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**Professor Jeremy Morris CBE FRCP in interview with Max Blythe  
9 May 1986**

MB Professor Morris. It is very interesting to be talking to you about your career quite a long way on. I'd like to start right at the beginning where all proper historical perspectives should come from. What was the beginning? Where did you have the first educational moves of your life?

JM Education, all right. Well, I was brought up in Glasgow and I went to a local authority primary school and then at eleven moved to a local Grammar School.

MB So you got a scholarship to a grammar school...

JM Hutcheson's Boys Grammar School. In 1650 the school began with twelve boys on the roll.

MB And that was a good place?

JM That was a good place, very tough, no nonsense, and we ended up doing four subjects: Latin, Greek, maths and English; nothing else.

MB And there you decided to do medicine?

JM Well, I decided to do medicine, but in fact I started by doing arts. My father thought that doctors were a very uneducated lot and said if you possibly can, do arts as well as medicine, and so I did a sort of joint thing. I did arts and medicine in Glasgow University, but took what they called an MA, the equivalent here to a BA, in general education, at the same time as I started on medicine. And this was a terrific experience, tremendous experience, to do English for two years at university level and moral philosophy for a year, writing essays and things like that.

MB This may not be easy – some people can trace it back, almost as Darwin could trace back various ideas about *The Origin [of Species]* in the history, in a kind of journey on a coach, this idea – can you trace back the time when the idea of a medical career came to you? Was it early in that secondary education?

JM Yes, and it was like so many secondary schoolboys, it was rather naive, saving the world, serving the world.

MB But that's what you felt?

JM This is what lots of us felt.

MB But you've felt it a lot since.

JM Well, this was very strong motivation. I suppose you'd say doing good. We weren't ashamed to talk about it at school. We were encouraged to talk about it in school.

MB When you went to medical school did all that begin to take shape? Tell me about your medical school days.

JM Well, it did begin to take shape. Apart from anything else, it was Glasgow, and we were very early brought in touch with some of the local problems, like our professor of physiology was a great man on rickets, was a distinguished investigator of rickets, and rickets was all over Glasgow. I had rickets; I've got the sign of them. All poor people have got the signs of rickets. So he discussed this sort of thing a lot.

MB So it was medicine very close to local culture?

JM Very much so. This particular professor, he was a very influential man, a very fine man.

MB So though Glasgow gave you your physiological background and also early medical training in terms of the theory, the biology, the early... - the clinical work came later when you came to London – but Glasgow also gave you the social perspective, you feel?

JM Well, I was already very much involved there. I was brought up in the poor part of Glasgow, in a very poor part of Glasgow and I saw a lot of what was going on, which really quite shook me. I suppose you might say I was brought up on a mixture of the Old Testament and the ILP.<sup>1</sup> Does the ILP mean anything to you?

MB Yes it does.

JM It was the local socialist movement and it was a national movement and it was particularly strong in Glasgow.

MB The memory of those years is not diminished it seems. You still feel...

JM I still feel very much like that and it has given me a rather simple view of life, I'm sure. I mean, I've got less problems with what's right and what's wrong than other people, but it doesn't make it any easier to do the right things and avoid the wrong things. We had a lot of contact... I mean during the 1926 miners' strike, for instance, I got to know a lot of miners who used to come regularly twice a week; they used to come collecting money with their boxes, rather as they did just now, and I became very friendly with the local West of Scotland miners. So I was very socially conscious, as you might say.

MB So there was a bit of a birth of social medicine, right then...

JM Yes, and students were very political. I mean, at Glasgow University you belonged to a political club. There were three main political clubs: the Conservatives,

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<sup>1</sup> Independent Labour Party

the Liberals and the Labour, and then the Scottish Nationalists came in, and they had vast memberships – thousands of members – and Friday night debates at the Union would be packed out. It was very different from today.

MB But you took your social concerns right into that political arena, right at that stage?

JM Very much so.

MB You were very active?

JM Well, I was active. Yes, I suppose you'd say I was very active, very interested and as active as I could be, and this carried on right through my medicine. After doing the second MB we moved to London.

MB Tell me about that transition. Was it a shock?

JM I did my arts degree in Glasgow and my second MB and then the family moved to London and we couldn't afford for me to stay on in Glasgow, paying for digs and all that sort of thing. So I moved to London, to UCH [University College Hospital]. I had some advice from a friend of my father who was actually the chief medical officer at the board of education. He had a long talk with me and asked me the sort of things I was interested in and said, 'If I were you, I'd try UCH, University College Hospital, and the Middlesex [Hospital]. So I made an appointment at UCH and things were very different then, I went to see the dean, I had an appointment with the dean at UCH at 2.30 and at 2.45 I left a student of University College Hospital. When you think of what the lads have got to go through today to become a student of UCH. And there I was at UCH... it was a marvellous place, a fantastic... it was a...

MB Can you give us a cameo of what it was like to be a student at that time.

JM Well, there was Thomas Lewis and Wilfred Trotter and John Parsons. I mean, the place was a fantastic place and had a tremendous level pioneering in research. I was very fortunate that Lewis, perhaps the most distinguished figure there... the story that we were given is that he decided he wasn't going to waste any more time doing teaching, he had more important things to do as maybe one of the world's leading investigators of heart disease, when it was found in his contract that he had to teach, so he said, 'Right, well I'll teach one student.' Well, in typical UCH way we had exams, everything was by exams, you were sitting exams for something or other all the time. So I had an exam and I came top of that exam and became his personal clerk, which I was able to stretch out for ten months by all sorts of chicanery, and later on I became his house physician. So I had that extraordinary personal experience of working very closely with Lewis.

MB The only student!

JM The only student for ten months and then his HP, his house physician for six months. That was a remarkable experience – extraordinary bit of luck.

MB That was one of the great points?

JM One of the great points. I saw how carefully they worked. It wasn't just Lewis. He had a brilliant team round him. He had [George] Pickering and Wayne and Grant, and then on the other side of the corridor there was the Medical Unit with people like [Harold] Himsworth, you see, bright young sparks.

MB It's incredible how much was going to spin off from that.

JM An incredible place – to be there at that sort of time, to be at UCH in the thirties.

MB Just the time to be there.

JM Incredible – never before or since.

MB You remained politically active while you were there as well.

JM Well, as there was the general action; we were getting very much involved with what was going on in the world. It wasn't so very long before the Spanish business erupted and then later on, not very much later on, of course, we knew there was a war coming and we we're all very much embroiled in that. In real political terms at UCH we ran a secret society. Political societies were banned and we were determined to have a society to promote the idea of a national health service. Very interesting, and we formed the society and called it the Hippocratic Club. It was a good... even the dean couldn't object to the Hippocratic Club. It was all a bit daft because in fact... I remember our first speaker was the senior ear, nose and throat surgeon from the Middlesex Hospital, ten minutes away, who happened to be a leading advocate of a national health service, which was then becoming very practical politics, very important.

MB Did you have many people part of your Hippocratic Society?

JM Plenty.

MB It was well supported. You knew there was going to be a national... you felt this wave.

JM Well, this was coming and was so obviously necessary and there was so much talk in the country.

MB This was 1935?

JM In the thirties and soon after that for instance the PEP [Political and Economic Planning] report came out – do you remember that – you see, which was such a fine diagnosis and such a hopeless prescription. I mean, this sort of made the case for us better than anything that here was the need, which obviously the sort of trimming which PEP advocated was obviously irrelevant and we'd obviously got to be thinking in terms of a national health service. So quite a lot of ideas on the national health service were formulated in groups and societies like this all over the country. We began to get active. Well, I became very interested in the social aspects of the

medicine I was being taught. I remember being very profoundly affected by one physician in particular who taught me, a very distinguished physician, a man called [Frederic] Poynton, a very distinguished physician, and a paediatrician similarly, who between them said that they never saw a case of rheumatic heart disease in their private practice, their private and very flourishing private practice. They were both busy Harley Street... This was the model, you know, the consultants were honorary at UCH and they earned their living by doing private consultancy. Whereas, in fact, our wards were full of these things. My very first patient was a boy about eight. I remember him so clearly, with an enormous heart; he had rheumatic heart disease, and the house physician teaching the students – actually the house physician was the future Lady Himsworth – I remember her telling us that he's only got a few more months to live, this boy, and I remember how we were completely shaken. This was the first time, you see, we'd just come into the wards. This was the first time we had to face this kind of experience.

MB A tragedy of social deprivation.

JM And I became very interested in juvenile rheumatism and rheumatic heart disease, which developed the notion that this is a model of a social disease and indeed worked on it myself. It was the first bit of work that I did together with Richard Titmuss.<sup>2</sup> By that time the war was coming on. I had become more and more interested and Richard Titmuss had published a book in the late 1930s really mainly about regional differences in health in the country, and I remember reading that and deciding, well this is a man I must know. So I made contact and discovered he was a clerk in the County Life Insurance Office in Piccadilly Circus. A clerk or a... no, there's another word... no he uses... I forget the word. He didn't deal with routine claims...

MB An actuary?

JM Not as high as that, but anyhow he was in the County Fire Office and we met and became close friends from the first moment we met, including family friends. And, of course, I was able to help him by medicine and he was able to help me.

MB That must have been a terrific getting together.

JM It was extraordinary – which kept on going right through the war. We together, I suppose, formed the Committee for the Study of Social Medicine, which I suppose was maybe the first time the term was used publicly. This was a group we set up actually from UCH in 1939: Max Rosenheim, [Philip] D'Arcy Hart, and a group of us, and I remember the first paper I wrote for that was on rheumatic heart disease and rheumatic fever as a social disease. Richard and I wrote a paper on this which was published in the *Lancet* in 1942, by which time I was not merely in the Army, I had been in the Army for a year or more and was already in India. But we continued to work together during the war by airgraph. This was extraordinary. You know, the Army... people like myself who never heard a shot fired in anger... I was a physician, medical specialist; I was always in a big hospital and life alternated between periods

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<sup>2</sup> Richard Morris Titmuss (1907-1973) Deputy Director, Social Medicine Unit of Medical Research Council, 1949-50; Professor of Social Administration, London School of Economics, University of London, 1950-73.

when you were frantically busy – eighteen hours a day couldn't cope – and other periods when you had very little to do, or nothing to do and too many people to do it. And so during these periods when you might say we were fallow, I was trying to learn something systematic about social medicine... I learnt [Austin] Bradford Hill's book off by heart. Mrs Morris fed me with a lot of stuff and my cousin and Richard Titmuss fed me with a lot of stuff and my cousin in Canada fed me with a lot of stuff, and in addition we worked, we actually wrote papers together by airgraph, full of statistics, none of which ever were lost. So the British postal system during the war was something fantastic and the censorship was... They must have had a meeting at high level and decided to leave these screwballs alone. There was no danger of secret information being conveyed in these statistics on death rates in the county boroughs of England and Wales or whatever it was we were writing on.

MB So the war did not get in the way of any of that?

JM No.

MB It just helped in a way?

JM Well, it didn't get in the way at all because I was able... as I say these long periods when you had only too much time on your hands.

MB Professor Morris, just two things that I'd like to do before we... because we're into a wartime period. You have met Richard Titmuss; a career in social medicine is widely and quickly opening up for you. Can I just clarify one or two dates? You've qualified before the war.

JM I qualified in '34 and I did clinical work right up...

MB At UCH?

JM No, no. Some at UCH and some elsewhere...no, very deliberately. I deliberately did a year in general practice in East London, in Shoreditch, and I deliberately did a year in a mental hospital. I just wanted to get...

MB To get that width of experience.

JM Or get the feel of it, some idea of what was going on. Then I took my MRCP [membership of the Royal College of Physicians] in January '39. This was the exam, you know, this is the watershed, you simply have to have that. Dreadful exam. I am sorry Cyril Clarke<sup>3</sup> is not here. A dreadful exam, but that was a sort of watershed, you had to have that. That made me a physician throughout the war. I mean, with the sort of class structure of Britain, that was that you see. Now, the first thing I did after I got my MRCP was to go to the London School of Hygiene to see the dean, who was Wilson Jameson, and say I want to do the diploma in public health [DPH], I want to move into this kind of... And of course he was very welcoming, and I was due to start at the London School of Hygiene in September '39 as a DPH student, but other things...

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<sup>3</sup> Sir Cyril Astley Clarke (1907-2000) President of the Royal College of Physicians, 1972-77.

MB Other things overtook.

JM Other things overtook. And until I was called up – and I was very impatient to be called up, this was very much my war – I did local medical officer of health jobs, waiting to be called up.

MB All broadening the experience...

JM And I did MSCW(?) which I enjoyed very much. I did ARP [air raid precautions]. Do you remember that? You wouldn't.... or you have read about it

MB Yes, I have.

JM Buying shrouds, estimating the number of shrouds which you wanted in Harrow or wanted in Hendon. And then, as I said, I joined up at the beginning of 1941 and had a year here in hospital, mostly in Shrewsbury, near Shrewsbury, and then went off to India. I was in India and Burma for three and a half years doing clinical medicine all the time.

MB But in an area also influential to your thinking, I guess.

JM Well, tremendously so. Well, there were two things. First of all, in terms of India, I felt then – and looking back I don't think it was a cowardly decision, I think it was a very wise decision – that if I'd had a religion I would have stayed in India, but to stay in India without religion, you couldn't survive. You needed something like that to enable you to...I mean, if there was any place that needed social medicine it was India, but to work in India without religion, of which I had none, there was no possibility. Others did work well through having the British Empire, if you like, as a religion. I met some very fine IMS [Indian Medical Service] and ICS [Indian Civil Service], but that was all over of course. The other thing, of course, while I was in India, I had to make up my mind, was I going to... really give up clinical medicine, which I was enjoying so much and was such a worthwhile thing? Army clinical medicine is immensely worthwhile. It is very exciting.

MB You were curing people. You were doing all kinds of things.

JM We were curing people, and the IMC in many ways I found a splendid institution, with its emphasis on prevention and its emphasis on quality. The regular officers got no credit if they ran a good hospital. It had to be super good before they got any good marks and any chance of promotion. You know what I mean, this sort of ethos. And really sick people, we were able to give fantastic care. We were able to mobilise twenty-four hour first class nursing and all that sort of thing.

MB Which is not all that common.

JM But we were able to do that, and by then I was quite a senior officer, of course, but there was no question of anybody differing on it, this was understood, this was understood. So in many ways it was a remarkable institution.

MB But, nevertheless, you did tear yourself away.

JM Well, I had to decide... it became quite clear to me I'd have to do one or the other and decided with great heartbreak to give up clinical medicine because I didn't believe it was possible to combine them. And I still don't think it is. It seems to me... clinical medicine without taking clinical responsibility didn't make sense, and taking clinical responsibility as well as doing the kind of work which I was hoping to do later on in terms of research, I didn't feel I could do it. Others have managed but I didn't feel I could do it. But I went on during the war and we published papers. I published papers with Titmuss and on my own. I came back in 1946 and decided to go then to the London School of Hygiene and do a diploma in public health, by which time, because of the publications, I was given a Rockefeller Fellowship, and during this time the MRC [Medical Research Council] approached me about working for them. Mellanby<sup>4</sup> who was the Secretary of the MRC had been very interested in these things in the *Lancet* – we published almost entirely in the *Lancet* – and he sent for me one day and said, 'Look here, what about you doing this?'

MB That must have been an exciting moment.

JM Well, it was an extraordinary one. I'd never visualised anything like this, and he said, 'We'll set up a unit for research in social medicine.' And I said, 'Titmuss, of course, must come in. You see, we we're working closely together and he's a sociologist and I'm a doctor, and we work very well together.' They were delighted with this idea and eventually they set up a unit with myself as director and Richard Titmuss as deputy director. Well, he came a bit late. We set up January 1st, 1948, and he was a little bit late in coming because he was finishing the war history. You know the war history, probably his best book.<sup>5</sup>

MB Incredible book.

JM Marvellous book, marvellous book. But he finished that, he came to the unit, but, of course, as soon as the book was published he was invited to chairs all over the place and...

MB You lost a close collaborator...

JM I lost him. He went to the LSE [London School of Economics], as the professor of social administration.

MB But your close association did continue...

JM Well, more the personal friendship rather than the working relationship, although we did work together...well, we worked together on public things rather than on research.

MB Jerry, perhaps this is a good time to get you to say a word or two about Richard Titmuss. I know you feel strongly about what he gave and what he was about.

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<sup>4</sup> Sir Edward Mellanby (1884 -1955) Secretary of the Medical Research Council, 1933-49.

<sup>5</sup> Titmuss, R. M., 1950. *Problems of Social Policy (Official War History)*. London: London: H.M.S.O.; Longmans, Green and Co.

JM Well, he was quite remarkable... for me, he was an original. When you met Richard he was different from other people. He contributed something original to a discussion. He had different funds of knowledge. He had different ideas and this to me was so... and he was a real research man. He really imagined things, thought up something fresh and thought up ways of tackling it and would then work like fury to all hours of the morning for months on end to do it. He was a real research man. My idea of a research man in this field. Well, we became very close friends and he died... he died from lung cancer. He was a heavy cigarette smoker... I suppose I spent more effort in trying to stop him smoking than I did with any of my friends and completely failed. I tried to bribe him with cigars and I presented him with pipes and I lectured him with this and I lectured him with that, and I mobilised Kay Titmuss, and it just failed... and it's a terrible thing when it happens to a close... and in the end I was responsible for diagnosis, in fact. He was sick and wasn't getting anywhere and I sort of bucked all the medical ethics, if you like, all the professional ethics, and I called in one or two of the best doctors in the country to see him as a personal favour to me... and there it was.

MB It was too late.

JM Oh yes! A very painful death too.

MB You must have felt...

JM The death was a very painful one. He had one of the worst forms of lung cancer in terms of symptoms and misery.

MB But you continued the kind of work that you and he had started? You went on to do it.

JM When we started the unit we decided that the unit would do three things. Well, first of all I've talked about this interest in rheumatic heart disease, which to me was tremendously important. By the time the war was over and we were setting up the unit there was no rheumatic heart disease, and this is really the social... very interesting. However, in the meanwhile coronary thrombosis had become quite clear as a major public health problem. This had emerged during the 1930s. Increasingly we were seeing cases in the 1930s. And Lewis had cases already in his wards and we were seeing cases, but there was no work started on it, no systematic research work started on it by the time war broke out and then other things happened.

MB So this was open territory.

JM Open territory. So I said to... this was long discussions with Mellanby of course, who was tremendously supportive and tremendously interested. He also had a background in rickets so he also had a social background – Mellanby's own personal research work, as you'll know. So I was going to work on coronary heart disease – whatever you like to call it – heart attacks as a major and new public health problem; I was going to do that. Together with Richard, we were going to work on infant mortality, which we were both interested in, very much interested in. And we teamed

up with Dugald Baird<sup>6</sup> who was the leading obstetrician in this field to do that. Then, thirdly, we were going to do work on what's now called health services research. And this was very interesting; it's worth recording because it has been a source of trouble ever since. We put this idea up to Mellanby and Mellanby said, 'Oh no, no, no. No health services research,' you see. 'Nothing but politics and we've got enough trouble,' you see. And this is very interesting in relation to the future history of Rothschild<sup>7</sup> and all the disasters that followed from this. However, we dug in our feet. I said, 'No, I mean we're interested in chronic disease, this is clearly what we are going to be more and more studying. Health services are a major factor in relation to chronic disease, and how a community copes with chronic disease and how you deal with chronic disease...' And not to study health services seemed to me just plain wrong. And I'd become very interested in this from what I saw. We didn't call it health services research, we called it operational research because I'd seen operational research during the war, you see, and it seemed to me... with people like John Squire – may ring a bell – he came to our hospital once when he was doing some of his operational research, you know, what operational research included, and it seemed to me that a lot of their methodology could be applied to problems of the health service, you see. I said, 'No, no, we must do this, this is absolutely...' And things came to a head. Actually, we said, 'Well, the first thing we want to do, we want to make a study of the health services available to the population now, before the introduction of the National Health Service.' We were getting towards the end of 1947, you know, time was dragging on – at the beginning of 1948. 'What's general practice like now? What sort of general practice do people get? And when we go back in five years time can we see what difference the health service has...?' etcetera and this kind of... And Mellanby said, 'Well, you don't mean to tell me that the Ministry of Health is starting a National Health Service without knowing this kind of stuff?' – these were his words, you know, this kind of stuff. 'Well,' I said, 'Not only do they not know it, but Jameson...' – and he was probably lunching with him at the Athenaeum twice a week anyhow – 'It would be absolutely suicidal for a Ministry of Health to do this kind of work,' – the Ministry of Health which was having a desperate fight with the BMA [British Medical Association] on the introduction of the NHS [National Health Service] – 'if it suddenly comes out in the *Daily Mirror* that they are doing research on the quality of general practice...' Well, as I say, we had this battle, you see, and in the end Mellanby was very interesting. I remember I was there with Richard in what turned out to be the last interview, and Mellanby was an enormous man and the armchair by his desk was particularly low – I remember I was sitting on this armchair, down there – and he drew himself up to his full height and said, 'Well, I don't know what you boys are up to, but you'd better get on with it,' which was the ethos of the MRC. And he was quite right of course, the operational research that we did led to all sorts of trouble, as it was bound to, and the MRC continued to resist doing it.

MB It was a dangerous field.

JM A dangerous field, which, however, invited the even greater danger of Rothschild, because what happened with Rothschild is that whereas the MRC didn't

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<sup>6</sup> Dugald Baird (1899-1996) Regius Professor of Midwifery, University of Aberdeen, 1937-65.

<sup>7</sup> Professor Morris is referring to the 1971 Rothschild Report: A Framework for Government Research and Development. Cmnd 4814 by Lord Rothschild (head of the Central Policy Review). The report recommended that all applied research and development commissioned by government should be on a customer/contractor basis.

like the solution that he proposed – and people like myself certainly didn't like it, I don't think anybody who was in the field liked it – the MRC made the serious mistake of denying there was a problem. They said not merely we don't like the solution but there isn't a problem, which of course was wrong. There was a very serious problem.

MB What did Rothschild actually propose?

JM Well, he set up this whole structure inside government ministries, and enormous bureaucracy and enormous waste of time and money, which was very little productive and was counter productive in the sense that he didn't really get the MRC with all its talented people really involved.

MB They were still on the outside.

JM Still on the outside. But Rothschild, as you know, was a very arrogant man, he was a man... Well, we're not here to discuss Rothschild... some other time.

MB But you were left outside.

JM No. Having set it up, some of us went into the organisation and sat on committees, collected endless paper and mostly it has been wound up.

MB But what happened about your organisational studies?

JM Well, we went on, we went on.

MB You went on, you pursued...

JM And we did some very interesting things, although it was never... after Richard Titmuss left it wasn't a major part of the unit, especially as I got more and more involved in the heart disease problems and quite early I'd turned up the hypothesis on exercise, which has been the main thread of my own professional work. That came up quite early.

MB How did that happen?

JM Well, we set up the unit on January 1st 1948 and we set off on the work on coronary heart disease. Now, next to nothing was known about this. I remember sitting one afternoon in the library of the Royal Society of Medicine and reading all the literature on the epidemiology and aetiology of coronary heart disease in English, and struggling through the French and taking home a couple of papers in German to get translated. That was the sort of the state of the art in 1948. Now, of course, you could fill... I won't say you could fill, not your polytechnic, but an ordinary polytechnic with the literature on the subject. Well, we set up...decided there were various hints, various clues. First of all, it was a disease that was far commoner in men than in women. That was perfectly clear from the clinical experience and from such little vital statistics as we had. It was a disease that became commoner as middle age advanced. That was again clear from the little bit of clinical experience and the little bit of statistics there were. And one thing and another, we decided to go into the problem through studies of men in different occupations, and we were doing something quite

un-Popperian, you see, which [Karl] Popper would dismiss, as he would dismiss so much of real life and science, but of course [Thomas] Kuhn would accommodate very easily, and it was a great relief to me to discover Kuhn, to discover respectability via Kuhn, which certainly Popper... Well, as I said, we decided to enter through the door marked occupation. We decided to study the occurrence of this disease in a large variety of occupations. First, it would give us ideas of frequency, the real statistics of frequency. Men aged thirty-five to sixty-five is what you can study in occupations, and with the study of a wide variety of occupations, we would see something of the social distribution and we might even get connections with occupations, which is the sort of thing we were hoping to find in terms of what little was known. And we set up studies among schoolteachers and among doctors and among engineers and among insurance salesmen and insurance officials – a whole variety – and in London Transport, where there was a wide variety of jobs on the underground and on the buses, and where the chief medical officer was an old friend of mine from student days. He was rather senior to me but we had maintained contact. A delightful man, Leslie Norman, lovely man. So we set up studies and the very first results we got were from London Transport. The very first results we got after one year of study was very interesting, were from the London buses where it became quite clear after only one year work that the experience of coronary heart disease among the two men on the London bus were quite different – that the conductors had only half the experience of the drivers, you see. There were two men on the London bus, as you know. There will be for some little more time until we destroy one job because of... civilization is a (?). Anyhow, there were two men, there was the driver and the conductor, and it was quite clear after only one year experience – and the numbers [in the survey] were big enough [statistically]. And the conductors had only half the experience of coronary thrombosis, particularly of sudden death, which is the worst form – suddenly out of the blue, a man being stricken down. Well, the first thing we thought of, of course, was stress, with the driver's being a much more stressful job, and we thought of stress because this was the sort of thing that our teachers had taught us, and Lewis had taught us. Lewis had got the ideas on stress from [William] Osler, who had been discussing not the form of coronary heart disease that we were dealing with, but angina pectoris, which was a much less common form, anyhow, that had been recognised years before and was not the modern epidemic but the same kind of pathology, and Osler had talked about stress. Well, we thought of stress – you see, the first thing we thought of – and we abandoned that idea of stress for two reasons. Firstly, the men... or rather the bus officials of the Transport and General Workers Union – of whom we saw a lot – who were very interested in this kind of work and very supportive, they weren't interested in this notion of stress at all, you see. And we spent many hours discussing this... and none of us would articulate... There was my statistician and myself and there was a couple of these shop stewards from London Bus... might even have been Jack Jones, I don't know, Ernest Bevin... It could have been. I don't know whether either of these were on the Bus... anyhow, could have been. And eventually we managed to articulate between us that both of these jobs were stressful, of course, and both deserved more pay – which we agreed and (?) and don't waste our time on that – but what was interesting about this was, they said if they had to pick one of these jobs as being the more stressful they would say it was the conductor, and for why, because the conductor had to deal with people whereas the driver only had to deal with traffic. Now, this remember, was 1950 or so, you see. Now, this is very insightful, I think. I was very impressed. This is what they were trying to tell us, you see, and later on when London Transport produced its own figures of neurotic, of nervous illness and so forth, the

conductors... it was right. So that made us... stress obviously wasn't going to get any support there. And the other thing is that very soon afterwards we got results from other studies of the same sort we were carrying out in the Civil Service, in the Post Office, in particular, where we found that postmen had only half the sudden death rate or half the heart attack rate of clerks and other officials. So we now had a hypothesis, you see, to be explained, or an observation to explain... or we needed a hypothesis to explain the same kind of observation not merely in bus conductors against bus drivers, but in postmen against clerks, you see. So, of course, the obvious alternative was differences in the physical activity involved in these jobs, you see; the bus conductor's being an active job by comparison with the bus driver, which is, you might say, as about as sedentary a job as there was. And they [London Transport] were even pioneers in introducing power steering, which I learnt later on. You sat on the front of the bus and you turned this wheel, and at the end of the journey you went out and turned the handle and changed the direction to Headington or to Oxford or whatever... London (?) to Brixton or to Hendon. Whereas the conductor was walking up and down the lower deck, walking up and downstairs, using a lot of energy keeping people off the bus in the rush hours, you see. And the postmen... we had a time and motion study done. The postman, the typical postman, spent 70 per cent of his time walking, cycling, carrying mail, going up and downstairs delivering mail, and 30 per cent of his time back in the office sorting the mail; the clerks... and the other. It was not only that the postmen had half of the rate [of heart disease] of the clerks, but we looked at several groups in the Civil Service of sedentary workers: one was clerks, another was telephonists. Male telephonists; very stressful job – night work almost entirely, in the Ministry of Defence and in the Foreign Office, to be a male telephonist, you see. But they had the same rate as the clerks – well, you might say as an unstressful job as we thought then. Maybe we were very naïve and we didn't have these sophisticated ideas as nowadays we have about control and dominance and all that. So we formulated this hypothesis and we worked on it for years: physical activity of occupation is related to the incidence of coronary heart disease. Men in physically active jobs have less coronary heart disease; what disease they do have is less severe and develops at later ages than comparable men in sedentary jobs. By comparable men, you take men like bus drivers and bus conductors. They are men living in the same part of the world; you see, they're men served by the same health service, served by the same industrial health service and with next to no difference in pay, which is something we didn't expect – half a crown difference in pay between them – same conditions of recruitment etcetera, etcetera, etcetera. You get rid of a lot of noise; they really are comparable. And we applied very Popperian methods to test this hypothesis. Popper must have been 'in the air' because I certainly hadn't read any Popper. I must have picked up Popper...

MB You picked the vibrations up.

JM Vibrations and from the journals and so forth. Because it wasn't until later we formulated the hypothesis and formulated various deductions from the hypothesis, which we tested and which the *Lancet* published at great length, and we worked on this hypothesis for years doing various studies. You recognise that all this is teamwork. It's all we, we, we! You see, all this is teamwork. There are doctors and statisticians and social scientists, and a team has to work very closely together for a period of years. Just the kind of thing which is difficult to develop nowadays with short-term grants and... You see, we were a unit so we were well established. We could work at leisure.

This unit was established with guaranteed funding until I retired, until I reached the age of sixty-five. You see, that was the MRC system.

MB How many people did you have in that unit?

JM Oh, varying numbers, large numbers, varying numbers. We took up different people, because by the 1960s, by the early 1960s, we changed course. We gave up on physical activity of occupation because it was quite clear to us that if physical activity of exercise was to make any contribution to public health in the future, it would have to be the exercise taken in leisure time by an increasingly sedentary population. So in the middle 1960s we got down to that problem. We got down to the very difficult technical problem for which we brought in a social psychologist and a (?) and these sort of people: how do you find usable methods of validly and reproducibly categorising individuals by the exercise they take in leisure time in a short way? We needed to study ten, fifteen thousand people and we spent several years on methodology of this, unsuccessfully, not very successfully. We ended up with a rather clumsy and expensive method, however, so we switched in the middle 1960s to exercise taken in leisure time and we've been at that ever since.

MB And it's still going on.

JM It's still going on, and we're now completing our second survey. This time we're studying men in the executive grade in the Civil Service: a very narrow, homogeneous group of men in the Civil Service, accustomed to filling in forms and giving information; strong social conscience, where a very high percentage of them agree to come into your studies. And we're studying the exercise that they take in their leisure time in relation to their experience of coronary heart disease. And this time we're working in partnership with the Civil Service's own medical service, you see...

MB It sounds rather good.

JM And the Treasury... It sounds... well, it's very exciting and this occupies me, when I'm not doing my social work advocating exercise in the general population.

MB You're totally convinced that exercise is a major factor. You couldn't be more convinced, could you? Because I still hear people say, 'It's not demonstrated, people haven't shown...'

JM I'm totally convinced in terms of the kind of evidence that is possible to gather. How exercise works, how it produces its effect is still unclear and there is very little work been done on this, especially in this country. But in terms of the experience of this typical band – you might say, this typical band of the British middle class and, you might say, very much a band of the future; very much a bureaucratic group of people, a very homogeneous group of people, all of whom have finished school, none of whom have been to university – and it's a very homogeneous group of executive grade men, in between the administrative grade and the clerical grade, this [exercise] is a very powerful factor in whether they get heart attack or don't.

MB Major factor.

JM Major factor. How much you extrapolate from that to others, let others do the studies. It takes us all our time to do this and, as I say, we're completing our second survey this year and will present more evidence.

MB This is a quarter of a century in this research.

JM This is a quarter of a century in this research and this kind of research needs a long time and a lot of resources. Just the kind of thing which in this modern climate is so difficult to provide and just the kind of thing which the MRC in its great days, without Keith Joseph breathing down its neck, was able to provide.

MB But it's a complex scene that you've worked on in terms of research, it's a complex area, but the tide has always been going in the same direction, favouring your opinion, carrying it forward. There has never been a time I suspect where you've got results that really said we're on a wrong track; they've always been going forward.

JM On the occupational side, very much so, and I haven't described the kind of occupational studies we did after these early ones. We did a lot of different work, different kinds of work, attacking the hypothesis, with different methods and different populations. And in terms of leisure time what's interesting is that we're coming up with different a hypothesis, you see. The occupational studies were in terms of total activity levels: active people had less heart attacks, this was the hypothesis, and this is the hypothesis with which we began our studies of the Civil Service, to get pictures of total activity levels. All these men's jobs were standardised, they were all sedentary office, sedentary or very light office workers: income tax people, social security people, that sort of people, you see, so we standardised for that. So what we're interested in is what they do outside work and the correlation between what they do... their total activity levels – whether you include their work, seven hours of work or not makes no difference – the correlation between that and heart disease is very little. What did emerge was a very strong powerful correlation between what we call VE, vigorous exercise, in particular, vigorous aerobic exercise. The kind of exercise was related to the occurrence of coronary heart disease, or that was protective against coronary heart disease, is what nowadays you would call vigorous aerobic exercise: the swimming, the badminton, the jogging, the hill climbing, the fast walking, lots of cycling, all that kind of stuff. Other kind of activity is very little related. So we have a new hypothesis and because in our first studies of the civil servants we didn't have that hypothesis, we had this hypothesis about total activity, we therefore mounted a second survey directly to test the new hypothesis. You know, one is uncomfortable about turning up something which you don't expect. You're very happy to do so, but it's not...

MB So you tore into the second.

JM So that we set up this second study, which started in 1976 and will go on until 1986, a ten-year survey, and we're just completing it now, to directly test this other hypothesis, and the results are the same now that we're directly testing it. A strong relationship, a strong protective relationship of vigorous aerobic sports, vigorous sports, against coronary heart disease among these middle aged men, ordinary men like you and me, sedentary workers, and a very small connection, small, with other kinds of activity. Something there, which we're not quite clear... it may work through relationships with weight and things like that. In terms of a strong and clear

relationship with coronary heart disease, only this. I've talked enough about this, let's talk about something else.

MB That was superb. What I was going to ask just to round it off...

JM Haven't I finished?

MB Since you started to talk about exercise and heart disease – I mean, in the literature, not to me.

JM About which you can gather I am moderately enthusiastic!

MB But since you started that work the whole range of sporting activity has changed internationally. Do you feel that you spearheaded some of that? See people running through...

JM Well, so they say. And, of course, it's sparked an awful lot of interesting physiological work and other research work.

MB A whole range of sports medicine.

JM A search for mechanisms which is tantalizingly... The popular mechanism today, as you'll know, is about certain patterns of lipoproteins which are promoted by doing exercise. The high density lipoproteins, which, to speak generally, you might say are protective against atherosclerosis, unlike the lighter density lipoproteins, which promote atherosclerosis... the high density lipoproteins rise with exercise, but in experimental work – mainly in Stanford, by my friends in Stanford – the amount of jogging you've got to do in order to produce an appreciable rise in your high density lipoproteins is eight miles of jogging per week. It seems to me... it's too much for our... it's more than a lot of our men who are getting a benefit are doing, so that I'm not convinced.

MB So you've got to work on that some more.

JM Well, others have got to work on it. You see the whole of exercise studies in this country are very backward as you probably know. Exercise in an unfashionable field, it's supported very little by the powers that be and considering the amount of exercise that is taken by the population, the number of different effects that exercise has on different bodily functions, you'd expect it to be a very important area of research.

MB Precisely.

JM But it isn't.

MB Unbelievable, it isn't...

JM For reasons which we needn't go into, which strongly contradict Kuhn's ideas or [John] Bernal's ideas; you know, Bernal's ideas about the social factors in promoting research.

MB Now, we are going to let you get away from heart disease. You have done some work on infant mortality; shall we encapsulate some of of your work?

JM Now, that... we did a lot of work on infant mortality early on and we gave it up later. This is work done jointly by Titmuss and myself, but he gave up, in fact he left us at the beginning and we carried it on in the unit. Infant mortality is very strongly correlated with social class, which is an abiding interest of mine. You might say social class, or look at it more generally, inequality is an abiding... you might say an obsession of mine. It's what I think is responsible for half the wrong things in Britain, if you like. You might say that with my background, and then having become a disciple of [R H] Tawney, I'm quite willing to be accused of being not merely... I'm quite willing to be accused of being obsessed by social class which I think gets more and more important in the context of Britain today, as we create more and more inequality as a matter of deliberate government policy, which we are doing today. Now, infant mortality of course is very strongly (?) and Titmuss did work on this during the war, which I was able to help him with from a medical point of view, and we set up studies after the war – and Titmuss was already leaving us – in which we studied systematically the social connections of infant mortality. And, in particular, the first thing we wanted to solve was an explanation that was readily given: is that since in the different social classes there are different patterns of child bearing; mothers give birth at different ages and they have different numbers of children and different spacing of children. The hypothesis was that this explains the differences in social class and infant mortality, with the lower classes having two, three and four times the infant mortality rates of the upper classes, professional classes. Now, this is a very interesting problem which we worked on and were able to dispose of that. We did this study jointly with the General Register Office... we, if you like, provided the idea and expertise and they provided the data. Together, a very happy collaboration and we were able to dispose of that. And we did a lot of work which showed that none of the factors that were being postulated could explain away the sheer social differences, and which you are getting down to differences in education – the sort of differences that Dugald Baird in Aberdeen was talking about. He was very keen in studying infant mortality, that you don't just study what's going on now. He talked about 'the long pregnancy', the pregnancy that started in the mother's own childhood, with how she was brought up and how she was nourished. You know Dugald Baird's idea. Very imaginative, another ideas man. The sort of man I love. A man with the real ideas... he's different from other chaps. He produces original ideas, you see, like Titmuss. He speculated, and not merely speculated, he set up studies to demonstrate he wasn't just a (?). He said right, how do we study this kind of idea that the long pregnancy is important, that the whole life history of the mother is important and how she performs physiologically when she gives birth in this greatest experience of her life, in which all her health capital expresses itself. So we did a lot of work along these lines with the General Register Office, with people in Aberdeen, and then we stopped, we decided we couldn't carry on. It was a deliberate policy decision we'd come to and we said we'd probably contributed as much as we could contribute without bringing in an entirely different team, an entirely new team, which I was very loath to do. Apart from anything else, I was director of the unit, but I was always immersed in the research that was going on, in everything that was going on.

MB And you never got pulled by the administration out of line. You stayed on the research track.

JM Yes, and the MRC in these happy days – I mean, one feels embarrassed in discussing them when I think of what my young friends have got to go through nowadays – we were always under pressure to grow. The MRC were always pressing us to grow: take on more people, you see, and train them, you see. But you've got to make a balance, you see, between doing that and doing more of that, which is very useful, supervising other people's research and being a research worker yourself, and since my happiest time was being a research worker we didn't grow very large. We had very talented people; we brought in excellent people who are now occupying... and doing first class work all over the place, in chairs and directing units and so forth. But for us to continue in infant mortality, it would mean taking on a whole new batch of people, social scientists in particular, to tackle the new kinds of problems in which... So we continued our work on health services and got very immersed in the problems of the quality of medical care, as we'd been from the beginning.

MB That must have been quite disturbing.

JM Well, it seemed to us in the Medical Research Council you were able to do this kind of thing. You didn't belong to the Ministry of Health. You could honestly say 'I have no connection with the Ministry of Health,' you see. 'I belong to the Medical Research Council which is a totally independent body interested in doing research on important issues, and it is with the blessing of the Medical Research Council...' For instance, we got very much tied up... We continued in our work on health services and got deep into the problems of the quality of medical care, and we were particularly interested in the different performances of different hospitals, which is a very delicate subject, as you can imagine, and could only be done by people from the Medical Research Council, you see, with no connection with the ministry and employment and salaries and goodness knows what, you see. And we did what to me was very interesting work, and I got very involved in health service issues, sitting on health service committees and so forth, as you can imagine, and was able to bring some of these insights into these committees. But I got more involved generally, I got involved generally in committees and I've always looked on committees as my social work. As a researcher and full-time I've rather limited them. For ten years I was a magistrate for instance, which the MRC were very keen on, and that led – I haven't got time to go into that – but that led to very interesting committee work, if you like. I was on the Home Office Committee on juvenile delinquency and I was on the Royal Commission on penal reform – a disaster. It was a Royal Commission of great promise and it collapsed – I wish I had time to talk about it – it collapsed for personality reasons, whereas it would in fact have made history if it had been allowed to complete.

MB So you were very disturbed about that. That must have been a great loss.

JM Very disturbed because we were under a very distinguished Conservative statesman, [Derick] Heathcote Amory. He was a former Conservative chancellor, a most enlightened man, and I was quite confident that we were going to end up in a report that would empty the prisons of vast hordes of people who were inside there and who had no need to be in there, and it would have been a tremendous thing...

MB But internal pressures went wrong.

JM Internal pressures went wrong. Internal pressures which didn't see that although Heathcote Amory was not an expert on crime, if he signed the report recommending the emptying of the prisons, it was very different from some experts in criminology, however. I had various interests in committees. I suppose the most important committee I was on in terms of effects was the Seebohm Committee, which was a very interesting committee.<sup>8</sup> We were set up largely as a result of pressure by a lot of people like myself, when the Labour government was set up and was starting to produce all sorts of reforms in the social services on the basis of no data and no enquiries, you see. And we were sufficiently influential to say, 'Look here, you can't do this'. Well, anyhow, they set up the Seebohm Committee.

MB When was this? What date was that, Jerry?

JM '64 or something like that. Yes, it would be '64, it would be '64, because Douglas Houghton was the supremo of social services, and about '65 he produced a paper on the reform of services for juvenile delinquents, in which I was very interested as a magistrate and which struck many of us really as dreadful for a Labour government. I remember these were very naive days. We still thought we were going to change the world, you see, especially lifelong Labour people like myself.

MB I suspect that you might still do it, Jerry.

JM And we went to Douglas Houghton, I remember, and banged the table. We knew him very well; we had sat on various Labour Party committees and so on. And he withdrew this white... this paper on juvenile delinquency and set up the Seebohm Committee. The only point I want to make about the Seebohm Committee is that the Seebohm Committee, as it turned out for me, the most important thing was the end of the medical officer of health. It became clear during this – and this, of course, was an agonising decision, as you can imagine – it became quite clear there was no means of saving him: he was dying. You can't even say he was dying on his feet, he was almost horizontal by then...

MB Right. We're coming to the end of a century of history.

JM Who'd been in decline since 1929, since he became a hospital man, he'd been dying since 1929. So the question arose of what was going to replace him, and this became a major concern of mine: what's to replace him? And round about the same sort of time the London School [of Hygiene and Tropical Medicine] invited me to come over and set up a new training course for the health officer of the future. So it all worked out like that.

MB You had got to provide the new answer: who was that new officer?

JM And so I went, after a great deal of heart searching. I went to the London School. I was then at the London Hospital and very happy, very happy in a clinical setting, and I went to the London School, and there we set up the new course for the

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<sup>8</sup> Seebohm, Frederic: Report of the Committee on Local Authority and Allied Personal Social Services. London: H.M.S.O., July 1968. Cmnd 3703.

new community physicians, which hasn't quite worked out as happily as we hoped it would, but we haven't time to discuss it, unfortunately.

MB Can you put your finger on one or two things that have gone wrong though?

JM Well, we produced a generation of young people with very little connection with their seniors, was one of the simple... Out of the Seebohm... my work on Seebohm it became clear to me for instance that the health officers, for instance, weren't doing any epidemiology. Now, to me this was about as sensible the physicians not doing any biochemistry. So the young community physicians that we produced.... we gave them a very intensive two year course and we gave them no excuse not to go out to their new jobs competent to do the epidemiological investigations and apply the epidemiological thinking to their problems that we saw the situation required. But, of course, they were very junior and the seniors, even when they gave their blessing – which they didn't always do – but even when they gave their blessing, they couldn't do very much more than give their blessing and this is one of the...

MB There was a massive gulf.

JM It's a major issue, this, of course. Do you set up a new service when the top people...? Exactly the same problem arose with community medicine as arose with Seebohm. With Seebohm, do you set up a new social service structure when you obviously haven't got the directors to run it? Do you not set up the whole structure? There's no answer to it.

MB There's no answer.

JM There's no answer. It was exactly the same with community medicine and setting up this new structure of community medicine when quite clearly there aren't the people to run it.

MB You produce an island cast away from the mainland and there's no answer to it.

JM But do you not set up the whole thing? And there's no answer to it. And, in fact, the correct decision may... well, to say you take it and grit your teeth and hope you'll get through. Whether that has happened with the social services I'm not sure, but they have worked through this period and a lot of the younger people with modern ideas, not just the old-fashioned welfare officers and so forth. But it was exactly the same problem with both these committees, which have led to endless discussion outside the committee as inside. And you can't win really. You make a decision which is not based on the evidence and if it goes wrong, you're open to attack because you've no business to do it, but if you don't do it, you've missed the moment in history.

MB That's right. Do you suspect that it is coming together? Will community physicians eventually anneal with all the rest...?

JM Well, there's a new government enquiry now, you see, to try to sort it out again, after ten years, after twelve years, and we'll see it by now because there's lots more of these, what you might say, the new wave and quite a number of the new wave are

occupying senior posts. Quite a number of my old students are professors, are regional medical officers or head of research units and that sort of... occupying senior posts.

MB Jerry, I want to come to the last part of our talk and I'd just like to kind of distil out... you've had an enormous career that's carried other people along with it as well as your own enthusiasms. You've been a vehicle for interests in a number of directions, which has fascinated me. What I would like, is to have your view of where it is all going. Are we really benefiting from the kind of epidemiological surveys? Is heart disease going to turn corners? Are we able to put into practice the findings that you're getting? Is a new health service in prospect? Are we getting rid of the inequalities that you so capably were monitoring? Are we steam-rolling across that...? Where is it going?

JM Well, there are several different answers. In terms of heart disease, this kind of research... and I've talked about one little bit of research, but this is a vast intellectual effort across America, across North America, in parts of Europe, in Australasia – Australia, New Zealand. It's a vast effort. What's happening now in many countries – not particularly in this country, very slightly in this country – is that heart disease is going down, in America – USA, in Canada, in Finland, in Australia, you see. Now, it's not clear why it's going down, because I would say this has become a historical problem – the sort of thing people write PhDs about – because everything is happening, you see. We're changing the diet, you see, we're smoking much less – or at least in certain places – we're changing the diet, we're smoking much less, we've got blood pressure under better control, we're taking much more exercise. Now, all these things are very difficult to date, you see, and they are all happening.

MB It's a constantly changing target.

JM It's a constantly changing target and, as I say, regardless of the feelings of epidemiologists, all going on. It'll certainly be a sick joke of history if it turns out that heart disease is going down not because we're doing all the right things that epidemiologists have been teaching, but for something quite different.

MB But it could be that case.

JM It could be, it could be as you say. Now, that hasn't really started seriously in this country, to our disgrace, to our disgrace, you see. We've been very backward in this country in the whole of this application of these modern ideas of lifestyle and health by comparison with other countries, and we are now belatedly coming round to it, belatedly. And I've no doubt we will start showing the benefits, as I would say, there will be arguments that it's got nothing to do with the fact that people are changing their diet, because they're changing the diet very interestingly. It is fascinating how people are changing their diets. The public has picked up a message about diet, you see, and is changing the fat content of its diet, for instance, in a most interesting way.

MB So that's in progress.

JM And there is a reduction in cigarette smoking, as you know.

MB So there is progress and it is exciting.

JM That is definitely happening.

MB What about equality within health services?

JM Within health services, the equality within health services, there is very little evidence. And health services are going to get more and more important, because what's happening now is that really health services have become so important that we are really now in the middle of a second public health revolution, where, you might say, the one great part of it is what we've learnt about lifestyles and how to lead a healthier life. The other part of it is the tremendous contribution which health services are making in particular to old people, you see. When you think of how health services have transformed the lives of old people, with hips and with prostates and with pacemakers, you see, and with the treatment of infection in old people, and of how surgery in old age now... surgeons have virtually been able to abolish the age factor. When you think of the tremendous contribution which health services are making to the quality of life in the elderly. Cataracts – I was just thinking the other day; Mrs Morris has just had a cataract operation with an implant, you see. My closest statistical friend has had a bypass after a very bad coronary experience, you see. One of my closest friends in the School is living happily with a pacemaker. You might say, it's all on borrowed time because they are all over seventy, but they're all making contributions. So the study of health services is going to get more and more important, and how we provide the health services, and how we provide them at the right time, so that... the right time medically and economically, you see. There is tremendous scope for study there and also to impress upon the public that they have to spend more on health services.

MB Yes. A major task.

JM A major task.

MB But there's the future, there's the future.

JM Very exciting.

MB Professor Morris, thank you.

JM Thank you.