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Edited transcript of interview with Duncan Thomas by Martin Johnson on 28th September 2009 at his home in Oxfordshire

[Edited and approved for release November 2009. Where changes, corrections or clarifications are inserted that substantially alter the original transcript, they are indicated in square brackets]

Speaker key

MHJ Martin JohnsonDT Duncan Thomas

MHJ What I think is always useful to start with is if you could briefly introduce yourself, in terms of your career - your education, you went then to America, you were then at the MRC for a reasonably short period, I think?

DT Yes, quite short.

MHJ Yes, if you could just give us some context for that?

DT Okay. Well, I graduated in medicine in 1954 in London, at St Bartholomew's Hospital, did my house jobs there; then spent a couple of years in the Army as a National Serviceman, but was lucky enough to be seconded to Oxford, and so actually I had a very easy time as a National Serviceman – I hardly wore a uniform, and I managed to do a DPhil while I was at it.

By that time I had married my wife [Phoebe], who was an American. I had met her when I went over to the States as a student on an elective, and we were married in 1956; and so I wanted to continue my postgraduate training in the States. We had met in Boston, and so we went back to Boston in 1958, and I was a resident in Boston for two years, and then had my own lab and was doing what I very much enjoyed doing, which was easier in the States in those days than it was here, which is that you ran your own lab and had a research outlet, but also saw patients. In this country, at that time, you were either a clinician or a lab man.

MHJ Absolutely; I remember, yes...

DT Whereas the Americans manage to combine the both, and that I found a very attractive way of doing what one wanted to do. So in my particular field, which was the study of thrombosis, particularly venous thrombosis, I was able to have basic science work in the lab, do a lot of experimental work with animals, and also saw patients with particular diseases related to the subject. So I did that, I did teaching, I was an associate professor of medicine at Tufts University Medical School in Boston, having been at Harvard before that, and had a very productive time in the 1960s.

I'd had a year in London on sabbatical with Professor Gus Born, who in the platelet field was probably the world expert, and so we had a very good year in London, went back to the States in 67; and then in 1970 I had what my wife would call a midlife crisis: I decided I didn't want to be in the States, I wanted to be in England. It was a bad time in the States - as you may recall, it was Vietnam, it was Nixon, it was a lot of things; and I wasn't happy there, so I came back to this country.

The problem was what to do back here; and at that time I was 40, I had three children, I was very much an independent investigator. I had a national reputation in the States, I flatter myself; I had published a book on my subject, many papers; but there was nobody in England who had my approach to the field. It was another 20 years before anybody in England looked at the problems of thrombosis in the way I had been looking at it, and there really were no jobs at a reasonably senior level.

So, for reasons that I find hard to explain now, I decided I would try my hand at administration. And I had good contacts at the MRC, because I had known some of the people who were working for the MRC when I was at Oxford before that, because I worked for an MRC unit in Oxford when I was doing my National Service. And so they put me in touch with the MRC, and to cut a long story short, I was appointed a medical officer at Park Crescent, at the headquarters of the MRC, in 1970.

MHJ That was roughly when, in 1970?

DT Summer; June, end of June, July – probably started July 1st, 1970. But we came back to this country in June, so I would say it was July 1st, 1970, give or take a few days. So that's background - is that enough background?

MHJ Yes; and then how long were you at the MRC?

DT In that sense, it's interesting, because when I had finished my National Service, I had a short-term appointment with the MRC, finished up the project I was doing; I then joined the headquarters staff. And in 1976 I was appointed head of the division of haematology at something called the National Institute of Biological Standards and Control, which at that time was run by the MRC – it was an offshoot of the MRC, so I went back to the MRC in 76. And then NIBSC, as it's called now, broke off from the MRC and had its own – what's the word I want now? – Act of Parliament, setting it up.

MHJ So how long were you at Head Office?

DT Head Office, I was there a year.

MHJ A year? So you left, well, halfway through 71, or ...?

DT Yes.

MHJ Good. And did you have any contact with the MRC Head Office people after you left, any significant contact with people you'd been working with, or...?

DT Not for some years. I did when I went to the NIBSC. For example, I was interviewed at the MRC for my job, because the MRC was the umbrella organisation for this offshoot of biological standards, which the MRC had introduced way back in the 20s. For example, a standard for insulin was provided by the MRC, and the MRC had a long history in this field, but then decided in their wisdom that this was something they didn't want to do in the future, and it was set up as an independent board, the National Biological Standards Board. But that came out of the MRC, so inevitably we interacted with some of the people at Head Office in relation to that.

MHJ But there was no direct relationship with the DHSS? Or did that increasingly assume...?

DT Well, in 1971 there was an ad that I saw for staff for what was, in those days, called the Committee on the Safety of Drugs; it later became the Committee on Safety of Medicines, and they wanted people with a medical background and some knowledge of pharmacology to join them as senior medical officers. Now I was just a medical officer, and there were no prospects of promotion that I could see at the MRC, and I had a young family, three kids; and the increase – it seems ridiculous now – but it was another £1,500 a year, which was quite a lot of money...

MHJ It was a lot of money in those days, yes, absolutely.

DT ... in 1970. And so I applied, and was appointed as senior medical officer at the DHSS, as it was then called - full responsibility for biologicals on the Committee on the Safety of Medicine. And the interesting point, which I think I might interject here, is that when I was thinking of applying for this job, the people at the MRC warned me that the difference between the MRC and the DHSS, as it then was, was that at the MRC it was the scientist who was on top. And it was, the secretary of the MRC, John Gray, was a scientist, whereas at the DHSS the person in charge is a civil servant; and they said, you should be aware of that: which I thought was an interesting comment, and quite true. I have to say it didn't really bother me, because the people I worked with directly were medical. But there was no question the permanent secretary was a civil servant, a very charming one called Sir Patrick Nairne, who I think is still alive; but he was in charge of the department, and was not a scientist.

MHJ Okay, so you have one year at the MRC, and then you moved on for reasons of salary increase and promotion, and so on. And you mentioned John Gray: did you see anything of him when you were at the MRC, or was...?

DT Well, yes, funnily enough...

MHJ How did things work, because the MRC's very hierarchical, if I recall?

DT Exactly so. And that's one of the things I found very difficult, because I'd been in the States for 12 years when I joined the MRC, and by comparison it was much less hierarchical. And it was quite a challenge to adapt to being the low boy on the totem

pole, and very clearly told that was my place. For example, medical officers could attend the meeting of the Council, but were not allowed to speak. Now that, with an American background, would have been unthinkable, and I found that hard. But I was told very clearly that at my level, you do not say a word at Council meetings.

Now, at a personal level, John Gray happened to live in Highgate where I lived, and I occasionally travelled on the Tube with him, and at that level we would have a perfectly sensible conversation and talk about all sorts of things. I had no problems at a personal level, certainly, with John Gray or with his deputy, Griff Owen, who was the Deputy Secretary, but I had a lot of problems with the person I was directly working with, who was a senior medical officer, namely Sheila Howarth,

MHJ Yes, I wanted to ask you about Sheila Howarth, because I think Griff Owen wrote her obituary for the British Medical Journal, and he said, and I quote here: "in the hierarchical culture of the MRC office she could appear a formidable figure to her juniors."

DT I think I would quite heartily endorse that.

MHJ In what ways was she...?

DT Oh, well, it's hard, you know, 40 years, almost, later, it's hard to pinpoint what it was. She was very much... a headmistress, and I was one of the pupils, discounted my, you know, not inconsiderable experience – I was actually 41, I suppose she was around 50, perhaps, at that time, but we weren't that different in age – I'd, you know, I'd had a fair amount of life experience; and she was, to put it kindly, a difficult woman.

MHJ Did her difficulty come out of over-confidence, or lack of confidence, would you say?

DT Good question, good question. I mean, she was a very bright woman. You know, she married two professors, Sharpey-Schafer, and then the chap at the Hammersmith, whose name escapes me.

MHJ McMichael?

PT Yes, you know, she was very much moving in the top circles, medically, but... sorry, I didn't doubt her intellectual ability, it was just her personality. Now, her boss, the PMO, was somebody called Malcolm Godfrey, who was a very nice man, and I got on very well with him. And I several times spoke to him about my difficulties, and he was sympathetic – he knew she was a difficult woman to work with. And I, at the end, said, look I just can't work with Sheila – it was one of the factors that led me to leave the MRC. And I had the feeling both Griff Owen and Malcolm Godfrey knew very well what I was saying.

MHJ Okay, that's really interesting. Good. Well, you were there at a very interesting time, obviously, for us, because you arrived shortly before Edwards made contact with the MRC, and you left just after he'd had his grant turned down.

DT Right.

MHJ And you were a very central player at that point, under Howarth, and so I just wanted to focus a little bit on that, because there's lots of rumours as to why the MRC didn't fund that work that circulate around the community, and so on.

DT Really?

MHJ Yes, and we're interested in probing that, and our research is very interesting so far. But I wondered, do you remember that first visit? I think it must have been in late August, sometime in late August -24^{th} August, 1970 - when Edwards came to the MRC to discuss the possibility of a grant application, with I think Sheila Howarth and yourself...

PT Yes, indeed. I remember it very clearly: it was not long after I arrived, and Sheila Howarth was responsible for clinical endocrinology – it was her field, and I was given... the system was that you were responsible for some of the MRC units around the country, as a medical officer. There was one in Edinburgh, I remember, there was one in London, there was one here in Oxford, and one went round and visited these people; and then the people who applied for grants came in for an interview. And I remember RG Edwards very clearly – he was not a man you would easily miss. He spent, I suppose, an hour persuading me that what he proposed was feasible.

MHJ So was it the three of you, or just you and him?

DT Just me.

MHJ Just you? Oh, right. Okay, so Howarth wasn't at that first meeting?

Port Not at that first meeting, although I suspect he interacted with her at some stage. And I have to say, it's not to my credit, but I was sceptical. Edwards – you must have known him – at least at that time, had slightly the air of a mad scientist; you know, he was clearly an enthusiast; and it was not a subject, a field I knew anything about. It was really quite inappropriate for me to have any prejudices against him, because it was not my field. But I listened to him politely, and discussed it with him, and wrote up my analysis of his proposal. And I remember discussing it with Sheila Howarth, and I think we both felt that this was not a runner, frankly. And, as I say, I'm delighted that we were proved quite wrong, but it didn't help Edwards at the time.

I had forgotten that his grant was turned down, but it would have been at a... the only thing I would interject is, it was not by the staff of the MRC – it would have been the Grants Committee that would have reviewed it; it would have been sent out to at least two assessors, external assessors, and their report... and the Committee that was looking

after these grants would have been the ones that made the decision. It certainly would not have been turned down on the basis of anything that Sheila Howarth or I said.

MHJ No. No, I understand that. So that first meeting lasted, what, roughly an hour, or so, did it?

DT Yes. Yes, that sort of period.

MHJ And the reasons that you were sceptical – I mean, you set them out very clearly in your memo, which is actually in the archives.

DT No! Oh, really?

MHJ Yes.

DT Oh! Oh, dear!

MHJ No, no, it's - I think it's a very fair assessment, really – I've just printed it out here. You set it out very, very clearly in a memo written on the 26th, which was sent, then sent to Sheila Howarth; and reading this, and knowing Bob Edwards, I can see exactly where you were coming from. You end by saying, well, yes, I do have a query here, because at one point in the penultimate paragraph you say, and earlier on you say, you imply that Dr Howarth was present?

DT Well, she may have been later, but my clear recollection of my initial meeting with Edwards was that she was not. But that's not to say that she didn't join us later on.

MHJ I think she may have done, because you say, towards the second page: Dr Howarth reminded Dr Edwards that the provision of clinical facilities related to patient care was not within the terms of the reference of the Council; so I...

DT She must have come in, did she?

MHJ She must have joined you. And there's a second reference to her being present towards the end: Dr Howarth commented that what Dr Edwards wanted was a set-up compared with what Professor Calne already had in Cambridge, at Douglas House. She remarked to Dr Edwards that the type of arrangement, which Professor Calne had organised, was provided with close DHSS support, and the various possibilities for obtaining support for Dr Edwards for his scientific programme were discussed. So I think she probably must have joined you at some time.

Yes. I wouldn't, you know, contradict that at all, except that I would insist that at some stage I saw him on my own, and then I think I must have gone out from that, unless he came back a second time and asked her to join us, which would perhaps be quite the normal... But it was not the usual practice for two people to see an applicant, in the first instance.

MHJ The prelude to this had been, he'd written to John Gray, as he then was, to ask about the possibilities of being funded, and it had been passed to Howarth to deal with. Howarth, I think, had spoken to Edwards on the phone a few days, about a week or so, prior to this, and suggested he come to Head Office to discuss his plan. And so he arrived, and you clearly met him and talked to him. I wonder whether at some point he asked to see Howarth? Do you remember anything?

DT Ah... he could well have. I have no recollection of it, but it would be perfectly reasonable for him to say he'd like to see somebody more senior than me; and I suspect I said, right, I'll go and see if I can find her; and she then joined us. But my only clear recollection is that it was a one-to-one initially.

MHJ Yes, okay, that's fair enough. It's a long time ago, and, you know, we have memories that are very selective.

DT Indeed.

MHJ But certainly you had a very strong initial impression that this was a guy who was a bit off the wall – is that fair?

DT Yes.

MHJ Yes, and you would need convincing? Were there things that follow from that?

DT Well, that's an interesting question. Um... he was not the usual scientist that one met at the MRC, which is – and I don't mean that unkindly - and one was perhaps a little more wary than one would have been had he seemed the more usual sort of... As I say, I find this difficult to remember exactly, but he was unusual, which of course should have told you, well, men of genius often are unusual; and one should have been more alert to that problem.

MHJ Okay, but clearly there were certain doubts raised in your mind because of his enthusiasm and his wildness?

DT Yes. Yes, I think that's a fair comment.

MHJ And do you recall - I mean, it's difficult, because I think Howarth must have joined you, and she certainly spoke to him on the phone: we have evidence of that – do you recall what her attitude to him was? I mean, given her personality?

DT Yes. Oh, I think she would have had an attitude at least as sceptical as mine, if not more so. I think I was probably, if anything, more sympathetic to Edwards than she was, because I had come from a rather more diverse background.

MHJ Well, I was wondering about that.

PT Yes. I mean, I had met a lot of different people in the States, and I had worked in several different areas, whereas she had been trained as a cardiologist and I think, entirely in London and hadn't really been exposed to anything other than clinical science; whereas I had done a lot of lab work, with different people in the States, and so on. I think my approach was probably a little more broadly-based than hers, I flatter myself. She was at least as sceptical as I was.

MHJ Hmm. It really must have been quite a tough one for you, given that you'd only been there about a month or so?

DT Oh, yes, and a field I knew nothing about.

MHJ Yes - but it's fair to say that, from then on, Edwards' communication was with either you or Sheila Howarth, was it? That you were the route, the conduits of further discussion?

DT Well, except that if - your records must show the grant was turned down...

MHJ Yes, we'll come to that a bit later on. I'm just thinking that... I think what the records seem to show is that all exchanges that Edwards had with the MRC went through Sheila Howarth, and either you or she handled it.

DT Yes, I think that's true.

MHJ That's probably true, is it?

DT Yes, yes.

MHJ Do you know, do you have any feeling for, how Edwards got on with Howarth?

DT No, not really. As I say, I think she shared my scepticism, and was probably more vociferous about it, perhaps. But, uh... it would be wrong to imply that she dismissed him – I think she just thought he was a bit of an odd bod, an oddball, um...

MHJ And she'd have been less likely, maybe, to take to oddballs than you, given the background?

DT Possibly; possibly.

MHJ ... but you wouldn't want to make that point, yes?

DT I don't wish... you know, of the dead, speak no ill; but I...

MHJ She was from Yorkshire, I think?

DT Yes, I believe so.

MHJ Yes, and so was he. She went to school about 25 kilometres from where he was born and brought up, till he was five...

DT Oh, interesting.

MHJ ... and I just wondered whether she was obviously from Yorkshire, or not.

DT No.

MHJ She didn't have a strong Yorkshire accent?

DT No, I would have said, quite the reverse.

MHJ What was her background? Was it, was she reasonably middle class, upper class, or working class? Do you know anything about her background?

DT Not really. I would have guessed middle class; married very well, um... and, I mean, I'm annoyed at myself – I can't remember her husband's name.

MHJ Isn't it McMichael?

DT McMichael – Andrew McMichael.

MHJ Yes, the second one... yes.

DT His son is the big thing here at Oxford [Sir Andrew J McMichael, Professor of Molecular Medicine, Oxford]. And so she, you know, she'd married the chap at St Thomas's, Sharpey-Schafer, and then she married her second husband. And there were several people at the MRC in those days who were married to distinguished medical men, but kept their maiden name: I mean, Sheila Howarth was Lady McMichael, Joan Faulkner was Lady Doll [married to Sir Richard Doll] there were one or two others, you know, and so you realised, with these women, they had pillow talk with distinguished members of the profession, and they wanted you to know that. It was interesting...

MHJ I can imagine, yes. Did you meet Bob Edwards again, or was that the only time you met?

DT I think I may have seen him subsequently on a brief visit, but I couldn't be sure about that. I mean, I have a very clear memory of the chat we had, and I think I saw him at the MRC on a subsequent occasion. But I had no further interaction, really, not with him. It would...

MHJ So it was just that first meeting?

DT That first meeting, and possibly a second meeting.

MHJ And Howarth would have taken the lead, if there was a ...

DT Yes. Oh, yes.

MHJ ...second meeting. Okay, right. What was your and Howarth's reaction to the fact that Edwards was looking at something very clinical, but he wasn't clinically trained? I mean, this is interesting in terms of what you were saying earlier about the difference between the States and the UK, and so on.

PT Yes. Yes, I think that may have been a factor. You know, in those days you were either fish or fowl; we didn't go in for much in between. It was very difficult, as I remember, for the clinicians to accept that non-clinical scientists have a role to play, and perhaps vice versa. There was a certain amount of – antagonism is the wrong word, but, you know... almost a bit like, you know, the labour unions; you know, you're crossing picket lines, you're coming into my area.

MHJ Was that true on both sides of the Atlantic?

DT Much less so, in the States.

MHJ So you were primed up to a more fluid position?

DT To be more sympathetic to people, because I'd worked closely with people. I mean, I did my DPhil here in Oxford, with a PhD, not an MD, and it worked; I'd done a Master's with an anatomist who was not, you know, not clinically involved, so I'd worked closely with non-clinical scientists, and so I had no particular hang-up about that. But I have the feeling, and I have the sense it's perhaps still true, that clinicians in this country - you know: we're clinicians - don't you come into our sphere, or be very careful.

MHJ Yes, it was certainly very strongly the case then, I remember, and it's, I think it's much less so now, but...

DT Yes, I'm sure that's right, but you're in a good position to judge that, I imagine.

MHJ Yes. So do you remember any discussions about the possibility of Edwards and Steptoe locating to the clinical research centre at Northwick Park, which was then in the process of getting under way? Remember anything about that?

DT No, but I can well understand that that would - might have been considered an appropriate place for them. But I don't have any memory of any specific conversation of them moving to... I mean, when it had got to that stage, because... mind you, the clinical research centre was up and running by then, I think.

MHJ It was just getting started, I think, the previous year: in 1970 it had been formally opened. And did you come across Graham Bull, the director, at all?

DT Yes, I, in 1967, I actually had an interview by him, because I was already thinking in that I might want to come back to the UK.

MHJ What sort of an impression did he make on you?

DT Not a favourable one: I was not impressed. He clearly wasn't interested in me, and interviewed me as a favour to a friend, basically. But I didn't find him a sympathetic character, let me put it that way; but that's...

MHJ I don't want to push you, but can you flesh it out a little? In what way was...?

DT About Graham Bull, you mean? Difficult after all these years – we're talking about events of 40 years ago.

MHJ I know; I understand that.

DT I just - my impression was that I wasn't sure he was the sort of man I wanted to work under, anyway; but I can't really... You know, some people you are simpatico with right away; they're thinking along the same lines: Graham Bull was not one of those people.

MHJ Was he the sort of man who would have got on with Edwards?

DT I would guess not. No, I don't think he was a man of broad sympathies, from what little I...

MH.J What about Edwards? Do you think Edwards would have got on with him?

DT I could well imagine they would not hit it off, but I couldn't go beyond that.

MHJ Okay, because in fact Bull did offer Edwards and Steptoe...

DT A position...

MHJ ... to run the whole programme.

DT Well, that's to his credit, but they didn't accept it?

MHJ But Edwards didn't accept it. This was never discussed with you?

DT No. No, I know, there would have been no cause to; you see, I saw Bull before I even worked for the MRC – I saw Bull in 67, before I joined the MRC, so I knew nothing about Edwards and Steptoe then. So it wouldn't have come up.

MHJ But I mean, it wasn't discussed with you by Howarth, or Godfrey, or anyone?

DT Not that I can remember. I'm sorry, I wouldn't...

MHJ Because I think Howarth did see it as a way through. If I can just fill you in: when your report was sent to Howarth - I can leave a copy of that report with you?

DT I would be interested. Excellent!

MHJ ... and if you've got any more comments on it..

DT Yes, it might trigger some thought.

MHJ When that was passed to Howarth, she, I think, sent it on to Godfrey, if I remember, or certainly communicated it – had a meeting with Godfrey, at which she then produced notes from that meeting; and Godfrey's reaction was that there might be something worth pursuing here. So he was, I think, counselling: let's look at this; and he said, it's not in a form where it will run at the moment, but it could be helped to get into such a form. So Godfrey was not negative.

DT Good.

MHJ I think it also fitted with the policy that the MRC had recently enunciated of support for integrated clinical scientific research, and so ticked that box; and one of the strategies that Godfrey suggested they follow up on was for Bull to be asked whether he would be interested in having it at the CRC (and Bull said he was) and then for Bull to approach Edwards, which he did – I think, in December, 1970, some time between 2nd and 18th December. And Edwards is reported by Bull as saying that he thought that what the CRC would offer him and Patrick [Steptoe] was exactly what they needed; it was perfect, except that he didn't think, at the CRC, as an MRC employee, he would have the intellectual and ethical freedom that he had at the University of Cambridge as a Reader. He had been employed at NIMR previously, so he knew what it was like to be an MRC employee.

Now, I think it's quite clear, though, that Edwards interpreted the offer from the CRC as that the MRC liked the proposal, and he actually said to Bull, look, my preference is to stay in Cambridge; if that doesn't come off, can I come to Northwick Park? And Bull said no, you either say yes now, or that's it, because I need to fill this post. In fact, he never did fill the post, and he never got a good developmental biology section going there. But that was clearly an important event

DT Indeed.

MHJ ... the MRC offered support, and it was turned down by Edwards, I think on, partly on a misunderstanding of the MRC's intentions, I think; none of that, you were aware of?

DT No. No, I really couldn't comment on that. It's, in retrospect, probably one could argue Edwards made the right decision.

MHJ In what way?

DT Well, the CRC was not a success long-term. I mean, the fact that it's gone speaks for itself, whereas Cambridge is still very much here – I'm simplifying to make a point.

MHJ No, no, I take that point. I mean, I'm quite interested, though. Do you think, had Edwards and Steptoe gone to the CRC, they could have pursued their programme through to embryo transfer and so on, within the framework of the CRC, and the ethical committees there, and so on?

DT I don't see why not. The only comment I would make, it would have, I suspect, not been easy for Steptoe, particularly, to integrate with the obstetricians at the CRC. I mean, you've got to look at it from Steptoe's as well as Edwards' point of view. I mean, Edwards was a research scientist, and knew about the NIMR, and knew about the MRC – he would have joined a body of scientists. But obstetricians, as you know much better than I, I'm sure, are a fairly conservative branch of the profession, to put it mildly, and whether Steptoe would have been able to integrate with the CRC...

MHJ Would he have come in at a consultant level with his own patients and beds as well as the research beds? So he would have... and he would have been the senior obstetrician/gynaecologist there, had they taken this up? Because there wasn't anyone there before him, so he would

DT Okay, so he would have been the only obstetrician...

MHJ He would have been the top dog.

DT Okay. Oh, well, then that, then perhaps my comments are not appropriate. I wasn't aware they didn't have an obstetrics department at CRC. That's... yes, that's interesting.

MHJ Well, not that I know of. There were certainly no research obstetricians [overtalking]...

DT No, right. But no service facilities...?

MHJ Well, I need to check that. I need to check that. There may have been some existing... You've identified there something for me to look at, which is very useful. [There was!]

DT Yes. I would certainly check that they didn't have a department... because it was supposed to be a general hospital as well as a research hospital, and, you know, I would

be surprised if a whole NHS hospital didn't have a department of obstetrics. But that's something you can easily check. But what I'm saying is if there was existing obstetricians, coming from somewhere else – because, where was Steptoe? Remind me.

MHJ He was in Oldham - Oldham General.

DT Coming from Oldham down to London, different scene - it would not have been easy, I suspect. I think it would have been easier for Edwards than for Steptoe, I would guess, but it's only a guess.

MHJ Okay. I mean, having turned that down, Edwards went the route of making a grant application, and I think we have a record that at one point you were asked... you suggested some referees to Howarth for the grant proposal. Do you remember that at all?

DT I would have probably asked Sheila Howarth who to recommend.

MHJ Well, the notes say that you recommended some names to Sheila Howarth, and Sheila Howarth came back to you, taking some of them but not others, and suggesting new ones; and then said to you: right, these five or six.

DT Hmm, that's interesting.

MHJ Is that the way it would...?

DT Well, don't forget, we're talking about a time after I'd only been with the MRC a couple of months, if that. I'd been out of the country for 12 years. I would have been surprised that I would have been in a position to recommend any names.

MHJ Okay. But you don't really recall how the referees were finally selected, other than that Sheila Howarth probably did it?

DT Sheila Howarth probably did it. I mean, I think Sheila Howarth was very much of the school that there are the right people and the wrong people. I mean, I think that's a... now that I think of it. To give you an example: I remember discussing with her about somebody I knew well called John O'Brien, who was a haematologist down at Portsmouth, and who was a distinguished man in the platelet field. And I knew John, and had visited him and so on because I was active in that field; and her response when he put in for a grant was, yes, you know, if he'd been properly trained, if he'd moved in the right circles, something would have... he, something might have come of him. It was a very elitist remark.

MHJ Okay. And this was characteristic?

DT And I think Sheila Howarth - and to some extent the MRC - it was a phrase they used which I'm searching my memory to remember - but basically, that you were part of the, you know, the great and the good.

MHJ So how did she view that? Was it to do with class? Was it to do with training... whether you were medically trained or not? Was it to do with regions? I mean, what...?

DT I... yes, I think it was... You'd have to go through the system; you had to be with the right people. And for example, there would have perhaps been some prejudice against Steptoe at Oldham, which was not considered the centre of medical excellence, if one could look at it that way. And if you hadn't had the right jobs with the right people, you were sort of not in the system. And there was quite a lot of that, actually.

MHJ Was that endemic to them? Or was it particularly her?

DT Particularly her, but I think there was an element of it that was more pervasive than just Sheila Howarth. There was, you know... it's... we're getting into deep waters here, aren't we, because...?

MHJ No, I think... look, it's adding colour to the background, and that's the major thing.

DT Yes, but I mean, you know it's... I was making a general remark. It's true more broadly in this society than just the MRC, I'm sure you would agree.

MHJ Yes ... I understand, yes. But she was particularly sort of firm in this respect?

DT Yes. You know, you did things a certain way, and you had a certain training, you worked with the right people. And if you were off that, it was that much harder to progress.

MHJ Yes, okay. You - when the grant came in, we have - there's rather fragmentary records, but we certainly know you were wrestling to try and get the figures out of Edwards for the grant, the correct figures for the grant and so on, the costing and so on, for a while. I don't know whether you remember any of it?

DT No, I don't, but that would have been part of my job; you know, how much money do you need?

MHJ Of the referees... going back to the referees, do you remember anything – Turnbull, from Cardiff...?

DT Yes, I know the name.

MHJ ... because he was a preliminary referee. Because Bob Edwards sent in, I think after the meeting... what Howarth asked him for was a preliminary proposal, which he sent in later that year. And that was sent to Turnbull, to Bull, who then asked him about going to CRC, and to Harris in Oxford.

DT Oh, right - GW Harris.

MHJ GW Harris, yes. And they were, their opinions came back, and on the strength of their opinions they were sufficiently positive that Edwards and Steptoe were encouraged to put in the full grant, which they did the following February. Now Turnbull's in particular, his comments are really interesting, in terms that, in terms of what he had to say about the project: the referees for the final grant application which came in in February and which were selected immediately around that time, did not include Turnbull. They went back to Harris - they didn't go back to Bull, obviously - they went to Harris; and there were five other referees, which we can talk about in a bit. But I'm particularly interested that it didn't go back to Turnbull.

DT Yes.

MHJ Do you know why it didn't?

DT Is my memory correct that Turnbull eventually came up to Oxford?

MHJ He did come to Oxford; he was professor of obstetrics and gynaecology at Oxford subsequently.

DT A well regarded one, I believe.

MHJ Absolutely, yes, yes.

DT I have no idea why they didn't ask Turnbull again. Harris, of course, ran an MRC unit here at Oxford in neuroendocrinology, I think. In fact he was one of my, he was on my patch: I had to look after him.

MHJ Of course, he died shortly afterwards, I think.

DT Yes, he didn't... yes, he... But certainly in 1970 he was on my patch, and I came to Oxford to visit him here; and he was a very well-regarded neuroendocrinologist. Why they didn't ask Alec Turnbull again, I have no idea; which is odd, because you'd think an obstetrician would have been a very important...

MHJ Well, there were other obstetricians. I mean, one of the reasons may have been that Turnbull was also on the Clinical Research Board, which is the board that the grant went to, because it was a five-year grant. So it's possible that being on that board precluded him from being a referee. Is that, would that be, standard practice?

DT No, I don't see why that should interfere, because if it goes to the board they would have to read the grant anyway. Why would that preclude him from assessing a grant, because, in a sense, he would have to review it anyway?

MHJ Okay. Did you go to any board meetings, Clinical Research Board meeting?

DT Yes, I did. Yes, I did. There was an endocrinology board I used to go to, because my field was endocrinology. I mean, that was one of the patches that was given to me.

MHJ So was that a separate committee, or a sub-board?

DT A sub-board. Yes. It wasn't the main Council.

MHJ All right. There was the Council, then there was the Clinical Research Board, and then there were speciality committees?

DT Speciality, for all those, yes.

MHJ But did you ever go to the Clinical Research Board itself?

DT I think I would have; yes, I think I would have.

MHJ Do you remember going for the Edwards and Steptoe one?

DT I... no, I don't remember that. I'm sorry, I don't.

MHJ Okay – not to worry. What did Board members get? Did they get the full grant proposal and all the referees' reports as well as the summary that the MRC in-house staff had prepared?

DT Yes. Yes, they would have had the original application and the secretariat's précis of it, basically. But they would have seen the original grant, I'm sure.

MHJ Yes, okay. And they would have seen all of the referees' reports?

DT And certainly the referees' reports.

MHJ And if there had been a preliminary grant application, would they have seen the preliminary reports?

DT Preliminary, in what sense?

MHJ Well, there were comments from Turnbull, and Harris that came in, in response... in the autumn of 1970 that led the MRC to suggest that it was put in a formal application. Would they have seen those comments, or only the later ones...?

DT I wouldn't... I, this, I fear, is a guess: I would have guessed that they would only see the comments on the full application, because that would be more to the point.

MHJ That's my impression, and I think that's what the minutes say.

DT I think, logically, that would be the case.

MHJ And then how did... when these proposals went to the Board, is it like it was when I was involved with the MRC, where one member of the Board would be deputed to lead on the grant?

DT Yes.

MHJ So the probability is, that would have been Turnbull?

DT If he was on the Board at the time, as he was, apparently. Yes, the likelihood would have been Turnbull.

MHJ Right, okay. Good. The Board turned it down on ethical grounds, and they gave ethical grounds; and this was, this decision was sent to Edwards. And Edwards wrote quite a long statement saying why he thought - it was several pages long - why he thought that the referees and the Board had been mistaken, had misunderstood parts of the grant. Did you ever see that?

DT No, I didn't.

MHJ No, okay. So that went to Howarth. I think it was sent to Gray, but I think Howarth handled it.

DT She would have, yes.

MHJ And she didn't consult with you on that?

DT No. That's interesting.

MHJ Yes, okay. And then you left, really, shortly after that, didn't you?

DT The next summer - 1971.

MHJ So this all happened in April - the decision not to fund was April? So you...

DT I would have been there. I was there in April.

MHJ And you, do you remember...[DT shakes head] you don't remember it not being funded?

DT No, I fear not. I would not have been surprised, because the thinking up till that time had been fairly negative by the staff, and it would have seemed to me at that time, I suppose, that the Board agreed with our assessment.

MHJ And did, do you know what Godfrey thought, towards the end?

DT I have no recollection that he had any specific thoughts about it.

MHJ So by staff, you mean Howarth?

DT Well, I think we probably did discuss it with Malcolm Godfrey, and I think we probably all thought that this... But interestingly, I have no recollection that we thought it was not ethical, that's an interesting point. I have no recollection of anybody saying, well, this is unethical.

MHJ So you don't remember reading any of the referees' reports?

DT I fear not. I'm sorry.

MHJ Okay, no, don't worry.

DT I wish I could be of more help.

MHJ I'll leave you one or two documents I've copied; I may be able to send you one or two others, to see if it jogs any memories from you. So, just to go back to when the grant was declined and Edwards wrote in – I think he wrote in in June - maybe it was the end of April; you left shortly afterwards, didn't you?

DT Yes.

MHJ So you weren't aware of any concern at the MRC that they may not have got it quite right, or anything like that?

DT Yes, I, ... insofar as I can remember anything about it, it is that this was part and parcel, and we were a bit sceptical about this chap, and didn't think he... You know, it's very difficult to put yourself in, where you were, in 1971.

MHJ I understand, absolutely...

DT But I don't think it would have been a surprise to me that it was turned down, let me put it that way - I couldn't put it stronger than that - because the early impressions were rather negative. But what is interesting to me, looking back on it, I'm not sure whether our reservations were primarily ethical, which, from what you say, was the main reason that the Board turned him down.

MHJ That was the only reason that was given, and the reason they said it was not ethical wasn't because of research on human embryos, that wasn't the reason –there were two major grounds: the first was that they wanted to use infertile women as experimental subjects. So they saw that not as an experimental treatment, but as experimental research, so that, even with consent, the women would have been considered to be experimental subjects - not experimental patients, patients undergoing experimental

research. And that it was unacceptable, therefore, to subject them to laparoscopy for purely experimental purposes [overtalking]...

DT No, because they would not benefit.

MHJ ... because they wouldn't benefit. And also, to place the embryos back into the uterus without better evidence that they would not give rise to abnormal pregnancies was also unethical. And what they suggested was that the whole work should be done first in primates.

DT I must say, as a non-expert in the field sitting here today, I can see how they would come to that. I mean, there is no way the infertile women would benefit from a laparoscopy with... which is not without some risk; minor, I agree, but, you know, it's not an entirely risk-free procedure, I would argue. And why wouldn't you do it in primates first to show that you didn't get foetal abnormalities? I mean, you know, I speak as a non-expert in the field, but you know, from a medical background, I would have thought, well, that doesn't seem unreasonable. You might think differently, but I could see why they...

MHJ I can see how that route was taken. Yes, absolutely.... but obviously this was all dealt with at the level of Howarth?

DT Well, she would have taken it to the Board.

MHJ Yes, because she's not registered as to whether she's present or not. It just says: other members of staff present for certain items; and I assumed that she and possibly you were there, but it must have just been her.

DT I suspect it was her, and probably Malcolm Godfrey.

MHJ Yes, he was there: Godfrey and Owen, yes.

DT But he wouldn't have led the discussion from the point of view of the secretariat – it would have been Sheila Howarth, because she would have presented the... The reason I know this is because when I went to the CSM, Committee on Safety of Medicines, the senior medical officer there presented the drug application to the CSM; and he would have provided a précis of the application for a new drug, and would have then presented it to the Committee. And that was basically following what had been set up by the MRC before, because the CSM was a new body, and they use as a model the MRC.

MHJ So, at the Board, then, Howarth would have done a presentation from the point of view of the MRC staff, and then Turnbull would have done a presentation of the science, and so on, and the referees' reports?

DT Yes, well, he would have been the lead discussant.

MHJ The lead discussant? Yes, okay.

DT Because it was his field.

MHJ Yes, okay, good. That's how I imagined it would have been, and it's good to have that reassurance.

DT Yes. Well, I'm glad it helps.

MHJ Did you ever come across Cohen at the DHSS?

DT Dick Cohen? I knew who he was, and I was at meetings with him. Interesting man, actually.

MHJ Because he was seconded there from the MRC.

DT Yes, ex-MRC, and went over to the... and was well regarded by the MRC because he was an ex-MRC chap. And he was the link man with the Department at that time.

MHJ Right, yes. And what were the relations, through him, between DHSS and MRC like? I mean, were they...?

DT Well, I think the MRC thought highly of Dick Cohen because, as I say, he knew them, and they knew him. And I think the relationships were reasonably cordial, with the proviso that I mentioned earlier - that it was recognised that the DHSS was basically run by civil servants; and experts were, experts were there, but not on top.

MHJ But Cohen wasn't a civil servant, he was a medical man?

DT But he was a civil servant.

MHJ But he was also a civil servant, yes.

DT DHSS, by definition, yes. So I was... when I was at the CSM for example, we were all medical, but we were all civil servants. We tried to pretend otherwise, but in point of fact, we were members of Central Government.

MHJ Did the DHSS have much leverage within the MRC? If it said, if it expressed concern about things to them, must they jump? Or was the arm's-length principle reasonably...?

DT That's an interesting one. That's an interesting one. I think they certainly took notice of what the DHSS said, but would, I would guess, would have been prepared to go their own sweet way if they felt strongly about it. I mean, they were an independent

body, they are an independent body, but I think would try not to have a fight with the DHSS.

MHJ So if the DHS was expressing some reservations about the Edwards-Steptoe proposal, and that chimed with what the MRC were doing, it would have been a reinforcing, if you like.

DT Yes, I would think that's very likely.

MHJ Okay, right, yes, that's really useful to clarify that. I'm just looking through my notes to see what we, else I've got down here. In retrospect, looking back now with the advantages of the hindsight of history now, do you have any other reflections about it... because you were there at a pivotal moment in history, in a way?

DT Really?

MHJ Well, I think it's fair to say that you were a player in some pivotal decisions. I mean, we're not concerned with saying, we got it right or we got it wrong or anything, we're concerned with working out what happened. And the MRC had come out of it quite well in a way, because they did offer to support Edwards and Steptoe. And this is the big discovery that we've made that wasn't really known up until now.

DT Really? Ah, that's interesting.

MHJ Yes. But then the consequences of that, how the MRC then handled it after that, having been positive about it, then to go right against it, I think puzzled Edwards and made him very bitter, because he completely misunderstood the MRC's attitude. He thought of the MRC as a monolithic organisation, which was politically naïve, maybe. Because I think, having gone the route for competitive mode funding, rather than for strategically planned funding that the CRC route offered, then for grant applications it was a different sort of organisation, of a beast, he was dealing with, that subjected the study to different sorts of scrutiny than would have happened if they'd gone to the CRC. And I'm just interested that that never really came up in any of the discussions; that the MRC said: look, we did offer him as placement for this work at Northwick Park, and now we're turning him down. You don't remember that ever coming up?

DT No. That probably happened after I'd left, I would have guessed, or in the summer that I left. Because I didn't know that they had specifically offered him a place at Northwick Park; and I'm still not clear why he really, he turned that down.

MHJ Well, all we have is the report from Bull, sent in, saying that he'd discussed it with Edwards who went there and met Bull, looked around, and said that, you know, he would offer him and Steptoe everything they needed. The one thing that it didn't offer him was the intellectual stimulation and freedom that he'd get, and got, in Cambridge from the mix of people and, you know...

PT You see, I would argue Edwards was dead right. I mean, I do remember very clearly saying the mistake that the MRC made was to putting the CRC into a District General Hospital, which is something, for example, the Americans wouldn't have done. I mean, the American analogy is that Clinical Research Centre at NIH which, I don't know whether you know it, but it's right in the centre of NIH, surrounded by all the various institutes. I mean, it's, you know, right where the action is, and to put it in a District General Hospital was considered a mistake at the time; eventually, so it proved.

MHJ Never really took off?

DT It never really took off.

MHJ The paradox is that if Louise Brown had been born there, it might have been the making of it, in a funny sort of way, really. I couldn't help thinking that the other day when I was thinking about...

DT Yes, interesting thought.

MHJ ... and if it had happened earlier, so, I mean, even if it only happened in 1978, when it did it would still have put Northwick Park on the map in a way that it really never really got on the map, I think.

DT I agree. I mean, yes, well, we could talk at length about that. But no, I haven't thought about this for years, but you've triggered my memory. I remember thinking at the time, what in hell are they doing putting it where it is, rather than with the University, or - well, in this country we don't have an NIH - or, you know, build it up from the ground, rather than expect a District General Hospital to take on board a Clinical Research Centre. Because, I mean, you could argue Edwards was dead right: he wouldn't have had the intellectual stimulus that he got at Cambridge, absolutely. So I think one would have to say Edwards got it right.

MHJ It made life hard for him, but he got there in the end by sheer guts and determination.

DT Yes, one has to admire him. Did you ever work with him directly?

MHJ He was my PhD supervisor, in fact, so I've known him since 1965, when I encountered him as an undergraduate, and then I did Part Two. And then I intermitted... I was due to go to Charing Cross in 66, and I decided to do a PhD with him, from 66 to 69. So, and then I went to the States, and I never fully completed my clinical training, although I'd done a lot of clinical research over the years, and trained a lot of clinicians. So I'd got a Harkness Fellowship, which in those days was quite prestigious.

DT Indeed. It still is, isn't it?

MHJ Well, I... I think it's changed, it's mutated a bit now, it's not the same. In fact I'm not sure the system even still exists.

DT There are no Harkness Fellowships anymore?

MHJ No, no, there haven't been in this form - they were in those for about 15, 20 years.

DT Oh, really?

MHJ So I've known Bob on and off over the years, and so on; and it's quite interesting for me, doing this research, because I try to put myself back how, you know, the atmosphere was at the time. And that's one of the reasons that talking to you is so good, because it brings, it colours the attitudes and values of the periods really well, and captures particularly the difference between the USA and the UK ...

DT Yes, oh, yes.

MHJ I have to say, in the papers, we picked up this sort of sense that Howarth and Edwards were not, were oil and vinegar...

DT Yes. Well, I could well... yes, I wouldn't disagree with that. I mean, she was oil-and-vinegar as far as I was concerned. That's one of the prime reasons I left. If I had got on better with Sheila Howarth, I would have stayed, I think.

MHJ There is one thing I'd, one other thing that I realise I haven't asked you, and it relates to something you said in one of your reports as well and it chimes with everything about the period that I remember, and all the other evidence we have. The notion... Bob Edwards was very strongly identified with trying to cure infertility. He also had in his proposal things to do with genetic diagnosis, pre-implantation genetic diagnosis and contraceptive involvement, but his primary identification was with infertility and IVF. And infertility did not have a very high profile then, particularly given the population problem in the world, and there was a lot of emphasis on research...

DT Curbing...

MHJ ... and curbing of that. Do you remember that featuring at all in any of the discussions?

DT No, in fairness, I don't think that I could say that people would have taken the view that there are too many people in the world - why do we worry about infertility? No, in fairness, I don't think that I could say that that was ever a feature. No, it was just that this seemed to be rather a wild project that... I think there was, you know, here was this chap who was not a typical Cambridge scientist, I think it would be fair to say, and an obstetrician in an obscure hospital up North. If you see my point, it just didn't... To some people at the MRC, I suspect, well, that they would look to that with a certain - suspicion is too strong a word, but scepticism I think would be a fairer word - that it

wasn't coming from the mainstream academic, from the clinical side. Okay, Edwards was at Cambridge, but he had linked up with, not a department of obstetrics that was well regarded, which is probably wildly unfair.

MHJ Was it clear that Steptoe had pioneered the introduction of laparoscopy into this country in the 60s and made it safe? And he was the pioneer of that, particularly in gynaecological modes: did that come through at all at the time?

DT No, not to me, anyway. But, you know, I suspect it would be fair to say that Oldham was not considered in those days a centre of medical excellence. I mean, if he'd been at a teaching hospital in London or Edinburgh or... you know, he might have had less trouble.

MHJ Absolutely. That comes through clearly. I mean, it's interesting in the referees' reports, Edwards is fêted as a good imaginative productive scientist – a little wild, but good: Steptoe is looked at in a rather more jaundiced way by, particularly by his clinical colleagues and so on, despite the fact, the grudging admission that he was a pioneer. And in fact he got his fellowship in the Royal Society, as Bob did, eventually, and so on.

DT I'd forgotten that.

MHJ Yes. So, I mean, he was, by the time he died, acknowledged as being a great pioneer, despite the fact of working at a Provincial hospital in Oldham.

DT Yes, well, quite amazing, isn't it?

MHJ One didn't know that at the time, of course.

Portsmouth. If he'd been in a, you know, a University hospital, he would have been looked up at... You know, that was what was behind Sheila Howarth's comment, oh, you know, if he'd been properly brought up, he, something might have been made of him. And I suspect some of that attitude would fit in with a review of Steptoe, which is sad, because...

MHJ Of course, it's understandable, because you need shorthand when you're making decisions about funding; and looking at the pedigree and the place and so on is also important. It still happens, I'm sure. I just wanted to... I mean, I thought your summary of that first meeting was incredibly fair and balanced.

DT Well, I'm flattered that you think so. I have no...

MHJ It was a very good account and summary of what we've - we've got, we've got fragments of records that we've found, and so on. There was one thing that I did want to

ask you about, that I've got somewhere, yes, we have a handwritten note from you here from the 23rd September 1970, and I think this is to Sheila Howarth, when Bob [Edwards] was to put in his preliminary grant. And you comment on the size of it, the staff estimates, and you think he's underestimated the costing, which was almost certainly correct. And you comment that 'at the time of impending financial stringency, support of this order of magnitude seems highly unlikely.' There we go - absolutely spot-on, eh? Now, you then go on to say: I think one could also raise the question of the viability of the whole scheme. 'Doctor Edwards is not medically qualified, yet virtually all of what he's requesting relates to providing clinical facilities for the patients.'

So this is this concern about it, which comes up with the referees as well. 'I would have thought that a unit of this size without the active involvement of somebody who is already part of the current Cambridge clinical scene would run into all sorts of problems.' Again, this is exactly what you were saying about CRC, and I think it's spot-on. We have independent evidence that that's the case in Cambridge, so you were right there. 'The passive approval of the Dean and Professor Mills is hardly adequate to overcome these problems, I would have thought.' Again, a very sound judgment.

Finally, is this... now this is what I'm really interested in... finally, is this area really ready for a full-scale clinical development as a priority area? It is certainly not population control. And if it is considered an aspect of reproductive biology, surely it should be developed in association with some kind of clinical centre, and not as a rather isolated development in Cambridge.'

So I just picked that up because there are threads through lots of the referees and within the MRC policy papers at the time, that the emphasis was on population control and maternal, neo-natal concerns in the reproduction area, and infertility doesn't feature anywhere. And I think maybe what you're doing, is picking up that strand from MRC policy.

DT I suspect you're right; I suspect you're right. But, listening to what you just read out, you know, you could see why there wasn't a close link with the facilities in Cambridge, I felt, and having to work at a distance with Oldham made it not a natural... on the face of it, it seemed a difficult...

MHJ I agree, and I mean, the fact is, Cambridge was at best ambivalent about hosting it: that's clear from what we've found. There was, certainly the clinical school in Cambridge was not terribly keen. The area hospital boards were prepared to contemplate it if it was funded, and to give Patrick Steptoe beds at Newmarket General Hospital, and they backed it down the line even when the MRC didn't fund it. But I've done some interviews with some of the players there, and the backing was not negative, but it was hardly actively positive – it was as if the MRC and DHSS will come in with the money, we'll take it, yes, thank you. It was that sort of attitude; but they were not negative about it, and their Ethics Committee didn't see problems with it, and that included the Bishop of Ely: we have records from the Cambridge University archive on that.

DT Well, that's very interesting.

MHJ But anyway, I'll leave these for you, and... I mean, I don't think I have any other specific questions. You, presumably, don't have any diaries or group photos of people from the period?

DT Sadly, not. I threw a lot of those out years ago. I wish I could, but no, I haven't that I have found; there may be some in the attic, but I wouldn't hold out much hope that I can find them. I gave you Barbara Rashbass' number...

MHJ I've been in touch with Barbara; and I'm going to be interviewing her in the next couple of weeks.

DT Okay, I think you would find her very helpful, because I used to cry on her shoulder quite a bit, about Sheila Howarth.

MHJ When you were there? So what role did she have...?

DT She was a fellow medical officer, but in a... you know, she had an office across the corridor from me, and had different areas of responsibility. I think – I can't remember whether she worked with Sheila Howarth or not; I suspect not.

MHJ Howarth – there is some evidence that Howarth, having assured Edwards that she would not inform other granting bodies of the precise reasons why they hadn't funded him, then the NIH was told. But even there, I think she tried to play it straight, but I think her own personal feelings about it just sort of did come through occasionally. So it's interesting what you said without any prompting at the beginning, about her.

DT Oh, well, I'd be very interested to hear what Barbara Rashbass says to you, because, as I say, I used to regularly cry on her shoulder about Sheila Howarth, and she used to try to sort of support me and say, you know, it's not that bad, sort of thing. And Barbara was there for much longer than me.

MHJ Okay, I think that's all I've got to ask you, really. Is there anything else you want to say before I switch off and...?

DT No, no, I think we're fine, thank you.

[Note added: "Thank you for sending me the edited version of our conversation. I really have no comments to make, and what you have written seems a very fair summary of events. Looking back on it all, I think my memo pointing out that Edwards had no clinical connections in Cambridge was a reasonable comment to make at the time. It is to his great credit that he managed to overcome that particular obstacle, which might well have daunted a lesser man."]