Rory Cellan-Jones

Interviewed by

Richard Sharpe

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Via Zoom

Welcome to the Archives of Information Technology, where we capture the past and inspire the future. It's Monday the 6th of December 2021, and I'm Richard Sharpe, and I have been covering the IT industry, first of all computing and then, as it expanded, to telecommunications, and networking, since the early 1970s. Whenever as a journalist I saw a journalist interviewing another journalist, I would always shout at the television, and say, 'Go and get a proper source.' But in this case, I'm not a journalist, I'm an interviewer for the Archives, and the journalist that I am interviewing, Rory Cellan-Jones, is more than just a journalist. He is in fact a witness, and not only that, but the writer of the first draft of history, as good journalism has been called.

[00:00:53]

Rory, you were born in 1958, a very interesting year for computing. The integrated circuit was developed; ALGOL, the programming language, was developed; a thing called virtual memory was developed on the Atlas machine; the spec for COBOL was under development; and the planar system of building integrated circuits was being devised at Fairchild, by the two people who eventually went and formed Intel. So, so hardware, software, and lots of implications. Presumably because you are wearing, as I have to tell our viewers, the rugby shirt of Wales, and because of your hyphenated name Cellan-Jones, you are Welsh…

Can I just… Yeah. Cellan [Welsh pronunciation], by the way.

Cellan, Cellan.

Cellan. Yah.

And it means, from God, does it not?

[hesitates] Well, my origins are slightly complicated, but, my great-grandfather was a plain old Jones, in far West Wales, and appeared to have added on the Cellan, which is a, Cellan is a village near Lampeter. And I think, like a lot of, like a lot of Joneses in Wales, there was an urge to differentiate oneself, perhaps to rise above the common [laughs] herd. And you did that by sticking, sticking a place name in front of you.

Oh OK.

Mm.

[02:35]
Now, 1958, Tell me about your parents.

Well my, my origins are quite interesting. My mother was a BBC secretary, or director's assistant, who left her husband after the war, and went off to London with her young son. Worked in the BBC drama department, where she met a much younger man, who was my father, had an affair with him, and I was the result. So I was brought up by my mother.

And, what was your early childhood like? Were you a single child?

[hesitates] Effectively, yeah. I had this older half-brother, but I was brought up by my mother in a flat in south London with, it has to be said, very little technology, not even a telephone. My mother was quite eccentric, and very suspicious of telephones. So, we used to have to walk across to another block where there was a phone box, and I used to have to press button A and button B and put coins in to make a call.

What do you think you inherited from her?

Well that's a very interesting question. What did I inherit from my mother? I'm right in the middle of a project, actually, where I am… When she died some 25 years ago she left every letter she had typed as a BBC secretary, she kept carbon copies, and every letter she had received, and it's an amazing archive of an extraordinarily determined woman, a brave woman who brought up, effectively, who was a serial single mother, twice brought up sons on her own. People used to say to me, 'How come you've grown up so normal?' Because both my mother and my elder brother were slightly eccentric to say the least. And now, I think I'm beginning to inherit my mother's eccentricity as I get older. But I'm hoping I'm, I've inherited some of her determination as well.

But not her fear of technology.

No. No, exactly. [laughs] I've tried to be enthusiastic about technology, from, from a late start, to be honest.

[04:52]
Did you enjoy school?

[pause] Does one enjoy school? Did I enjoy school? Reasonably, yeah. I went to Dulwich College prep school, and then Dulwich College, on a, on a free place, at a time when the Inner London Education Authority was supporting kids from lower income backgrounds, which, which I was at that stage. And, it was a good school. It was quite a machine-like school. It was processing as many people as it possibly could towards Oxbridge, which it did with me. It got me to Cambridge eventually. And, school was school. It was sometimes dull, it was sometimes fun. I made some good friends, a couple of whom I'm still in touch with. So overall, reasonably positive.

Were you on the arts or the science side?

I was very much on the arts side. I ended up doing modern languages. And, given where I moved later, I've got a shockingly poor background in the sciences. I did one science O Level as they still were, which was physics, and it was my worst result, got a grade 5. I did do two maths exams, maths and further maths, which I was not bad at. But I then abandoned all of that, and did French, German and economics for my A Levels. So not at all on the science side.

And apparently you saw your first computer, but you weren't able, weren't allowed to use it.

Yeah. At Dulwich there was a science block, and I remember, in that block there was a computer, which seemed to me, in my memory, this would have been 1975, 5, 6, seemed to fill a room. And the only way one saw it was on open days, because, the only boys that were allowed to go near it normally were boys studying physics A

Level, who had to approach it wearing white coats, and feed it with tickertape, as far as I understood. And, the rest of you could stay well clear of this dangerous and exciting machine. But I always thought, even back then, that sounds quite exciting.

That particular college has a reputation, Dulwich has a reputation, does it not, for producing oddballs quite often. P G Wodehouse went there, did he not?

He did, P G Wodehouse. Ernest Shackleton. Yeah. More recently, an oddball that I don't really want to talk about, but, there we are. [laughs]

But you saw it as a, as a machine for getting people into Oxbridge.

Yeah, I mean it was an efficient school. It had its very good sides. There was a lot of music. I was always hopeless at music, but I was in the school choir. There was quite a, a vibrant kind of drama scene, with people that, you know, were very keen on the dramatic arts. But it was, maybe all schools are like that at a certain stage, it felt very much as if it was about getting, getting through the exams, rather than necessarily enjoying yourself. And there was also a bit of a culture of it being not cool to be enthusiastic about any aspect of school work, which I suppose, certainly a lot of boys go through, whatever school they're at.

Were you involved in sports?

I was the worst sports person you can imagine, made even worse by the fact that I was actually quite enthusiastic. So, Dulwich was a rugby school, and I remember on the first day of rugby training, I was about eleven, and there was this enormous rugby teacher, and, I think he was the head of the lower school, he was about six foot six. And he said to everybody, 'I'm going to demonstrate the tackle. Cellan-Jones, stand there.' And he just flattened me. And that was my taste of what rugby was like. I was still quite enthusiastic. Unlike others who just bunked off, I would always volunteer. I used to play football at lunchtime with people and was always, 'Oh god, do we have to have him?' Picked last and put in goal. I used to go and travel sometimes to watch the 1st XV play rugby at other schools. So I was hugely

enthusiastic about sports. And at that time I also became a fervent, for some years, Crystal Palace supporter, which was the local team. But, I was always terrible at them

[10:00]
You moved straight on to Cambridge?

Well, no, I had a, I did what was then called seventh term entry. I had got, I stayed on an extra term to do the Cambridge entrance exam, got a place at Jesus College, and then I did something which was incredibly formative. I went on a project called Meet Berlin, with about 40 other young people who were going to study German at university. And we got taken to West Berlin as it was in those days, at the height of the Cold War, 1977, and given jobs, I worked in a kindergarten, and accommodation. So we were reasonably, you know, sorted. And it was actually, something called the Deutsch-Britischer Jugendaustausch, the German-British Youth Exchange. And it was effectively a propaganda effort on behalf of West Berlin, which quite reasonably felt besieged at that time, and wanted, wanted everybody to see how important it was. And, I loved it. It was incredibly liberating and exciting. I also made friends, sadly nearly exclusively British friends who were on that trip, who are still friends today, so more than 40 years on.

What do you think you learnt during that trip?

Well it was my first taste of independence. I had, you know, been brought up by a very protective mother. It was exhilarating. I learnt to be, eventually, careful about holding my drink. Probably drank too much. I learnt how, how exciting it was to live in another country, and to learn about another place's history, and of course that place, as I say, it was the height of the Cold War. We woke up on our first morning, because the first two weeks were spent at a conference centre, a rather dull two weeks, in theory, learning about West Berlin, going through these sort of, you know, education sessions, and we woke up in this conference centre, which was called the Schloss Glienicke. And we looked out of the windows, and it was February, and there was a little bit of snow on the ground, and there was a wall around the conference centre. And then, we gradually realised, that was 'the Wall'. We were right on the border, with East Germany rather than East Berlin there. And of course that became a feature

of our lives, and during the six months, we'd quite often get day permits, day visas, to go over to the East, which meant queuing at Friedrichstrasse station for an hour, in a, in a dark basement, and being quizzed by East German officials, and handing over a certain amount of money for a visa, a day visa. And one of the reasons we went there was, East Germany was where the beer was much cheaper. [RS laughs] So we would go over for the day to drink cheap East German beer and feel kind of adventurous, and some people, I think, which I didn't really, went and met dissidents and so on.

[13:27]
Then you moved to Cambridge.

Yeah, then I started at Cambridge, in October 1977, at Jesus College, which was, which I didn't like too much at first. It was very… It was, it was all-male; it changed during my time at Cambridge. It was very boat-y, it was very much a rowing college, which I was not. But I had a ready-made selection of friends, who had all been in Berlin with me, and hung out with the, the modern languages crowd, and had a, a great time.

[14:05]
When did you see your first computer?

[pause] Well, I had seen my first computer, as I said, at school. I, I am not even sure that there was one at, at Jesus. There certainly, I know that… I, I lived on K staircase, an old part of the college, with a bunch of, actually, chemists, who were third-year chemists, who were very jolly. And there certainly was, I think maybe by the end, a room at the bottom of the staircase where there was a computer. And it seems extraordinary now, but I don't have any memory then of computers at Cambridge. And in my final year, I went abroad for a year to Paris in the middle by the way, I lived in Paris for a year, but I came back, and I got heavily involved in the student newspaper, because I wanted to get into journalism, and we made that newspaper in the way you made newspapers before the computer age. We, we made up the newspaper using Letraset, I don't know if people remember Letraset, and cow gum, sticking, sticking bits of copy on to sheets of paper to be, photocopied I suppose in the printing process. So, it was a very primitive process. I had my first typewriter

by then, which had been given me by my older, half-brother, Steven[sp?], a beautiful Olivetti Lettera portable, which I loved. So that, [laughs] that was as close to a machine as anything I owned.

Did you own your first computer?

Well, let's… I think before we get to when I owned my first computer, let's make an embarrassing confession. So, I left Cambridge in 1981. By the way, I had, I had a, a short-term temp job in a bank doing something terrible called reconciliation, which was making numbers, two sets of numbers match each other where there were millions of pounds involved, and cheques on, cheques to be added up. And for that, I was given a kind of glorified calculator, not even a calculator, a, a thing which was, felt like a sort of mini-typewriter which added up the numbers. So it wasn't really a computer, but I used that. Then I went to the BBC. I worked in Leeds first, where there was no sign of any modern technology. In fact we were filming, shooting news stories on film still, which had to be processed, took 45 minutes to go through what they called the bath. And then, cut up by hand, by film editors, very skilled people. And it was quite a quick process when that happened.
[17:27]
And then when I came to London in 1983, that effectively was when I saw my first computer, which was, or worked with an actual computer. I may have seen some device in the Science Museum at some stage, but, very hazy memories of that. But, I got a job working as a producer overnight. Well, in the television newsroom, my first assignment though was to *Breakfast Time*. Breakfast television had just come on the air in Britain two weeks before I arrived. I was sent down to Lime Grove where they were starting breakfast television, and they were using a computer system, which I was trained on. And we were typing the scripts into this computer system, and then, they came out in a sort of reel out of the top of the machine, on sort of shiny paper, and then, rushed to the studio. And that was my first encounter with a computer. Because, in the main newsroom, what still happened was that, report-, well, producers, I was a producer then, wrote out their scripts, the sort of intro for the, that were read out by the likes of John Humphrys, and they went and, wrote them in longhand, and dictated them to lady typists on electric typewriters, who would type them out at furious speed. And a year or so later, there was an earthquake in the

newsroom when the BBC announced it was going to bring in a computer system to the main television newsroom. And what happened, I and the rest of the newsroom went out on strike. We were not going to have these infernal machines. I remember one of the editors, one of the output editors of one of the programmes, saying to somebody, 'If they bring them in here, I'm going to throw them out the window.' Those damn machines. And I, I was a member of the union, and we were called out on strike. We had to turn up at work. The routine was, the boss, the editor of the whole shebang, would say to you, 'Are you prepared to work normally?' Which meant working with the computers. And you said, 'No sir.' And you were then suspended. So that happened with me. So, my, one of my earliest interactions with computers was to go out on strike over them.

[20:10]

So we had a rival, ITN, obviously, that was much better funded, it seemed, and certainly paid much higher salaries to its staff. And they were introducing exactly the same computer system. Their journalists had made a big fuss about it, and they had been given £1,000 a head to accept these terrible machines. And so, we went out on strike, and eventually, we settled, we got 300 quid each. So, peace reigned. And that's when I finally entered the computer age at work. And quickly, obviously, found that this was the future, and this was a much more efficient way of working. And it was also liberating in certain ways, because, you didn't have to go to a typist to get your script done; you could, you could work more independently, you could work at your own pace. I mean, obviously, the computers at first were certainly not Internet-connected. There was… The really powerful thing on this first system, which was called Basis, which a lot of newsrooms had, turned out to be something called topline messaging. Very simple. You would put the name of the person, Fred, type out, you know, a sentence, press return, and up it would flash in their screen. And that became completely addictive. It was a real sort of, sign of how important simple communication systems were. Although people made terrible mistakes. For instance, if the boss was called Brendon, and you, people would send their, think they were sending their, their friend Bob a message about, Brendon is being a complete, four-letter fellow, and they'd forget to type Bob first, and so Brendon would get a message saying, 'He's a complete four-letter fellow.' [laughs] 'He's having an affair with his secretary.' Or whatever. So there were, people very quickly learnt what 30 years later people learnt on social media, to pause before pressing to send. [laughs]

[22:52]
So, you were a researcher on Look North…

Yes.

…in 1981. 1981 is the year of the IBM PC, of the Acorn coming out from Cambridge, of a very important microcomputer as they were then called, the VIC-20, Commodore VIC-20, the Sinclair ZX Spectrum, and Japan's Fifth Generation project, which was all about really big systems and big computing. But you eventually began to focus, didn't you, much more on the consumer side, rather than the business side of computing, although, you were a business journalist, that was your title, wasn't it?

Yeah. I mean, we're spooling forward quite a way now. So…

OK.

In the early Eighties, when I joined the BBC, I was a producer. And then, a researcher in Leeds, and then a producer in London on very, at that stage you could make quite quick progress if you were sharp. I was a producer on *Newsnight*. And I was doing general news, so anything and everything. I wouldn't specialise. And then, I broke through to becoming a reporter by making a big decision, leaving London, my mother thought I was mad, I was giving up my pension, to go to Wales to be on screen, to be a reporter on the local, Welsh national television news, *Wales Today*. And then I came back in the late Eighties to London, and was on a sort of, freelance contract for a while. And that's when I started specialising in business. And that is when, well, at work I was finding computers increasingly useful. I remember, I worked on a programme… I was, I was also becoming a specialist business reporter, knowing very little about it at the time. I was starting a relationship with my now wife, who is a distinguished economist, and used to ring her up and say, 'What's GPD?' [RS laughs] And, I, I was both becoming aware at work of computers, much more so, and thinking about them at home, and thinking about what I wanted to report on, and what I wanted to specialise in.
[25:28]

And about that time we got our, well, we got our first, somewhere around 1990, we got a, not a proper computer, we got an Amstrad PCW 9210 word processor. Which was, you know, was revolutionary for us, but was not an interesting machine. I couldn't see why you would get obsessed with it in any way. It was a functional machine for, it was basically a glorified typewriter. But at work, and I wasn't yet senior enough to be doing these stories, but, but I, the computing revolution was beginning to impinge. Yeah, I, and when I say I wasn't senior enough, by the early Nineties I was beginning to cover some computing stories. And then, it was in '94, '95, that I acquired our first proper home computer, which was a Performa, a Macintosh Performa 630, with a 250 megabyte hard disk. And the reason we went down the Apple route was that our next-door neighbour, was a nice woman who was a medical illustrator, and she told us that Macs were the only thing to get. Put us in touch with somebody who could advise us. You know, people from the graphics sort of industry were obviously all, or largely, Mac-based then. And despite the fact that it was obviously, was incredibly expensive, this machine, but I had been left £2,000 in a relative's will, and we spent the whole lot on, 1500 quid on the computer, something like 250 quid on a, it feels like madness now, on a printer, and some more on a modem. And eventually, and this is from a person with absolutely zero background, worked out how to, how to get it online. And, the family, which was me, my wife and our then five-year-old son, gathered round the computer, and watched in, in wonder, as I found my way to the Louvre's website, which was one of the very early websites, and found that a picture would animate on to the screen line by line, of an old master. And it felt like a miracle. It felt… I mean I had obviously been using computers at work, but this felt…

Yes.

Yeah, I mean, the other thing about that computer was, I don't know if you, you remember this, but, I mean the design, and this was why I became very Mac-orientated I suppose, yes, the neighbour, but, when we turned it on for the first time, for, hooked it up to everything, there was a little cartoon animation about what a Mac could do. And that was, again, a wow moment for us in our family. I mean my wife actually had a better background in computing than me. She had been, she, she studied in the United States after Oxford, and learnt to program, she was an

economist, but she got time on one of the Harvard mainframe computers, and, talked about having learnt FORTRAN. So, I was a babe in arms compared to her. So it took me some catching up, which I never have really done, never caught up with my wife. [laughter] Although I am, I am nominally head of IT for the household.

[30:02]
You were, at that period when you started writing about technology, who were you competing with? Who did you sense were your competitors?

Well… Let's be clear. Until the 21st century really, I, I was exclusively a broadcast journalist. The BBC's website didn't, got under way reasonably early, mid-1990s, but, culturally, there was a really bad thing, which has only just gone away, which was, oh, you wouldn't want to do that. We are… Telly is the most important thing, and radio, but, you know, writing online, that, that's, you know, something much less important. So I didn't start writing until, probably, you know, the year 2000 and shortly afterwards. Although I did write a book in the year 2000 [laughs], and we'll come to that in a moment. So, I was a business correspondent. And let me talk first of all about why I got, gravitated towards technology. So in 1995, by which time we had got our first computer, I was already finding this interesting phenomenon where you got better, it very quickly happened, you got better technology at home than at work. Because work systems are very, kind of, rigid, and, uninteresting, in my view, back then, Windows obviously, and, you know old versions of Windows, and there I had this spiffy Mac at home. And then in 1995 I was sent to New York for a couple of weeks to cover for the business correspondent there, who was away. And it happened at an interesting time. Netscape had just floated on the Nasdaq a few months earlier, which was the, the original Web browser. And its share price while I was in New York went, spiked massively higher, which was the beginning of the dotcom boom, dotcom bubble, this later was. And separately, I got sent to interview Bill Gates. Bill Gates had just brought out a book called *The Road Ahead*. And of course, we now think, probably rightly, that Gates missed the Internet, and Microsoft was slow to get the implications of the Internet. But actually, this book he, he brought out, called *The Road Ahead*, in 1995, was him basically saying, 'Oh my god, the Internet, it's going to change everything. Let's get our act, let's get our ducks in a row.' And some of it looks quite prescient, it's, you know, it does predict a lot of the

things that then happened. Anyway, I got sent off to interview him. He was not the most sparkling of interviewees, but obviously, it was quite a big deal for me to be interviewing Bill Gates. And he signed a copy of his book, and put in the, the fly leaf, 'To Rory. Good luck with computers. Bill.' Which was, [laughs] I presume he said this to everybody who interviewed him, but it was a kind of whacky thing to say, and I've always kept it.

[33:58]

But yeah, there was a feeling, going to New York, that this new era was dawning. And over the years after that, when I came back, I was a business correspondent covering anything and everything, but I found the technology stories the most interesting. There was an occasion when I was working for a great programme called *Working Lunch*, for instance, and this is in the archive, in 1996 when, we used to go to a different place each day, a workplace, to do a live broadcast. And one of the places we went in, I spent a week in Dundee, and I went to a company called DMA Design I think it was called, and did a live broadcast walking around this games company. Well they're working on a new game, it's called Grand Theft Auto. And it involves this, that and the other. And that's still in the archive, and people play it from time to time, me looking very straight. Because of course Grand Theft Auto went on to become one of the biggest games in history. And there, meeting, you know… Because, I think the IT industry had, still has in some ways, an image problem in those days. And these, these people at this games company, they were obviously part of the new IT industry, and were very different from what was seen as the kind of, slightly stuffy, unapproachable types that ran the IT industry up until then.

[35:52]

You mention in your excellent book Dot.Bomb, which you wrote in 2000, and it is about the rise and collapse of the dotcom industry and speculation in the UK, in London particularly obviously, from the summer of 1999 until the summer, or March really, 2000, when it reaches peak and then…

I think, it started back in 1998, as far as I remember.

OK.

I think what… Yeah. I mean, the book, which, you know, was an extraordinary project to be involved in, because, television, which I, was my main business then, is all about telling a whole story in a couple of hundred words. There's zero space. So in, I was commissioned by a publisher to write a book, this was a terrifying experience, because, thousands of words had to be laid out, you know, huge volumes of white space had to be filled. But yeah, I had got, as a business correspondent, more and more interested in technology, and in particular the rise of the dotcoms in the late 1990s, which were far more interesting to me than reporting Marks and Spencer's annual results for the fourth time. So, obviously… I remember, for instance, in the very late Nineties, being in the newsroom, and people were swapping tips about the latest search engine, and I think there was one called All of the Web
, which was the first one which really worked. And then there's, somebody said there's something called Google. And as soon as we tried Google, we thought, wow, this is amazing. So, there was a huge excitement around these companies. And my book was, was about the, the very short, and much more constricted, British dotcom bubble. Obviously, the, the American one had started with Netscape in the sort of mid-Nineties, and was involved in a lot of companies which arrived from nothing and were worth a fortune and then were not. The British bubble started with, really, was very small-scale, but, but pretty interesting, and started with a company called Freeserve, started by Dixons, which was billed as the first free Internet provider, by which it meant, you effectively, I'm trying to remember the business model, but, they made money off the phone calls, rather than off, a percentage of the phone calls, rather than a flat fee itself. And that sparked this extraordinary bubble where, we caught up with the United States in a slightly ridiculous way, and companies which had virtually no revenue were suddenly worth more than, you know, great titans of the, the stock market.

[39:08]
And you say in this, I think, you might well have been constrained on TV, and be horrified by the amount of space you had to fill in this book, but I must say, as a writer, this is extremely well written, very well written.

Thank you.

And you do have a very very interesting observation here, on page 157, and I'll just need to put my glasses on for this, sorry. And it is, 'In the dotcom world, the key skill was not the ability to write elegant software, or understand the latest microprocessor architecture, or even to draw up a convincing business plan; it was the people who knew how to network who stood the best chance. And an Oxbridge education, and a healthy bank account, are great confidence boosters. [RC-J laughs] If the bubble had lasted longer, a far wider group of people might have burst through the barriers to business success, but in the brief dotcom boom, in the UK, it was networking skills of the old Establishment that flourished, hence people like Martha Lane Fox.'

Yeah. I mean, I, I think Martha would probably accept the truth of that. What was interesting is that, it did change things, but, as I write there, initially it, it unleashed just younger versions of the same people who had always done well. So, smart people coming out of Oxbridge, who would normally have gone into investment banking, or the media, or whatever, seeing others making apparent fortunes in a hurry, thinking, maybe I could do that. And as I say, at that stage, although it wasn't, it wasn't true of the, it certainly changed a lot later, much of it was very frothy, it was kind of marketing-based companies, things like, there was something called Clickmango, which was going to sell beauty products online and use Joanna Lumley as a sort of figurehead. It was, it was a, a marketing thing, rather than a hugely sophisticated technology play. But in the background, what was happening was that, more sophisticated companies were eventually being born in places like Cambridge. And, and they, they survived the dotcom bubble, which, when it burst, wiped out most of the frothier companies. And we did see… You know, when you think of companies like ARM, which had been born ten, fifteen years earlier, they actually became big and well-known during the dotcom bubble, it raised their profile, and in some cases provided them with the backing that they needed to, to carry on. But, certainly in the short term, it looked, it didn't look like a great revolution for, for British technology.

[42:50]
And in that period, we have also, I don't know whether you were covering it, the concern about Y2K, the Millennium bug.

Yes. Very much.

Did you cover that?

I certainly did, yes. [pause] Yeah, I mean it was, it's difficult to remember now just how much of a panic there was about that. And, I keep changing my view of it. At the time, it felt like this was being over-hyped. We covered it, we covered it, we covered it, and then, nothing, nothing really happened when the clocks turned on, on the year 2000. But in retrospect, I've got a lot of time for those people who argued, well the reason nothing went wrong was because of the sheer amount of preparation that was put in, and that was money well spent.

I've gone through the archived interviews. By the way, we already have Hermann Hauser in the archive.

Oh yes.

We have Martha Lane Fox in the Archive. And we have some others that you mention in your, in your book just out, which we'll come to in a moment. I've been through all of the Archives, and looked at the interviews, and there is a fantastic spread of opinion about Y2K. On the one hand, we have one man saying, it was a great con by people like Gartner and other people, like Accenture, and Andersen, to make huge amounts of money. And on the other hand people saying, 'It was vital, look what we did. If we hadn't, things would have crashed.' And also, it provided the platform for what came later, which is actually more important. E-commerce. That's what they argue.

Yeah. Yah. And I think there's some, some validity to that. I mean people now are kind of, drawing perhaps slightly dodgy parallels with, with the pandemic, saying, it's, it's worth preparing for the worst, because, it's important to have that infrastructure in place, just in case. And the money's never wasted, because, you can improve all sorts of other things by spending some time thinking about processes and trying to modernise them.

[45:31]

I think we could use, as a framework for the rest of our interview, your new book, if you don't mind.

Yeah, no, I certainly don't mind that. [laughter]

Now, it's available in all good bookshops, and available online, so people must run out and buy it now. And it's called Always On: Hope and Fear in the Social Smartphone Era. And that actually gives, I think, a rather distorted view. I don't know whether you wrote that, or your publishers did.

Oh it was my, blame me. [laughs]

But it's far, far wider than that. It's far, far deeper.

Yes.

And it's far, far more profound than that. Again, let me quote from you. 'This book has been about the conflicting emotions we have felt during an era when technology became more personal. The hope was, liberate us, and make us wealthier and happier. The fear was that it would endanger our children, undermine our democracy, and make giant unaccountable technology companies even more powerful.' I'm going to put you a very difficult question. Now you are about to leave the BBC, and no longer…

I've left the BBC. I've left the BBC.

You've left the BBC. So you are now…

End of October.

You can now give your personal opinion. Which way do you think it's actually gone, Rory? Hope or fear?

Well, a lot of this is about one's own personal temperament. I am pretty much a, a glass half full person. I, I do believe the technology has the power to liberate us, has the power to bring, to enrich our lives in all sorts of ways, it's enriched my life in all sorts of ways. But I do worry massively, in particular about the sheer concentration of power on the west coast of the United States, and about the unintended consequences of letting those giant monopolistic corporations thrive without regulation, which we're now coming to grips with. But I also think that we've had this panic about every wave of new technology, and we learn to adapt to it, and we learn to, control those giant organisations eventually. But, it's, it's a, it's certainly been a pretty dark few years for those of us who worry that, for instance, technology can help to undermine democracy.

Not only that, but may well be an existential threat to human beings and human intelligence. Certainly, the late great Sir Clive Sinclair thought so. AI will take over.

Yeah, well, I mean, we are speaking at a time when the Reith Lectures are under way, and they are called 'Living With AI', and they're done by a great and fascinating thinker about AI, Professor Stuart Russell, from, a Brit who has actually been in the United States for a long time. And that is the message he is spreading. Which interests me, because in the book, I talk about an interview I did seven years ago, in 2014, with Professor Stephen Hawking, who came up with a, a pretty terrifying thought about what artificial general intelligence would mean. Effectively it will mean the end of the human race. And when that was broadcast, a lot of people who were frankly more knowledgeable about AI than Stephen Hawking, which, it wasn't his particular field, said, he's, you know, this is, this is slightly hysterical, these are, these are not immediate concerns. And I kind of, shared that view. But Stuart Russell, whose field it very much is, tells some interesting stories about why we should be worried, and we should be worried now. He makes this, he uses this great parallel of what happened in terms of the power of nuclear energy. And he tells a story about Rutherford, you know, the British sort of father of that, that field, giving an interview, giving a speech in which he said, there was no need to worry about this, because nothing's going to happen in terms of unleashing the power of the atom for, for many many decades. And the very next day a Hungarian scientist, whose name I forget, an émigré, having read this in the *Times*, walking across a zebra crossing near

Russell Square, and suddenly coming up with the theoretical basis for effectively unleashing the nuclear age. And Professor Russell's warning is that, it may feel like we're a very long way from artificial general intelligence, from machines that can not do one task brilliantly but can do anything brilliantly, but human ingenuity is such that, don't bet on it.

[51:12]
And yet we don't have to go that far to have clear examples of AI being brutally used. Two words. Cambridge Analytica.

Yeah. I mean, we can then get into a huge debate, which is possibly not useful, about definitions of AI. And also, about whether Cambridge Analytica was anything like as smart as it claimed, which, I think many people think it wasn't. It was a nasty little company, but was not anything like as clever as it claimed. But I think, I, I'm going to bring up another example, which is not about AI, but is about trust in computers, and believing that computers must be right when there's a conflict between them and humans, and that is the great post office scandal that's unrolled over recent years.

Oh yeah.

I've just read a fantastic book called *The Great Post Office Scandal* by a man called Nick Wallis, and it's, it's a very sobering read. And one of the lessons is, that, we should be very careful about assuming that computers are always right when they're in conflict with humans. The post office computer system, Horizon, which they swore blind was, virtually without fault, kept throwing up examples of where it said, individual postmasters had a shortfall of many thousands of pounds in their accounts. It was coming up with different numbers from the postmasters themselves. And the Post Office investigators believed the computer system; didn't believe the postmasters. And that ended up with hundreds of people being prosecuted, and quite a lot going to jail, and several of them taking their own lives. So, an extraordinary wave of human misery caused by excessive faith in computers.

[53:20]
Someone should go to jail for that, shouldn't they?

Yes, I think they probably should.

So there should be some process, it doesn't have to be criminal, necessarily, in which there are rules and regulations about what happens. Are you in favour of a more heavily regulated social, social sphere?

Well, I am in theory, but, we are right now going through the Government's Online Safety Bill, which is having an incredibly tortuous birth, and it's thrown up an extraordinary problem in my view. So, it talks about creating a category of offenses, basically, which, where the social media giant, the technology companies, are guilty of behaviour that is harmful but not illegal. And that is really difficult, because who decides what is harmful but not illegal? If it's illegal, that's fine; you may disagree with the law, but if you break the law, you pay the penalty. But who decides that, for instance, a certain company is encouraging abusive behaviour to a certain degree and therefore should be punished? And there are all sorts of questions about, a balance between free speech and, avoiding harm. I'm slightly, you know, cynical about those who always rush to free speech, but there we are. But what, what this is all moving towards is a very very powerful regulator, making extremely difficult decisions, and I don't envy that, that person. That person is likely to be in Ofcom, which, whose job gets ever more important as the years go by.

What do you think of the pattern of trying to create an independent process, away from, you know, political and democratic process, of having these apparently independent regulators? Isn't that a bit strange, within a democracy?

Well yeah, I, it's kind of what I'm talking about.

Yes.

[pause] And it comes back to this idea of defining behaviour that's harmful, but not illegal. Because, Parliament, politicians, make the law, decide what's the law. If you are going to decide there's a whole area of behaviour which is not illegal but still needs to be policed, then that job has to be given, not to a politician but to a regulator.

I mean we do, let's, to be fair, we have regulators in all sorts of areas of life. You know, there's the Financial Conduct Authority, which is supposed to police the financial system.

Yes, but you read Private Eye, don't you? [laughs]

Yes. [laughs] Yeah. I mean, I, I'm always suspicious of people who think there's easy answers, and there's been a long… If I have any sympathy for the technology giants, which I don't much, it has been more than a decade of kind of, blather from politicians, which is often incredibly ill-informed, especially on areas like encryption. And one can see why they might get impatient with it. The trouble was, there was for too long an attitude by those tech giants that they were really smart and that the Internet was different. The Internet was, another land. You know, the, the kind of, slightly hippy-dippy Californian attitude was, this is a land of freedom beyond the realms of individual countries' legislatures. Don't try and govern it, because, that way, madness lies. And they were incredibly patronising to the often, you know, annoyingly stupid politicians, to be frank. But, they've eventually had to realise that that whole philosophy, just doesn't stand up. I mean, just one example. There is a, there is a place where they find it perfectly easy to regulate the Internet, and it's called China. [laughter]

Indeed.

No one wants to go down that route, but, we, we do need to find ways of controlling the worst excesses of online behaviour.

[58:13]
You have interviewed, hundreds, if not thousands, of people in IT in your, in your years covering business and technology, Rory. I would suggest to you, Bill Gates was not the most character-, most charismatic one. Who really struck you as the most charismatic? I suspect from your book, it's Jobs.

[pause] Jobs was certainly… I mean, the single most charismatic and amazing performance that I've witnessed was Steve Jobs unveiling the iPhone. Now, I did

interview Steve Jobs a couple of times, but in the most constrained circumstances, at a couple of events in the UK. I think one was the launch of the iTunes store, where, he's sitting there, and you get five minutes, and, you never get anywhere really. He trots out a few clichés. But the performance in the Moscone Center in San Francisco in January 2007, it's just worth looking at again. He walks on to the stage in his trademark black polo-neck jumper, wire-frame glasses, jeans, and there's a momentary pause, and, he looks down, as if, you know, the ceremony's about to begin, and says, looks up and says, 'We're going to make some history here today.' And then goes on to outline the reason history of technology, which of course turns out to be all about ground-breaking Apple products, before then going through this mantra of, 'We're going to unveil not one, but three ground-breaking products here today.' And he says, 'We're going to unveil a widescreen iPod with touchscreen controls, an Internet device, and a mobile phone. A widescreen iPod with touchscreen controls, an Internet device, and a mobile phone.' And he keeps on doing this. And of course, the whole point is, these are actually one device. And then the iPhone. And he whips this crowd up into a frenzy. And I had two sort of reactions to this. At first I thought, oh, come on, being a very British, and slightly cynical journalist, and, unused to the kind of crowd that turns up at these events, which is, less a kind of, you know, dispassionate press conference; more a kind of, evangelical session, of bloggers often whose livelihoods depend on being enthusiastic about Apple. So I was cynical at first. But I was won over by, by, not just the performance, but by the product that he unveiled, which is, is one of those moments where you think, wow, that's going to change the world.

[01:01:13]
And is he the best one? What about Mr Musk?

Well, my experience of Elon Musk is, is very different, because, I had a much more, I only had one encounter with him, but it was a really, substantial encounter, and absolutely fascinating. So I spent… I, I promised by bosses an interview with Elon Musk. I rather rashly promised it in October, when I was going out to CES the following January, and they had grudgingly said, yes, they would fund this trip. But, I took off for Las Vegas for the giant CES fair, having not actually nailed down the interview yet. So it was all a bit nerve-racking. And then eventually, his PR people

said, yes, he would see me. And we drove in a Tesla from Las Vegas to LA, which is an exciting experience in itself, to meet this man, who was nothing like as famous then, this is five years ago, was well-known in the technology field but probably hadn't broken through to the wider field. But, I was excited to meet him. And at first, when he turned up, I thought, this is going to be a bit low-key, because he seems to have a kind of mumble-y voice, be dressed in black, and be, you know, not that exciting. But as soon as he started speaking, I could tell the interview was going to be good, because he had such great lines. For instance, we were talking about autonomous driving, and he said, that in a while, owning a car that you had to drive yourself would be like owning a horse. It would be, a kind of, a nice, emotional choice, but it would not be a practical thing, it wouldn't be necessary. And then he eventually used the line 'when we are a multi-planet species', and I thought, yeah, we've got it here. So, he was a fascinating interviewee, but also an incredibly flawed person, I think has become apparent, in terms of his sort of, incontinence on social media, and, his enthusiastic pumping of various cryptocurrencies, which I am deeply sceptical about.

[01:03:40]
Yes, from reading that chapter on cryptocurrencies, I didn't expect you to have any of the Cellan-Jones money in cryptocurrencies.

Well, I, to be fair, I actually, because I'm wary of it

You did buy some?

…I, I had to buy some. Yeah. I had to buy some to, you know, to film with it. And I gradually sold most of my holding, at a big profit, which, by the way, I contributed most of it to charity, dear Mr Taxman. [pause] Yeah. But, all of my adventures into cryptocurrency have, have ended in me being convinced that it's a very very dodgy area to say the least.

[01:04:33]

The story of the launch of the iPhone, the launch of the driverless car, et cetera, are often given to you, I'm not criticising you, they're given to you by the PR machines, and you are given availability.

Yah.

What was the biggest story you cracked, which was not given to you by that great PR machine out there?

Well, I'll talk about two stories. I mean there have been a number of stories where, I've seen behind the façade and seen how things go wrong. So, here's one which went wrong. So there was a, a company called SpinVox. And by the way, you are completely right about the huge weight of the PR industry and its power in relation to journalists. There was some figure a few years back that there were six PR people for every journalist, and that's probably, still the case. There was a company called SpinVox, which was billed as one of the bright young technology companies of Britain, and what it did was translate voicemails into text. It was apparently one of the early AI triumphs. A bright young British company, with incredible technology. And I had featured it a couple of times, you know, I had swallowed the PR, [laughs] as you, as you say. And then, I got an email from somebody who said that they were, they worked at SpinVox, and wanted to tell me a story. And I met this person, in a café, and they wanted to be anonymous. We met together. And what they showed me was fascinating, which was that, whatever the claims, translation of the messages from voice to text was actually mostly being done by people in call centres in Egypt and other places around the world, which had huge implications. Firstly, security implications, people's messages were actually being listened to overseas, they're very sensitive messages. Secondly, the company was effectively built on a lie, it wasn't an AI business at all, or its AI didn't really work. And thirdly, this was disastrous for it financially, because obviously, employing all these workers in these distant call centres, who often were not being paid, and they would flee from one call centre to another by the way, meant that the company was unsustainable. And that was a, a really good story which, you know, it didn't make… It made the *Today* programme, and I did a lot about it online. It, it didn't make the, the television news bulletins,

because it was not big enough, but it was, I think it was an important story in what it said about, too much of the tech industry being built on hype. So that's one example. [01:07:51]
Another where, I mean the story wasn't given me by a PR person, was given me by people behind it, but was the story of Raspberry Pi. So I was in on the birth of Raspberry Pi, and that was because I knew one of the, the founders, a guy called David Braben, who's a fascinating guy in himself, who had arrived actually at Jesus College, Cambridge, the year after I left, and while he was there, had built, with a, a colleague, the world's first 3D space adventure game, Elite. And who has gone on to be a big figure in the games industry, a very clever guy. And he came with a young man called Eben Upton, who had been a Cambridge University computing science academic, to show me something which they said could transform the way children saw computing. And it was a little prototype of what became the Raspberry Pi. It looked like a little USB stick, with a bit of circuit on it. And I said, I'm not going to get this on the television. By the way, they thought the BBC would back it in the same way that the BBC backed the BBC Micro in the 1980s. And I had to disabuse them, a) of the fact that I, I don't think the BBC these days would feel able to back a commercial venture in that way, and in any case, I had no influence over that part of the BBC. But I said I would… It was not a, the kind of story I would get on the television, or even the radio at that stage, but I might blog about it. And why didn't I get a video of it? So I took a video on my phone, stuck it on YouTube, and it went viral over the weekend, hundreds of thousands of people ended up seeing that video. And Eben Upton, who went on to lead Raspberry Pi, said that was the moment that they realised that, the idea had legs. So that wasn't a PR-driven story.

No, good. We have, we've, I did actually, interviewed Pete Lomas, one of the designers.

Oh yes, Pete's a great guy. Yes.

One of the designers. So…

Yes. Yes.

It does rather show that what I said to begin with, that you are the witness, and also the drafter, of the first, of the first draft of history, is true, because, we come along in the archives afterwards and we get these long interviews with, with people like you. Now, another couple of questions if I may.

Yah.

[01:10:40]
What's the biggest mistake you've made, in covering IT?

What's the biggest mistake? Well, I, I have been over-enthusiastic about products that never came to anything, the most notorious being Google Glass, Google's augmented reality headset, which I was very… I mean, I think it's important to get excited about new technology. [laughs] And to be frank, it happens at greater intervals these days. I was excited about the iPhone. I was excited the first time I could interact with a voice-activated speaker, that struck me as extraordinary. And I was very excited when I saw the demo of Google's Google Glass, this augmented reality headset, and eventually managed to persuade the BBC to get me one. And then wore the thing for three months solid, wherever I went, while my colleagues, my friends, my family, told me I looked like an idiot. And eventually I realised I did look like an idiot, and stopped wearing it, and that actually betrayed a bigger truth about the product, which is, however clever the technology, the look and feel of it is incredibly important to its eventual success. So, that, that was a mistake. I've also been wrong, although, I still believe I might be right in the longer term, about the extraordinary valuations placed on certain companies. And of course Tesla is a point in case. Tesla is currently valued at a level which is more than the rest of the car industry, traditional car industry, combined. It's got a huge multiple. Which to me makes no sense, but I've been saying that for two or three years, and, it continues to go up. And the same has happened with bitcoin. So, I've been wrong about that.

Yes, but like you, I was very critical of those share prices for companies that were not making a profit, and were not going to make a profit for several decades.

Mm.

And I said, this can't go on, it's got to collapse, I was saying, in the 1990s and 2000s. People said, 'Oh Richard, you don't understand the new economics, the new economics. You're old and grey and you don't understand it.'

Yeah. Yeah.

Well no, I think that was experience telling. And I think you're right.

There was an old man called, I think he's called, was he called Tony Dye? Anyway, there was a, a doomster, a Cassandra in the stock market, who, who kept on saying that. And then he was fired, literally, about a month before the market collapsed. And that, that is the problem. You, you can be, the market can be wrong longer than you can afford to be wrong. [laughs]

[01:14:00]
That's a very good quote. Now, you left the BBC in, in October, this year.

Yes. Yah.

And so, what are you going to do now?

Well, I'm finding myself quite busy. So, I'm doing a number of things. I've got a couple of consultancy plans, working for people, talking about technology. One of the things, I'm doing a couple of podcasts. I am starting, or planning to start, a Substack newsletter. I don't know if you know about Substack, but it's a way of, for journalists to publish a newsletter and potentially got paid for them, although, that's kind of not really the main aim for me. But I'm, I'm taking a great interest in health tech. I've got a couple of health challenges. I'm, I've got Parkinson's, which I've had for, been diagnosed with about three years ago, and I'm going to be doing some journalism around that. And, all in all, it's proving enough to keep me quite busy at the moment.

Yet we've taken your time. I'm very very grateful for your, for your contribution, Rory Cellan-Jones, to the Archive. And actually, I'll not be shouting at myself, go and interview a proper source, Richard, because, you are a proper source. Thank you so much for your time.

Thank you, that's been really enjoyable.

[End of Interview]