



Lord Baker of Dorking

Interviewed by

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Welcome to the Archives of Information Technology. It is Thursday, July 12th 2018. I'm Richard Sharpe and I have been researching the IT sector since the early 1970s. We're close by the Houses of Parliament, which is appropriate, because making his contribution to the archives today is Lord Baker, Ken Baker, MP as he was. The politician who I think did most to influence the use of IT in the UK. For 50 years or so now he's been a member of both the House of Lords and the House of Commons.

Lord Baker, where were you born and what did your parents do?

I was born in Wales in Newport, Monmouthshire. In those days it was Monmouthshire, and the boundary between Wales and England came down between Newport and Cardiff. You knew that because that's where the pubs were open, either or closed on a Sunday. Now it's all part of Wales. So Newport, Monmouthshire. My father was a civil servant and he rather wanted me to go into the civil service. I was the first generation of my family who went to university, to Oxford, and when I left I didn't really want to be in the civil service, but I didn't know what to do. And so I applied to the one company that paid the most to students in those days, and that was Shell, and they paid the princely salary of £750 a year.

Did you get on, so you got on quite well academically?

Yes, quite well.

Must have passed your eleven-plus?

I did history. No, I passed two eleven-pluses. Because we were evacuated to Southport during the war, so I did the Lancashire eleven-plus – I went to a Church of England primary school, a very good one indeed, called Holy Trinity in Southport – I took the eleven-plus and that was quite a demanding exam. Then we came back, we were evacuated there, we came back to Middlesex, I took their eleven-plus. That was a walk-through, it was all those sort of questions, is this a square or a rectangle, sort of exam. And I went to grammar schools for, in fact, three years. And then one day my father said to me, do you want to go to St Paul's, and I said, well it's a church isn't it? And he said no, it's a very good school I've heard about. And I said, well, I'm very

happy at Hampton Grammar, a very good school – there's still a very good school at Hampton Grammar, it was a state grammar school in those days – and so he put me in for it. My father was a great believer in education being the ladder up which you climbed in life, which was very much a Victorian attitude, as it were, to education. And so for four years I went to St Paul's. And then I went from St Paul's to National Service, I did two years in the army, I was a gunner, and I was, became an officer in the gunners and I became an artillery instructor.

[0:02:47]

And what were your key subjects at school and then university?

History, essentially. History and English and Latin. My three A levels were English, History and Latin. And that has been with me all my life, basically. Because I've written history books and I've published anthologies of poetry and things of that sort.

So there was no technology there, no science?

No. The only technology we had was at my grammar school in Southport, the only lesson I can remember in that school was the two hours of carpentry that we had each week, where we learnt to make dovetail and tenon joints. And I also learnt the classic advice to all carpenters, measure twice before you cut.

Always useful skills.

And I all... remember that more than anything about the technology. But I now, but I acquired the technology rather later. Being an artillery instructor you had to have quite a lot of technology actually.

Yes, you were dealing with rather explosive technology.

Yes, and, you know, complicated sighting arrangements and things of that sort.

[0:03:51]

And you led people there. Did you learn leadership skills there in the army?

Yes, in the army. I learned debating skills at school and I liked arguing. And when I was at St Paul's, with a man called John Adair, who became the Professor of Leadership at Guildford University, we started the first competition in public schools, which led to the Observer Mace exhibitions. And arguing and debating was really part of, early part of my life.

Your parents gave you that talent and encouraged you?

My parents encouraged me to do as well as I could, I think, quite frankly. My father was, left school at sixteen. My grandfather left school at twelve. And my grandfather learnt much late in life and he became a great devotee of Dickens and he'd read Dickens aloud to us. And he collected all the editions of Dickens and things, and he loved it. And that's why I actually then had a great love of Dickens, that I still have. And I've read everything that Dickens has written, virtually everything.

[0:05:03]

You went to university, the first of your family to go to university.

Yes, indeed.

And you read history.

Yes, at Magdalen College. I was very lucky with my tutors. We had the greatest medieval historian, Bruce McFarlane, who wrote really, in fact identified bastard feudalism, and he was a really very great scholar. Very scholarly man. And then, for the 18th century we had John Stoye, who's just died, 18th century one. And then we had, I had AJP Taylor for the 19th and 20th century, that was very lucky.

AJP Taylor is not exactly your political kettle of fish.

No, not at all. But he was a great history teacher, very great history teacher. I enjoyed the sessions I had with him.

[0:05:48]

Where did your conservatism come from?

I think it was more liberalism in those days. I like sort of these things that I'll tell you about, I remember bits of politics, I remember people criticising Stafford Cripps as the Chancellor of the Exchequer, for putting up taxes. And I remember one of the people who helped in my mother's house objecting very strongly that he'd put up the price of tobacco and cigarettes. And I became slowly aware of the outer world, as it were, through that. And those were the immediate years after the war. And I just became interested in public events, if you like. I remember one of my history teachers at St Paul's saying, when I was about thirteen or fourteen, he said – and he had in his classroom a high shelf with newspapers on it – and he said, you've really got to start reading newspapers and seeing what's happening in the world. And I did that and I got more involved all the time with events.

[0:06:50]

You came out of Magdalen in '58, was it?

Correct.

'58. You then went into Shell, which paid this amazing amount of money.

Yes. £750 a year.

£750 a year.

I can't tell, you lived grandly in those days. [laughs]

You lived well on that?

Well, during the army I managed to save, because I was posted to Egypt and to Libya, and you couldn't really go out and spend money because we were on active service in Egypt in those days, the Fedayeen were trying to kill us and shoot us, because it was the early days pre-Nasser and they wanted their independence, they wanted Farouk

killed. And so you, weekend after weekend I was locked into the mess playing canasta or cards with people, and you couldn't spend money and so it built up. But it wasn't very much. When I started my, I remember my first week's pay as a soldier, an ordinary soldier when I started my National Service, was seven shillings a day and I was sent a postal order for 28 shillings and a railway ticket to get me to the barracks. It wasn't a great sum, but I managed to save five, maybe ten, 20 pounds a month. I built this up in a Post Office savings bank and I had it when I left the service, and it was very useful at Oxford, because it was an extra bit of money that I had and for about ten pounds in Oxford in those days you could live for a fortnight.

[0:08:14]

You joined Shell, what was your role first of all in Shell?

In Shell I learned, they put me into economics, which I didn't- I was surprised, and it was the economics of oil pricing and I began to understand the relationships of supply and demand and I worked with a very clever economist, who happened to be the illegitimate son of Dorothy L Sayers, I was able to discover, a man called Fleming. And he taught me a great deal about how to use figures in economic matters. But I got bored with that and it wasn't for me, and so I just applied out in the air for a job in the *Sunday Times*, assistant to a chairman of a company. And I didn't know what the company was, it turned out to be Aquascutum, the clothing company. And I went and worked for him in the rag trade. A remarkable man called Joel Abrahams, very good Jewish entrepreneur and merchant, and I learnt a lot about how to run businesses, and I also learnt from his accountant the whole business of the financing of the company, and he taught me how to budget control, I was given a small subsidiary to run. The first job I was given, by them, was to pull around a warehouse that had got completely out of control in Golden Square, and the goods were coming in, they weren't properly checked for poor stuff, and the staff didn't know what was happening. And so for three months I just had to use my common sense to pull it round. They seemed to like that and I was given a small subsidiary to run, I liked that. And I worked, stayed with them for two years, but I learnt a lot of basic understanding on the job, I didn't have any management training, I just learnt. And then I applied for another job as assistant to another chairman, in the City this time, a man called Peter Cannon, who ran a company called Minster Trust and he was a very advanced and interesting man who

invested in companies and then stayed with them for three or four, five years and pulled them round, able to pull them round. And after a time he liked what I did and he put me in to run a clothing company they'd invested in, which supplied Marks & Spencer's. And there were about three factories and I was suddenly the chief executive of all of this. And I loved that, I loved actually being an active manager, I got into the office every morning at 7 o'clock, opened all the letters before anybody else arrived, and I liked it. And I also learnt a huge amount from Marks & Spencer's on how to run a really good company. And I was there for, what, two or three years, and I was the chief executive, we then became a public company.

[0:10:38]

I kept up my interest in politics at the time, because I'd been the secretary of the union at Oxford and I was a local councillor in Twickenham for a time when I left Oxford, and I, in the 1964 election, fought an election as Conservative candidate in the seat of Poplar, which was a very safe Labour seat

Yes, they don't count the Labour votes, they weigh them.

They weigh 'em. And my opponent was Ian Mikardo, who I rather liked. He was a fairly controversial figure, Ian Mikardo. He was a person that joked and said of him, he's not as nice as he looks, and he was a very ugly man, but he was a bookmaker. And I rather liked him. And he was very kind to me, he knew I was, I didn't threaten him in any way, shape or form. And that was the 1964 election, which Douglas-Home just lost and Wilson just won. And in those days, to go into politics, you first had to fight, as a Conservative, a safe Labour seat. Cameron and Osborne were parachuted into safe Conservative seats straightaway, but in those days, at the time I was at it, you started with fighting a Labour seat. And in the '66 election I fought a marginal seat, which was Acton, which they'd lost. I didn't win that back because there was then quite a big swing to Wilson. And I stayed on being the candidate just on the paper, and then strangely enough, in 1967 the Member of Parliament, then called Floud, committed suicide and there was going to be a, obviously a by-election. And whoever stood was going to win, there's no question about that, because Wilson was massively unpopular. So I had to decide, I was then the chief executive of a publicly quoted company, which I'd saved from bankruptcy, I had quite a good shareholding in it, so I was going to make a lot of money one day. Do I go on being

in business or do I go into politics, I was bound to win the seat. And I went to my patron, Peter Cannon, he said, come and have a drink with me in the Connaught bar. So I went and we spent the night drinking in the Connaught bar and he eventually said, well I know you really want to go into politics, so go ahead, stand. We'll find another chief executive for the company, but you will stay on the board as a non-executive. And he said, I'll help you with some of your secretarial expenses, because in those days MPs had no... So I won the seat, with a big swing, and that's when I got *in* to politics, as it were.

[0:13:04]

So now you're an MP.

I'm an MP, and interestingly, as we're talking about IT, it is quite interesting, I took a great interest in data security and data information. And IBM was the big company of the day at that time and I had a hand in introducing a bill in the house as a backbench MP on data security and the right of citizens to have access for information. And I had a lot of help from IBM drafting that bill. And I also took an interest in, then, telephony and technical matters. And one of the bills going through in that parliament was a bill to change the General Post Office into a nationalised industry. And I was on the committee stage in that bill and I'd been fairly convinced by some articles I'd read that really you should try and privatise part of the telecoms, particularly the telecom bit of it. And I remember the person leading the committee, our leader was Ian Gilmour, and I said to him, do you mind if I move some amendments in this bill that would separate out the telephony from the post side, on the basis that on the telephony you'll be able to raise money from it, you'll probably raise money from the post side. And he said, oh well, you can do it. He said, I won't support you, it can't be government policy, it sounds rather too extreme for us. But I was given my head to move some amendments. So in 1968/69, it was, I think, I did move some tentative amendments which separated out the telephony side of the Post Office from the General Post Office, and that was the beginning really, the really first stages of the privatisation, it took ages to get there. That was 1969. And in '70 I lost the late '70 election because it went back to Labour. But I got the first by-election in St Marylebone five months later, so I re-entered the House as a backbench MP.

[0:15:13]

Now, in the late seventies, when I was involved in this company which was supplying Marks & Spencer's, running factories, I got advanced in an interest in various technological matters and early days of computing. And they were the very early days of computing. Industry was just getting used to the electric typewriter in those days and the first ATM machines came out. The first ATM machines were little metal cards, that size, with punch holes in them. And so the most advanced offices had equipment that did punch holes, and the whole of the social security side of big offices in government were basically clerks, many of them blind and partially sighted people, doing punch hole activity. You probably may just remember it, because you're that age, possibly. And it was that stage of technology. And now, we're now in 1970 after the election. And I got involved with a company called Logica, which was a software company, and I was a very small shareholder in it, and I got to know the people running it, particularly Philip Hughes, and they were one of the first breakthroughs in software, and I began to realise what software was. Software was like the music and the piano was the hardware, I understood it that sort of way. And I got into it more and more and I learnt a lot from them, a considerable amount from them. And in '72 I was given a job by Ted Heath to be a Minister for the civil service, and I got sucked into central administration of government in doing that. And I was his personal Junior Minister, he was head of the civil service. And again, this was, you know, and we were still having typewriters with seven flimsies at this stage, and electric typewriters, and I was in that government as Junior Minister responsible for the purchase of computing. I was in charge of the stationery office and the Central Office of Information, and one of my jobs was, I was the Minister answerable for that, and I had a very good civil servant in Reay Atkinson, who died recently. And he was trying to get the government to automate more, we were trying to buy equipment that would help and help and help. So that stimulated a very great interest in computing, and that's when I took up the interest in Logica and I got to know Logica very well. And so when we lost the election in '74, through the seventies I was very much involved in the early stages of computing, which you remember was the Sinclair computer and things of that sort. And I, by the time of 1979 when Margaret won, I was back in the House at that time, I was a Member of Parliament, but backbench Member of Parliament.

[0:18:12]

Did you have your own microcomputer?

I had a Sinclair for a bit. It was so funny playing it, it was like rubber, plastic. But I began to learn through Logica how important computing was going to be and how important software was and how it could automate such an enormous amount. And so I was, up to '79, doing that. And when Margaret won, I was not offered a job at all by Margaret in '79 because I was considered to be a Heathite, having been Heath's personal Minister, as it were. And so I went on, and again, I got involved with more technology with Logica and other companies. And then in 1981, Margaret, I persuaded Margaret to come to Logica in Newman Street in London, where its headquarters were. And she was very impressed with what she saw, she didn't really understand computing at all, but she could understand that this was something that was quite important and happening. And then I devised a ten-point programme for her of what I think ought to be done, and part of it was to get computers into schools, even the early ones. We're now talking about the Sinclair one, basically, and the BBC computer. The BBC then developed a computer, had programs on it. Also, I learnt about fibre optics. Fibre optics was invented in Essex, from one of the laboratories of Standard Telephonies, and I learnt about that. And I also learnt about early robotics, very, very early robotics. And so I put all this into a general note to her, ten points, saying there should be a research fund into these separate things, and that you should try to move towards a paperless office. It was almost the first use of the phrase, a paperless office. We all had those printers and early printers and, what was it called?

Daisy wheel printers?

[0:20:23]

Not daisy wheel printers, they were there as well, but before the daisy wheel there was... It'll come back to me, I forget names. But it was the one who produced a whole lot of things and it was the early days of photocopying. Photocopying was just arriving, as it were. And so, I put this to her and she liked it so much that in January '91 she offered me the job. I said there should be a Minister of Information

Technology, she offered me the job, Minister of Information Technology. And so I joined the government in January 1981.

As Minister for Information Technology?

Yes.

In the Department of Trade and Industry.

Correct, as a Minister of State, because I had been a Parliamentary Secretary before, so I was halfway up the ladder, if you like. And there was a bill before that I had to complete, and the bill that was still going through the House ended the monopoly of the postal side of the business, didn't touch the telephony at all. And also, it privatised Cable & Wireless. That was as far as they could go. And I finished off that bill altogether. And while I was working on this bill, which was the privatisation of Cable & Wireless, Keith Joseph was my senior Minister, and he had an adviser called David Young, who later became a Minister. And David Young and I worked on the privatisation of Cable & Wireless and when we were working on it, we came to the conclusion that it would be possible to privatise BT. That had never been in the manifesto of the Conservative government in 1975. I think the only commitment to privatisation was, I think, selling off small laboratories – what were they called? The laboratories, and possibly BL, but nothing more. Anyway, we're talking now of the summer/autumn 1981 and I realised that this was going to be such an important area and BT could be privatised as we were handling the privatisation of Cable & Wireless. And David Young and I went to have dinner with Keith Joseph in his house in Fulham. Dinner with Keith Joseph was quite a spartan affair, as you can imagine, and we persuaded Keith that this could be worked out. And he went and then put the idea to Margaret, who said alright, produce papers for me to say how it could be done. And that was the beginning of the privatisation of BT.

[0:22:59]

And while you were moving towards privatisation of BT, you have privatised Cable & Wireless, which was a big international operation, telecommunications, had very

close links with the government, particularly in security matters, so that you were able to privatise it.

Absolutely.

While you were going in that direction, which was very acceptable to Margaret Thatcher, at the same time you're putting together a ten-point plan which is quite interventionist.

Yes, it was very interesting. In 1981 Margaret Thatcher was massively unpopular. We were in a very deep recession, if you remember how deep the recession was, when I visited Manchester or Birmingham, as I got off the train, the – in 1981, at the end of '82 – your local civil servant would come to you and give you a list of factories closing that day, *closing that day*. It was a very, very deep recession. And she was very unpopular. One-term Prime Minister and all the rest of it. And then Margaret decided that she wanted a package of interesting and progressive measures in the summer of 1981. And I was, as I was the Minister for the sunrise industries, I was asked to dig up some ideas. And so I devised various schemes. One of which was to get a computer into every school, and we chose two computers: the BBC computer and a computer from Research Machines. And we made an offer to all schools they could get them at half price, we had to put up the other half. It was an offer they couldn't refuse. And Margaret actually launched that scheme herself, came to launch it one day. I also put up to her a proposal for automation of offices in Whitehall, beginning of the paperless office. Because you were now getting rather more advanced electric typewriters and moving into sort of computerised typewriters by that time. And there was a scheme for that as well. There was another scheme for fibre optic, because fibre optics, as I said earlier, had been invented, discovered in a telecoms laboratory in East Anglia, and I'd seen it and I'd realised the importance of it. And so there was a research programme that I announced for that. And then on top of that there was also the early beginnings of robotics, and again, we launched a support programme for that. And so in the summer of 1981 there were three or four programmes announced, because Margaret wanted to be very positive and looking to the future and all the rest of it. And I was lucky to do all that on behalf of her and behalf of the government. And so that all went ahead.

[0:25:46]

In the meantime, it was agreed that we should prepare a bill to privatise BT. And the only reason why that worked was that the Chairman of BT, a man called Sir George Jeffries [Jefferson], wanted to be privatised. He'd come from the defence world, running a defence industry company, and I was a Minister in charge of this nationalised industry called the Post Office. And as a Minister I had control over the wage negotiations for the staff, the pensions negotiations for the staff, I could appoint anybody I wanted as the Director. I was also responsible for the investment programme of the Post Office and everything management, it came to me as a Minister. And I said I happen to be a businessman so I rather like all of this, but quite frankly, most of my colleagues really had no idea at all about business and it was quite wrong for a Minister to be making those sorts of decisions about a great industrial undertaking. And George Jeffries [Jefferson], the Chairman of British Telecom, believed exactly the same. And with his support we were, over a period of three years, able to privatise BT. Quite a lot of his senior managers were totally opposed to it. They believed that telecoms was a natural monopoly, it should be in the control of the state. For security reasons, for wisdom reasons, for... it was important that they have the powers that a state company has to dig up and all the rest of it. But we, we managed to devise a bill that allowed that to happen. And the first element of competition we introduced was on the ordinary telephone. In those days if you wanted a telephone, you had to wait three months for the telephone and you had the choice of one colour, black. And so we started immediately, David Young and I, to open up competition for the manufacture of phones. And that was really the beginning of the privatisation of BT. He was a very gifted leader, actually, George, and he was very well aware of the future. He came to me one day and he said, the defence industries are releasing 32 megahertz of space in the spectrum and could I have it, please, for these new cellular phones. I happened to have heard about them, in America. And I instinctively said, you can have half of it, George. You can have half of it but not all of it. And he objected, but nonetheless he got half, and the other half we decided to privatise and get someone else to do it. And that began the beginning of private telephony in Britain. And because we made that decision back in 1982/83, we led in the eighties cellular telephony, because there was competition and we created a competitor with the chairman of Cable & Wireless, with Barclays and with BP, were finding the money, to create a competitive network for BT, called

Mercury. And also then we created a competitive company using – the name'll come back to me in a moment. It ended up as the private telephony of Nokia, we did that. It was... I haven't got my folder here, I can give you all the names. And that was done in 1983. Then there was a general election.

[0:29:28]

Yes, can we just go back to '81. Sorry. Can we just go back to '81 for a moment? And it seems that you are a ship with the wind behind you.

Yes.

If you think of '81, you've got the BBC Micro coming out, you've got Prestel announced.

Correct.

Not a great success, but an innovation.

No, I went out and tried to promote it. It was the future for a time, Prestel.

ICL has come out with a new distributed system called DRS 20, 1981. So 1981, the wind is behind you.

Well, one of the things I had to do was to save ICL from bankruptcy.

Well, it was a thing I wanted to ask you about, because I always got the impression you weren't terribly keen on ICL.

No. I saved it twice.

Go on.

I saved it first in the 1970s when it got into trouble in 1972/73. And I can't remember the name – it's all in my autobiography – who was running it. And it had to be saved,

because it did virtually all of computing, automatic – it wasn't computing, it was punch cards and all the rest of it – for the government. And Reay Atkinson, who was then the civil servant who did it, devised a package to save ICL. They got into equally bad trouble in 1982, '80/81 then to '82. And we decided it had to be saved. Margaret told me it had to be saved, because it did so much social security computing and tax computing. And we had to devise a package to save it, which meant we had to find a chairman and a chief executive. We found Laidlaw, who was the deputy chairman of BT, he wasn't going to become the chairman or the chief executive, and he was very good indeed. And then we had also a whizz kid, an American whizz kid, to be the chief executive. The name'll come back to me, but I can provide you with that.

Robb Wilmot.

Robb Wilmot.

British, but from Texas Instruments.

Yes, and I learnt a lot from Robb Wilmot. He was very, very good. And the pair of them pulled it together. At the same time, I had to get a loan from Leon Brittan at the Treasury and he gave it to us because Margaret said he had to give it to us, of £500 million for the company. And we also had to try and – and I suggested we should do a deal with a Japanese company, because during the 1970s I'd gone to Japan a lot, to see their work on virtual, on computing and on chips. They led the world in the 1970s on chip development, and they did it through very clever public investment, and I worked particularly with Fujitsu. And Toshiba. And I got to know how good they were. And part of my ten-part programme was to do a deal with the Japanese to get the chips made in Britain. And so I was instrumental in getting Fujitsu invested into ICL as well at that time, so they saved them for a very long time indeed, and only recently disposed of. And that saved ICL.

[0:32:42]

So this was a very exciting time and I realised that this was where the future of the country lay and so I persuaded them to have an Information Technology Year in 1982, and we had a stamp from the Royal... Post Office, because I was also responsible for

that. And we then, in order to get computers into schools, computers into offices, we fitted up whole buses with equipment which would go around the country and schools. We had a train that was fitted up with all equipment, modern equipment, so as much of modern we could get from America, from IBM and from the Japanese, and very little in the UK, to show what could be done. And we did all that through the IT Year, 1982. I had fun, I had fun.

[0:33:37]

You did have fun. And you always looked as if you were having fun. And in retrospect, was it a success, IT 82?

I think it was. It alerted people to it. I remember having to do a great presentation at the party conference and I did a very advanced, what would now be called a PowerPoint presentation, it wasn't called that in those days, with lots of slides and lots of colours and big bangs and big balloons to blow up and all the rest of it on the screen. And it seemed, I was trying to show the Conservative Party this was the future, you must really embrace it. And many people said they'd never heard of this until they'd seen these programmes and that sort of thing. And so I was just trying to point the way forward.

[0:34:20]

And the Computer Literacy in Education, do you think that that was a lasting success?

Well, first to get a computer into every school was a tremendous success, and of course it wasn't welcomed by a lot of teachers, because they often found in the sixth form in the school that the Sinclair computer knew much more about it than they did. And it was not welcomed with entirely open arms in that. We did manage to get one computer into every school in the country and that meant that you could begin to say to youngsters, you know, this is important. And some, and some schools used it just for administration, others used it as a teaching tool.

So you think it was a success?

It was the beginning of a long road. I always said we're at the early dawn of a great day.

[0:35:12]

Right. Those were four exciting years, being Minister for IT. Can you identify what you think is the best thing you did as Minister of IT?

I think the privatisation of BT, which took three years, because it was interrupted by an election, and that required an enormous amount of effort and commitment from me personally, because there were so many people saying you shouldn't do it. The unions were forming up against it, there were lots of Conservatives who said, don't be silly, who'll buy shares for telephones. And one just had to press ahead and know that you were on the right course. I'd put that as really one of my achievements, because at the same time I also created the cable industry, because again, I remember George Jefferson taking me to a house in Milton Keynes which was entirely wired up, and it was the first example of you could put on the alarm when you're not there, you can turn the lighting on when you're not there, you've got television in every room and all the rest of it. It was very advanced for 1983/84. And I could see that if this was going to happen in one way, shape or form, we had to be active, we had to be in this industry, we had to really persuade people, this is the future, because very often people don't want to know much about the future, they really want to make the present days as comfortable as they can. And so I think the sheer, the sheer momentum that I tried to create was very important, and I think the computers into schools, I'd put the two achievements, I think, as privatisation of BT and computers into schools as the two most important things I did that endure.

[0:37:00]

Your biggest mistake as IT Minister?

[laughs] I had more mistakes when I was Education Secretary. I mean, it's very conceited, I can't think of many mistakes that I had. We had thrills and spills all the time. I think getting Cable & Wireless away as a private company was quite tricky, actually, and I think that in Cable & Wireless it was somehow, we didn't quite make a company that really survived all that well, it fell into difficult days and I don't know

whether we got that right, but it was a prelude to the success of privatising BT, the privatisation of BT was in fact one of the noble changes of Thatcherism. It wasn't in our manifesto. And in order to sell part of the public sector you had to get the first one away and the most saleable one was undoubtedly BT. If you got that away, then you could think about gas, you could think about electricity. And I as Environment Secretary was the one that privatised water, following BT.

[0:38:14]

While you were Minister for IT, there was a programme of four years called the Alvey Programme.

Oh there was, you're quite right.

Which was an attempt to match the developments of the fourth generation, as they were called, developments in Japan, fifth generation developments in Japan, which concentrated on very large-scale integration, on artificial intelligence, as we now call it, and software engineering, and parallel processing.

And there were various companies that were involved that we tried to facilitate.

There were.

Do you remember their names? Do you remember the names, I can't remember them.

Oh, companies like Inmos.

Inmos, Inmos. Inmos was the chip one.

Inmos was the chip one, founded in '78.

Correct.

Yes.

And it had soldiered on and certainly did a lot of chip technology.

Yes.

And I found quite a lot of money, investment for Inmos. And we opened a factory on the moors of Wales, I remember going to it. But it never really got established, I don't think.

Alvey has been...

And there was another one, part of Inmos. There was...

Insac? That was about office technology.

It was office technology.

Logica, again.

Again, Logica. There was Logica. Insac, I think, was more successful because companies decided that they wanted to do it. And we suddenly discovered that Unilever was the most remarkable company. No. Yes, it was Unilever. They invented the first printer and they invented the first word processor as part of their office equipment. They never developed them, and I remember going to see them and congratulating them on these extraordinary inventions. And they really did produce the first word processor, for the internal administration of Unilever, and I got that out into Insac to try and make that the big thing. And what was the other one you mentioned? Insac, there was that. That was office development. And they also did the first printer, which became the classic first printer of a company in Texas.

[0:40:27]

But Alvey has been severely criticised as a big mistake.

Yes.

Because its critics have said that Alvey was basically putting into the public domain technologies which then other people could exploit. And instead of creating demand or real technologies that were patentable and usable purely to the advantage of the UK, it just gave this stuff away and was doing research for other people. How do you respond to that?

I think there's something in that, I have to say. Because they were very creative, there's no question about it, and on the edge all the time doing something new. But we never managed to really develop beyond that. And it wasn't entirely the fault of Alvey. We have, and at that particular stage of our history, it's rather less now, strangely enough, we were very good at inventing things. The Logicas of this world did invent some very good software. We were much less good at trying to do it, Logica tried to produce a very advanced word processor and it failed. They weren't into the business of hardware and the marketing of hardware and the manufacture of hardware. They were on conceptual sides of the software, and I remember all of that, and they tried very hard. I'm talking now of the years, late seventies, I would have thought, that sort of period. And they never, the one company that would be able to do it, if it was, they didn't do it. And it was the hardware people, the Japanese and Phillips that really were the people who did the hardware side better, and very often the research and development of that was outside this country.

[0:42:11]

Why weren't companies like General Electric Company, Plessey, Decca, why weren't they stepping forward enough?

Well, I remember trying to persuade Arnold Weinstock to do this and the Plessey brothers to do this. The Plessey brothers were in awe of Arnold Weinstock, for a start, and I think they were actually terrified of him. But it was nonetheless an advanced company. And the other one was the smaller one, the Italian one...

Ferranti?

Ferranti.

Ferranti.

Now, Ferranti were very creative, there's no question at all. And I once met the old man Ferranti before the two brothers, and he was Jewish. And he would never let anybody have more than 50% of his business. And I once asked him why and he said, look, if you're Jewish and short you don't lose 50% of your business. And they needed a big partner and they had some most interesting technology actually, Ferranti. I could not persuade Arnold Weinstock to really get into cheap chip manufacture. He really made his money by supplying big telephone equipment to BT and doing it on a very cosy basis and he strongly opposed the privatisation of BT and the privatisation of Global & Wireless, and he got his chairman, at one time James Prior, another time Lord Carrington, who died this week, to argue very strongly against the privatisation. He wanted to keep the monopoly a monopoly. And there were three suppliers: there was GEC, Plessey and Standard, Standard Telephones.

Standard Telephones and Cables, part of ITT.

Correct. And they were in the Essex end and they shared out all the business between them, it was a really cosy relationship. And it was so cosy, to go into chip manufacture you had to do a deal. I thought first with the Japanese company, and do it on a joint basis, because they had done it all before. Their VLSI stuff was all done in the seventies. And the one I knew mainly was Fujitsu. But Mitsubishi had done it and Toshiba I think had done it. And that would have led to really computing as well, but we hardly made any computing or equipment in that stage at all, as you know, it was all imported. And I never was able to persuade any of them to do it.

[0:44:50]

Why was Weinstock so unwilling to get into commercial computing?

Well, he liked established businesses, he was very good in diesel manufacture, he was very good in- he had a big diesel company. And I accompanied him once or twice to overseas markets and selling power stations and to sell the generating equipment, and this was the business that was so much bigger and very solid and reliable and you could make cash out of it very quickly. And he built up a huge cash mountain,

billions. He wouldn't spend in the more experimental stage, wouldn't do that. There's only so much a government can do.

Because he ran the company as an accountant. Isn't that the reason? He had no real strategic vision.

Yes. He very rarely visited the companies. I remember going to see him several times in his office, which is just next to the Dorchester, and he sat in an office about the size of this room, at a desk, a sloping desk, in his shirt sleeves and braces. And he would have before him all the figures of all his companies, just figures, figures, figures, figures, figures, figures. And he would ring up the various managing directors and chief executives and say, I see that your stock has risen by two per cent this month, why has your stock risen by two per cent when your sales have not actually risen by more than two. No, no. And he ran it all from the centre. He was a very astute and clever businessman, let me say this at once, but that's how he ran his business. Very, very rarely visited the businesses he went to. Never became emotionally involved with them. They were for him an exercise in administration and hitting targets. And he, one of his key figures was his finance director, had a very clever finance director, I can't remember his name now, but very clever finance director. And they were very successful, no question about that.

And when he retired, it imploded.

Yes.

In the hands of some strange people.

It completely imploded. I remember once seeing Arnold in the House of Lords, before I joined the House of Lords, I went, I was over there, I was taking an education bill through or something, and I bumped into Arnold. I said, how's it going, Arnold? And he opened, he pulled out his pocket, it was an empty pocket, he said, that's what's happened since. And he had not, he was a rich man, but the great cash pile that he had generated disappeared within about two years. The chap was made a peer, he never attended the House of Lords, I don't know what even happened to him. He

was a manager who couldn't cope and the inheritance was appalling, it was all broken up. Same with Plessey's, soon as they went. And, you know, what happened to Ferranti's. It was all that sort of golden age which didn't quite come together industrially.

[0:47:44]

It was a golden age which didn't quite come together industrially. Was that because the, particularly Thatcher government, lacked an actual industrial strategy?

To some extent, I think that's true. We have a rather good industrial strategy in IT at the moment, actually, strangely enough. Matthew Hancock's got a lot to do that, now he's been promoted now to, or moved rather, to Health. And I admire him for having a good industry strategy in digital, the digital strategy's the best bit, industrial strategy. There was a great reluctance by Margaret to have an industrial strategy because we didn't want to second-guess business, that was the great thing. And on the whole governments don't do that very well. But on the other hand, you could have used public expenditure more imaginatively, which is what America did with defence expenditure, of course. And they created the American computing business out of their defence expenditure. And Arnold had a lot of defence equipment, but he would lobby for making torpedoes, because he had a torpedo factory. And BEA would lobby for making submarines because they had a submarine factory. But the strategy behind it all and the basic underpinning of it all, it would lead eventually to the iPhone and what we have today. There was no one prepared to take that particular imaginative strategy on. You couldn't do everything.

[0:49:14]

It has been said that the civil service, UK civil service is a Rolls-Royce, but often a Rolls-Royce that is more interested in listening to the clock ticking than where it's actually going, ie, in its own ability to do things. What was the quality of the civil service backing you? These are not necessarily people of great vision.

No. The civil servants that I had with me in the telecoms side – I had Reay Atkinson for a long time and he was very gifted. And then I had other civil servants. And when the civil servants know that they've got a competent Minister who's listened to,

and I got a lot of support for the privatisation of BT from the system, when they knew the Prime Minister wanted it and they had a Minister in the department who was able to deliver it, they become immensely supportive. And I was not opposed at all by any of the civil service in the privatisation of BT, they helped enormously. Or in creating the cable company, again, they were not opposed to that at all. Because they knew that it was going to happen and therefore they should try and help as much as they can. They weren't, and I don't think the creative sparks of it, that came from other things. It came from the fact that I knew quite a lot about the cable industry myself and I wanted to do something about it. I'm not trying to imply my own hand in all of this, but I did know a bit about it and I could therefore appoint people who could help. And I did appoint various people who could help, and I really did want to save ICL. I looked upon ICL as a real, a real chance of making a really good computer company in the UK that could make equipment and all the rest of it. And it was just before- at that time, to be a computer company you had a computer twice the size of this room with air conditioning and goodness knows what, and IBM dominated it and some of the names dominating it have disappeared completely now, actually. I'm just trying to think of the names. And ICL and Wilmot was the first one, I think, to realise the importance of distributing computing and how the computers could be quite small units rather like the size of this, as it were. And so, he could see that, and he actually put ICL on that path, actually.

[0:51:47]

But he's been criticised as a man who would have ten ideas, follow up six of them and forget what they were after two weeks, because he's going to have another ten.

[laughs] He was certainly full of ideas, I agree. But he did save the company from bankruptcy, he did pull it round. And he got them into making desktop computers, that I do remember. And that saw them through. The big massive computers, he maintained and would occasionally sell a big one to the government. But it was the distributed smaller computers that I think Wilmot made the biggest impact with.

[0:52:20]

I understand that Reay Atkinson, who you've mentioned...

Yes.

I met him a couple of times, I saw him as a civil servant with considerable vision, and he put a paper into government saying that ICL has to be recapitalised and Margaret Thatcher wrote something like 'piffle' on it.

Well, it was recapitalised. I had to do it, I had to save the bloody company. And in those days, because there were so many companies going bankrupt, in the early eighties, there was a system of 'launching the lifeboat'. And someone from the Bank of England would appear, the captain of the lifeboat, was a very courtly, elderly man with a double-breasted waistcoat and a gold chain, and he was the captain who launched the lifeboat for whatever company it was. And as soon as you had the Bank of England behind you, and the government decided to support them, and ICL was one of those, then you got a lot of support from the centre. And certainly we did that, we recapitalised ICL, actually.

But Reay Atkinson was sent to north-east England, I believe?

Yes, it was very unfair, because he was a very gifted figure, and I kept in touch with him. He did an enormous amount for the north-east of England, I may say. Because in my very first job when I was Environment Secretary I was always going up to northern England and showering money on them and giving money to Reay to do this, that and the other.

[0:53:42]

You had a year in Secretary of State for the Environment, and then you had a turbulent three years as Secretary of State for Education.

Yes.

And if we just stick to the IT part of it, what, you presumably pursued your programme and idea of computer literacy in schools, what did you really contribute there to IT in education during your period of...

You have to go back to '81 when I visited an – I read about it in *The Observer* – an extraordinary trainee unit under the bridges of the railways in Notting Hill, doing computing. I went and visited it. And the man running it was called Russell... it was an information technology centre. And these were training almost predominantly black youngsters who'd left school with no qualifications in computing, they were sat and computing with their woolly hats, I remember visiting this. And I saw they were turned on totally by it, because of the fact they could access music through it. And this was, again, the very depressed '81, and I said we must, I persuaded Keith Joseph, I said look, this is so good, we've got rising unemployment – and we had heavily rising unemployment in those years – I said, let's re-create these information technology centres across the country. And so, we set up over the country a whole network of ITeCs, they were called. And Michael Heseltine at that time was doing garden centres in Liverpool, you may remember, after the riots. And he wanted ITeC, so we got three or four ITeCs into Liverpool for him. And I realised that I was recycling youngsters who'd failed at school and using technology to do it. That's why I became totally convinced that computers were a way to sort of help youngsters significantly. And there were several hundred of these eventually and it was partly my money, partly the environment money, the local authority suddenly got into it and wanting them, and a whole network was set up. So when I went to see Margaret, when she appointed me to Health, I thought she'd give me a list of what she wanted done. Not at all, she didn't give me a list at all. She said, go away for four weeks, come back and tell me what you'd like to do. I said, well, I do want to do technical schools and I want to do schools independent of local authorities. I did that, because being a central London Member, my local authority was ILEA, Inner London Education Authority, and I thought they were a rotten education authority and extremely left-wing. I remember going to a demonstration in my school, one school in Marylebone, in a primary school on a Saturday morning, and they had a game all set out on the floor, it was a sort of big snakes and ladders with all things on it, and it was basically a game of the bosses versus the workers, and the bosses all had top hats and the workers all had cloth caps and you had to not get on that square, but get on that square, and beat him there and take the roles away from him, and all that. And I was totally amazed, and I said, I'm appalled. And I was quite convinced that you had to get schools out of that sort of control. And so that's what I had, one of the ideas I said right away to Margaret, and I said I would also want to get more computers and

computerisation into schools and technology schools. Because we used to have technical schools in 1945 but they'd all been closed because of snobbery. And so I came back with the idea of city technology colleges. And these were the first schools that would be independent of local authorities and they would be computer-based, lots of computer technology in them, eleven to eighteen year old schools, and we'd get local government to support them, pay the government to support them, and I'd ask each company that supported them to put a million pounds in. And that was the policy. And that was in our manifesto in 1986 and I had to do it after that. And when I went to all the big companies like ICI and Rolls-Royce and the water companies and asked for a million, they all said no, this is a job government's got to do, we don't want to spend our money doing that. So I had to turn to the entrepreneurs, Harry Djanogly, Nottingham Manufacturing, the... the... computer... The name doesn't come back to me. Harry Djanogly was one, James Hanson at Hanson. Dixons, that's the Dixon man I went to see. And they all put up a million pounds and in all we raised about 60 million. Raised 44 million pounds and sixteen UTCs... CTCs. And I got one or two off the ground straightaway, the first one was in Solihull, it still exists, it's still one of the best schools in the country. And the emphasis was to use computers a lot in the schools, and so they were well equipped with computers, not just one or two. And I wanted that to happen, and I got that in as Education Secretary. And I did lots of other changes; national curriculum I did and...

Baker Days?

Baker Days. And league tables and GCSEs and tests and all the rest of it. And I also freed polytechnics from local education control, because I wanted them to be the technological... And I was the last person to defend the difference between polytechs and universities. There's a huge difference. They were the training ones, they shouldn't be doing research, they should be doing the training, marketing of that side. But one of my successors two or three years later when I left made them into universities, a huge mistake, a huge, huge mistake.

[0:59:42]

You were succeeded, when you left in, Minister of IT in '85, by John Butcher.

That's right, a nice man.

Was he effective?

Yes, he... yes, he was my Junior Minister on the bill as we took it through the House of Commons. And he was, yes. And he was very effective in getting smaller companies to support us, he was a small companies man, John Butcher. Why do you ask?

I'm just remembering interviewing him and he didn't have the same pizzazz and he didn't have the same energy that you had.

Well, yes, but few people have. [laughs] But he, I liked him, he was very loyal to me and he was quite good at getting local businesses involved, locally, which was important. Businesses that were not in the computing industry and basically because he was a Birmingham MP, or a Midland MP?

A Midland MP, I think.

Basically, and he had lots of small businesses, that's what I remember John for. He died very early on.

He did. In his sixties.

Yes.

[1:00:45]

Do we need a Minister for IT now?

Well, the Minister who's been doing it is Matthew Hancock in the Department of Culture, Media and Sport. There's no one in the business department doing it, strangely enough. And he devised the digital strategy, which is quite a good strategy, I think actually. And it focussed upon getting 5G out by the end of this Parliament, and that sort of thing, and had specific targets. I think it should be definitely all out

by 2020, it should be done in 2022 in my view, it can be done. Technology is not all that difficult. If you really want to extend that to telephony, I've discovered that all you need is a unit about the size of this room every six miles. And you fill it with the appropriate equipment of today and it can deliver you with fibre optic and everything and 5G and tel... wireless communication, everything. And I was about to see him and talk about that, but it's just been moved. And that's good. Digitally, we're quite good at the moment, I'd say. I'd been promoting new schools, university technical colleges, which are technical schools. And we've got 50 of those. We should have 300, but we had 300 in nineteen... 1945 they were killed because of snobbery. And I persuaded David Cameron and Osborne before the 2010 election that we had to have these schools. I first persuaded Adonis, the Health Minister, and these schools are fourteen to eighteen, they're 8.30 to 5 every day, and for 40% of the week the youngsters are doing technical work, they're designing things, making things with their hands, designing things on a computer, doing CAD, using 3D printers, using lathes, using everything that's necessary. And we've now got 13 and a half thousand students, with about 15 or 16,000 later this year. And these are technical schools, basically. And we have the best employment record of any schools in the country, we have just one per cent unemployed, one per cent unemployed at sixteen or eighteen. The average of unemployment youngsters in the country is eight per cent, we're one per cent. And that is technical. A lot of it is digital. We have one down at London City Airport, that's the only firm- only college in the country teaching sixth-formers virtual reality. The whole class have these on their heads with the big double screens, ahead of them, Fujitsu screens ahead of them, and they're learning virtual reality daily. Up in Scarborough we have one that is for GCHQ. They're doing- I went... they have listening posts on the north-east coast and they could not recruit youngsters from existing schools in North Yorkshire that were good enough. And so they've sponsored a UTC in Scarborough, and I went into the sixth form and I saw these sixth formers are doing ethical hacking.

[1:04:03]

What do you think about the sale of some very successful, two particularly I'm going to point to, very successful companies: ARM, to the Japanese; and also Autonomy to Hewlett Packard. These two very successful companies coming out of Cambridge, they're no longer British.

I think it's a great pity. And there's been another one, I thought you were going to ask me about, called Momentum.

Yes.

Which the Chinese are investing in, I think. And I think it's a tremendous absence of imagination on behalf of the City that they're not supporting both ARM and Autonomy and Momentum. Momentum was about a year ago. And these are young Cambridge scientists who are right into artificial intelligence and to virtual reality. And it was a Chinese company that did it. They're all going to do their stuff over here, but they should remain British companies. And that disappoints me, quite frankly, it really does disappoint me. And it's happened so much in our history, that we've been very inventive, very creative. We're a very adaptive people. And, you know, when you look at the Nobel Prizes we've created compared to our size, and we swamp France and Germany and all the rest of it. When it comes to the development of that, we're not in the game for the most part, and that is a great sadness. And I would certainly now not let, I would not, if I'd been a Minister, I'd have not let Guest, Keen, Nettlefield be bought by the company that bought it. Melrose. I'd have kept it in the UK very clearly, and in control of- and, you know, it sounded to me very naïve in doing this, what happened to Cadbury showed us that we should not do it. They gave cast iron guarantees that when the company, the American company who bought Cadbury, they'd keep all the fac... no, within the year, they'd gone.

[1:06:06]

And government needs to intervene, therefore?

Oh, I'm not against that, intelligent intervening can be quite useful. I believe in lifeboats being launched sometimes. You must remember that you can never stand still. Everything is happening at such a fast rate, things are happening around you, and although standing still can be very comfortable, particularly if you're making a lot of money and you know the established ways of doing things, but you've got to realise that it's all changing around you at a rapid rate, and it's changing around just now at a very rapid rate. The fourth industrial revolution is going to change

everything. And I've always argued in the past, embrace new technology because it will create more jobs than it destroys. I'm now quite sure that the fourth industrial revolution will not do that. The capacity to destroy jobs, artificial intelligence, massive computerisation and big data will change jobs fundamentally. Take automatic lorries. Mercedes have got an automatic lorry, which they're already experimenting with and operating on American roads. There are three million truck drivers in America and another eight million of them, of people providing sandwich bars and stopovers, eleven million people. They're mainly unskilled workers, those sorts of people, not done very well at college and school. Most of those are going to disappear over the course of the next five to ten years, it'll change. That is one way it's going to change. Take artificial intelligence and the massive use of computers. I happened to have a small accident, hit my head last week when I was cutting down a tree, so I went out to see if I needed stitches in my head, to the hospital, and I went to a small injuries unit in our local hospital in East Sussex, and she drew up in a moment my entire medical history and every doctor I'd ever seen and every pill I'd ever taken, and everything about me, just like that. I had no idea that that information was all on a computer and was available. And this is only one way that in fact it'll transform... transform medical health. You'll be able to use machines to diagnose complaints with no trouble at all, for example, which is progress. But you'll see all sorts of changes like this. When you read of the banks closing 300 branches, they're not firing bank clerks, they're firing middle managers and junior managers and senior managers, people who probably did at their education humanities degrees and then joined a big company, knowing that was a comfortable job for them for life where they'd get a better car and a better house and a happy family going to private school and the rest of it, lots of those jobs are going to disappear, totally disappear. Already computers have virtually ended secretaries. Only a handful of people now have secretaries. The number of people who do their own emails, quite senior people do their own emails now.

[1:09:08]

But you're convinced that more jobs will be created?

Different jobs. And what you've got to do is to give the youngsters leaving school at sixteen or eighteen a range of different skills, not just academic skills, not just exam

results skills. And the skills that the youngsters of tomorrow have got to have is experience of working in a team, because life is working in a team. You don't learn that in an ordinary school, you learn it at my colleges, because you get, in my colleges there'll be teams of four or five youngsters working on a project brought in by the local company. There'll be teams of four or five youngsters building an electric car, there'll be four or five teams- four or five youngsters building a drone, and they work as teams and they know how to work as a team, an essential quality for jobs in the future. Secondly, they've got to be able to make things and fix things with their hands. That's going to be very important in the future. And they don't do that in normal schools. They should be able to design things on computers so they can use 3D printers. They don't do that in ordinary schools now. They've got to do problem solving, which they don't do in ordinary schools now. None of this is done because the whole education sphere is on a very narrow academic curriculum set by Michael Gove and it's completely the wrong way the schools are going, in my view. You've got to have more technical, creative, adaptive, imaginative training. And for one, the second thing I'd like to say to you is I think every student should do computing science at sixteen. It's a tough exam, it's not as all that tough as you think, because I know one primary school in the west of England, in Telford, in a very deprived area of England where they get through a lot of eleven year olds through GCSE computing at sixteen. And I've talked to the head and I've talked to all the teachers in that school, they're all coding. I said, how long does it take to learn coding? Oh, they said, about a week. And you've got to therefore impregnate youngsters in that so that they can do it. And I've got a grandson at the moment who's at Cambridge, very clever, very, very bright boy indeed, but actually his work experience in his holiday is marketing in social media. Now, you don't need to go to Cambridge to market in social media, I can tell you, but he's learning about how you motivate, how you attract sales, how you keep on the sales, how you deliver, and all the rest of it. He may not end up doing that, but it's a wonderful little insight into the sort of job that these new industries do create.

Thank you very much, Lord Baker.

[laughs]

[recording ends at 01:11:50]