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Professor Sir Martin Roth FRS in interview with Sir Gordon Wolstenholme

Oxford, 29 June 1988

GW Martin, I'm going to ask you mainly, I think, about the advances in psychiatry during your time and if we have time at the end, I would like to get on to the establishment of the Royal College [of Psychiatrists], in which you have had such a big standing. But could we start with some personal background. Now, I understand you were born in November 1917 in Budapest, which doesn't seem to have been a very good choice of place or time because there must have been many hardships for people in Budapest then and especially in the year following. Do you… to what age were you exposed to those very difficult times?

MR I remember virtually nothing of the difficulties. I have a very vague recollection of gunfire on the streets at times, but I am not entirely sure to what extent this is a retrospective creation or a real memory. I have a clearer memory of swarms of people in the streets - it would have been about 1920 - looking out of the windows of the apartment where we lived, but my memories are very hazy. But I came, you see, with my parents; my father had come first to this country when I was aged just five and a half. So, the whole of my… virtually my entire, education… I had a brief period of education in Hungary, very brief, and I retain virtually nothing of the Hungarian language, which is a mystery to me because I am good at languages and reasonably competent, I learn them fast. I suspect that I would recover Hungarian if I studied it a little, if I read. And I am going back for the first time, next month, in my life ....

GW Good. I hope it will be a very pleasant visit.

MR Yes, it will be a very interesting visit; I don't know how pleasant it will be. I shall of course be very curious and…

GW Well, they're talking of making a biochemist into the new president.[1]

MR Oh well, you have already made it a more pleasant prospect in saying that.

GW When you came to this country - your father had come before you - Hungarian was not spoken in your family?

MR Hungarian was spoken by my mother; my father was not terribly competent at it, but they did speak Hungarian. They spoke a certain amount of German, which was

[1] Dr Árpád Göncz, A Doctor of Law, was elected as President of the Republic of Hungary in August 1990.

a language more common to each of them. But in the new environment where I was very soon sent to school I took very quickly to speaking English and mastered the English language rapidly.

GW Yes, if I may say so, you are known for your command of English. Perhaps that's a Hungarian trait.

MR Yes. Hungarians often say to me, as Nicky Kalder used to say to me, 'You are from Hungary, I can't believe it, if only I could get rid of my Hungarian accent,' you see.

GW At what stage in your education in this country did you begin to think of going into medicine?

MR Not until I matriculated. I went from… took the matriculation examination as it was in those days and then I became intensely interested… I had become intensely interested, in biology and learnt and read early on about evolution and was fascinated by this. I saw evolutionary theory as quite an incredible, exciting hypothesis, which completely transformed my view of the world and the universe. I had this almost euphoric, ecstatic awareness at one point in my life, I remember, about seventeen, when I suddenly seemed to appreciate in a flash what the full implications were of a universe whose history was impossible to define in its origins, limitless in the past and without - seemingly without – limit, or without definable limit in the future. Well, I think I've said enough about that.

GW And that led you into… you went to St Mary's [Hospital], didn't you?

MR Yes.

GW Did you do the whole of your medical course at St Mary's?

MR I had obtained what was called the intermediate examination of the University of London, and taken biology and botany, zoology, chemistry and physics and I have done some mathematics - I was interested in maths. I went to St Mary's and I did my entire medical training at St Mary's.

GW And at what stage… I know that, I mean you qualified with your conjoint and then your London degree, and fairly rapidly you got your membership and your MD. But in 1949, if I'm right, you got your DPM [Diploma in Psychological Medicine]. Now, at what stage had you begun to move in that direction?

MR I had been fascinated by neurology, first when I was working in the St Mary's Hospital unit down in Park Prewett where I met a man called [L P E] Laurent. He had been at University College and then gone to the West London Hospital and he had been a pioneer in the treatment of myasthenia gravis with physostigmine; he had been one of the first people to use it. He had been immensely impressed with Mary Walker's discovery of this treatment and he told me stories about the way in which

this had happened and the manner in which orthodox, celebrated neurologists just rejected this discovery. I remember his telling me about a certain famous neurologist, who shall be nameless, whom he questioned about Mary Walker's achievement, and he said, 'What is she but an old hen grubbing in the dung heap and discovering a precious jewel,' you know. I thought this was less than fair. Now, he was a brilliant clinical neurologist and he introduced me to some neurologists in London and I managed to get a job at the Maida Vale [Hospital], where I came under the influence, particularly, of Russell Brain[2]. Now, that was the link.

GW I hadn't realised that.

MR I was a pupil and friend of Russell Brain. He was very kind to me and I have missed him terribly, terribly, after his premature death.

GW Yes. He was certainly… I owe a great deal to him personally and I can appreciate what it meant. He was a very shy man, but he was… his influence was tremendous.

MR Enormous. And, you see, he was an exceptional neurologist. In the first place, he was one of the few people who was interested in higher nervous activity and he had done actual experiments on visual disorientation associated with lesions of the right parietal lobe, but he was interested in aphasia, agnosia and memory. He was also interested in psychoanalysis and he was fascinated by this - simply in its historical dimensions, in what in human development made a man the sort of man he became, creative or otherwise, and became interested in men of genius and their psychology.

GW Yes, of course, which he wrote about.

MR Yes, he wrote about genius. And he had a friendship with Eric Strauss; it was an unusual, a strange friendship. And I worked in neurology and, in fact, my first neurological papers, my first papers were neurological and published in *Brain*, one of them strongly influenced by Brain. It was on disorders of, what image due to lesions of the right parietal lobe, and that was already taking me to psychiatry. Because these people with lesions of the right parietal lobe would have anosognosia[3] for hemiplegia only when they had lesions in the minor hemisphere. The minor side, the non-dominant side, seemed more easily to fall out of consciousness as it were, and these people would ignore this hemiparesis and deny it and say things like: 'It's not mine,' when I asked them to lift their left limb; 'Well, it's not mine, it's a stranger's.'; or 'That strange little bugger there,' they would refer to their left limb. Now, this was something extraordinary. And then - may I go on?

GW Oh, please.

MR Then, Russell Brain would see psychiatric cases, and among his friends at

[2] Lord Walker Russell Brain (1895-1966).
[3] Denial of a striking neurological disorder.

Oxford there had been perhaps the most celebrated biologist of the day who suffered from recurrent bouts of melancholia. Russell Brain would see him and I met him; he would come to the Maida Vale to see Russell, and I saw him and his melancholia and I had to take him from time to time to Harley Street. He, incidentally, was a great authority on evolution. You may guess to whom I'm referring, but it is known from his own biography, autobiography, and from other accounts that he did have melancholia. And I saw him after an attack, after he'd been treated with electroconvulsive treatment and the effects were extraordinary. It seemed to me little short of miraculous. Now, neurologists, most neurologists, seemed uninterested in such conditions as depression, anxiety and schizophrenia, and uninterested in what happened in the brain when somebody had a succession of convulsions and recovered from a delusional psychotic illness. And I was moving at the Maida Vale - that was between, I think, about 1942 to 1945-6 - I was moving towards psychiatry, with Russell Brain's encouragement.

GW Yes. I'm very surprised to hear this. I mean, I appreciate that he had this interest, but I hadn't known that this… not only that he had an influence on you but that, indeed, his consciousness if you like of the psychiatric elements in neurology were so strong.

MR Oh, it was very powerful indeed and he encouraged me in this, in my… at that time it was the desire to understand more the neurology of these strange phenomena, neuroses, psychoses, the manner in which physical treatments exerted their effects.

GW Of course, he was a very, very… a man of letters and of poetry and so all the linguistic side of these defects and so on fascinated him.

MR Yes. Oh yes, indeed. Language. He was poetical; he wrote poetry and he was a philosopher. He was unusual being a philosopher and a poet as well as a neurologist and he was, of course, a deeply religious man - a Quaker. He read the Riddell lectures[4] and he was deeply read in philosophy. I was a voracious reader at that time and literature was another bond between us, and music; I was a keen musician. I, at one time, hoped to become a musician.

GW Your instrument being the piano?

MR The piano and early on I played the organ, but I had to shed that, of course, over the years.

GW Your first post truly in psychiatry, was that the one in the Crichton, the Royal Crichton [the Crichton Royal Hospital, Dumfries]?

MR No, no. I went to the Maudsley.

GW The Maudsley after Maida Value?

[4] The nature of experience: the Riddell Memorial Lectures, Thirtieth Series delivered at King's College in the University of Durham on 12, 13, 14 May 1958 by Sir Russell Brain.

MR After Maida Vale, I went to the Maudsley as a senior registrar. I had already obtained my higher qualifications. I went to the Maudsley and I came under the influence of [Aubrey] Lewis, but above all of Eliot Slater. Above all of Eliot Slater, but also Lewis, [Eric] Guttmann and many others were there. Incidentally, I must mention Wilfred Harris as an extraordinarily stimulating, masterly and brilliant neurologist. He was then in his eighties when I met him at the Maida Value and still outstanding, but perhaps I will leave that there. He was very friendly and helpful towards me and we kept in touch long after I left the Maida Value.

GW And when you went to the Maudsley, you still retained an interest in the neurological aspects of psychiatry?

MR Yes. Indeed, I had made contact with [William] Grey Walter because I was interested in ECT and got myself trained in electroencephalography - trained sufficiently to do some work with it, and I had seen Dennis Hill and George Dawson. And apart from a paper on the heredity of the degenerative disorders of the central nervous system - not a good paper I'm afraid, but Walshe printed it in *Brain* - my early researches were concerned with the effects of the EEG, effects of electroconvulsive treatment on the electroencephalogram.

GW This was before the days of prefrontal leucotomies?

MR No, prefrontal leucotomies were already being undertaken at the time.

GW Were they?

MR Yes. They'd been undertaken since the thirties and undertaken in some cases with success: in some instances, as in the case of schizophrenic patients, with some dire effects. But, one mustn't forget some of the successes from this very radical treatment. The methods used were at that time - the leucotome - were very crude, indeed as compared with what is done now.

GW From the Maudsley, then it was Dumfries [the Crichton Royal Hospital], was it?

MR Yes, but at the Maudsley I had come under the influence of Eliot Slater, particularly. In fact, it was through him that I met [William] Mayer-Gross with whom I went to work at the Crichton Royal, and Slater was an immensely impressive figure. He was a man of extraordinarily lucid mind and limitless in his courage, his intellectual courage, and a geneticist as well as being mathematically gifted, and extraordinarily impressive, widely cultured but very modest. He encouraged me. He encouraged me to publish the paper on the heredity of the degenerative disorders based on… it was an expansion on the basis of some families with Friedreich's disease and peri(?) muscular atrophy that I'd studied, but I had speculated around the subject somewhat and he didn't mind that. He was very receptive to new ideas if they were interesting and exciting, provided one was prepared to grasp them by the throat

in tackling the question as to whether they were true or not. Aubrey Lewis was far less enthusiastic about such activities.

GW He was very down-to-earth.

MR He would give one the cold water treatment, but very valuable, very valuable in that, of course.

GW I was very fond of him, I must say.

MR Oh, very valuable, very valuable effect to have that, and one was glad to have been exposed to it.

GW At what point did you undertake the book on clinical psychiatry with Mayer-Gross and Eliot Slater[5]?

MR Well, the history of that is very clear. When I went to the Crichton Royal, Mayer-Gross was already reading sections of the book, of the first drafts. He was giving some lectures on this. And he read a paper on mental disorder in late life, and I began to read around this because mental disorder in late life seemed to me a very mysterious phenomenon at the Crichton. The Crichton have a wide variety of mental disorders in late life. Some of the patients were incredibly vigorous and vital, although bizarre, peculiar and certainly not, as I understood it, demented - that was clear already. And I had a lot of discussions with Mayer-Gross about this and it culminated in a surprising invitation to me to write the review for the progress volume of the *British Journal of Psychiatry* on senile and arteriosclerotic psychosis. This was published in 1950.

GW So, it was a writing on the wall, in a way, for your own career?

MR And I had touched on some of the problems that were to exercise me later, and he very soon, in fact, at the Crichton already, he had invited me to prepare the chapter for the textbook, although my experiences were very small. But, of course, I gathered more when I went to Graylingwell to work. And later on I had other tasks to undertake in relation to the book: the chapter on trauma, tumour and other organic states; part of the introduction because I believed in this extraordinary introduction and some of it had been drafted by Slater and its plea for science. It was a manifesto for science and psychiatry, which made a very profound impression on me, and it made a very strong impression when it appeared in America, in the United States.

GW It was a remarkable opportunity really?

MR Oh, for a young man to have the chance of doing this. And I was given all the chapters to comment on. We exchanged these chapters.

GW And this has now run to how many editions?

[5] Mayer-Gross, W., Slater, E., and Roth, M. 1954. *Clinical Psychiatry*. London: Cassell.

MR It has run, in effect, to four. Three and a revised reprint. I did that myself in 1977. In effect, it's not really a fourth edition. The fourth edition isn't proper.

GW And it's gone into many other languages?

MR Oh yes. Even Chinese! Portuguese, Italian, Spanish, Japanese - the Japanese published a pirated edition of the introductory chapter, which was circulated as a sort of manifesto for biological psychiatry. About a thousand copies were printed.

GW So, it must be quite a valuable document now?

MR I've never had a copy. I'm trying to get hold of one now. But the effects, I'm told by my colleagues in the United States that it was an eye-opener for those who read it and many of those who are very prominent in biological psychiatry now; this includes the St Louis, Washington University School, Eli Robins and Sam Guze and their team was influenced by it. I must make it clear that the most important sections of the introduction, the eloquence and the literary distinction, were those of Eliot Slater. I added the section on psychoanalysis - that was mine - and some parts of the section on multi-dimensional approaches, but it was… in that form, it appeared only in the first edition. And I didn't realise how revolutionary in its implications it had been until many years later through discussions with friends in America.

GW When you went to Graylingwell [Hospital], you went as a director of research. Now, that was an unusual title to be given at that stage of your life and, indeed, at that stage of psychiatry in this country.

MR Yes.

GW Did you have facilities for doing anything?

MR Well, director was a grandiose, inflated title, of course. I had no staff. I had to direct myself, but support quickly came. I acquired a secretary, then I was joined by John Shaw, who was a technician in electroencephalography, but with considerable knowledge of electronics and later of physics, and he joined me in electroencephalographic researches into ECT. I was joined by David Kay who worked with me for twenty-seven years before he left for Australia - David Kay who was a man of incisive, scholarly mind and a most valuable, intellectual companion and a most treasured friend. Then Barbara Hopkins. We gathered the team with the support of the regional hospital board and some grants from foundations and we got going.

GW You were not there very long, were you? Was it a year or two, or more?

MR Oh no, no. Quite a long time.

GW Were you?

MR Because Newcastle came up in ’56, wasn’t it?

GW But from ’50 ...

GW Oh, from ’50. It was as long as that, was it?

MR From ’50 to ’56, but I had nearly a year in between teaching at McGill. I went to Montreal and taught at McGill and went to the United States.

GW Was that in the…not in the Neurological Institute at Montreal?

MR No, in the Psychiatric Institute, the Allen Memorial.

GW Oh yes, I remember. Were you surprised when the call to Newcastle came? That was so-called psychological medicine, wasn’t it?

MR Well, I… the call didn’t come, I applied for the job.

GW Did you?

MR Oh yes. The director of research at a small research department in the South of England couldn’t be expected to be called. I was only, at the time that I applied, I was what? I think thirty-seven. And I applied for the job and was surprised to be appointed. I had the support of a number of good senior friends. Russell Brain was there. Desmond Curran, I have to express an overt appreciation for his extraordinary generosity of spirit. He was noted for this. I miss him too very much. There were no limits to the lengths to which he would go to help somebody for whom he had… whose abilities he had respect and he supported me, as did Eliot Slater, of course.

GW What sort of a department was it when you went to Newcastle?

MR Well, the foundations had been created but there was hardly any research in progress. And one precious resource that was already being put into shape, that was the first - I think it was the first - psychiatric inpatients’ unit in a general hospital. The Newcastle General had converted, gutted one of its old workhouse buildings, and was creating an inpatient unit of about fifty beds. Now, this was still… the foundations had been laid, but an enormous amount of work had to be done in order to consummate this idea, to have this sort of unit in a general hospital - this was not at the main teaching hospital but a subsidiary teaching hospital, the Newcastle General - and it took another year. And we published a paper in the *Lancet* about this, and we had a very good contact in the local mental hospital and this opened the way to investigations, of course.

GW Was there a very heavy teaching commitment as well?

MR Well, yes. The teaching commitment was very heavy. The administrative

commitment was heavy because very soon we had quite a large department. The regional hospital board gave me immense support and so did the board of governors. In the early years, within the first four or five years, we had the Medical Research Council group established and that was well staffed. There was a very intensive undergraduate teaching programme. We very soon embarked upon the new curriculum, integrated curriculum, and I played my part in all the committees of this. And I learnt very early on a lesson that has remained with me throughout my professional career, that the tradition in British medical schools - British clinical schools - is that the professor of medicine does not go to the wards to consult personally in relation to patients as consultant colleagues refer; he should be invisible, and is invisible and nobody pays any attention to him. So, now, you see, with administration and research and the teaching of students and running a DPM course, as it was, and so… As regional adviser in psychiatry and the committees of the regional board, and having to raise funds and the staff to move internationally, to keep to this, to up… to shoulder this responsibility, and to see the wives or sometimes my colleagues as patients, this was quite a problem, to see patients personally. And to take on, to take responsibility for seeing and guiding and advising and consoling families, this was hard but it was inescapable and I'm sure it was true. And, you see, American psychiatry has moved far away from this image and its professors are pure administrators. I'm sure this will prove to be a bad image and it will come to an end in the foreseeable future.

GW It's a very tough assignment though, the way in which you had to tackle it, and just as well you were young when you moved to Newcastle?

MR Yes. I should mention one thing, you know, that made me feel in a hurry. I fell ill shortly after qualification and this was a serious illness, I had to be operated on by [Arthur] Dickson Wright under spinal anaesthetic for three hours. I could hear him commenting on what was going on inside: 'Look at these huge glands, MacLeod. Look, can you see these huge glands?' And so on. It was, in fact, regional ileitis. I read up about this at the time. The operation was a complete success and I've never had a recurrence. I learnt that I had this disease and I expected, from reading, not to have a very long life. So, I thought that what I had in me in the way of intelligence, imagination or any capacity for adding something to knowledge, this had to be accomplished.

GW Without delay?

MR Soon. Because I thought the next attack might come at any time and then I would have to lose some feet more of intestine. That was with me for some time.

GW This was like Florence Nightingale who always lived thinking that the next day was the last - but of course in her case very imaginary - but a rather more serious reason to ...

MR I had a rather more tangible… I wrote Dickson Wright a poem the night before the operation, a sonnet to a surgeon, and he thought I was mocking him, which was a

bit unfortunate! I wasn't. I had a great admiration for him, his versatility and wit, which became a little coarse later.

GW Yes. It was also the tone of voice with which he gave out rather blue stories and so on. It was more the tone of voice than what he actually said, I think.

MR Yes, but you know, can I just side-track for a little while. It was one of these terrible ironies of fate that makes one feel that there is some little impish or evil element to what destiny there might be, or from the source in which this destiny comes. Because he was a brilliant speaker, the most articulate man I knew, and the one thing that went when he developed… when he had a stroke towards the end of his life, was his speech. Nothing else was affected. And I've known this happen to others.

GW So have I, yes. Coming back to Newcastle, because you had this tremendous task, but of course in that position to begin with, the MRC made demands on you and you did quite a long spell on the MRC and on the Clinical Research Board [of the MRC], I think?

MR Yes, but not before I had got going a large venture in studies of all these mental disorders. We began a venture which entailed studying patients in life, with clinical examination and psychological measurement, and studying the brain quantitatively post-mortem - those patients that came to post-mortem. I collaborated here with ...

GW You mean for neurone loss?

MR Well, no, for counting [neuritic] plaques and [neurofibrillary] tangles, quantifying this change, because it had never been counted. And the fact that the judgements, the pathological judgements, were all on or none judgements made it possible for people to regard people who were perfectly normal who suffered from depression, because they had a few plaques and tangles, as Alzheimer's, or, and to regard these changes as being of no significance. So, this was a large project because many patients had to be examined during life with developed measures, with all of the techniques for measuring and quantifying the change in the brain. Epidemiological research was initiated, large community studies, which, I think, were the first of their kind in the community - community samples. David Kay took the main responsibility for this and we set it up together. We had studied patients post-mortem at Graylingwell already and we'd studied brains. I'd had some training in neuropathology under [William] McMenemey. We sent the brains to McMenemey but he died before he could report. So this was a re-establishment, a re-creation on a much more ambitious scale than the Graylingwell venture, which had been aborted. And I began also some investigations into the classification of depression, and we were among the first people to do trials of the antidepressive compounds which were coming on the market. Anxiety was… anxiety states were a great preoccupation for me and we published fairly early on, so this had… we had created these ventures before the MRC came to visit - they inspected us. Harold Himsworth had wanted me

to stay in Graylingwell; they wanted to turn that into an MRC unit. They came up to see what we were doing. It was then that the MRC group was established with a good many staff and in '64 I was appointed to the Council. I stayed, well, with Council for a total of six years, and for some time afterwards I went on working on some committees.

GW And your international responsibilities; what about the… when were you first called to the World Health Organisation?

MR In 1957 I took part in a… I think, a working party on schizophrenia. In 1958 I went to Geneva and worked for, I think, two and a half months preparing a working paper and a programme for the first expert committee on problems of ageing and the aged - mental health problems of ageing and the aged. And this paper was published in the bulletin of the World Health Organisation. I had to write a greater part of the report, persuade the multinational group which had been assembled, including a Russian representative who couldn't speak a word of English, that in fact they'd said what I'd written down. And that was a very rewarding venture, but, of course…

GW Very demanding, but was it rewarding in an international sense. I mean, from that did you get international co-operation of value to your own work?

MR I think there was a certain amount of international interest aroused. We included the classification of mental disorder in old age in the report of the expert committee. Yes, and we'd had people from abroad come to work with us: from Sweden, from the United States, from Canada, one from Europe and so on. We began to recruit internationally. I'm not sure whether that was through the working party or whether it was…

GW Just the reputation of Newcastle from your publications and so on.

MR The publications about mental disorder in late life, you see, we were publishing by the early 1960s. We were publishing on the epidemiology, 1966 I think, publishing on - the first paper in *Nature* - on the correlation between clinical and pathological changes, which showed that if you measured these, the correlations were incredibly high. These changes had clear meaning, they must have, and so it seemed justified to conclude some relationship to the process that gave rise to the dementia, to the cerebral change that gave rise to the dementia. And we were publishing also on the social aspects: studies on the contribution of social variables like isolation, like loneliness, like social class and the part of Newcastle from which patients had been drawn, physical illness and its psychological and physical concomitants, and all sorts of interesting things which were to occupy me later. For example, the markedly increased mortality above normal expectation of male depressions - people, men with depression in late life - in the community, so this couldn't be an artefact of hospital admission. We had noticed this increased mortality in the hospital population, but [also] in the community. You see, there was a two and a half to four year follow-up study and fifty per cent of these patients were dead - markedly different from the controls' death rate. I began to wonder then whether

depression itself could kill, although...

GW You mean, short of suicide?

MR Oh yes. Suicide was excluded as a cause of mortality, although it was more likely, as David Kay sceptically pointed out quite rightly, that the men were… these men were far more ill than we had been able to establish in an epidemiological study, far more ill than the controls, physically. I still think that depression kills in its own right, by itself.

GW We're coming through the sixties and we are coming to one episode in your life in which we were… well, two episodes we were closely associated: one, you helped me to organise a conference on Alzheimer's in '69, but that was a time when you were already beginning to be very concerned in the formation of a Royal College of Psychiatrists. Would you like to talk a little bit about the early history, in the movement from what was it called, the Medico Psychological Association? Where did the first movement arise towards forming a Royal College?

MR Well, it had arisen along time before. I'm not sure I can be absolutely accurate about the history, but I'm certain that the negotiations with the Privy Council continued for the greater part of the decade before we were granted a charter. And the Privy Council were extraordinarily demanding, fastidious and very critical. They looked over us with a very keen and, at first, I think a rather sceptical eye on a Royal College of Psychiatrists.

GW Was it thought to be divisive or were they just suspicious of the status of psychiatry?

MR They, I think they were cautious about awarding a… not a Royal charter - before we had been called the Royal Medico Psychological Association for a considerable time - but in awarding a charter that qualified us to organise an examination for… which became the standard higher qualification to pass the portals of entry into psychiatry as a speciality, and in taking the responsibilities that we were subsequently to assume in supervising every mental hospital, in evaluating and assessing every mental hospital in the country, every psychiatric establishment, to determine whether they were fit to train people, and to assume the authority of a Royal College. Finally, it came in 1971.

GW With you as first president?

MR Well, can I point out, I had myself no ambition to be president. I think this is objectively, the evidence is objectively available. I had not submitted my name, I had not got myself nominated in council and I was not nominated in council. And at a very late stage I was approached by a group of quite senior people, using a clause in our charter which enabled them to nominate someone if enough - I think it was ten or twelve people had to nominate me. And they came to see me in person and asked me to allow myself to be nominated, and I did, so I was nominated.

GW And, of course, you took on a very tough assignment?

MR I was elected and, of course, the entire membership elects, not the council. This was done by ballot.

GW Yes, as with the Royal College of Physicians.

MR But, it was by postal ballot. The entire membership participated, so there were thousands of votes.

GW You had no home then, or at least you had no… that was, I remember your visiting me frequently at the time of looking at one property after another.

MR Yes, it was terrible, you know. We were outwitted over and over again by property developers. It gave me an insight into this work as a property purchaser; it gave me an insight into the extraordinary goings-on in the property market. Some proposals I hardly dare mention were made to me. Oh well, I'll mention one. One individual had managed to obtain some half promise to get a terrace from the, I think it was the Crown Commissioners. He got in touch with me to point out that he'd be prepared to offer us one half of this magnificent Regency terrace. What would the other half be? He said, well, we'll open a nursing home for psychiatric patients! You can imagine my response. Keith Joseph[6] was immensely helpful to me and later on, later in the Labour administration, David Owen[7] helped us. But Keith Joseph brought to my attention all sorts of buildings, on which we were defeated. We bid for Charing Cross Hospital Medical School, but we didn't get a look in. But I had some… we had no money, of course, and the costs were vast. I eventually had to persuade… well, in fact I took the decision and then got approval to obtain a loan of about, I think, £900,000, for which we paid seventeen per cent interest - it was guaranteed - and with this we were able to purchase the home in Belgrave Square. The treasurer thought I had taken leave of my senses and tore his hair. He thought I was suffering from some strange mental aberration, but we have in fact paid for this.

GW You had to. There was no alternative.

MR We were… you see, our lease had run out in Chandos House and the Royal Society of Medicine insisted that we depart, and anyway, the quarters were cramped. You had to build up, you see, an organisation to do this: the approval and the accreditation visits throughout the country; the membership examination; the various committees of the sections; the work we did in collaboration with government and advising government about policies. We had some marvellous conferences to which, I mean, Sir Keith Joseph came and George Godber[8] came and ministry officials came,

[6] Keith Joseph (1918-1994). Created life peer in 1987. Served as Conservative Secretary of State for Social Services, DHSS, 1970-74.
[7] David Owen. Created life peer in1992. Served as Labour Minister of State, DHSS, 1974-76.
[8] Sir George Godber. Chief Medical Officer at Department of Health and Social Security, Department of Education and Science, and Home Office, 1960-73.

and we had representatives of psychiatry from up and down the country and we had some extremely good discussions. I think they were productive and the publications followed the recommendations. This had somehow to be reconciled with maintaining the chair in Newcastle.

GW Yes, because you stayed there until '77, didn't you, before you moved to Cambridge?

MR Yes, I had to commute two or three times a week.

GW From Newcastle to London?

MR Yes.

GW Well, if I may say so, your knighthood in 1972 was singularly well earned?

MR I should say that people have said that it was related to the fact that I had been elected as president. No one receives this notification and that had come before the results of the election.

GW I had a somewhat similar experience with the Royal Society of Medicine, in that mine came through when I was already in the post but before… it wasn't part of being president, so it is more gratifying.

MR Yes, well, it's a small thing, but I thought that I perhaps should make it clear because it's a general assumption that this is how it happened.

GW You must have been very happy to move to Cambridge, though?

MR Yes, although I was tired, you see. I'd had a four-year stint as president because I'd begun when the year had already… we were already into part of a college year, so I went on until 1975 and then I did a few visiting professorships.

GW In different parts of the world?

MR In different parts of the world, but fairly short ones. I never went for more than one week or ten days, that sort of thing, but a good many of them in the United States, in Australia and Sweden. I did some missions for WHO, the USSR and Japan, and then in '76 came the election, I was invited to Cambridge.

GW That must have been gratifying in many ways. It wasn't a question of moving into, so to speak, a serene old age of inactivity, was it?

MR No. It was a great comfort and a great privilege to be offered the fellowship at Trinity, which has meant a great deal, an enormous amount, to me. I had to start all over again. There was no department; I was the first professor and I had to struggle hard not to be the last. I was alone when I came - no secretary. I had to recruit a

secretary. We had a very small amount of space on level four in the clinical school. We had no beds in the teaching hospital. I had to rely on beds in Fulbourn Hospital where some of the senior people, not all by any means, but one in particular didn't welcome my presence. The hospital was entirely unsuited for teaching the undergraduates, which was our prime responsibility, because it was run as a therapeutic community and treatment was given in the form of small and large groups, and all the patients were enclosed, you see, were sequestered for a large part of the day talking about themselves and about each other.

GW And there couldn't be an intrusion of people.

M Well, there couldn't be an intrusion. I was not allowed to intrude either, and this I had to contest. It was very difficult and it led to a good deal of struggle - difficult, at times unpleasant, because of some of the means used to prevail upon me, to compel me to, well, withdraw. I'm afraid I have to say that. It was as bad as that. And, you see, I was determined to mount research again into old age mental disorder because a new wave of observations had come in. The first discoveries of neurotransmitter deficits in the brain in Alzheimer's disease came in 1977. We had Leslie Iversen across the way directing a MRC unit and I immediately established a relationship with him for joint work, you see. We had to visit hospitals, some of them fifty miles away, in order to make studies of patients and to get post-mortem material. My colleagues on the staff, sometimes myself, had to travel this distance.

GW Did you have the post of being a regional adviser? Was East Anglia your whole parish?

MR East Anglia was my whole parish. I was not… well, I was on a committee of… a psychiatric advisory committee. Well, *de facto* I was adviser because I would ....

GW But, there were no difficulties in your seeing patients in other parts of the region?

MR Well, we saw a few in Fulbourn, in this hospital that I mentioned, we saw just a very few. But the examinations and studies, in order to get adequate numbers, we had to conduct the studies in six different hospitals, and we managed to get collaboration. But we managed, you see, to accumulate a unique and precious scientific treasure. I don't think it exists anywhere else in the world. Because these patients had been studied in life and we had the brains after death, after permission of course from relatives, and one half was submitted to investigations - we now had image analysing equipment which enabled us to actually count mechanically, count neurones - and the other half went to Leslie Iversen. Then we put the data together and within a very short time we were able to provide data that nobody else could, you see. I mean, in the United States - this is a tremendous advantage we still enjoy - post-mortem examinations have been declining and virtually died out in many places, partly because pathologists wouldn't do it, because laboratory results provide all the information we need about patients, and partly who is going to pay for it? And then,

[D C] Gajdusek reported some cases of Alzheimer which he said had a transmissible virus, so pathologists were not bursting with enthusiasm to do this. So we had and we still have this, we had a brain bank in Cambridge and this became an important activity. It was not ...

GW Martin, we are running short of time and I do want you to just say a word of where things are moving now in Cambridge, particularly with regard to molecular biology and the prospects this is opening up. Can you do it quickly?

MR Yes. Well, about three or four years after I arrived I became aware of the fact that one structure, the only structure to have been discovered by Alzheimer, neurofibrillary tangle, had the potential of being a fruitful basis for investigation by the techniques of molecular biology. And I became aware of the investigations of Aaron Klug into a number of structures. He, I think, is the greatest structural molecular biologist in the world and the solutions, which have provided elegant, comprehensive and conclusive, for the structure of tubulin, the structure of actin, the structure of tobacco mosaic virus, the structure of, later on, much later, of chromotin. And these investigations excited me because the structure led to advances in characterising the protein in which this structure, which formed the constituent of this structure. So I think the paired helical filaments… neurofibrillary tangle which is made up of paired helical filaments....

GW We have to be brief, I'm afraid.

MR Well, I took to him a very talented young man who solved first the basic problem that he prepared. In other words, he prepared a pure, clean preparation of paired helical filaments which could be submitted to our studies, submitted to structural studies, and we then had two Nobel Prize winners working on a psychiatric problem, Aaron Klug and César Milstein, who helped us with antibodies, monoclonal and polyclonal antibodies. And I think that I am unable to be entirely objective, I think that we are going to succeed in characterising the protein of which paired helical filaments, the central lesion I believe in Alzheimer, are made and if we do this, I believe we may be on the way to uncovering the secrets of Alzheimer's disease.

GW That's a very splendid note, if I may say so, on which I must end this interview. I want to thank you most warmly. It's been a fascinating opportunity to talk to you and ending on a most exciting note. Thank you very much indeed.

MR Not at all.