Sir Anthony Cleaver

Interviewed by

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28th August, 2016

At the

BCS London Office,
5 Southampton Street, London, WC2E 7HA
Kindly provided by BCS – The Chartered Institute for IT

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Welcome to the Archives of Information Technology. It's Friday the 26th of August 2016, and we're in the offices of the British Computer Society, the BCS. The IT and computer industry is littered with three-letter acronyms, and of course one of the biggest three-letter acronyms, which made so much of the industry, and formed so much of it, was IBM. IBM, as International Business Machines, was actually the name used for a Canadian subsidiary of the company, which had been formed in 1907 as a result of a merger of different companies financed by what we would call today a venture capitalist. And they put in charge of that a remarkable man, Thomas Watson Sr. And he had a philosophy and an ethos about running a business. He eventually changed the name of the corporation itself to IBM, and it spread internationally. And wherever it spread, it attempted to recruit the youngest and brightest people that it could to populate its growing operation. And a young, bright person they found in the 1960s was Anthony Cleaver, now Sir Anthony Cleaver.

Sir Anthony, welcome to the archives.

Thank you.

[01:12]
What was your first job in IBM?

Ah. I started as a trainee instructor. So, I came straight from Oxford, no understanding of computers at all. And, they gave me a an aptitude test of course, and, I guess I probably did quite well on that, so they decided they wanted to employ me. But the chap interviewing me said, 'Well, you've got no commercial experience.' And I said, 'Absolutely right, I don't pretend to.' So he said, 'Well the problem is then, how do we get you into the company? Do you think you could teach?' So, I said, 'Well, I don't know, but my mother's a teacher and my sister's a teacher, my aunt's a teacher, so, maybe there's something in the blood.' And, he said, 'Right,' he said, 'ten minutes' time I'll have 20 people in a room along the corridor, and I want you to talk to them for ten minutes.' And I said, 'What about?' He said, 'Anything you like.' So I think I can safely say, I'm the only person ever to get into IBM with ten minutes on the decipherment of Linear B.' [laughter] And…

It went down well?

It went down well. And I loved it. I joined on October the 15th 1962, and, started on what was called Basic School, and in those days everybody who was going to be a systems engineer, a salesman or an instructor went to the Basic School, which took about ten weeks.

Where was that?

That was, in those days in the road, and I'm forgetting its name now, off Oxford Street. Newman Street.

Newman Street.

And, we did ten weeks on the use of what were called unit record machines. So, they were all punch card based. So, you started with a key punch that punched the holes in the 80-column cards. They were then checked by somebody punching a verifier. You could then sort them in a sorter, collate them, and then you could put them through an accounting machine which would print out invoices or whatever it was. And, we also had calculators in those days. And at that time the first computers were just becoming reasonably prevalent. The 1401 was the machine that IBM had introduced in, I think they announced it in 1959; by '62 it was a fairly popular machine, and I think probably the first really successful commercial machine. And that was essentially what we were then going to be trained on. So we did ten weeks there. We then went off for field training, and so, on the 27th of December I reported to London North, which was in Welwyn, and I spent two and a half months carrying the bag for one of the salesmen, and we went round from customer to customer, and, sometimes the customers had technical problems in wiring one of the control panels, and, I was told to spend the next two or three days sorting that out, and so on. But I learnt a lot. It was really, very good experience.

[04:14]

And then, in the March I think I started on what was called Computer School. And that was another series of lectures and problems and so on, this time based on the 1401. It was pretty much like old-fashioned school, this. I mean, we had an exam

every week normally on the Friday afternoon, and they were marked, and the next Monday morning you were told how you had done in the class and so on. But it all came easily to me, it was like being paid to do crossword puzzles, I loved it. And so, that was, that worked out quite well.

What were you programming it in?

Assembler.

In assembler.

In assembler.

And what type of applications were you asked to do?

Pretty well all accounting type applications. So, you know, again, invoicing was a fairly standard thing, and then, how would you deal with a monthly statement based on the invoices? That sort of stuff. So it was fairly straightforward in that sense. But again, if you hadn't had any prior business experience, you actually could learn a lot from that, you know, and really understand. And then of course when you went to the customers, that was very helpful to you as well as to them in terms of learning, you know, what really mattered. And you could see how things went.

[05:32]
Who were their customers then, who was IBM's customers then?

Oh, they ranged from the high end sort of, technical people, and I'll come on to that in a moment. But for the 1401, they were, everybody, Chesebrough-Ponds I remember, people who used to make, Nivea was it? I can't remember. Any rate, they used to make those sorts of products. Ford of course. I mean, quite a range of companies. But of course, the 1401 had no operating system. It would do one thing at a time, so you had to load up the program and then run it, and then move on to some other application. And so on. So, it did all the standard things pretty well, and I think was

very successful. But, it couldn't cope with the sort of things that we now expect or have expected for many years.

[06:26]

And, when you were with those customers, these seem to be American companies. Was IBM mostly supplying to American companies, and had been chosen by the parent in the US?

I think there must have been some of that, but I wasn't really conscious of that. I don't think that was the case. But, there were a lot of people who were just, still experimenting. And of course, on the British side there were a lot of companies in those days.

Yes.

I mentioned that I didn't know anything about computers. What happened in fact was that I actually took my degree without knowing what I was going to do, and it was only because somebody suggested to me that I go to the Vocational Guidance Association and take their aptitude test, which I did, and at the end of the interview they said, well they thought probably law was a good thing for me to go into, and so on. And that didn't appeal particularly, and I said, 'Well no, but, what do you really think I should do?' And the chap said, 'I think you should go into computers.' And as I say, knowing nothing about it, I went back to the Oxford Appointments Board and said, 'Look, what about computer companies?' And there were ten. And I wrote the same letter to all of them. And, you know, there are names that have long gone, English Electric, LEO, Elliott Automation, and so on.

Yes.

And two of them offered me an interview, and I got two interviews on the same day. The first one was Burroughs. They actually wanted me to sell their accounting machines. And I said, 'Well if I joined you, what would happen?' And they said, 'Well, we'd give you a three-week course, and then we'd give you names and addresses of people to go and call on.' And I didn't think I had read Greats to do that

somehow. And, as I've explained, IBM was very different. But, I think, at that time, you were asking whether the American influence was very strong so to speak with the customers; I don't think that was the case at all. Some of them had particular connections, obviously Joe Lyons had developed LEO, and were very strong in that sense; Elliott I think focused pretty largely on the technical and scientific areas, and so on. So they all had their individual strengths or backgrounds.

[08:40]

Right. So, you were then, you were trained by them, by IBM.

Mhm. And then I was teaching.

And then you were teaching. And were you trained, so to speak, in this very strong culture that IBM had developed?

Oh yes, the culture was, immensely strong. And I mean it started on day one. So on day one, in the afternoon, having done a little bit of technical stuff if you like, we then had a session on IBM. And we were told what was expected. And perhaps the most significant thing was that we were expected to wear a white shirt every day. And so, for the next 32 years I wore a white shirt every day. And since I've left IBM, other than for funerals I never wear a white shirt. [laughter] It's a minor sort of rebellion. But, I mean that in a sense was, if you like, symptomatic. So, the culture was very powerful. I think we were very fortunate in a sense in the UK in that, the people in the UK, even at the time I joined, already had a strong sense of, yes we are IBM, but we're also British, and it was melding those two that I think made IBM UK the company I was very proud to be part of for many years. So, there were things like the white shirts, which clearly stemmed from the parent company, one was expected to do. On the other hand, we didn't sing IBM songs, as they still did in IBM in the States, even in my early years in the company. So…

The IBM songbook.

Yes, absolutely. But, I think also, the, the basic beliefs really were something that IBM believed in at the top, certainly Watson lived to those beliefs. I don't know if

you know the background, but, there was, there's a book by T J Watson which actually came out, I think in '63, but in 1962 he went to do a lecture at Columbia University, and he talked about a business and its beliefs, and that became the title of the book that was then published. And, the sort of fundamentals in that imbued the company, and people really would refer to them and say, well if we did that, that wouldn't be in line with… And there were just three basic beliefs, which we were told about on day one, you know. It was respect for the individual, service to the customer, and the pursuit of excellence. And they are all basic concepts, but actually that's quite a powerful set of things to try and work to, in all that you do. And I think the respect for the individual was hugely important. I noticed in your introduction you mentioned IBM tried to choose the best people if you like, and that's certainly what we did. But we then felt, we owed it to them to give them the best education, to keep them up to date, to give them good terms of service, pay them well, and then we expected a hell of a lot from them in return. And I think it's a very simple but very effective formula, which throughout my time I think we tried to live up to.

[12:00]

You started training people inside IBM then. What did you train them in?

Well I started training, so, I was teaching them first of all the 1401. But very rapidly they decided to move me on to other machines. And so, almost as soon as I had done my first course, I was then sent on a 1410 course, 1410 being a bigger version of the 1401. And then, I was again almost immediately sent on a course on the 7090. 7090 was IBM's largest sort of standard machine. There was one bigger machine called Stretch, 7030, and there was one of those in the UK, at Aldermaston. And there were six 7090s. So IBM felt they always needed one instructor who could teach the 7090, and the one instructor who they had, they wanted to move on, and so I first of all went on courses on the 7090, and then became that instructor. Now, in normal times that wouldn't have been particularly important. As I said, there were only six of these machines. But one of the interesting things for me, well several interesting aspects, first of all, it was the first machine that we had that had an operating system. So the idea of an operating system, and job control language which told the machine what to do, and so on, was something I learnt on the 7090. The other thing was, that it used to high level languages, so it had a FORTRAN compiler and a COBOL compiler. So I

also learnt those two languages. I think we had had some sort of brief instruction on them in the computer course, but certainly, we hadn't specialised, and I now learnt them in depth, and taught, and probably there were more courses for the 7090 on those languages, because that was the people who were using it, as opposed to the specialists who did assembler language and so on. So, I have to be honest, IBM never got that much back from me in terms of these courses. I learnt them, but, I kept sort of moving before I had really spent much time teaching them.

[14:12]

The next thing that happened was, towards the end, now, of 1965, IBM announced a sort of, cut-down 7090, the 7040, and the 7044, and I was sent off on a course in Essonne in France, to learn about them, again to support the efforts as they were introduced. Now all of that of course became hugely important in January 1964, because what then happened was, IBM was preparing to announce the System/360. I don't think anybody who didn't live through that could appreciate just what a revolution that was in computing. I think it's fair to say that really was the first time anybody had a range of compatible machines, so that you could start with a small one, and if you wanted to upgrade, you didn't have to reprogram, you could just transfer it from machine to machine. And IBM could see this was going to be a huge thing. It had to be, you know, the stories were that, IBM bet the company on the development of System/360. I mean that was absolutely true.

Absolutely true, yes.

So, they decided in January we were going to announce in April; we need to have some people ready to teach to both our own people and to customers. So, there were probably about 20 or 30 instructors who taught the small and intermediate machines, so they had a choice of, who were they going to take from those to be the early teacher? But on the large systems, there wasn't a choice, it was just me. And so, I was sent off with the man they chose, a chap called Clenyg Squire, to Hursley, to the laboratory. And at Hursley they had been working on the development of System/360, they actually developed one of the models, the Model 40. But they had there, on our 7090, a simulator for System/360. So, Clenyg and I spent two or three weeks down in Hursley working out how to program this new machine, and working out a few problems that we could set people to see that they understood, and so on.

And we ran all these things on a thing called Suppak, the simulator on the 7090. And then of course, on April the 7th 1964 IBM announced System/360. We had five models, 30, 40. 50, 60 and 70 at announcement time. And, that was a significant range. I mean the Model 30 was really quite a small, commercial machine. I think in theory you could get a 4K machine, which is, [laughter] hard to believe these days. But fairly typically, it might be 16 or 32K, that would be fairly normal. And it went right up to the Model 70, which was the same sort of capacity as the 7090, it was fairly powerful by the standards of those days, and could be huge, I mean, 128K maybe, something like that. And, so, we had a huge announcement; made a fantastic impact I think round the world, certainly in this country we made huge sales on day one.

On day one?

On day one. You know… Well, we announced on day one, and the salesmen went straight out and said to customers, 'I think, look, this is dramatic, you're going to want one; there's going to be a lot of pressure on getting the early machines, so you should put in an order,' et cetera, right? And, I mean, the story was, I couldn't obviously prove it, but in that day we sold more computer capacity than the whole existing in the UK prior to that day. And if I take just one example, ICI for example bought sort of one of everything and several of some of them, and they became one of the major early customers. And I'll come back to that in a moment.

[18:11]

But of course, the great thing that happened to me then was that, I was teaching everybody, from the managing director down, and so, I got a lot of visibility inside IBM. And of course then, when these people went to call on customers, if things got a bit tricky and technical, they'd think back, oh, so-and-so… And I'd get called in. So I made a lot of my mistakes on other people's patch, and learnt a lot of course in the process. And I then started developing the courses. So we had, if I call it an executive appreciation course of a week for senior managers who weren't actually going to do anything technical but who we needed to have on side, and we had an orientation course for the technical people to get them started. And then there'd be a course on assembler language, I think we took three weeks to do that, and a course on other aspects. And of course the high level languages then became standard, so there

was FORTRAN and COBOL, and I was one of the few people who was already teaching those. But then on top of that, IBM decided it was going to develop what it called originally NPL, New Programming Language, which became PL/I, and that was based in Hursley, so again, I was involved with that. And I think I taught the world's first PL/I course for customers, that would have been, however, the following year. And of course nearly everything was the following year, to put it mildly, because, 360 was very ambitious, and both hardware and software suffered delays, and so on.
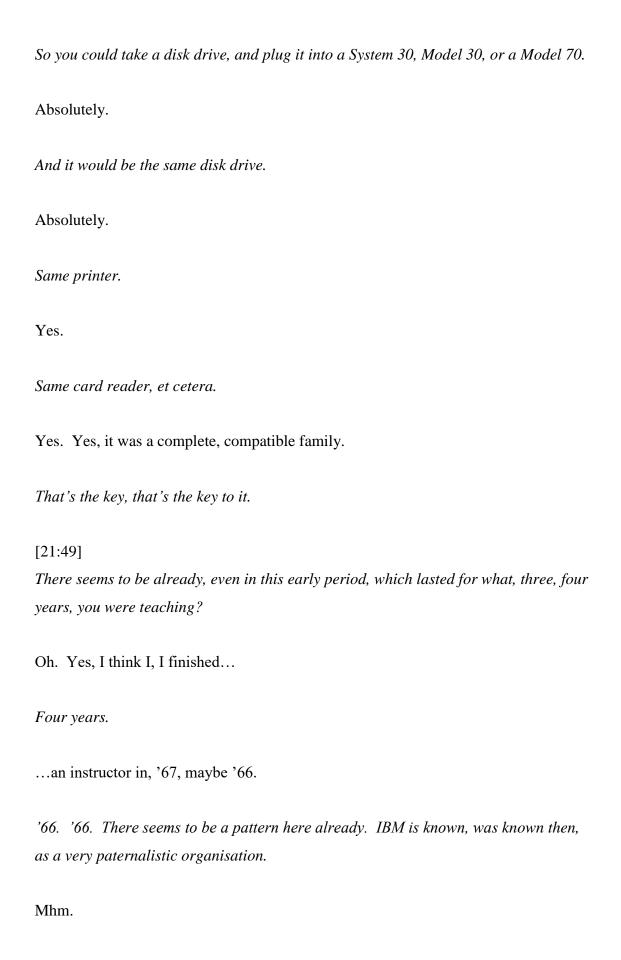
[19:48]

The thing I remember most perhaps is the challenge we had with ICI. It got to November, and ICI, having 'bought', in quotes, all these machines, were getting worried about, they couldn't see them, they couldn't do anything et cetera. And they insisted that somebody come and teach them about the operating system. And there were no OS/360 courses. So I was told to go and spend two weeks at Alderley Edge, ICI's education place, and teach them OS/360. So I started by gathering everything there was that was published, and then I put together some problems. Because the way one taught in those days was, you teach for an hour, hour and a half or whatever, and then set people a problem, and then go through it with them and so on. And, I only had enough material for about a day and a half when I started. So IBM agreed to fund the telephone costs, and I spent, I used to teach to five o'clock, go back to the hotel, and get on the line to Poughkeepsie, which is where OS/360 was being developed, and talk to the people and say, 'Now what could I teach them next?' And they'd say, 'Well, you know about job control.' And I said, 'I've done job control. Now we'd better talk about the linkage editor,' and so on. And so, I managed to stagger through this fortnight's course. But it was interesting, because over the years later there were a number of people who worked for ICI who came on that course, and we used to meet every three or four years, and, look back with some amusement at it. But…

[21:24]

Now the 360 was not only software compatible, but it was also hardware compatible, because of the standard plugs.

Yes.

So you could take a disk drive, and plug it into a System 30, Model 30, or a Model 70.

Absolutely.

And it would be the same disk drive.

Absolutely.

Same printer.

Yes.

Same card reader, et cetera.

Yes. Yes, it was a complete, compatible family.

That's the key, that's the key to it.

[21:49]
There seems to be already, even in this early period, which lasted for what, three, four years, you were teaching?

Oh. Yes, I think I, I finished…

Four years.

…an instructor in, '67, maybe '66.

'66. '66. There seems to be a pattern here already. IBM is known, was known then, as a very paternalistic organisation.

Mhm.

And, what we would now call human resources, I believe they called the Personnel Department…

Absolutely.

…looked after people.

Yes.

And, almost modelled their career.

Oh yeah.

And you were being moved, partially to test you.

Yes.

But you were always being moved on to more important things. To be an instructor for the 360, in the UK, was really quite something.

Yes. No, I, I look back, I, and, perhaps it doesn't happen quite so often nowadays as it used to, but you know, you find yourself at the bar somewhere with young men who are keen and enthusiastic and ambitious, and they say, well, 'How did you, you know, manage your career?' And I almost feel guilty, because, I think my career was managed rather than me managing it, you know.

Right.

If I look back, almost the whole of my career, until the sort of, more settled state at the end in IBM, in IBM UK, was an alternate of a year doing something, and then three years doing something else, and then a year, and so on. And very often it was a question of, 'Well we want you to do this,' and I'd say, 'Well I don't know anything about that.' And they'd say, 'Fine, it doesn't matter. We want you to do this.' And you say, 'Well OK,' and off you went. And, later on, you know, when I was running

IBM UK, for all the senior positions, we had replacement tables. And that meant that we had two or three names of people who we thought, if this person moved on, for whatever reason, would be the ones we would look at to decide who we'd promote to it. But we also started with people in the sort of 25 to 30 range, and we would identify people from early courses and say, this is someone with, I think high potential was the phrase, somebody we thought, in the long term, and therefore… And one of the ways in which we appraised our managers, because everybody got an appraisal every year, and in that…

Part of the culture, part of the philosophy.

Part of the culture, appraisal and counselling, A&C. And, we took it very seriously. And the way that it worked was that, each individual was given some objectives. Those objectives were set by his manager, but approved by the manager's manager, so there was always that sort of check. And then at the end of the year, the individual would be given, by the manager, his assessment of their performance. They would have a chance to respond to it, and comment. They'd have a meeting at which hopefully there was agreement, not always but, mostly. And then, that interview itself was sort of, recorded, with, with the notes, and had to be approved by the manager's manager. So it was a very structured process. But I think it was a very fair process. It was back to this respect for the individual. And people didn't hesitate, if they really felt it, to say, 'Look, I don't agree with that. I think I did this and this, and you were the person who prevented me doing that and that.' And so there was a very healthy interplay there, and, I think, most of us learnt a lot on the way up from that, and certainly supported it afterwards, and I put in some quite draconian measures at one stage when I felt… One of the things we used to do, again, was, for senior managers, say, what percentage of the appraisals that should have been done by this date have actually been done? And for one year I said, nobody could get a pay rise unless they'd got 100 per cent of the ones they were responsible for, et cetera. And, you know, so…

And they were done.

And they were done. It's amazing what you can do, you know. [laughter] But I think, going back to that, you're right, I was, I, you know, I hardly ever taught a course twice. Over that period I was developing new courses, and then I'd teach it once, and then I'd hand over my notes, and the problems that I'd set, and so on, to the next person, and go on to the next subject. So for me, it was a tremendous opportunity, and the sort of thing that could only happen at that point in time so to speak, with a complete new system to explain.

Yes. But a steep learning curve.

Yes.

[26:40]
Another part of IBM, I believe, at the time, and maybe still is, was Speak Up.

Yes.

That you were allowed to anonymously say things. Is that right?

Yes. Yes, you… If you had something that you were concerned about, and for whatever reason you didn't feel it appropriate to talk to your manager or whatever, you could write in to a central point where, what you put would be anonymised, if it would betray by its content who you were so to speak. Part of the Speak Up department's responsibility was to anonymise it, OK. And then, the people who could handle that issue would be told, 'Look, you know, we've had this Speak Up and we need your response.' And again, that was a, a very good safeguard. I don't think it was used that often. Well it depends what you mean by that often. It was used regularly. I mean, in the course of a year I'm sure there wouldn't normally be a week in which there weren't one or two Speak Ups in IBM UK, but it wasn't that it was inundated. If you got several on the same topic, that also told you something. So, again, it was another part of the culture. I think one of the difficulties I found much later on, when people would say to you, 'Well you do so-and-so in IBM, and perhaps we should do that,' saying, 'Well, yes, but, you need the whole package. It only works if you do it all together.'

Yes.

You know, one of the most important tools that we had was the opinion survey. Normally, every year or every two years, I can't remember whether it was every year, we would send out an opinion survey to all our employees, and there'd be, probably 70 or 80 questions, and for each one it was, you know, 'Do you totally agree, partially,' or whatever. And, we took that enormously seriously. So, when I was chief executive of IBM UK, I would have to go to Paris to explain the results of our latest opinion survey. So it was very much something that you, you cared about, and that, again, went all the way down the line. So, what would happen was, the results, the things would come in, they would then be marked, and the numbers then would be released to, in, at the lowest level, first line manager, he would get the results for his people; second line manager would get the results across their part of the population; and so on, all the way up. And then, you would have a meeting with your manager to explain your results, you know, 'I understand why this particular branch out of my five is unhappy with this; it's because they live in Nottingham, and frankly, our office in Nottingham is not up to the standards of the rest.' You know, whatever it may be. And again, it was a very powerful tool. I think already you can see there are, maybe ten or 20 aspects to this culture. One of the ones that I found quite interesting…

[29:47]

One of the difficulties I think for somebody like me is, you spend 30 years inside a very powerful culture, and it was only when I came out and went to other companies that I realised how much I had taken for granted, that just didn't happen elsewhere. And, most of it, almost all of it, I think, I would reproduce elsewhere, if one could. You can't, because it's, as I say, you've got to have the whole package, and that, you really can't reproduce. But there were lots of things that I saw later on, gosh, if only they had had that in this company, this wouldn't have happened, or it would have been better. And one of the things is to do with sort of, ethics, business ethics. There's all this talk nowadays, you know, about this aspect, and I think, sadly, business doesn't have a very good reputation, in general. People still think of businessmen as, you know, always looking at the short-term and cutting corners and, and not worrying about what is morally right and so on. IBM again had a very rigorous approach to this. We had a little booklet called Business Conduct

Guidelines, and this was normally revised each year, and sent out across the world, and every employee had to read it, and then they had to sign a piece of paper saying, 'I have read and understood the Business Conduct Guidelines.' Now, you may say that's over the top. But, it's quite interesting, you know, if you, if people have done that… What I found interesting was that, when I was running the UK, I think on average, we'd do this, I don't know whether we did it every year, maybe every two years, but on average, there would be about 20 people who would refuse to sign. And they would say, 'I can't sign up to this, because, I can think of a circumstance in which I might not do this.' And we'd sort of, [laughs] sit them down with the manager and say, 'Now look, have you really thought this through?' et cetera. And, we'd spend a lot of time with those 20 people, trying to understand and seeing whether we could agree, or not. I don't think we ever fired anybody, but, you know, it certainly was followed up quite seriously. But it did mean, I could stand up and say, you know, this is what we in IBM do. We do not do this. So, disparaging the competition, for example. I mean obviously one tries to put one's own products in the best light, but you don't specifically go along and say, so-and-so doesn't work, et cetera, and, there were occasions when we did fire people for that.

[32:43]
You moved on from training, then.

Well I… Yes. So, I stayed as an instructor. I had some interesting experiences. In '65 I got sent to Nigeria for two weeks, to the University of Ibadan. IBM had decided the year before that it would put on a year's course at the University of Ibadan for the data processing managers of the future in Africa, about 40 of them. And they'd been taught the 1401, et cetera. And I was sent to do an update to take them into the 360 for two weeks. And again, fantastic experience; very difficult in the sense that, they really had not much background in terms of the applications. You couldn't just say to them, 'Well of course, if you were running an invoicing system,' because, half of them had never seen an invoice, you know. But they were very bright. And it was a, you know, again, a huge opportunity for me, just to get a different experience, and, and so on. But then, increasingly, people tended to ask me to go and talk to their customers about something, again because people had seen me on a course or whatever. And, so, eventually I became a systems engineer. And…
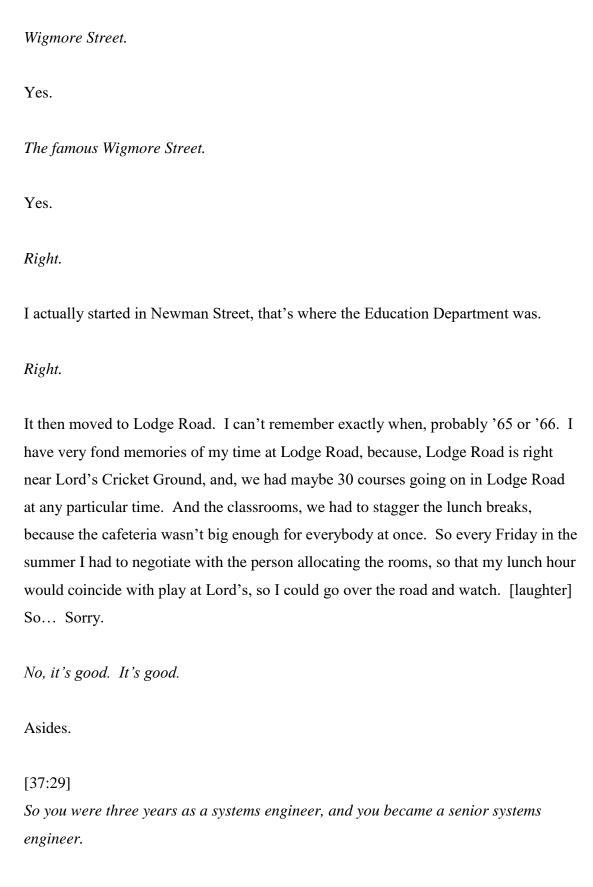
[34:02]

What is that role in IBM at the time?

Yes. The systems engineer was there to be the technical adviser, if you like. So, the responsibility for any customer lay with the salesman, who was the account salesman. When I say 'the salesman', I mean in some cases it would be a lead salesman with five or six others, in a big customer, a bank or whatever; in others it would be just the one person. And, they were expected to know enough, talk to the customer, understand the customer's perception, et cetera. But when it got down to the technical stuff, actually understanding how to program or whatever, then it was the systems engineer who was expected to do that. And, it was a, it was a very good role. A lot of people, it was something they did for the whole of their career, and they enjoyed that; for others, it was, very often you would come in, be a systems engineer, and then, decide that you wanted to be a salesman, and people would move across to do that, it's a fairly standard thing to do. Incidentally, I mentioned joining as a trainee instructor. On day one when I arrived, I discovered on the basic course there were two other people who had read Greats at Oxford and were exact contemporaries of mine, and they were both going to be systems engineers. So I probably was the first person to go and complain to my manager, my second day in the company, I insisted on seeing my new manager, and said that I thought, I wanted a transfer, because, obviously, instructors were junior compared with systems engineers. Luckily he was used to dealing with foolish young men, and he said, 'Well look, you know, systems engineers all come on this course, and then they do the same training before the next one, and they come on the next course. So, why don't you leave it till the end of that, and then if you want to transfer, I'm sure we'll do it.' And of course I, well I did, but years later. So, anyway, I then became a systems engineer. And I went to what initially was called the Early Support Group, because, we were still dealing with some of the early problems with System/360, and so on. So it was a sort of specialist team to go out to situations there. So I did that for some time. And…

Where were you based then?

I was based in Wigmore Street at one stage.

Wigmore Street.

Yes.

The famous Wigmore Street.

Yes.

Right.

I actually started in Newman Street, that's where the Education Department was.

Right.

It then moved to Lodge Road. I can't remember exactly when, probably '65 or '66. I have very fond memories of my time at Lodge Road, because, Lodge Road is right near Lord's Cricket Ground, and, we had maybe 30 courses going on in Lodge Road at any particular time. And the classrooms, we had to stagger the lunch breaks, because the cafeteria wasn't big enough for everybody at once. So every Friday in the summer I had to negotiate with the person allocating the rooms, so that my lunch hour would coincide with play at Lord's, so I could go over the road and watch. [laughter] So… Sorry.

No, it's good. It's good.

Asides.

[37:29]
So you were three years as a systems engineer, and you became a senior systems engineer.

I became a senior systems engineer first. And, one of the things that IBM did in those days was to have a European SE symposium, and if you wanted to go to this, you had

to write a paper, and, the best papers in the UK so to speak were chosen to actually be presented there, and some people got to go but didn't actually present their paper. And, I was lucky enough to go in, 1967 I think I went for the… Yes, '67, I went for the first time, and presented my paper, and got the prize for the best presentation. And, went back again in '68, and again got the prize. And, I was already developing a particular interest which was in performance, trying to make things run faster. Again, as I said, it's like doing crossword puzzles, and, in those days… I feel sorry for people today who deal with a PC for example, with millions of lines of code written by programmers in California, with no particular logic. I mean they happen to choose to do it this way. It wasn't like that in our day; you could actually go back to first principles, back to the assembler language, debug the thing, and decide how you can make it go faster or whatever. And I loved that. And so, that was a sort of area that I specialised in. And from that, I then got transferred across, still as a systems engineer, to large systems marketing. So then, my role was specifically to be the technical person on performance, where people were selling big systems round the country. So somebody was selling what in those days might be a Model 65 or something like that, and, it would be, I don't know, up at, let's say payroll, or somebody in the North, and I'd go up and spend two or three days as a sort of, whiz-kid. And it was a, it was huge. I mean I had no responsibility in one sense, because it was other people's accounts, they were the ones who had to sell it, or not. So it was power without responsibility. I could swan in and give them my views and so on. I think I actually did take it quite seriously, and I loved it. I mean I found it really fascinating.

[40:00]
And again, you're being moved, aren't you?

Yes. And I was promoted to, I was very proud at the time, I became the youngest consultant systems engineer. Because we had all these grades for systems engineers, so, I don't know, trainee, associate, systems then a senior systems engineer. And there were only about, five or six of us who were consultant systems engineers, and I got there fastest, so, I was pleased with myself about that. And, and that's really what I was doing right up until, at the end of November 1969. And, suddenly, I got called in by Peter Clarke, who was the sort of, number two or three in the company. And I remember it very well. It was a Friday.

There was a Fred Clarke and a Peter Clarke, wasn't there?

Yes, there were two Clarkes.

Yes.

And, it was a Friday evening, and I was suddenly summoned to the top floor. We were, by then we were in Chiswick, in the Gunnersbury building, and, seventeenth floor. And, I was summoned by Peter Clarke. I mean I knew him a bit in that obviously I had presented the things, and he had been there, but, didn't know him in any sense personally. And he called me in, and he said, 'Right,' he said, 'we've got a new job we want to move you to. We want you to be manager of this marketing unit, looking after Lloyds Bank.' I said, 'Well,' I said, 'that's a job on quota isn't it? I mean, paid on commission.' He said, 'Yes.' I said, 'Well I've never done that.' He said, 'No, I know.' And I said, 'And marketing, that must be a second line management job.' He said, 'Yes, of, I don't know, about 100 people.' I said, 'Well I've never been a manager. And by the way, I don't know anything about banking.' And he said, 'So what?' And we then fell out, because, I said, 'Well look, I don't know whether I'd be any good at it.' I said, 'I think I'm rather good at what I do, and I certainly enjoy it, and, I don't know whether this is a sensible thing for me to do.' And he got angry, and he said, 'We've never offered anybody as big a promotion as this, and here are you, turning it down.' And I said, 'No no. I'm not turning it down.' I said, 'Look, it's Friday, it's now about seven o'clock. I know there's nobody else on the floor.' And I said, ''I'll come back at half-past eight on Monday and give you my answer. But I really do need to think about this.' And so, somewhat begrudgingly he agreed to that. And of course I couldn't resist it. So, I came back, with all sorts of qualms, but nonetheless, and I said, 'OK, look, I'd like to do this.'

So this is a special unit, looking after Lloyds Bank.

Yes. They're already, it already existed, the unit.

Right. So you were taking…

They had decided… The chap left who was running it, and, I was brought in.

Lloyds Bank was a very important customer?

Very. Very important, as will appear. And, so, on the Tuesday morning, Eddie Nixon took me in himself to meet the general manager of Lloyds Bank, and introduced me as their new man. Eddie, I had known a bit, because again, I had presented all sorts of things when he had been in the audience, and so on, but, I didn't really know him. And as I said, I knew nothing about banking and so on. So, Eddie had a very smooth, has always, meeting with the general manager, who was charming, and said, you know, 'I'm sure Tony will really look after you,' and so on. And left. [laughs] And I'm left there with the general manager. And he said, 'Now, what do you think you can do for us?' And I said, 'Quite honestly, I have no idea.' I said, 'I think I do understand computers.' I said, 'I do understand how to make 'em fly, and, I'd like to think that on the back of that, together with all the people who already support the account, who obviously know a lot about you, I could make things happen. But,' I said, 'I need some help.' He said, 'What do you mean?' I said, 'Well I need to understand a bit more than I do about banking.' 'Oh,' he said, 'that's not a problem, I can fix that.' So, for the next week or so, I was sent round to various departments in the bank, and they were instructed to talk to me and tell me what they did and how they did it. And of course, again, that was an invaluable opportunity. And, I remember at the end I had to come back and tell him what I had found.   And there was only one thing that I noticed on the way through, and that was that, in nearly all the departments, in the course of telling me about what they did, they'd say, 'Well of course we have one or two special customers and we do have special terms for them,' or whatever. And of course, they were always the same customers, and because they're doing well, or are important to this department, they're getting a good deal there, and they're getting a good deal here. I said, 'I suspect you're actually doing rather better for these people than you need,' in the sense. So he said, 'Oh, that's interesting.' So I don't know what sort of havoc I caused by that comment. But, it was tremendous, because Lloyds were already well ahead with putting all their branches onto the computer system. It was a program that had already started. It was based on products developed specially for them, so the 3980 system, and the terminals

that went with it, worked largely from Hursley. And, that was working very well.
And so, the first job was to make sure that continued.

[46:18]

But then, there were two other aspects. I've always been lucky, I mean, timing is
everything, and just as the 360 was right for me, in the same way, February the 15th
1971, you probably don't recall, but it was the day we decimalised. And of course
decimalisation meant, for anybody with anything, anything at all to do with sterling,
they had to change all their systems. So it was a huge opportunity in that sense, which
we took full advantage of. But for Lloyds that wasn't the most important thing. The
most important thing for them was that they saw the need for what became a cash
dispenser. And, at that time there was nothing that did anything like the job. The
only thing, I'm always amused in one way by the claims that, the De La Rue box was
a cash dispenser. What it did was, you had to, you had to buy a card for £100, and
you could then get ten lots of £10 on this card. Now, as Lloyds pointed out to me,
that was no use to them, because most of their customers couldn't afford £100
upfront. Remember, in those days, you know, that was a lot of money.

Mm.

So, they said, 'Look, our problem is this. Every Friday, there are a lot of people who
are paid weekly, they flood into the bank. We literally take on extra cashiers just for
Friday lunchtime, and even so we've got queues out of the bank and so on. We want
a machine that can deal with that problem, and you supplied our equipment, so you'd
better well find one.' So I listen. And I mean the idea, in fairness, really was theirs
rather than ours if you like, they had a need. But after a while I said, 'Look, OK, I can
see, I can see that you have a real need, and obviously we'd like to be the people who
can supply it. But, we need really to understand, in much more detail, how this might
work and so on.' So they put together a team of three, and I put in three people. I
think we spent about two and a half to three months doing a detailed study of what
we'd require. And of course the fundamentals were, first of all, you had to be able to
recognise the customer, and it had to be a secure recognition. Then, you had to be
able to access the customer's account and see how much money they'd got. Then you
had to be able to pay out a variable amount of money. And, that sounds simple, but
actually, you need several different pieces of technology. First of all, you obviously

need the bank branch to be online and immediately accessible. Then you need the technology that can recognise the customer, however you do that. And then you need the mechanism that can actually translate the customer's request into, that means, two £5, or one five and three ones, or, whatever it may be. I think most of the real breakthroughs in computing come when you get two or three different technologies that come to an appropriate level of development at the same time. You look at the PC later on, you needed the screen, you needed a disk, and you needed some simple programming, but you needed the three things, it wasn't any good having one of them. And in the same way, you needed these. So, one of the questions was, how are you going to recognise the customer? And, in those days the mag stripe was just developed, and, it had just been used by IBM in California for the Bay Area Rapid Transit system as, rather like today one does on the Tube. So, that technology was available. Lloyds were well ahead with getting their branches all online, so, they knew they could do that. Dispensing mechanism, that wasn't too complicated, so one could see how one could do it.

[50:46]

So I was filled with enthusiasm, I thought, this is great. So I went off to IBM, and we had a Specials Department for non-standard requests, called it RPQ, request price quotation. And, so I went along with my spec and said, 'This is what we want to build, and we'll sell lots of these.' And, people looked at it, and said, 'Well, don't know whether that's ever going to work. Doesn't sound very likely,' et cetera. And I couldn't get anybody to take it up. And then, I had another of those strokes of luck. There was a chap called John Fairclough, who you would certainly know from his later career. John had started, I think with Ferranti. Any rate, came to IBM early, was heavily involved at Hursley with the development of the System/360 Model 40. From there, he eventually became Assistant General Manager in the UK working for Eddie. John and I had always got on well, because, he was a technical, and I was, in those day, a sort of whiz-kid, and we'd done a number of, working together, doing presentations, you know. And, so I knew John quite well. And John was interested in this, but of course, wasn't able in the UK to do anything, et cetera. Then he got posted to Raleigh, to run the laboratory there. And he could see how he could pull together the expertise from the other IBM labs in the States. And so we did a skunkworks. We actually built a sort of cardboard and string cash dispenser. And, it must have been in, early, very early 1971, I flew Lloyds Bank over… No, may have

been earlier than that. Anyway, I flew Lloyds Bank over to the top people, and showed them this machine. And they said, 'Fine, if you can build that, we'll buy it.' And so, again I thought, this is great.

[52:50]

Now IBM being IBM, we haven't really talked about the sort of international dimension, but it was always important, it always wanted to look at things worldwide. So the next thing is, IBM does a worldwide forecast. So… And, I then get summoned to New York. Now I'm still very junior, you know, I've just become a branch manager, which was a sort of step up, but nonetheless, it's pretty junior. And I get summoned to meet Jacques Maisonrouge, who's sort of, head of world trade and, god. [laughs] I go into his office, and he said, 'Ah, Mr Cleaver,' he said, 'we have a problem.' So I said, 'Well…' He said, 'We've just done this worldwide forecast for this machine you want us to build.' So I said, 'Yeah.' He said, 'The forecast says that if we make this, we will sell 1,600.' And he said, 'The problem I have is that apparently you are going to sell 1,500 of them.' [laughter] So being young and arrogant, what do you do? I said, 'Well that's because I understand it and these people don't.' I said, 'They've had a piece of paper from head office saying, "Are you interested? Would you sell one of these machines?"' I said, 'I've spent months working hand in glove with the customer to understand exactly what they want, and I know I can sell 1500 of these machines.' Now he had done a bit of homework and he thought he had got me at that point, and he said, 'Well,' he said, 'I have a problem,' he said, 'because, I've talked to my friends here in the States, and they tell me that the biggest bank here has only got 800 branches. So how are you going to sell…?' I said, 'Ah.' Luckily I knew the answer. I said, 'That's because of the Glass–Steagall Act.' And I said, 'The Glass–Steagall Act restricts retail banking to state boundaries, so the bank you are talking about, I happen to know, is Bank of America in California.' I said, 'Lloyds Bank has got 2,200 branches; a) it's not even the biggest bank in the UK, and b) I'm not even selling one per branch.' So, he was convinced. And off I went back to the UK and thought, OK, that's great.

But this is another exposure to the top people.

Yes. Yes it is. So, Jacques does as he said he would, and he takes it to the main board. And Learson, who's then the boss, turns it down. And he turns it down

because they have a discussion at the board, and one of the non-execs says that, if we do that, we'll have to interface with the general public, and we have never dealt with the general public. Do we know how to do it? Because, even when we sell our typewriters, we can train a secretary. We can't train people to use this.' So, back it comes, and I get summoned. [laughs] And all that I can say is, 'Look, we've really done our homework. We have reduced this to, all the customer has to do is remember a four-digit number. Right? It's as simple as we can possibly make it. And, the bank, it has their name on it as the big name; our name will be there, but they're the people, and they're prepared to take this. So, the other thing I have to say is, although this is brand new, the bits of technology are all out there, and other people will do it if we don't, and banking is important to us,' which it always was. So luckily this time they agree.

[56:11]

So eventually, I get the go-ahead, must have been about June I think in '71, and I'm told, 'This is the price; you can now bid it to Lloyds Bank.' So I have the bank all set up. I arrive, I'm allowed to bid from nine o'clock on Monday morning. By 9.30 I've got a letter for 500 machines at about £10,000 a time. And, I jump in my car, and drive to Chiswick, to the sales director. He's out. And I put that on his desk, with a note saying, 'I make that one hour fifteen minutes from permission to bid,' right? What I don't know is that in the meantime they've phoned Eddie Nixon and they've said, 'Look, we've given Cleaver this letter, and, it is a valid order, but there is one condition, which isn't in the letter, and that is that he has to stay as our manager until the first one's installed.' [laughter] Which is very smart of them, I have to say. Anyway, so we went ahead. And, over the next eighteen months we had all sorts of challenges, not least with the software, because, the standard software wasn't fast enough. You can't have people waiting there for the thing. So, we had to write our own software, and IBM doesn't like people doing non-standard things and so on. Luckily I had some really bright guys in the branch and we managed to do it all, and so on. Anyway, so, on December the 11th 1972 the world's first online variable amount cash dispenser went live, at Brentwood, and, the rest is history. You walk down the street now, there'll be 30 or 40 in one street.

There will.

So…

There will.

One thing I should say actually, was that, the other thing I spent that next eighteen months doing – well two other things, the other thing that Lloyds I spent the time doing was persuading them that they should put these machines through the wall. Because they actually wanted to put them inside, and the first ones did go inside the branches.

Yes.

And they were very doubtful about whether they wanted them out in the street. But we thought, quite rightly, that in the long term that's where the opportunity was. So, I got the first 500 in-branch, and it took me about, another year to sell the first 100 to go through the wall, and so on.

[58:36]

The other thing I managed to do in '71, which was my other ambition at the time, was to sell to the Bank of England. And, they of course were ICL, etc. And they came out saying they wanted new systems. And it's indicative I think of a lot of the background of computing in the UK at the time. So we bid, and they told us that, they really wanted to understand what was the best system for them. So they had two parts of the Bank, and we should bid, a) what we would do if we did a single system for both, and b) what we would do if we had two separate systems. And, they asked ICL to do the same thing.

And what were you going to bid, what machine were you going to bid?

We bid 2145s.

OK.

Yah, I think it was 2145s in each case. Certainly in the bit that we won was 2145s. And we also bid database, and it was about the first time that databases, I think it was

IMS came out, and so on. And that I think was quite a challenge for my successors; I had moved on. But there we are. But, just as an indication of the power of buy British, which is a sort of recurring theme throughout my time, I have to say, and I suppose I can't prove this, but, I know what I was told by people in the Bank. When they came to judge the systems, they said the best system would be IBM, one system. The second best would be two IBM systems. And then comes ICL. The decision got referred to the Cabinet, because, wouldn't this be a big blow for the British computer industry, and so on. And they were ordered to split the business. And so we won one half, and ICL won the other half. And, I suppose by then I had learnt a bit about selling, and it was quite interesting, because, obviously, the people were glad to see us with the half we had won, but I insisted on calling on the chap who was responsible for the other half. And he was obviously sort of, nervous in a sense when I got in, you know, about how this was going to go. And I said, 'Look, I only want five minutes.' I said, 'I enjoyed working with your people. I'm very sorry that you'll not come with us. I hope in the fullness of time that might change, but I just wanted to say thank you for your cooperation.' 'Oh,' he said, 'oh, well thank you.' And of course alter on he was one of the chaps I knew well, and so on, and…

[1:01:24]
So, here is this American-owned, wholly-owned company.

Oh absolutely. Yes.

Refuses to let anybody else have a participation in his wholly-owned subsidiary, IBM UK.

Yup.

Mostly staffed by people from the UK.

Entirely staffed.

Entirely staffed by people from the UK.

Other than, you know, occasionally there might be a particular technical expert or whatever. But again, I think it's a recurrent theme as we talk, the strength of IBM's beliefs and systems, and IBM at that time believed fundamentally that countries should be run by nationals of the country.

Yes.

Interestingly, for IBM UK, that transition came through the Sixties, not for IBM UK in the UK, but, for some time we quite often had to send Brits across to the parts of Africa that had British connections, to be the country manager, but it was always our instruction that if possible, in their time there, they should develop a local who could take over.

Mhm.

So, yes of course it was a wholly-owned subsidiary, you're absolutely right. On the other hand, we were as British as we could be other than ownership. I think in every other aspect that was a conscious, deliberate decision.

And you reported, or the company reported, to Paris.

Yes.

Which was Europe, Middle East and Africa.

Europe, Middle East, Africa. Yup.

And that reported to White Plains, which is IBM World Trade.

Yes.

And that reported to…

To the Corporation. Yup.

...the Corporation itself.

In Armonk. Yup.

In Armonk. OK.

Yup.

So that was the structure.

That was the structure.

[1:03:11]
OK. And your next move was into that structure.

Into… Exactly.

To White Plains.

Yes. So what happened then was that, on, in November, I think, the company was confident enough that the first cash dispenser would go live, and would be successful. And I was interviewed by a chap called Gil Jones, who was then Chairman of World Trade, about the possibility of my going to the States. And, at the end they just said, yes, they would like me to do that. And then, a personal problem arose, in that, my wife had just given birth, we had our son at the end of August, and in the course of her time in hospital they discovered that she had got cancer of the thyroid. She had to have it out, and, subsequent treatment. And I was unable to go. So, they said, 'Well, no problem. Got to sort your personal problem, but then we'll…' It meant I didn't go to the job that he had interviewed me for, but that didn't matter as it happened. And so, I became, I forget what it was called, marketing, district marketing manager or something, for five months. And then in June I did go to White Plains, we moved, and I became AA, Admin Assistant, classic IBM term, to the World Trade vice-president of product line, a chap called Ray Fentress[sp?]. And, again…

What was your role then?

Well, again it was a classic IBM thing. Senior people in IBM would have an assistant, an admin assistant. The admin assistant was normally a young manager, typically, you know, a 30, 32-yar-old, et cetera, who had high potential, as we discussed earlier, and the idea was that, a) obviously he should help the person he's working for, but b) he should get a perspective of something from that level, and understand that. I was both lucky and unlucky I suppose in my vice-president. Ray Fentress[sp?] was very bright. I thought I was doing quite well, you know, by the time, I suppose, what was I? When are we talking about? '73. I'd be 35?

We're talking about, '73, '74.

Yes. So, I'm 35, you know, and I've already been a branch manager, which was always seen as one of the things you had to do on the way up.

Oh yes. Oh yes.

And, you know, I've now been assigned to the States, and so on. That's pretty good. And I've discovered that Ray is about two years older than me. He is of course American. He's already been general manager of two South American countries, right And he's, you know, way up in terms of the thing. Super chap, really enjoyed him as a person. He was a Southerner with a sort of Southern accent, which he used mercilessly to give people the idea he was this country boy, and he was certainly not a country boy. And, he didn't… He was probably the least equipped to use an assistant. I mean he didn't want any help, he didn't think he needed any help, other than very basic housekeeping stuff. But he called me in the first day and he said, 'Tony,' he said, he said, 'as far as I'm concerned,' he said, 'you can be here in my office whatever I do, unless it's a personnel meeting,' he said. 'Anything else…' And he said, 'I expect you to listen, and,' he said, 'if you've got any questions at the end of the day, you can have a word with me and ask me about it, and so on.' And of course that is invaluable. Because it doesn't really matter. Afterwards you think back, and you either think, ah, I remember when Ray had this sort of problem and this

is how he fixed it, or, you think back and you say, I remember when Ray had this sort of problem, and, didn't work very well, what he did, so I'm not going to do that. Either way, you learn. And, it's a very powerful development tool. So I was there, and…

[1:07:22]
You were there for a year.

I… I was there, supposedly for two years, but all sorts of things happened in that time. The first thing that happened was that, after about five months Ray got given a new job, and Ray's new job was to be Mr IBM in Russia. IBM had decided to go into Russia. Now, being the sort of enthusiastic American he was, Ray threw himself into this. He was immediately into intensive Russian language courses and so on. And I had to help him as much as I could with, dealing with the State Department, getting, et cetera et cetera. So that was just an interesting insight into the way some of these top level changes happened. But then, the other thing that then happened was that, things didn't work out for the district manager, finance district manager, so, I had been one of five, six branches reporting in to the fiancé district manager, and, it wasn't working, and I was summoned back by Peter Morgan, who members of the Information Technologists will remember, who was then the sales manager, and, asked if I would take over as Finance District Manager. And of course I said yes.
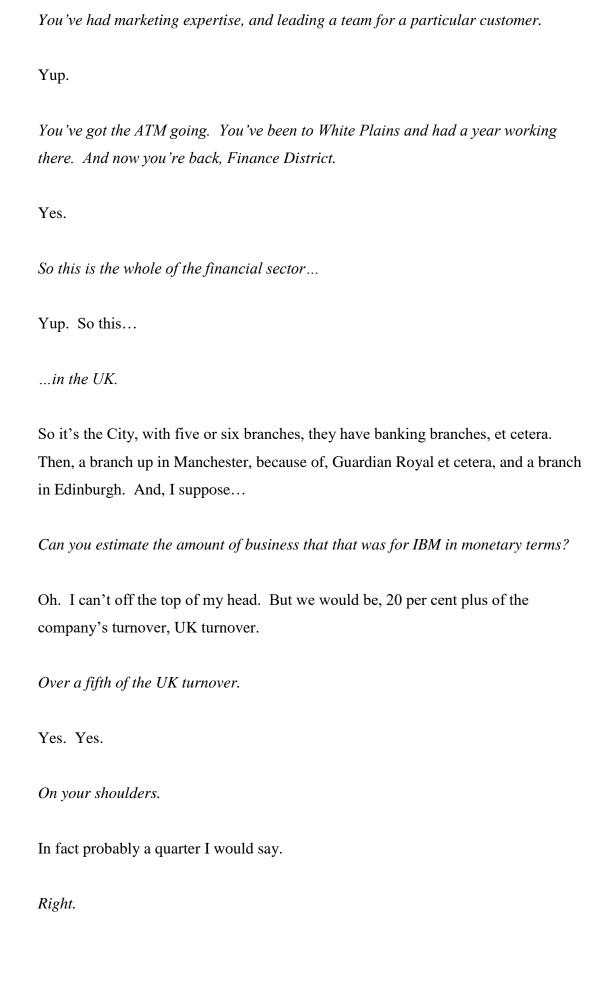
So, here we go again, don't we.

Yes.

This, now this is a very big step.

Yes.

You've had technical expertise.

Yes.

You've had marketing expertise, and leading a team for a particular customer.

Yup.

You've got the ATM going. You've been to White Plains and had a year working there. And now you're back, Finance District.

Yes.

So this is the whole of the financial sector…

Yup. So this…

…in the UK.

So it's the City, with five or six branches, they have banking branches, et cetera. Then, a branch up in Manchester, because of, Guardian Royal et cetera, and a branch in Edinburgh. And, I suppose…

Can you estimate the amount of business that that was for IBM in monetary terms?

Oh. I can't off the top of my head. But we would be, 20 per cent plus of the company's turnover, UK turnover.

Over a fifth of the UK turnover.

Yes. Yes.

On your shoulders.

In fact probably a quarter I would say.

Right.

Yup.

On your shoulders.

Yes. But…

And you're 36, 37.

Yah. But by then, you know, I've, I've spent the time in the City, with Lloyds and the Bank of England. I'm very comfortable with banking. The next biggest area is insurance, and IBM is hugely strong. By the time I left Finance District, we had nineteen of the top 20 insurance companies. And, so, again, one could learn an industry if you like.

Yup.

And we had got a lot of experience, so I could pick that up, and so on. The other thing I enjoyed most, and I learnt a lot, I'm not sure I used it, or was able to use it as much in my IBM career as later, was Edinburgh. I had a branch in Edinburgh, and that again was banking and insurance basically. It was the Scottish banks, and the Scottish insurance companies, like Scottish Widows, Standard Life, big companies, General Accident, and so on. And I used to go up about once a fortnight, and I would fly up on what was then a shuttle, and, I would have dinner with a customer or customers, and the next day I'd be in the branch, and I'd probably call on a couple of customers, I'd have lunch with somebody, and I'd come back the next evening. And a thing I then discovered of course was, how lucky the Scots are in one sense. It is big enough to get your hands round. It took me about six months, and at the end of six months I knew everybody that mattered in finance in Scotland. And that's got pluses and minuses. The plus is, providing you do a good job for them, the word gets round, and that's self-reinforcing. You'd better bear in mind, if you screw up, [laughs] that's also going go around.

Yes.

But, you know, I just learnt, and I've always been jealous in a sense since then of what you can achieve in Scotland. We'd better not get into the current situation, but, you know, I've been lucky enough since to have quite a lot of association with Scotland, first through IBM and then later, and, I still feel there are some advantages. Whereas in London, I don't think any individual can get his hands round it to that degree.

Yes.

Anyway…

[1:12:16
IBM now…

Yup.

By the time that you got this responsibility for nearly a quarter of its UK turnover, and very prestigious customers, IBM now is facing a little bit of a problem, I would suggest to you.

Mhm.

And it's this. The fact that you have a plug in the 360 means that someone can use that plug…

Absolutely.

…and unplug your disk drive…

Yup.

…your tape drive, and put in a Telex or a Memorex disk or tape drive.

Yup.

That started in 1968.

That's exactly what I have, yes.

And then, in reverse, an ex-IBMer suddenly had the bright idea, actually the plug goes both ways, and you can replace the whole processor.

Absolutely.

Gene Amdahl and others.

Yup.

So we have Memorex Telex banging on the door, and we've got Gene Amdahl and others banging on the processor door.

Yup.

Your crown jewels are under attack.

Yes.

How do you respond?

Well, you come back to what I think was IBM's greatest strength, in the big customers, and, as you may have gathered, I have to be honest and say, my predisposition was always to, large, that's where I grew up, with large systems, and I tended always to be more in that area. The answer really is, the way you respond is by understanding the customer, working with the customer, developing a relationship that other people can't match. They can come in and the box may be cheaper, but can they offer the range of support, the background understanding of where the company, that company has been, and why it's got to this point, and so on. I think that was IBM's greatest strength.

You didn't get fired for buying IBM…

Well that's what they said.

…if you were a data processing manager.

Yup. Yup.

And your rivals, Amdahl, Memorex and so on, consistently criticised IBM for using fear, uncertainty and doubt.

Yes. Well…

But…

That's their description of the fact that they can't establish the same relationship as we have established, in many cases over many years. But even if not over many years, by consciously working at it. You know, I expected my account managers really to understand their customers, and very often to see where the customers needed to go before the customers did. Now, you know, it's not that we're extra bright, but, if you think about it, somebody like an IBM account manager where that company is already using a significant amount of IBM equipment across multiple departments, can get a perspective, but probably the chief executive's the only one in the company who gets that breadth of understanding. And therefore, if we ally that with good equipment, all the software, et cetera, I think we ought to win. And we did, in general. But of course, we had huge battles in some of them. I mean it was, it was very interesting. I was… I don't think I was really tempted, but Gene Amdahl did, at one stage, summon me and ask me if I'd join them. And, it, it was tempting just in one sense, in that Amdahl was a technical person, he was a, you know…

A genius.

He was an SE writ large.

Yes.

And the thought of working with him, you know, was, was really quite inspiring. And I was relatively junior. This must have been back in the '73 sort of period or whatever. But, no, at the end of the day, I didn't want to do that.

Yes? And, Gene Amdahl had the red mug, didn't he.

Had the…?

Red mug.

Yes, I…

That his salesmen would go round to IBM, IBM customers, and give them a coffee mug which was red.

Oh right, I didn't know that.

And as soon as the IBM salesmen saw the red mug on the coffee table of the data processing manager, the price dropped by a million. [laughter] Wasn't that right?

Well I don't think the price would have dropped to a million, because we were pretty strict on keeping prices, I think.

Yes. Yup. Yup.

[1:16:31]
I mean the whole pricing question in computing again is fascinating, because, over my period of time, you know, I started at a time when hardware was hugely expensive, and people were cheap.

Yup.

So, when I left Oxford, I joined IBM on £900 a year, and that was one of the best new graduate salaries that you could get. And so, for a 7090, it was costing £3 million, you could throw in a few people at £900 a year.

Sure.

And of course over time what happened was, the hardware got cheaper, the people got more expensive, and so, things changed. And one of the things of course that changed, and these things nearly always have an up side and a down side, was that in about 1969, I can't remember exactly, we un-bundled.

Yes.

And that meant that, prior to that time you bought the hardware and the software came free, and we saw, quite obviously, that the software was getting increasingly both important and expensive, and that actually, it made sense to price separately. Now of course, that was good in one sense, but that's also one of the things that was necessary, because Amdahl, and Fujitsu and co, could never have developed the operating systems and so on that we had. So, that, you know, the seeds of failure are there in success.

[1:18:03]
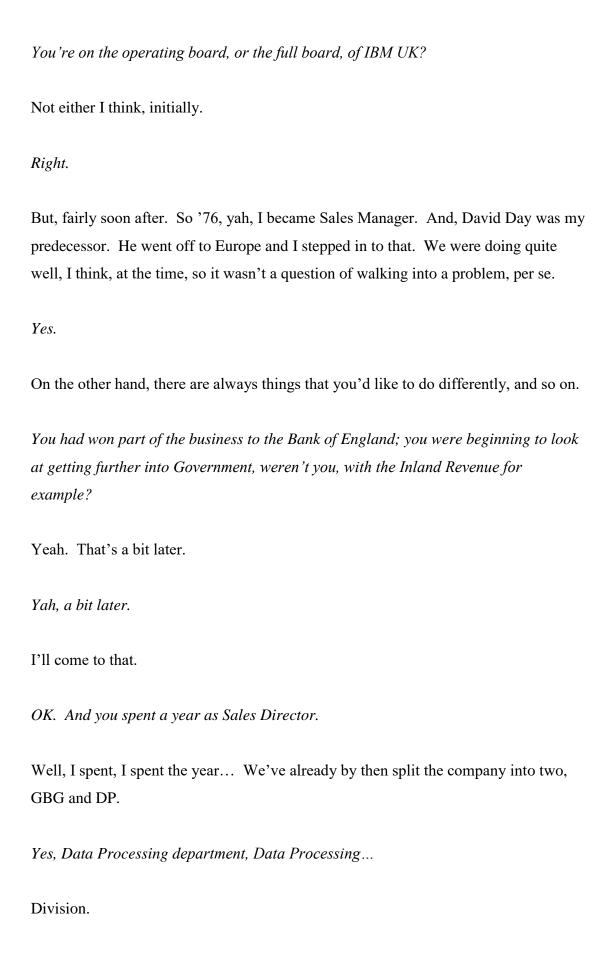*True. True. Three years there. Is that right?*

Yup. Yah, about that.

And then, UK Sales Director.

Yup.

So you really have moved on to the board now.

Yup. Well…

You're on the operating board, or the full board, of IBM UK?

Not either I think, initially.

Right.

But, fairly soon after. So '76, yah, I became Sales Manager. And, David Day was my predecessor. He went off to Europe and I stepped in to that. We were doing quite well, I think, at the time, so it wasn't a question of walking into a problem, per se.

Yes.

On the other hand, there are always things that you'd like to do differently, and so on.

You had won part of the business to the Bank of England; you were beginning to look at getting further into Government, weren't you, with the Inland Revenue for example?

Yeah. That's a bit later.

Yah, a bit later.

I'll come to that.

OK. And you spent a year as Sales Director.

Well, I spent, I spent the year… We've already by then split the company into two, GBG and DP.

Yes, Data Processing department, Data Processing…

Division.

Division.

And General Business Group.

And General Business division, GBG.

I suppose, one of the things, you know, if one's trying to give a picture of IBM, the danger in talking to somebody like me is that, even I, until the very top positions, was always looking at part of the company.

Yes.

If you go back, we always had office products, and office products were, typewriters, and then in the early, '73, somewhere around there, IBM introduced a copier, dictating machines, and so on. And, I think they were very good, and they were certainly successful, but, they were always a separate salesforce, it only came together at the top. And then increasingly what was happening was, a concern as to whether the smaller systems weren't getting their fair whack, and, so with, I can't remember where we were in this stage, probably System 34, something like that. Those sorts of systems.

System/3, System/34.

System/3. Yah. Were then in General Systems Division, which was part of GBG. And so, for Eddie Nixon as the country manager, he effectively had two people. Although, interestingly, I think it was always fair to say that while he had real control of DP, GBG was always a bit of a, a cuckoo in the nest sort of thing.

It was the toy factory.

Yup. And…

[1:21:04]
So you were in DP.

So, I was in DP.

And after being UK Sales Director, you…

Well, then what happened was one of those, that was a very sad thing. Sometime around March, I guess, in '77, what happened was that Petr Clarke[sp?], who was the DP Division director… So under Eddie you'd got the DP Division, and that had all the DP sales and marketing, plus customer engineering, which had been, which was always separate, its own line up to the top. And administration, and so on. And Peter had been sales manager years before, he had been off to Paris, he had come back, he was DP Director, he was clearly the sort of number two in the company. And, he and I were due to meet with some people in the lab at Hursley, and, I drove there, and Peter didn't turn up. And, we didn't understand what had happened, and he had had a terrible car accident on the M3, and he was sort of, paralysed I think from the arms down. And, so I was put in to stand in for him, for him to recover. And of course, he never did in the sense of being able to come back to the company. And so, eventually I took over as DP Director.

DP Director for three years.

Yup.

Right.

And, and that was fantastic. That was, all that part of the company. I obviously had to pick up customer engineering and administration and understand those things, and so on.

[1:22:53]
One of those years, in 1979, IBM really put the hammer down on the opposition with the launch of the 4300 range.

Yup.

Which had a radical new price/performance point.

Yup.

And which really shook the plug compatible industry, shook Amdahl, shook up the leasing industry as well, that was a big move.

Yes. Of course, again, that's one of the things… The difficulty is trying to see these things as they come through, you know. So when I joined IBM, everything was rental.

Yes.

That's how customers… And, obviously there were advantages in that, particularly if they're going to upgrade, and so on. But then, partly with the separation of hardware and software, people started to move to the purchase, and that has its own advantages. But then of course, the question becomes, well, maybe we could get somebody else to finance it differently, and so we get the leasing companies coming in. And then of course, when you start to get plug compatibles, you get the combination of leasing and plug compatibles, et cetera. And then IBM responds with things like purchaser-installed, so… So, there are all these techniques for dealing with the financial side. And, there are obvious huge advantages in having better price/performance, but it also impacts the whole of the existing market.

Yes.

So, you have some interesting challenges in doing that effectively. And one of the challenges is, you hope you don't have to wait too long for delivery from announcement, otherwise all sorts of things go wrong in the interim.

But you didn't control the delivery process, not yet.

No.

[1:24:40]

Then you move to Paris.

Well then I move to Paris.

Two years. And a critical two years.

Yes.

Because, it's the early 1980s.

Yes.

And IBM breaks out of its shell, of being a vertically integrated, we make the whole thing, company, and comes out with, not a microcomputer but a personal computer, in 1981.

OK. I ought to take you back just…

Do.

…before I go to Paris and so on. I don't know how interesting the personal side of these things is, but, they first came to me in 1978, and said, 'Look…' I was then just DP Director et cetera. So they wanted me to go to Paris. And offered me a particular job. And, I didn't want to go. Partly because I'm having a ball, and partly because my son was then six, and I thought it would be disruptive to him and the family. So, not a real problem, they, reasonably good grace, they say, 'No, OK, well stay where you are.' So then in '79 they come back, and they say, 'Look, we really want you to go and run marketing in Paris.' And my wife and I talk, and I don't want to go. And, gets a bit difficult. But I managed to persuade them that it's in their interest as well as mine that I should stay in the UK, and do what I'm doing. IBM don't give up. So in 1980, IBM Europe president flies over, takes me to dinner at the Savoy, and says, 'We want you to come to Paris.' And I appreciate that this is it. I either go to Paris or I

leave the company, because they're getting fed up with me. And, and I go home and say to my wife, 'Look, I really think this is it.' She said, 'Well we'd better go then.' And, so, I phone them up and I say, 'Look, I'm happy to come to Paris, but I have one condition, I want my son to get into the International Lycée at Saint-Germain-en-Laye, because I'm told that the British School is pretty rubbish, and, that's the most important thing for me.' And they say, 'Well nobody can get him into,' thing. I say, 'No, but you can, I'm sure, get him an interview, and then it's up to us.' And luckily he has the interview and he gets in, and, a fabulous experience. And my concern about going was really, first, for my son, I was concerned about his education; secondly, for my wife, because I knew what would happen, I'd be flying off round Europe all the time, and they're in Paris. I really wasn't worried about me. I was sorry to leave this job in the UK, but… And of course IBM again were quite smart, and quite tough in a way, because the president said, 'Fine. Now, I'm going to put you into a job that doesn't exist. I want you to be,' whatever it was, Group Director of Order Management. He said, 'We have a problem. We have,' I think, 'seventeen plants around Europe. Somebody buys a system from us; they get possibly the processor from Montpelier, the disks from Mainz, the terminals from Greenock, and so on, and we don't always get it all together as well as we might on the premises at the right date. So I want you to fix it.' And I say, 'Well, so, what resource do I have?' He said, 'Well, whatever you need. But,' he said, 'I need you tell me what you need,' and so on.

[1:28:32]

So I leave the UK on a Friday with 10,000 employees roughly, I'm used to, and an office and secretary and PA et cetera, and I arrive in Paris, and I say, 'OK, where do I work?' They say, 'Oh, well, no, we'll find you an office.' They find an office. And I say, 'Well I need a secretary.' And they luckily managed to find me an English secretary. And then, it's up to me. And by golly, you have to learn about the headquarters and the politics and so on. And of course, I'm not terribly popular to start with, because I'm interfering with sales, I'm interfering with manufacturing, I'm interfering with administration, et cetera. [laughs] So, I have to make my way through this. But it's great. And it's a tremendous, again, opportunity to learn a hell of a lot about the company. And so, I…

So you put together an integrated logistical system…

Yup.

...for IBM delivery.

Yup. So, I end up with about 20 people, and… Because you've got to work through the others mainly, but nonetheless, you need somebody to put it together and so on.

Yup. Yup.

[1:29:42]
And so I do that until about, July, what are we, '81.

Right.

And then I get summoned by Cassani again, and he says, 'Right, now, you're going to do the job we always wanted you to do. So I want you to be Vice-President of Marketing and Services, he' Phoned me up. And I said, 'Fine, I'd like to do that.' And then he says, 'But I've got another issue that I need to talk to you about next week.' So, 'I want to see you on…' So I come back the next week, and he said, 'Now, the company has decided that it's going to put DP and GBG together, it's going to be one organisation from next January. How many people have you got?' I said, 'Well my direct responsibility is 1600 people, spread around Europe, in the international education, et cetera.' He said, 'Fine.' He said, 'Well,' he said, 'obviously, there is a vice-president of marketing for GBG, and one for DP, and there's only one job, and we're going to give you the one job. But the challenge you have is, I want all the people here in Paris,' he said. 'So, you've got 1600 people at the moment. There's 600 people in GBGI in White Plains. I want the combined total to be 2,000, all in Paris, on January the 1st.' [laughs] And I said, 'Well, not sure how I do that.' He said, 'No, I'm sure you'll find a way,' he said. [laughs] So off I go. And…

So you've got to relocate them, and you've got to shred 2,000.

Got to shed 200.

200, sorry, 200.

But remember, by shed, this is IBM full employment.

Exactly.

So, it's not a question of getting rid of people in that sense. So, off I set to carry out his instructions. Quite interesting. You know the Parliament and Industry Trust? No. It's an organisation in the UK that takes two or three MPs a year and gives them some, twins them with a company, and, so, the idea is, they learn a bit about industry, which is obviously a good thing, et cetera. And a chap called Richard Caborn was then on this, and was assigned to IBM, and he came to see me in Paris. And, he couldn't believe that I had this particular mission. He said, 'It's impossible. How are you going to do it?' I said, 'I've no idea, but, one way or another we'll have to do it.' So anyway, I set off, and, for the next couple of months I went to White Plains every Wednesday, and I used to work in Paris till one o'clock. I'd then catch the three o'clock Concorde from Charles de Gaulle to New York. I would then be in the White Plains office about 1.30. I'd then work there till seven, and then catch the overnight plane back from, Air France. And, we managed to do it. I had the people who weren't willing to come to Paris, or the people we didn't want, I managed to get the various parts of IBM in the States to redeploy them, and so on. And we got the 400, and I had my kick-off meeting in January in Paris. And, again, it was very exciting. Because, I had always felt that we ought to be one company. Whichever way you do it, quite honestly, there'll be some conflict, there'll be the people who think, this is better done with three small systems than one larger system, and so on. But nonetheless. So…

OK. I think that will be a very good place to have a pause.

Good. OK.

[pause in recording]

[1:33:47]

Welcome back to the Archives. This is part two of an interview of the 32-year-old career of Sir Anthony Cleaver. And we are up now to the 1980s. And Sir Anthony is brought back from Paris in 1982 with a very important assignment in the UK.

Yup. I've become Assistant General Manager. What has happened, I don't know if this of interest, but, Fred Clarke[sp?] was the number two in the UK at the time, and was due to retire a year later, which was when I was scheduled to return, and, Maggie Thatcher changes the pension rules, and it becomes clear that there's no point in him working for another year, his pension won't change, et cetera. And so he leaves. And suddenly, I am asked to come back, so I come back.

Fred Clarke[sp?] was quite a character, wasn't he?

Fred Clarke[sp?] was a great character. The two Clarkes[sp?] were. They both came through the route of being branch manager in IBM Newcastle, and that sort of, perhaps epitomised the way they behaved.

I understand there was a, often a degree of coordination between race meetings and when, where Fred Clarke[sp?] went to visit branches.

I think that's absolutely right, yes. Yes, Fred was indeed a character. Anyway. I get hauled back. But, perhaps the most important aspect of this actually goes back to while I'm in Paris. Because, IBM had suddenly realised that there's something called a personal computer, or, that whole genre, and that it's losing out, doesn't have an entry in the market. There's a meeting with Frank Cary, who's then head of the Corporation, and, the chap he's talking to says, 'Well, it'll take us two and a half years, the way we operate, to get into the business.' He said, 'We can't afford that. and we need to be in there in a year.' And the chap said, 'Well I can do that. But of course, I'll have to break a lot of the rules of everything being standardised and so on.' And Frank Cary said, 'Yeah, it's important enough to do that.' So that's what they decide to do. All of this means that, I'm sitting responsible for the European, Middle East and Africa market, and I suddenly learn there is to be this new box, and it

won't be available for us; it's only going to be announced in the USA and Canada, because it doesn't have the suitable power supply, difference between 50 cycle and 60 cycle, and so on. So, as you can imagine, I'm not best pleased, and I create as much fuss as I can, but, at the end of the day, the Corporation's going to do it, and that's the way it's going to be. So, when I come back to the UK, I know that it's going to be January '83 when the PC is going to be announced for Europe, Middle East and Africa. And, the challenge is, how do we sell it? We are still a company of dark suits, white shirts, and, that's fine when you're selling something for, maybe even 50,000, 60,000; it doesn't really work if the box is £3,000, and we have to find another way of doing it. In the States it wasn't too difficult for them, because they already had, in Sears and, Computerbyte[sp?] I think they were called, any rate, they already had outlets for the personal computer. We had none. So the first challenge that I had, quite apart from anything else, was, what can we do about this? And we decide we need dealers. And so, we advertise for people to become IBM PC dealers, and a lot of them take a second mortgage, buy a small shop, and, set up in business, and we give them training. I often think nowadays when I see the *Sunday Times* Rich List and, I can think of three of the people in that who I remember on that very first gathering, and we said to these people, 'Now look, we think this is a big opportunity. We'd like you to do it, and this is the way we want to handle it.' So…

[1:37:56]
You made several people multimillionaires.

Multi-multimillionaires. Absolutely. But, you know, full marks to them, because, I guess for them, dealing with IBM was quite a challenge in its way, and, you know, they had to be very entrepreneurial in order to succeed. But some of them did very well, and I think we were very proud of what they were able to achieve.

But you couldn't have done it without them.

No. Absolutely. We, we certainly couldn't have done it through our internal resources. So, that was a big thing. Of course the other thing was, again, one keeps coming back to the sort of IBM worldwide structure. Basically, IBM's position in those days was that, we had worldwide development, so, a System/360 Model 40 was

that all round the world et cetera. We actually manufactured normally by sort of, continent. So, as I said when I went to Europe, we've got seventeen plants within the European area, and then we market by country. So, that's the way in which it's done. Now what that means is, for the countries, they are very keen to get manufacturing mission. It's hugely important to get it. And of course at Greenock, we had been successful in getting the mission to build the PC for the whole of Europe, Middle East and Africa, and of course that was hugely important to us. I think, the main advantage we had was that, for years there had been a synergy essentially between Hursley and the things they developed, and they tended to develop terminal systems, and then manufacture, it was natural for the Hursley-Greenock link to come in. Greenock had started making punches, key punches, and verifiers, so, keyboard type devices. So then later on, we come into the Seventies, we come to the 3270, hugely successful displays and a whole family of those. So, I think we had a big advantage in bidding for that mission. But we certainly had a lot of competition from Italy and so on. But, Greenock, having been awarded it, it became doubly important to the UK and to me that it really was a great success. So, that I think probably took most of my time, certainly more of my time than anything else, but, we did set up a separate organisation.

[1:40:27]

The other thing that happened, and a lot happened in 1982, because, as I've said, DP and GBG merged, and so we had a different structure in the field in IBM, it was also the year in which the antitrust suit in the States, which had been going on since 1969, but it was finally resolved in 1982, and I think that made IBM perhaps a bit more adventurous, willing to do some things. IBM was also, I think, finally waking up to the fact that, a lot of things had developed, and had not been as structured as they might have been. The thing that always interested me most I think was, they put a taskforce together to look at keyboards, and they found that across the company we actually were making 250 different keyboards. And, within two years they got it down to ten. And, you know, it just shows the way these things can develop, and, there are always opportunities to improve it, pull it together.

[1:41:36]

Your title was General Manager.

I came back as Assistant General Manager.

OK.

And, I think I stayed as Assistant General Manager for a year, and then I became General Manager.

And apart from the, organising the distribution, sales et cetera, and the main factory with the PC, what was the role of a general manager, of the general manager?

Well it was really responsibility for the territory. So, in my case, Eddie remained as the Chief Executive, and, had also become I think Chairman by then, I can't remember exactly the dates for that. But I, I essentially was gradually taking over all the various things that were in the UK.

This is Sir Edward Nixon.

Yes.

Yup.

Yes, sorry.

No that's fine. No problem.

[1:42:25]
So, we announced the PC. We had Kenneth Baker up there for the announcement at Greenock, and we make, obviously, a big splash.

He was Minister of IT at the time.

Yes. Yah. And, we then run into all sorts of little issues, but, for example, we actually raised prices, partly because what was happening in UK exchange rates and

so on. And, Customer Users' Association, with whom I jousted once a year, were concerned about that, and, so, I spent some time trying to handle that.

[1:43:09]

The other interesting thing that happened, as an aside, was, IBM UK was still growing significantly, and we opened our South Bank office next to the National Theatre. I actually drove the first pile for that in 1980.

This was designed by Sir Denys Lasdun?

That's right.

Who also designed…

He designed the…

…the National Theatre.

…National Theatre. And so IBM decided that the best way to fit in with it was his. I think they're both horrible, to be honest, but, that's by the way.

You don't like the new Brutalism?

It's a Brutalist design. But, it was the first time we had had a really significant London office.

Since you moved out of Chiswick.

Since we moved down to… Yes. Because we moved down in '76. I had just gone on the board, and…

You moved down to Havant.

We moved down to Cosham.

Cosham.

Havant was a manufacturing plant.

Oh right, Cosham.

Just along the coast.

Yes

Cosham. And, one of the many things that Eddie, Sir Edward Nixon, did which were very brave, was to persuade the Corporation that we should build our office at North Harbour, on what, at the time he got their permission, was under water. And the M27 was being built, and that enabled us to use Dutch polder dams, and to build the head office. Interesting thing was, in '76 we got the Duke of Edinburgh to open the office, and we had a big lunch with all our senior customers there, and the only problem was that in the course of his speech, in which he said of course all the right things, he also commented that as he drove in, he rather thought the land looked like a moonscape, and he thought IBM could have done better. What he didn't realise was that of course it was the salt that had been left from being under water, and we had done every damn thing we could. And I was, we were all a bit upset with him for saying that.

What was the decision to place them in North Harbour? Why?

Well we were looking for a head office out of London. It was clear from the number of people we had, London was expensive, it's not a sensible place for those functions that don't need to be there. We looked at a number of sites all round the country. But, maybe Eddie was influenced by the fact that he was living in Petersfield, I don't know. But, it was also true to say, a) we were very big in Hampshire, we had the plant at Havant, we had the laboratory at Hursley, so, that made sense, but in particular, Portsmouth was suffering because of the decline of the Navy, and so Portsmouth were very anxious for us to come and provide employment, and so on. So, I think it was a very good decision. The only challenge was for people like me who were totally stuck between Portsmouth and London. So, you know, one used to,

as far as possible, organise one's life so that Monday mornings were in Portsmouth and, if possible, Friday afternoons, and the rest you were, wherever you had to be.

[1:46:17]
Monday mornings are very important for IBM, are they? They used to be very important. Monday mornings was the day of the meetings, wasn't it?

Yes. Yes, Monday mornings was when we had our management meeting. So, when Eddie was the chief executive and so on he had it, and I continued that. Just the people who reported directly to me, and so on.

It was also in the branches, Monday was the, was the day for the meetings?

That was really up to the branches. I don't think there was any, any significance in Monday in that sense, you know, but…

Right. Right. So Monday mornings, the major executive decisions would be made, and problems faced, and allocated and so on.

Yup.

Yup. So that set the agenda for the week.

Yes. Yes, absolutely.

[1:47:00]
Jolly good. So you're General Manager for three years.

Yup.

Classic three years.

And…

Then in '85…

In '85, Eddie hits 60. Corporate officers have to retire at 60 from mainline operations.
And, so the question is, who's going to take over? And they decide it's me. And,
they did it with some style I think, in that, John Akers came over. John had been
appointed Chief Executive of the Corporation in January '85, so by now, we get to
October '85 and they announce Eddie's going to retire and I'm going to take over.
And in November we have a big lunch in the Dorchester, they invite hundreds of IBM
customers, and, I'm given the challenge of speaking first. And, I, I tried to think of an
analogy for my position in being by far the least important of the three speakers, and I
decided that I would refer to the opening batsman from Middlesex in 1947 when they
knew that everybody was actually there wanting to see Compton and Edrich, but this
chap had to be got out. [laughter] And that seemed to go down quite well. And so…

*What was the difference in style between your leadership as CEO and that of your
predecessor, Sir Edward Nixon?*

Well, a number of sort of magazines, *Computing*, *Computer Weekly* and so on, said
they didn't think there was really any difference, we were both… And I think, there's
a lot of truth in that. I think Eddie was actually a better politician than me. I don't
think I was eve any good at office politics, not that office politics was significant in
IBM, normally, but, there's always some. Eddie was never very technical. I was
always a systems engineer manqué. Eddie had never been a systems engineer, he was
a salesman, and that was his forte. And so on. So I suppose there was, you know,
there was some difference. I was always interested in the technology, couldn't help it,
and Eddie really wasn't. So I suppose there's a difference there.

*I remember interviewing him once at North Harbour and he said, 'I never thought in
IBM I would ever have the decision of having to choose what colour a shop should
be.'*

Yes.

Because you opened a shop, didn't you.

Yes. Yes we did, we had some shops opening. I think, I think Eddie did a fantastic job. Because, he did take IBM… I think he joined in '55; it was set up in '51 in the UK, and, he joined in 1955, and clearly we were seen as American interlopers and so on. And the UK computer industry was relatively strong in those days. I mean, I could go on at length about the tragedy of UK industry generally. I'm a great believer in the Correlli Barnett history, you know, of the fact that we have the Industrial Revolution, we are leading the world, but the people who lead it, their sons want to go and buy country houses and hunt, rather than…

Yes. Correlli Barnett is a historian who maps the decline of Britain's industrial state.

Yup. And I saw this all the way through my career, and I think it's still true that in this country the fundamental tendency is to venerate the theoretical and not the practical.

Mhm.

I give you one example of it. In 1969 I went to talk at a seminar at Newcastle University, and, I went with a chap who at the time, Carl Conti, who at the time was the architect of the Model 91, the most powerful System/360. And, one of the features of Model 91 was that it could take instructions out of order and compute ahead, et cetera. And we sat with astonishment listening to a venerated professor from the UK explain why this wasn't possible. And I just always thought, that epitomised the UK. And the sadness to me is, I mean it was before my time, but, if you look at the Fifties, you look at the UK contribution in terms of computing theory, and development of things like subroutine and so on, and yet who took it to market? Not the UK; the Americans in general. Other people.

Yes.

And I, I just think that's rather sad. Anyway.

[1:52:00]

What issues did you face then? You are now CEO in 1985. What issues did you face?

Well, I think, we had all the issues that you referred to earlier coming together in a sense, in that, we have plug compatible competition, and that becomes quite intense. We have, obviously the PC has now been absolutely explosive. I mean, fantastic success. But just as I said earlier, the seeds of the problem are there in the success, because the way that we got it out in a year was, normally IBM used its own components; we didn't use our own components. Normally IBM developed the software; we didn't develop the software. And so, it was easy for other people, Compaq and so on, to go off, buy the same components, use the same software from other people, et cetera. And, we had missed one big trick, which was the software on the PC. And I was slightly involved in that. I'm trying to remember exactly when it was, and I'll probably get it wrong. But, when we introduced the sort of second generation PC, it was the PS/2, and with it we announced that there'd be a new operating system.

This was 1987.

OS/2.

PS/2. Yup.

Yup. And OS/2 was announced to go with it. Although we said, it wouldn't be available, OS/2, until 1988. And OS/2 was being developed at Hursley. And one of the key things about it was that the early software for the PC, as you will remember, was DOS, and DOS was a traditional sort of basic type. And the interesting thing that was coming was the use of the icon on the screen. I think, most people would say it was originally developed by Xerox, but, anyway. This was an opportunity. And, I'm sitting in my office one day in London, and I get a call saying there's a chap called Bill Gates, who is coming over to the UK, and they want me to meet him, and to facilitate his visit to Hursley. And, I say, 'Isn't he competitor?' And they say, 'No no, we have a good relationship with Bill, we know what we're doing,' et cetera. And I said, 'Well, that's not my understanding.' And they say, 'Well, sorry, you know, we

expect you to do this.' So I said, 'Well I'm only going to do it if you put it in writing.' Which they did. And so, I meet Bill Gates, and that's perfectly sensible and so on. He says he's going to Hursley, and I say, 'Fine, I'll phone Hursley and make sure they see you,' and so on. And, I believe that he went, saw as much as he could of what was going on with OS/2, picked up what he thought was important about it, and put it into Windows.

Yes.

Now I'm not suggesting that he wouldn't have had something like Windows et cetera, but I think we gave away the shop with that decision. Of course, he was then supposedly working with us and both systems could work together, but it never happened like that, and he was always one step ahead with announcing a new feature, and so on. I'm not competent to judge, but, I think people whose opinions I would respect said at the time that OS/2 was a better product than Windows, you know, could do all it did, and other things, and was potentially more powerful. But anyway, that's history.

You could actually run Windows inside OS/2, and it ran faster inside OS/2 than on its own native?

Oh well that, I didn't know.

[1:55:52]
Yup. So 1987 is a crucial year. You are Chief Executive. And what has happened in the whole of the worldwide industry, not just in the UK industry, was, it's basically been turned upside-down.

Mhm.

Until now, IBM's strength has been that you are multi-presence, that you are internationally coordinated, that you are, apart from the PS... well apart from the PC, vertically integrated, you have all of those strengths. Now the world has turned

upside-down. Instead of having the IBM PC architecture, what we really have is the Wintel architecture.

Mhm.

Windows running on Intel.

Yup. Yup.

IBM's lost control.

Yup.

I remember the announcement of PS/2, and we phoned immediately to Compaq and said, 'What will you do?' And they said, 'We'll tell you in a week.' And then they said, 'We're not going to adopt OS/2, and we're not going to adopt the new board,' which was microchannel architecture.

Yup. Yup.

And IBM lost control.

Yup. I think that's absolutely right. And…

How did you feel about that?

Well, obviously, it was a significant concern, but, I think, at the time we still had enough advantages, that the business was performing pretty well. I need to check the finance position, but if I look at '87, the UK market for IBM grew by, was about flat in '87 over '86. But then grew again in '88, and in '89 and so on. So, you know, we were able to handle it in that sense. On the other hand, clearly, if we had also had the PC going, as it might have gone, it would have been dramatically better.

Yes.

But, it was still, you know, one could still handle it, and there was nothing one could do.

[1:57:58]
We've talked so far about the two ends, the big machines and the PC.

Yup.

And, ATMs, and terminals.

Right.

But actually, what is less understood is that IBM was a bit of a giant in the middle as well.

Yes.

You had a remarkable architectured machine called the System/38.

Absolutely.

Which was very successful.

The Post Office took 100 System/38s, so…

There you are. And then you morph that into the AS/400.

Yes.

Which was again successful.

And, the AS/400 was announced in June '88.

'88.

And again, I think…

On your watch.

…claimed at the time that that was the biggest ever IBM worldwide announcement. And as you say, was enormously successful. But of course…

These integrated a database into the system, didn't they?

Yes.

They had a relational database.

Yes. And, systems application architecture which was across the range. I think, you know, IBM, one of IBM's strengths always was the ability to, compatibility across different machines, using the software to do it. Of course again, one of the challenges is, if you want to do that, it's difficult to do that and also be able to integrate other things. So one of the issues that we have coming up is open standards, and so on. IBM's telecommunication standard was always Systems Network Architecture, and that was important to IBM. Other people wanted to be able to integrate other equipment that wouldn't conform to that, and so you get the advent of the , is it Committee for Open Systems? Any rate. And then the Open Systems Foundation. And, I see one of the things that I was saying around this time was that IBM was also into open systems, and we were indeed, and had AIX, which was implemented, UNIX, and so on.
[2:00:04]
So, there's a hell of a lot happening at this time, you know, both in changes in hardware, changes in… And, at the same time, we've also got interesting changes in the UK itself, with Thatcherism, with privatisation. I mean, my strongest personal relationship in a sense probably over many of these years was with Iain Vallance at BT. Because, once BT was privatised they needed and wanted to have efficient systems to deal with their customer service and so on. And, they became a huge

customer. But then of course it's also over this period that we start to see other things developing that affect them and affect us. So, we talked together about satellites. We tried to do a joint venture together, IBM and BT, a thing called JOVE, and, that was to be an early value-added network service, and the Government eventually wouldn't let us do it the way we wanted. We certainly claimed at the time that this was a bad thing for the UK. I don't know whether it was or not. We certainly could have provided at that time a service that wasn't available anywhere else, our combined resources, but, it clearly would have been difficult for other people to combat that, and, I can understand the Government decision. So, all of that's going on.

[2:01:50]

Meanwhile, the whole question of British computers and protectionism and so on has come up. I think I said before, the last thing I did before I went to Paris was the presentation to the parliamentary committee on information technology. And I basically laid out why I believed IBM was more British than anybody else. It sparked all sorts of reactions. Alan Roussel of ICL claimed that we were not telling the truth with our claim that we were net exporters; we were net exporters, there was absolutely no doubt. I bunged in a very tough legal letter to him, and ICL refused to comment, so, you can guess they were wrong. But I pointed out we had more employees, we were net exporters, we had more money going to local suppliers, the value of IBM shares held by British nationals was greater than the whole share value of ICL. And by the way, I noticed that day after day Fujitsu seemed to be coming more and more into ICL, and of course, the irony for me was, I spent 30 years fighting this so-called British company, only to wake up one day and find it's actually Japanese. And, that seemed rather ironic. And I also think that, reverting, as we had done all the time, to IBM culture, we always did believe that we had the five stakeholders: employees, customers, shareholders, suppliers, and the community, and our work with the community spanned a whole range of areas. We had, for example, a specific policy of seconding people into public positions. I suppose, the two most prominent ones over the years were the two other knights in IBM, Len Peach, who we seconded to just when I took over. I did feel slightly, I suffered a little bit in that Eddie had an enormous strong team; when I took over we had just seconded Len Peach to the National Health Service as Personnel Director, and he actually became Chief Executive within a year, and, immediately afterwards they came and asked me for John Fairclough and he went to be Chief Scientist for Maggie Thatcher. So, I mean

they were obvious secondees. But we seconded at all sorts of levels. And again it was an opportunity, you know, in a company, a big structured company, to take a junior manager and let them go for a year and help run a charity where they'd get sort of general management experience.

That's right.

So, that was good.

I remember when Sir Len was offered the job of Personnel Manager of, Personnel Director, of the National Health Service, and I said, 'Ah, I've just looked at the numbers by the way, and, IBM spends more on administration than the National Health Service. So what do you think you're going to teach them about being lean and mean?' And he made some witty remark, as he did.

As he always did.

As he always did.

Yes.

Yes. Yes. Well he was buried earlier this week.

Yes. Yes. And then…

[2:05:18]
You drew around you, then, a whole new group of executives to replace some of those that had come up with Eddie Nixon, or, now been seconded out.

Yes. And, and some of them were people who had, previously I had worked for. So, Peter Morgan and I exchanged positions over the years; David Day, again, same thing. Other people that, David Morris for example had followed me to look after Lloyds when I left them, having sold the first cash dispenser. So, David I had known for years, David Livermore, and he and I were more or less contemporaries.

[2:05:57]

Now, there's not a woman's name there.

No, there's not a woman's name there.

Is this part of the IBM culture?

No. I think, rather the opposite. But, I was always concerned that we should do what we could about that. On the other hand, I had seen that sometimes in the States I felt their sort of positive discrimination was not a good thing, and it remains my view to this day. I hope this isn't too indiscreet, but, one of the mistakes I made when I came in was that, we had never had a female branch manager, and a branch manager was seen as, you know, it was a job you almost certainly had to do if you were going to get to the top.

Oh yes.

And I determined that the following January, which was when normally we made these changes, we would have a female branch manager. And there was a woman who was very good, and people thought was ready and so on. But, if I'm honest, she wouldn't have been the top choice if she hadn't been a woman. And we promoted her, and it didn't work, and within a year we had to find her a different job, and so on. And, I think I learnt a lesson that one can only go at a certain pace. So, we had people coming through, and you just had to wait for them to be genuinely competitive and ready. So, I don't think we would have compared badly with any other British company at the time, but certainly, like, you know, it's not the sort of situation you'd see today.

[2:07:42]
A classic three years as CEO.

Well…

And then you…

No, I did six… I came in January '86.

Sorry. You did seven years.

Yup. And, then in 1990 I became Chairman as well, and I…

Is that a god position, to be chairman and CEO? [pause] Well obviously you think it is, because you were, but…

Well, I think at the time it was kosher. I think today it wouldn't be. I think, we were a subsidiary. Although we had enormous autonomy, at the end of the day I did have to have an annual plan that I took to the States, and they had to sign off on it, and so on. So, you, you know, you weren't untrammelled in the sense you might be if it was a purely British company. I don't feel that was necessarily a problem. I do feel what I did then was a mistake, and is now seen, normally, to be a mistake, and that is, moving from chief executive to chairman. So, I did the two years as, combined, and I then gave over the chief executive role. I mean basically what happened, very simple, they felt that I had been doing it for long enough. I mean I had had ten years basically running the UK market, certainly the whole of the marketing side, and gradually added manufacturing, development and so on. And I thought they were quite right. But their answer to that was, they wanted me to go to Armonk. And I thought, wow. So I'm…

This is the world headquarters.

Yes. But, so I'm number six or seven in an American organisation. I mean maybe I'm kidding myself. I think that's roughly where one might have been. But, I'm never going to be chief executive. And by then, of course, I've got other interests outside IBM in the UK, which I could never have in the States as a non-American, and, why would I do that? So I said, 'No, I think it's better that I go.' And they said, 'Well would you stay on as chairman, non-executive, for a couple of years, and see the new man in?' And I agreed to do that. And I think that is a mistake.

And the new man was?

Nick Temple. And I think that's a mistake. Not just for me, but in general. The problem is, if you've been chief executive and you become chairman, if the new chairman – new chief executive does something that people aren't happy with, they try and come round the back and say, 'Now you'd never have done that,' and, 'Shouldn't you…?' et cetera. I think it's a very unhealthy sort of relationship. So I wouldn't recommend it.

[2:10:19]
So you're Chairman from '92 onwards to '94.

I'm Chairman from '90.

'90.

But I'm Chairman…

'90, sorry. Chairman alone.

Yes.

And during this period, IBM is desperately trying to change.

Well no, it started in my first year as Chairman. 1990 through to '94 was tricky.

And it's trying to present itself first of all as a rainbow company. I remember one of the annual reports had all the colours of the rainbow on it. We are everything to everybody. It tries many different approaches. It spins off some of the companies, parts of it, the printer operation becomes Lexmark in '91.

Lexmark, yup.

But eventually the hammer falls, doesn't it, in 1993 IBM declares after a board meeting it will no longer be paying a dividend. And that afternoon the Chief Executive is out, John Akers is out.

John Akers goes, and Gerstner arrives.

Was that a shock?

Yes. Well, yes and no. I mean one knew that the problems were there. I mean we had a very difficult time in the UK in 1990, '91. We had the combination of the product issues if you like, together with the economy, which was very poor, et cetera. I mean one of the things I'm actually proudest of is that, over that period we actually had to reduce our number of employees by around 4,000 people, so I had nearly 19,000 at one stage, and it went down to 14,000 odd. We managed to do that without any compulsory redundancy, which I felt was important. IBM had always talked about full employment.

Yes.

And I felt that was one of the values we should maintain. It was expensive. So we posted a huge loss, a loss one year and then a huge loss the next year. But, I felt that that was right, and it was necessary to do it. I don't have any doubt it was necessary to do that. [pause] Gerstner came in, from the outside.

Now this is the very first time that a person has headed IBM…

Yeah, who hasn't…

…that has not been from IBM.

Absolutely.

He's come from American Express.

Yup.

It's a type of bleak acknowledgement that the old IBM is pretty well dead.

And, I think, to be honest, I was glad that I was no longer in the line so to speak, I was Chairman but just part-time chairman. I have always been careful about criticising Gerstner, in the sense that, clearly there were some dramatic things that needed doing, and he was right to see that, and to say, 'I've got to do that.' One of the things that he did, which may or may not have been necessary, was to say the country structure isn't serving us well; what we need to do is to run everything from the centre by product line, and so on, which is what they have done ever since. In my day the country general managers were the robber barons. There were seven of us who had the major countries, so there was, in Europe, France, Germany, Italy and UK, Japan, and then Canada and the USA. And towards the end we used to meet round the world once a year, and we would say what we thought the company ought to be doing, we need products to do this, and so on. Now, I'm not suggesting that we ruled the world, but, we had 80-odd per cent of the business between us, five people. So, you know, it was significant. And at its time it worked. But, it may well be that that decision, to bring stuff back and then put it out differently, was absolutely right. I really don't criticise IBM these days, because, I know too little about the real problems. I think, the fundamental issue for John, John Akers, who I thought was a friend, and he and I got on well, because he had been appointed just a year ahead of me, and we got to know one another pretty well, and John was a classic IBMer, a classic IBM salesman. I loved taking him on calls, took him in to see people like Norman Tebbit and just watched the two of them, and, fabulous. But, I think, John himself I saw change over his time, from somebody who was always out there with the customers, to somebody who tended to be back in Armonk with his team round him. And of course what was happening was that, back in the days of the mainframe being the heart of the business, gross profit on a mainframe was 60 per cent. With 60 per cent, you can do a lot of marketing, a lot of advertising, support, et cetera. I don't think anybody's ever made more than maybe fifteen per cent or so on a PC. You just can't do the same things. And I don't think IBM actually reacted to that fundamental change quick enough. And that I think was it. So I was very sad, but, I also was in a difficult position, because in '93 I went to the Atomic Energy Authority, and just as Gerstner was seen

as the vandal coming in from outside, I was doing the same thing to the Atomic Energy Authority. So, I was in no position to say things have to be as they always have been, right? I, I suppose if I'm honest, I think that, it should have been possible to do most of the things that Gerstner did but retain a bit more of the belief in the people, and the support for them, and so on. Because at the end of the day, I think if you treat people well, they will do a much better job for you. I never had to ask people to work over a weekend if it was necessary; they did it because that's what we did. And, you know, I think, they lost a lot of that sort of thing.

[2:17:00]
That's 32 years of career in IBM. Thank you very much Sir Anthony Cleaver.

Right. OK.

[pause in recording]

[2:17:04]
Welcome back to the Archives of Information Technology. This is our third session with Sir Anthony Cleaver. And this time we're not necessarily going to talk about the 32 years he had in IBM, but the years before and the years after.

So you were born in 1938, in London.

Mhm. Yes.

Your parents would have been what?

Well my parents had both grown up in the East End. By that time my mother, she was one of the very first I think to go and read maths at King's College London, so, she had obviously come up on scholarships and so on. But, she didn't do that. After a while she left that course and trained as a teacher, and she was a primary school teacher. But I think by 1938 she was no longer teaching, because, she had fallen into the group in the early Thirties when unemployment was so big that married women had to give up their jobs, and she had actually done that. So, I think she was doing

supply teaching at the time. My father had a very strange career. I have never been able to understand how, but the school that he went to, from an early age, was very, especially school, in music. And he was a violinist. So by the time he was fourteen he was playing in the pit in London theatres, and at Lyons Corner House and so on. But he was smart enough to realise that he wasn't a Yehudi Menuhin, and he needed to do something else. And, he was interested still in music, so, he apprenticed himself to the Duo-Art piano company, who specialised in making player pianos, playing music rolls. And he qualified doing that. And then, when he was 21 he and a friend decided that they would strike out, form their own business, and build cinema organs. And so, the firm of Bartrop and Cleaver was formed, and they built a cinema organ which duly came up from the floor in the cinema, and was very successful, thought that they'd got a career for life, and then, a) the talkies, and b) the Depression, and they went bust. And, he had no idea what to do. And somehow he got referred to Sir Henry Lunn, who ran travel agencies, Lunn's, Lunn Travel. And he became first a uniform man. Now a uniform man was a glorified porter, who would stand on Victoria station, look for people with Lunn labels, who were going for winter sports or whatever, and escort them to the carriage and make sure they knew where they were going. And he gradually worked his way up through the office. By the time the war came, he was a manager. So, that's what they would have been when I was born.

[2:20:04]
And, your father missed the First World War, because he was born in 1908.

Yes.

Yes? And, you were born then, '38.

Yes.

And you have, brothers, sisters?

I have one sister who was born in 1943.

So, you're the younger.

So we were living in Cricklewood. And we lived there until 1944, just after my sister was born, when we moved to Abbots Langley, which is just north of Watford. I'm always amused at the phrase 'north of Watford' because Abbots Langley is four miles north of Watford, which is not what people mean. And so we grew up there in what was then quite a small village. I went to the village school, which was tremendous at inculcating the three Rs, every day that's what we did. And, they had a freedom that schools don't have now, in that, if you were bright, you could be moved up a year. So by the time I was eleven I was with the fourteen-year-olds, but, it wasn't just me, there were three others I think who were the same age.

[2:21:20]

What did you inherit in terms of characteristics or attitudes from your parents?

Oh. I think, my mother… My father always said that I inherited my mother's argumentativeness, and that may well be true. She would tend to take a position for the hell of it, and, I think I possibly inherited that. I think from my father, he was always in a sense a craftsman by attitude. He, you know, you had to do things properly, and I think I inherited that. He was affronted by the idea of ever using a nail. You either made a proper mortise joint, or you used screws, and they were all countersunk, you know? And I think something of that probably I inherited.

[2:22:11]

You don't get to be the top of IBM UK without being a very disciplined person as well.

I think that's probably right. My parents were both, they were brought up in the East End, where they saw, poverty obviously; they also saw a lot of problem from alcohol as they saw it. They were both teetotal. And…

Are you?

…rabid teetotal. And I'm afraid I'm not.

OK.

I was, all the way through school, didn't touch a drop until I was in the Army. I went from school to National Service. So any rate, I, at the age of eleven I was lucky enough to get an Eleven Plus scholarship, and I got a scholarship to Berkhamsted, which is a minor public school. And, that was tough to start with, the first year, because, there was a class of, let's say, 20, 22, something like that, of whom all but three or four had come through the prep school. And they had been doing Latin and French for two or three years, et cetera, and I knew nothing but the three Rs. But I did know those very well. And, it was, again, old style. We had what they called fortnightly orders. So, every fortnight your position in class was put up on English, French, geography, history and Latin. And, at the end of the year I was top of everything. And, so when I came back for my second year I was astonished to find I had been put into 3B. And I was called in and told that they wanted me to go into 3B, but there was just one issue. The second year was when you decided your optional subject, and your choice at that time was Greek, German or science. But, the problem was that they were sorry but I couldn't do Greek, because, only the A stream did Greek. And I suppose I showed my bloody-mindedness then by creating one hell of a fuss, and saying, you know, I wasn't prepared to do that; I'd rather go back to 2A or whatever. And the school were very good, they said, 'OK. We'll get one of the masters to have lunch with you twice a week, and teach you some Greek in that, and see how you get on.' So I did that, and at the end of the term I was put up into 3A. And so on. And then I did O Levels. And I…

[2:24:41]
Did you have a favourite subject?

Well I always enjoyed the Latin and the Greek, actually. I suppose, again, it's disciplined if you like, it's rules, structure. You know, logic, really, is fundamental. The other interesting thing, well, a) sadly, I did no science. I have never had a science lesson, which is ironic when you think of my subsequent career. And secondly, the maths was interesting. We used to, we were, at O Level we did elementary maths and additional maths, two subjects. Now elementary maths included geometry in particular, and I had missed a whole year by skipping from one to three, so a lot of

this stuff I just didn't know. Whereas, for additional maths, all the teaching on that I had done. So when I got my marks, I got 54 and 56 on elementary maths, and that was about the pass mark so to speak, and 98 and 100 on additional maths. [laughter] Which I thought was quite amusing. Anyway. It was then a question of, what do I do in sixth form? And, they sort of steered me to Classics. It wasn't that I had took much steering, but I did pretty well, I had done pretty well in everything else. I rather suspect that the public schools, the smaller public schools, advertised their success with the number of Open Scholarships they got to Oxbridge, and I think they saw that there were quite a lot in Classics, so, I don't know. So two years later I do A Level and I get a State Scholarship, and then they put me in for Oxford for the… And in those days there were three groups of Oxford colleges, and, you could go in for each of them. So in the December I took the entrance, got offered a place, got a viva but didn't get a scholarship at Corpus. So I went back in the January, and that group included Trinity, and I got a scholarship, an Open, to Trinity. And, went back to school. The headmaster said, 'You're not staying on for two terms and doing nothing, so, I have found something for you to do.' So I ended up entering the Middle East archaeological prize at Oxford for school boys. And as I recall it, I know I was second, and I think first was Robin Butler, who later people knew as a Cabinet Secretary and so on.

[2:27:10]

Anyway, and then the college wrote to me and said, did I want to go up first, or do National Service? And I thought I'd better get National Service done. So I, I had really stayed on because I wanted to play cricket that summer term, so I did nothing about National Service, which was clearly foolish. So I got posted to the local infantry, which was the Beds and Herts, known as the Honeymooners. And, after three weeks I was sent off to brigade headquarters as a potential officer. A miserable seven weeks of, you know, basic training, with sergeants really enjoying taking it out on these young potential officers. And then you went to WOSBy, the War Office Selection Board, and, I did all the various bits about, getting people across a river with a tyre and two bits of rope. But there was also an essay question, and one of the subjects you could write on was criticism. And being young and foolish, I laid into the Army in my essay. So I got summoned by these three colonels who said, 'Young man, we think you might make an officer but not yet.' And so you could pass or fail, or get what I got which was deferred watch, which meant, come back in three months

and hopefully you'll pass. So I go back to the brigade headquarters, and the colonel there says, 'Silly bugger,' he said, 'what did you do?' I said, 'Well I think it may have been my essay.' 'Oh,' he said. He said, 'Well no problem, we'll make you post corporal. Now the post corporal used to cycle around the camp taking messages from the orderly officer to the guard room or whatever. And I could think of nothing worse than that for three months. So I said, 'Well I don't think I fancy that sir.' 'Oh,' he said, 'you really are one of these clever buggers,' he said. 'Oh they're always looking for your type in Intelligence. So, off you go.' So I went off to the Intelligence Corps. And, I loved it. And, after a couple of weeks they said, 'Anybody here interested in codes and ciphers?' And I said, 'Yeah, I think I might be.' So they sent me off to GCHQ, and they taught me a bit of Arabic, and a bit of cryptography, and I went off to Cyprus to listen to the Arabs. And decode, they used to have a very simple cipher that changed every day. And I used to spend half the night decoding this, and then leave the stuff for the analyst to work on. So I had a great time.

[2:29:37]

Why didn't you stay in the Army then? Didn't appeal at all?

Oh they tried to persuade me at the end. I mean I was still only a, a sort of, sergeant level in that. But no, I wanted to go to Oxford. They said I'd be much better, they'd promote me to warrant officer and so on, [laughs] and I thought, yeah, OK, but… Anyway. So, I went to Oxford. Loved it. Worked hard to start with, because I had done no Greek, other than playing about with Modern Greek during my time in Cyprus. So I was pretty rusty. But I don't know if you know, Greats is a four-year course, and you take Honours twice. And so, the first time is after five terms, and I managed to get a First. So I did stop work then, and enjoyed all the other things that Oxford affords, and…

[2:30:26]
What was the characteristic of Trinity then, Trinity College in the late Fifties, early Sixties?

Trinity was a pretty social college, so, I was relatively unusual in background, I mean, mainly from Eton and Winchester and so on. That's probably untrue, mainly, but a

lot of them were. And it was considered a very sort of upmarket college. Then, as now, I'm proud to say, best food in Oxford. About, a small college. One of the things I've always been grateful for, 180 undergraduates in my time. Now what that meant was, there were never enough people in your year doing your subject for you to get into that group. So you knew everybody. That was super, you know. So, I met people and made friends across a wide range of areas. I just loved it. I mean it was, it was a huge privilege.

[2:31]

Why didn't you stay on as an academic?

Well that's what I was going to do. I thought it was, you know, I loved the Greek in particular. I did a special subject in Homeric archaeology, and I was all set, conceivably, to go off… I, I got interested then in the interaction between the early Greeks and the Egyptians, and I actually got the Egyptian hieroglyph, grammar and so on, and started to look at that, et cetera. But then what happened was, it's interesting, it's a four-year course; if it had been a three-year course I think I would then have gone on to be a don, or tried to. But in the fourth year I started to feel a bit sort of, confined, you know? Thought, this is sort of, narrow, you know. And I then met my future wife, and through her I met a lot of people. She worked for Kodak. And on one of the occasions, towards the end of my last term at Oxford, I went to one of these parties with her. And what happened at these parties, it was always the same, because they would say, 'Oh you're Molly's boyfriend. What do you do?' And I'd say, 'Well I'm at university.' They'd say, 'Oh, yah. And what are you going to do?' I'd say, 'Well I don't know.' They'd say, 'Well what are you studying?' So I'd say, 'Well Latin and Greek, philosophy and ancient history.' 'Oh,' they'd say. 'Mm. Perhaps you should stay on.' [laughter] But then I met this one chap, and he was the personnel director for Kodak. And we had the usual introductory conversation, and then he said, 'Well, I don't know what you should do, but,' he said, 'let me tell you.' He said, 'I was in insurance, and,' he said, 'I was there for five or six years, and,' he said, 'I hated it. I used to get up on a Monday morning and think, oh hell, another week.' And he said, 'Somebody then sent me to the Vocational Guidance Association, and I took their test. And they told me to go into personnel, and,' he said, 'I love it.' He said, 'Why don't you go and see them?' So I did. And, I paid

£10, and, they… I think there were about 300, a huge number of multiple choice questions, which you had to answer as fast as possible. And I remember now, one of the ones I remember was… It was nothing direct, like, do you like this or do you like that? But it was, imagine you're in, on a train, on a long journey. Would you read a book, talk to the other people in the compartment, go to sleep, et cetera. And I said read a book, et cetera. And they said, 'Come back in a week.' So I come back in a week, and I've still got it, a little booklet of what they thought of me and my aptitudes and so on. And they suggested maybe I'd go into the law, but, they weren't that strong. And I wasn't impressed with some of their bits of argument. And at the end I said to this chap, 'Look, I've paid you £10 to tell me what I should do, and…' He said, 'Oh, no question, you should go into computers.' And I really didn't know what a computer was. So I went back to the Appointments Board, get all the names of the companies, and…

Write to them?

…from there, write, write…

[2:34:28]
1962 you joined IBM.

Yup.

And 32 years later you left. But, towards the end of those 32 years, a particularly important event occurred in 1979, was the election of Margaret Thatcher.

Mhm.

And Margaret Thatcher was very keen on, well privatising a lot of things.

Yup.

And, also, IBM by then had become a very strong company, and it was beginning to be admired for its management excellence.

Yes.

And it became a case study of a very important book, In Search of Excellence.

Yes.

By Peters and somebody else.

Tom Peters, yes.

And, then the Government, Thatcher's Government, started to use people from IBM in the public sector. A very interesting move.

Yes. I guess my relationship, if one can call it that, with Maggie Thatcher, there were several things. The first entertaining one was, before she took over, when she was Leader of the Opposition. And, she came to lunch with IBM, with the IBM Executive Board. And I can remember first of all Eddie Nixon saying to us, 'Now of course, she's a woman, and we must be courteous and,' so on. And she came with just one acolyte. So we sit down. And she proceeds to go round the table taking us to pieces, one after the other. Absolutely classic, as one subsequently learnt, of her technique. So she turns to Len Peach and she said, 'Oh you're Director of Personnel, Mr peach.' And he says, 'Yes.' She says, 'One of the things you say is that you're a single status company.' And he said, 'Well, yes, that's true, you know, we don't have management dining rooms for example, we, everybody gets the same,' et cetera. 'Oh,' she said, 'that's intriguing. Do you have a car Mr Peach?' He said, 'Yes.' She said, 'What is it?' He said, 'It's a Jaguar.' She said, 'Oh,' she said 'does that mean all your employees have Jaguars?' [laughter] And she just took that sort of approach to each of us, you know, waiting with repidation for my turn. I can't really remember exactly what she asked me, but I'm quite sure I was treated the same as the others. So, we had no doubts what was going to happen when she got into power. And then, we did have several contacts with her. I managed to organise meetings for the chief executive from the States. The way IBM was working, I mean they really did respect the country general manager's role. Nobody from the corporation would dream of

coming into the UK for any meeting without going through you, and, usually of course asking for your help. So, a couple of times, you know, I got a call saying, 'I'd like to meet Margaret Thatcher,' and I'd think, oh, crumbs, how do I do that? But we always did manage to do it. And then, of course with the PC we became hugely important exporters, for several years we were either the fifth or the sixth biggest exporter in the country, and I managed to persuade her to come up to Greenock. And she had a fabulous, for our standpoint, fabulous tour round the Greenock plant. And the irony was, on the Friday, she was coming up on the Tuesday, on the Friday I got a panic call from the Greenock plant director saying, 'Tony, you do realise that the Tories are not exactly popular up here.' I said, 'Yeah.' He said, 'Well I can't guarantee what'll happen when she comes.' I said, 'Look, a) it's too late to change anything, but b) I've got every confidence, I've seen her in operation, I don't think that's a problem.' Anyway, she turned up, and of course she charmed the pants off them. She went round the line, she talked to the people on the line, and she was able to do that, and so on. And she said a few words. There's a headline in one of the *IBM UK News* you've got which says, 'Your products excel all others,' which she did actually say on that occasion. And, when she drove out of the plant, the guys were leaning out of the windows waving and so on. [laughter] It was fantastic. It just shows you the power some people have, you know, as a person. And, then there were things like, preparation for 1992, and, I was one of the people called in to Number Ten to discuss whether the UK was prepared for it. In those years, the Government realised that we weren't doing very well. There was IT '82 I think, and then there was Industry Year '86, and we were obviously involved in all that. So…

[2:39:06]
So you were now getting inside the political establishment.

Yes.

IBM was.

Oh, yes, IBM certainly was.

Yes. Sir John Hoskyns was one of her advisers.

Yes.

And he was ex-IBM.

He was ex-IBM.

He was ex-IBM.

Yup.

And towards, when you were Chairman and CEO, you also took up the role of non-executive director in other companies.

Yes.

Which were not direct competitors of course.

Yup.

General Accident.

Yes. I started…

That's your finance background.

General Accident was my first one. Of course I knew General Accident from an IT standpoint. There's one good story that's perhaps worth telling. General Accident, I think all the other directors were either aristocrats or Scots. So I was somewhat different. I'm not sure how they got my name. Any rate, they asked me if I would join the board. And, I persuaded the company that it was a good thing that I should have one outside directorship, which I firmly believed. And, and so I did that. I had been on the board about, three months I suppose, four months maybe, and had a monthly board meeting up in Perth. And the chairman was Lord Airlie, who was then

also Lord Chamberlain, at the Palace. And, IBM had bid two large, I don't know, 168s or something, 3080s, I can't remember, to General Accident. Obviously I had talked to the account team and understood the rationale for it and so on. But, it then came for a board decision, are we going to buy this? And, contrast this with today's received wisdom. We come to item five on the board meeting. And the chairman said, 'Right, next one is a decision on whether we're buying these IBM machines.' And I put my hand up and I said, 'Chairman,' I said, 'perhaps I should leave the room.' You know, I, obviously… He said, 'What?' He said, 'You've only been with us for a few months, and the first time we come to something where you can be really useful, you want to leave the room.' [laughter] And the idea that there's a conflict of interest and I might not be honest and so on, just, didn't, that's not how people behave, you know?

Yes.

And you contrast that with today, it's really quite…

Yes. Yes indeed.

And so I learnt a lot from that. It's always been my belief since, whenever I've got a chief executive, I would always try and get them onto some other board, because I think, unless you've been a non-exec, you don't realise how difficult it is, going to a meeting once a month, all you've got is papers, and the executives are there the whole time, they're right inside it, and if you're going to do your job properly, you know, you need to understand that. So. So that was, that was important and helpful.

[2:41:45]
One of the most interesting roles that I'm interested in that you played outside of IBM was the United Kingdom Atomic Energy Authority.

Right.

What was your role there?

Well that came after IBM, or after all but the very last bit. To what extent it was directly connected, I don't know. I'd been asked if I'd go on the board of the Atomic Energy Authority some years earlier, probably, '86, '87, or something, and I couldn't do it, I couldn't spend the time, et cetera. At the end of 1992 I organised a dinner for the IBM Executive, directors, with the permanent secretaries. I had got to know Robin Butler, and I said to him, 'Here, how about your team and mine sort of, getting together?' And he said, 'Yeah, I think that's a good idea.' So we did that. In the January I got called in by the then DTI Permanent Secretary, Peter Gregson, and, I had already done one or two things with the department, you know, task forces, and, Committee on Business and the Environment, so on. He said, 'Right Tony,' he said, 'now, we'd like you to do a real job now.' So I said, 'Well, what's that?' He said, 'Well how would you like to be chairman of the Atomic Energy Authority?' I fell off my chair laughing. I said, 'Peter , come on.' I said, 'You better than anybody, you know I'm a classicist. What the hell do I know about nuclear physics?' He said, 'Well that's not the issue.' He said, 'Heseltine thinks it needs sorting, and he doesn't know what to do with it. And he wants somebody who is used to dealing with a lot of technical people, who has got no baggage, to come in and sort it.' And I said, 'Gosh, I don't know.' I said, 'Look, I need to think about it.' And I went away, and there was only one person I knew who knew anything really about nuclear, and I went and had a meeting with him. And he said, 'I think it would be great for you and great for them. You really should do it.' So, after a week I went back to Peter and said, 'OK.' And so, I started in June 1993. And…

[2:44:04]

What did you face?

Well it was quite clear it was in a sense dysfunctional. It's a sad story. It's another UK, yeah, in many ways. In the 1950s nuclear was seen to be *the* future. Remember it was electricity too cheap to measure. And, the UK was well ahead. And, at its height, the late Fifties, the UK Atomic Energy Authority had 55,000 employees. And then, over the Sixties and into the Seventies various pieces were spun off, so British Nuclear Fuels came out, Amersham International came out, et cetera. But also, nuclear was no longer favourite, in fact, just the opposite. Of course Labour had always been anti, the Campaign for Nuclear Disarmament, didn't distinguish between

peaceful and, et cetera. And, so, gradually it was declining. By the time I had got there, the Authority was down to 12,000 people, and was losing about 1,000 people a year, because the Government was cutting the research grant, because it didn't really believe in it. The irony for me was that back in the Sixties I used to go to Harwell to debug their System/65, Model 65. And, I remember talking to the director there in the late Sixties, and he said, 'Well what we've got to do to protect ourselves is to commercialise some of the expertise we've got.' And they kept trying to do that. But, they never did it really. And I found when I arrived, they said they'd got 22 sections or whatever. So I duly went round each of these sections. And, quite often they would say, 'Well we've developed so-and-so from our technology, and this could be a really good product.' I'd say, 'Well, how does it compare with what's on the market now?' They'd say, 'Oh yeah, it's at least as good as anything on the market now.' I said, 'Well, why don't we go out there and sell it?' 'Ah. Well the problem is, a) there are restrictions on what we can sell, because we're a Government statutory body, but b) we can make it much better next year.'

Yah.

And of course, that again is the technology's answer all the time. So, I'm going around understanding what's going on. Also, another interesting example I suppose of culture. Because, I've only been there, two or three days, and I call my PA in, who I've inherited, and said, 'Right, I want to go round to all the sites, talk to the troops.' She said, 'What do you mean?' I said, 'Well I want to go to the sites and talk to the people.' So, I said, 'Can you get me a timetable for the next few weeks.' So the next thing, I get the senior personnel guy come in, and he says, 'Chairman, we don't understand, what is this you're going to do?' I said, 'I'm going to go and talk to the people.' He said, 'But, you don't know anything.' I said, 'Well, actually, I know where I've been, and I know what I believe in. I think I ought to tell people, this is me, this is what I'm about, because,' I said, 'we're going to do some interesting things, and I think that's the right way to start.' 'Oh,' he said, 'I don't recommend that.' I said, 'Well I'm sorry,' and I duly did it. Anyway, I had only been there about a month, and, the executives had disappeared for a meeting along the corridor, and when the chief executive comes back I call him in. And I said, 'Hey, Brian,' I said, 'what's the meeting?' He said, 'Oh, it's with BZW.' I said, 'What are BZW doing?'

He said, 'Oh, you know, the Government, they've asked them to recommend how we'd be dealt with in the future.' And, I said, 'Well what are they recommending?' He said, 'Well they want to cherry-pick little bits that they think they can sell off here and there and so on.' I said, 'Well, are you happy with that?' He said, 'No, of course I'm not.' He said, 'We should be kept together.' So I said, 'Look, I think we've got do something.' So I, first of all I phoned Peter Gregson, and I go in. And I say, 'Peter, look, I thought you appointed me in order to sort the Authority.' I said, 'What's this BZW?' He said, 'Oh, well that was already under way before you came on board Tony, and they're due to report.' I said, 'In that case, I'm resigning.' He said, 'What do you mean?' I said, 'Well, I come in to do a job. I'm not going to be told by a load of merchant bankers what to do.' 'Oh,' he said. 'Well, we can't stop it.' I said, 'Well can you delay it?' He said, 'Well we could I think.' I said, 'Fine. Tell them you don't need it for another three months., and I'll do what I want to do.' So I call the guys in, and I say, 'Look, I've seen enough. There's no way this is going to be kept together as you are, it doesn't work. On the other hand, I don't like this idea of cherry-picking bits. So why don't we sit down and work out what we sensibly can do.' So I manage to persuade them that we could split it into three. There's the nuclear sites that we have to leave. Nobody's going to take them on, they've got to be Government-owned. So that stays in the public sector. There are things that are genuinely viable commercially, and we should take those out and then try and make money with them. And then, there's the services, catering, site, transport.' I said, 'We've still got services at a level that could deal almost with 55,000 people and there's only 12,000 of us. It is ludicrous what we're spending on estate, real estate, so on.' Now I had some experience at IBM, because one of the things I did in IBM was to outsource our property department, and then we outsourced what became Skillbase, et cetera. So, I knew one could do that. So I then go in to see the junior minister, Tim Eggar, and it's the only time I blindsided the civil servants. You should work with the civil servants, they were good, competent, et cetera. But of course they have their view. So I didn't tell them what I was going to say to Tim. So I go in. And Tim says, 'Tony,' he said, 'I'm really disappointed. We brought you in to bring a different approach. And here you are, telling us you've got to keep everything together,' which is what they had obviously briefed,' And I said, 'Oh I'm surprised at that Tim, that's not at all what I want to do.' He said, 'What do you mean?' I said, 'Well what I'd like to do is split it into three,' and I explained the rationale, and so on. And he

realises then that these guys don't know. So he looks at them and he says, 'Any reason why he shouldn't do that?' And they say, 'Well, we don't…' da-da-da-da. So I stand up and say, 'Thanks Tim, I'll come back with a plan in a month's time.' And off we went. And that's what we managed to do. And it was fascinating. It was the last privatisation when the John Major had a majority of, two, or something. I met Blair and Brown who were the coming people. And they were very honest with me, because, as you can imagine, the unions were totally opposed to this. And, I explained to them what I wanted to do, and they said, 'Look, we can see what you're trying to do. You may well be right, but quite honestly, if can see this as an opportunity to defeat the Government, that's what we'll do. So we can't give you any support.' So I said, 'OK, I know where I stand.' And then, we got it through. Had to get it into the Queen's Speech, and it wouldn't have happened had it not been for Heseltine failed to get, to persuade the party to privatise the Post office.

Right. Oh, and that would have been…

And so there was, there was a gap in the Queen's Speech, and I said, 'Right, we're ready.' And, we got it through. And so, in, June let's say, we were privatised. And, in September I floated AEA Technology. And I was given the choice of either staying with the Authority, with the nuclear sites, or going with the… And naturally I chose to go with AEA Technology. And so I chaired that for the next five years. And that was it.

[2:52:33]
What do you think of the new proposed deal with the Chinese and EDF for nuclear power?

I just think, Hinkley Point, there are too many issues. I just think it doesn't make sense financially, where it's got to. I think that particular design is still unproven. I think there are lots of other ways nowadays. I think we could have a better, or at least a proven standard design. And I think we also, for the longer term, probably ought to be looking at small nuclear plants, which I think is probably the way of the future. So.

[2:53:10]

Latin and Greek.

Yes.

Egyptian hieroglyphy.

Yup.

Computer technology and software.

Yup.

Logistics expert.

[laughs] No… Definitely not. But OK.

A man who understand nuclear power.

Mhm.

Thank you very much.

[laughs] OK.

[End of Interview]