.

BT Yes. That's right.

JW And, of course, you're now on an even tougher assignment, which I'm not going to press you about, the future of the London teaching hospitals. It would be improper to ask you, but it must be interesting.

BT Yes. It's extraordinarily interesting and it's intellectually testing. There are some problems that I think are going to be very difficult to solve. But it's not been a personally difficult issue. People have talked openly and, on the whole, in a friendly fashion. And I think we've been friendly. I mean, we didn't come down... the team didn't assemble and decide that London was for the chop. That's not been the sort of exercise. We did... we have told everyone that we don't take anything for granted, and we don't swallow that a place is world-class research standard because the occupants tell us so. And we've used words of this kind, of course. It brings people into a certain sense of reality. But, on the whole, they've been very good.

JW Well, we look forward to talking to you about that, perhaps, on some subsequent occasion. You've had an exceptionally happy marriage, and a lovely home in Low Fell, with an acre of garden, which must occupy a fair bit of what spare time you still have. Two years to your golden wedding?

BT That's right.

JW And a son and a daughter doing various other things.

BT Mmm. Mmm.

JW But not in medicine.

BT That's right, no. My son's a civil engineer, working in mid-west Scotland. And my daughter, of course, qualified in agriculture, but that was only because I said I wouldn't pay for her to go and work in a stables until she'd got a university degree.

JW I see. But she's a considerable horsewoman.

BT She's a good... she's a good horsewoman. I think short of international standard, but very content with her lot and a good dressage rider now. She's doing well.

JW Your personal recreations: gardening, golf, music and walking. And, of course, the golf is one that we have, from time to time, shared together, as in those marvellously combative matches between the RVI and the General at Brancepeth [Castle, Durham].

BT That's right.

JW You've got some interesting memories of those events?

BT Well, I mean, some of them were alarming, weren't they, really!

JW They were. They were.

BT If you couldn't win by straightforward golf, you won by whatever means was available!

JW Yes, indeed. But still playing at Northumberland Golf Club?

BT Well, I play whenever I can. And I play with David quite a bit now.

JW David Shaw?

BT David Shaw, that's right, yes. He's a constant companion now.

JW Lastly, any regrets, or anything in your life that, looking back, you would now wish to have changed?

BT I don't think ... I don't think there are many, honestly. Well, it's wrong to say that there aren't some things that I'm sorry about, outside medicine. Inside medicine, I don't think there's anything that I'm sorry about. When I was... when I trained with Vines, H W C Vines, initially, during the war, when I left to go into the Army, he said to me, 'Look, when you come out of the Army, come back and join us at Charing Cross, and it'll be all right. We can get you on the academic staff and so on.' And I went to see him as soon as I came out of the Army, but I thought Charing Cross was such a crummy place, and in such a terrible site. If you remember, I mean, off the Strand. It was absolutely ghastly. And I thought, 'I can't stand this.' And so I didn't, of course. And I said to him, 'I'm sorry.' He thought I was a fool. And I took the job

in Newcastle. And, of course, for a time, at Newcastle, I thought what an idiot I'd been, to come up north and find myself graded below what I'd expected. But, of course, subsequent events would have changed that view totally. And I honestly think working at Newcastle General, and in Newcastle in medicine, could never have been bettered. I think it's been a magnificent experience.

JW Well, naturally, I have a certain bias. I can agree with you.

BT I know. But it's been, in many ways, a great privilege.

JW Good. It's been a privilege working with you, and talking to you today. Thank you very much, Bernard.

BT Thank you.