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HORIZON AT 50

7 APRIL 2014

INTERVIEW ED GOLDWYN

Q: I have the pleasure of talking to Ed Goldwyn and it's Monday April 7th 1914 and Ed made *Horizon* between 1975 and 1985. You did a lot of science at school, when did you first become aware of *Horizon* as a television programme?

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A: BBC2 started in '64 didn't it? I think I joined the BBC in about 1962 and was working in the Schools department, and when BBC2 started I just noticed this new science series that was beginning and I thought, 'Just fabulous', and it was about doom and gloom, about things that were going to happen to the planet, it was about pollution, it was about portraits of some scientists doing fantastic things. It was just what I wanted to be involved in, but I couldn't be. I couldn't be, because every time I applied for it bloody Aubrey Singer, or whoever was on the Board from Science and Features would say, 'I'm terribly sorry, you're from the Education department, you're used to a captive audience. You're not for us', you know, so, it just went on for years from 1964 to '75, before I could make the

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transition.

Q: But you were in the BBC all that time?

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A: Yes, I went from being a researcher, to being a producer in Schools, and then went to Further Education and then went to The Open University and became Senior Producer. You know, every time there was a job in Science or Features I applied, and every time never got it.

Q: When you did arrive you were a fully-fledged producer; you didn't go through the training of *Tomorrow's World* did you?

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A: No, not at all, no, I arrived, (er) I arrived as a senior producer and that was on an attachment, and so on, and whilst I was there, there was a job advertised that I applied for. And I'd actually just finished the last day's filming at San Francisco at SRI when I got a message saying I'd been successful in getting the job as producer. So I took the guys out for a drink, you know, it was great, but the cameraman said, 'Ed look, what's happened? I knew you were a senior producer, and now you're a producer. Have you been demoted? Have you done something you shouldn't?' and I said, 'No, I applied for a job that was at a lower level because I

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wanted it, and I got it and this is worth another couple of drinks too'.

Q: When and how did you arrive at doing your first *Horizon* programme?

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A: Well I'd been doing some very, I thought, I mean they were really exciting for me, programmes about molecular biology for Further Education, and they were on at 7 in the evening to 7:30. About all the discoveries of DNA and ribosomes and all that good stuff, and so on. And then Peter called for me, and it was a very strange call because it was saying, 'Talk to me, we're thinking about doing *Horizon* about molecular biology, and we're very interested in some of the visual aids you developed in your studio series'. So I went along, and with trepidation I went in to see Peter.

Q: Sorry, could you give me his full name.

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A: Alright, so I got a phone call and it was Peter Goodchild from *Horizon*, no, actually it was Marnie, it was Marnie from *Horizon*, saying, 'Can you come and see Peter? Peter wants to see you, because he wants to learn about these ideas about how you make models of enzymes that show the enzyme pathway'. So I thought they were pretty good these models actually.

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So I went to see Peter, and he asked me about it and I told him, and so on, and he (er) I said, 'Peter, is there', I said, 'I really want to come and work here'. 'Oh really?', he said, you know, it was a great surprise. I said, 'Yes, I really want to come and work here'. 'Well', he said, (er), 'Maybe we can arrange an attachment or something'. So I said, 'Terrific', and he said, 'Well yes, I'll fix it up', and he did, he fixed up an attachment, and six months later I went over and made my first *Horizon*. I think that Peter found, when he'd done the attachment, he'd got quite a lot of disapproval about it from the Head of Science Features and the people above him, because here he was letting in this person who ought not to be let in, but anyhow, Peter was very, very determined that, to give me every chance he could, and yeah.

Q: So what was the programme and what was the topic, and how did you and Peter arrive at the topic?

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A: Well, when we first talked I was offering him a programme about the crown of thorns starfish, a starfish that was moving across The Pacific gobbling all the coral up. And (er) you know being up at the Open University I used a lot of my time to research this stuff,

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and he said, 'No, no, I'm not so keen on that really. Have you got anything else?', so I said, 'One about children, why kids, when they get to school at age five, are not in a state to actually to receive the sort of education they're offered'. I'd read a book called *How Children Fail*, which was a beautiful little book, written by a schoolmaster, who thought a lot about how the children who came aged five and six and seven, weren't ready to actually take in the concepts they were trying to, but other kids were. And it was to do with, A, the home life and the was that teachers taught them, and I thought that was very interesting and so on, so I said that to Peter. And he said, 'Yeah, that'll be good, that'll be good'. And it was about four weeks before the attachment began, so I could get on the phone and talk to everybody who had anything to say about it, and talk to every psychologist and educationalist between, I don't know, London Institute of Education, to all the way round the world, you know. So I knew everything when I came. (OVERLAP – Alright). And came into the office on the first day and Peter said, 'Tell me how this is going?' and I'd written it, the papers were this thick and I'd phoned Mr A and Mr B and Mr C and Professor

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so and so and so, and as I went on with this, this meeting took about an hour and a half, or two hours, and so. And as I went on saying, 'Oh and look at this professor here, he is doing this with these children', you could see the dandruff coming out of Peter's hair and gathering on his shoulders and this was a danger, it meant that there was something worrying him, or whatever. So (er) I got to the end he said, in quite a tense voice, 'Ed, this is all very, very interesting, but what the hell is the question?' and I thought, 'That was a revelation really', I thought, either that one ought to spend more of one's effort actually raising the question that the programme is about, than dealing with the answer. However, when I told Peter it's why children fail at school, 'Oh', he said, 'Why didn't you tell me at the beginning?'

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Q: You were a science film-maker already, but the perception of the general public is that science is difficult or boring or only for geeks. How did you cope with that when making programmes?

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A: Well there are several aspects to this because it's an important question because a lot of science is boring, that is true. I think the first thing I did, was that if

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it didn't interest me, I wasn't going to do anything about it, it had to actually spark an interest, in a sense it had to be new, you know, something I hadn't heard before.

There was a certain element of, kind of, pretending to be someone else to know whether I'd heard it before or not, because I might have heard it before, but if I

thought I was the man in the street who hadn't heard it before, then (INAUDIBLE). The second thing, it was

quite an important question that Peter often said to something, he said, 'Come up with something that will

be important in 12 months' time, so that when this programme goes out it will actually be important,

because people will want to know about it at that time.

So that really starts filling in the palette of stuff that you might, you know, want to get involved in. And I think

the third thing, I feel strongly about, is that people equate science with explanation, that you're going to

have something explained to you, it's a passive thing

you receive. And I think that's just bollocks, because I

think science is not about answers it's about questions,

and it's about raising the questions and I've always

kept the amount of explanation in my programmes to

the minimum, the minimum you need to actually get to

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the end, when you get to the end you say, 'Ah, so that's how it works', and that's what I'm aiming for, I'm aiming for an emotional response, and explanation kills it. So I'm all the time scraping from the draft scripts, and the cutting copy, the explanation, getting rid of it. Is it necessary? Is it necessary? But you cling on to it, at the beginning it's your kind of lifeline, it's a bit like drama has sex and violence to actually fill out an incredibly thin story, just put a few murders and rapes in and suddenly, you know. I think in science films, explanation is rather like that, if you start explaining about Einstein or the Uncertainty Principle or what atoms are, it suddenly makes your programme seem worthy, even if it's not interesting, it's a filler.

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Q: How are you going to arrive at that 'Aha', moment, unless the audience understands the fundamental detail of the explanation?

A: I think, I'm not disagreeing with you for a moment, I think it is like that, I think the tendency of many, of me anyway, and some other programmes I've seen, to begin with a need for an awful lot of explanation. And I think a lot of it turns out to be unnecessary when you actually find out what the concept is, that is going to be

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new and going to be exciting. I can say this, you know, you often feel that if you're going to do something about DNA and proteins, you have to explain the DNA, ribosome, the thing, and the protein chain folds and it folds because of the hydrophilic and the hydrophobic, maybe you didn't need all that. Maybe the thing about the protein was just the fact that it has two sulphur atoms which occupy this spot and they make a nice little nest for the oxygen to get into. You don't need the other bit, so get rid of it. People enjoy the little nest thing, that is the great... Does that explain what I mean?

Q: You did a lot of science film-making. Is there a particular style which you've tried to develop which was the Goldwyn style?

A: I don't think so, I always found it a strain, and I think that I never really knew how to do it, and once I'd done the research I would always forget how do you go about setting up the filming? And then having done the filming and then I'd come into the cutting room, how the hell do you edit? And then we'd get to the end of that and we start the next programme and I'd say, 'What do you have to do for research?' It always felt as though I

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was inventing it each time and I think I was, you know, I think I was quite pleased, there was something I was reaching for, I can't quite remember what it is.

Q: The difference between being a film-maker and a science programme-maker?

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A: I (er) I felt that once I'd understood the story, what it was it was all about, I could have done it with a telephone, that it was the need to tell people so that in the end they, kind of, understood, it was lovely to be able to do it with film. Fantastic because it was so much more powerful, but I was not making films, I was actually trying to tell people about things.

Q: Did you use a lot of music in your films?

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A: Yes, it happened because a wonderful editor, Jim Latham, I made the second film I ever made with him. And he was just saying, 'Ed, what do you think of this? What do you think of that?' and I thought, 'Oh boy, wow, this is terrific'.

Q: So your editor chose the music rather than you?

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A: On this first one, absolutely yes, it was one of the first one that I'd got involved with music, it was called *The Planets*. And the first time Jim laid a piece of music, which was Holst's *Mars*, and that was the big

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rocket taking off carrying the photographic equipment that NASA was sending to Mars to send back the first pictures. It was just amazing, I mean you could imagine that music in your head, it sounds like a huge great organ, here's this great organ pipe rushing up into the sky. It was fabulous.

Q: How did you tell what a good film was? Did you have a gut feeling, or did you analyse the structure of your films very carefully?

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A: I was (er), I was often looking for a film that would tell itself, that was kind of fly on the wall, something like the Maysles brothers did with their bible films. Some really strong story that you could just follow, and I never found, well, I always wanted it, I always wanted it. Some films, in a sense, kind of seemed fairly simple, they were a journey through, maybe, seven or eight laboratories and you began on one and you collected some, quite intriguing, idea from that. And you moved into the next, and the third and the fourth and then all these together took you somewhere else. And the structure just came out of the fact that you had been on a journey and this was, sort of, perhaps, like a road film. There was only one, and I really had to design a

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structure very carefully and that was the one called *The Caillou Project*.

Q: Tell me about that.

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A: I'm wondering how far to go back with it you see.

Quite an important part of this was (er) give me a moment. Alright, you need to know I had my daughter Ruth with me, she was about 16; she'd just failed doing her English degree O Levels well enough to be able to get the university course she wanted. And I was taking her with me to Egypt so she could, you know, I wanted to have her with me and it was quite an important part of an agreement I'd made with my wife, that we would hold our marriage together by me involving the family. And so this was Ruth's turn and my wife was going to join me out there. But this was a film about the testing of a drug against a tropical disease, bilharzia, in The Nile Delta. And there was a team of scientists, Egyptian scientists who were testing it. The purpose of the film, (COUGH) and which is what I sold it to, or Peter sold it to me, I've forgotten which was it was about, was there was a lot of Arab universities starting up. And the question was, would science in a Muslim environment be different from science in a Western environment,

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because in the Quran it says you shouldn't become a specialist, you have to grow the trees, all its branches are equal. And it also says that you shouldn't use knowledge to take advantage of other people, so there should be no patenting and so on. So I thought that was a great idea, and we chose Egypt because it seemed the most friendly and the biggest developed universities and quite a strong science thing. So I went and filmed these doctors in the Delta and there were lots of slightly strange things about it, but I filmed this story and came back with it. And I was having trouble deciding where we started, it was basically about a man called Alumi (phon) who was the kind of senior guy, and then were three kind of thirty year old-ish, Egyptian doctors already on their second degree, they'd done their medical degree so they had now done a public health degree on top, so they were quite senior. But I couldn't decide how to begin it and it began to feel a bit, sort of, embarrassing. And then on the show, on London Weekend Television, Melvyn Bragg was interviewing Golding, William Golding, there was this wonderful guy there with his whiskers and so on, and Melvyn Bragg talking. And he leaned back at

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one point and he said, 'No, Mr. Bragg, I am just a simple storyteller', is what he said. And I thought, 'Alright, I'll go and ask him, I need the advice of a storyteller'. And it also happened that the book he'd written, called *The Spire*, was set for the exams that Ruth was taking, so if Ruth heard the man talking about *The Spire* himself, she might write something that would get her a very good mark in her O Level. So I rang up and he said, 'Could you meet me?' and he was very formal and friendly and said, 'I don't see the point really, I know nothing about film. But I can meet you at Brown's Hotel on Tuesday if you like'. I said, 'Fine, that would be very nice', he said, 'Good', and I said, 'I hope you don't mind, I shall bring my 16 year old daughter with me'. There was a sort of strange pause and he said, 'Alright'. So we turned up at Browns and sat down for lunch and he was really nice, and so on, and I told him all about this film and all about Alumi and all about this, and so on, and I said, 'I want your advice as a story teller'. And he said, 'Mr Goldwin, I think we're very, very different, as I understand it', he said, and he put this very nicely, but it was quite pointed, 'You have, as I understand it, all these cans of film and you're not

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quite sure what to do with them', he said, 'My job is quite different, I start with sheets of white paper and I know what to do, I know what to write and I write it. So I'm not sure I can help you with this'. So I thought, 'Shit', and I thought, 'What's Ruth getting out of this?' So I said, 'Just tell me, please tell me Mr. Golding, your book, *The Spire*, where did you begin with it? Which is the bit that you write first? How do you begin with the story?' And he said, 'I begin with a peripeteia?' and I said, 'What's a peripeteia?' and I kicked Ruth under the table, and he said, 'You obviously weren't educated at a public school then, and certainly not at Winchester', where he was a master at Winchester. And I said, 'Well tell me what it is', he said, 'Well it's where you learn something about what the story is about and it changes your whole attitude towards it. I said in *The Spire*, which I had read, it's where two thirds of the way through you realise that the abbot is nuts, before that you presumed him sane and interpreted all the people talking to him, and his reactions, as being, *The Spire*, is the big top going on Salisbury Cathedral, which is crazy to put it there. And there's all sorts of little hints that there's witchcraft going on, people doing nasty things

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and monks who are trying to tell him to stop. He overrules all the time and then he has a, sort of, schizophrenic attack, and you now realise he's nuts, and thinking back now you know that all the monks were actually sensible, and you reinterpret the story in the light of that. So I said, 'Well that's terrific, I'd never heard of that before.' And kicked Ruth and I hoped she'd made note of it, and thanked him and went back. And I thought there actually is a peripeteia in this story, in this *Horizon* because I'd come to the conclusion that Alumi was something of a fool, and that what he was doing wasn't making these doctors good at all because they had to sit without their legs crossed when he was present, they were never allowed to argue with him.

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(er) One of the girls, Salvo, was going to get married, she couldn't get married without his permission, the technician who was getting divorced, Alumi was responsible for this man, the contact after the divorce, he was at the court and so and so. Kind of everything was slightly different and bizarre, the doctors who had gone to this village, which was, you know, a lovely picturesque village, yaks or whatever the animal are, and carts with wheels and so on, everybody was in the

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water having to do things in the water. But the water was full of snails, now they would come in to the clinic and the doctors would be giving them an injection and saying, 'Yes, but you must never go into the water', and the peasants would say, 'Yes of course, we won't go in the water', and they'd go out and go in the water you see. And after about the third visit I said, 'You know they're going in the water, why didn't you go out and look', they said, 'Oh, we're not allowed to leave, we have to stay in the clinic'. So I thought this was, (er), you know terrible really, I don't think you're breeding scientist for any use here. Now, what was the peripeteia? The peripeteia, or whatever it's called, I went to Alumi on the kind of eight day, or something, and I sat down in front of him and I said, 'Look, I'm terribly sorry, I'm not trying to be rude, but I don't think you're making good scientists here', and I listed the sort of things I'd talked, but I said, 'They ought to be independent, they ought to quarrel with you. If you want them to have a critical mind they ought to advance their own ideas and try and shoot you down', and he leaned back with a smile and he said, 'Mr. Goldwyn, you are completely and absolutely wrong, what you are looking

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at you are looking at with eyes that you see from London. If you were to see with eyes here, of what is going on here, you would see it very differently', and then he said this wonderful sentence, 'I have to fix these people to this earth so they stay allegiant and don't go to Boston and don't go to Paris and don't go elsewhere. They need to work in the Ministry of Health in Egypt and for that they need to understand this authority, they need to fit in', he said, 'That is why I am involved with Selwa's marriage and so and so, and I've taken that seriously, that is why I ask the young doctor to have a clinic in this village so that he gets involved with these people, and so and so. Because I want

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these people to be here for Egypt'. So, ok, now I have all these cans of film, I actually have this interview, which I hadn't really thought about before, I thought it was a disastrous interview and a complete waste of movie to have shot it. So I thought, 'Well this is the peripeteia, this is the moment when it changes. How do I structure film so it does this? It's got to be two thirds of the way through, what happens for the front two thirds?' Because if you play the interview by itself it doesn't mean anything, you wouldn't see it. So the first

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two thirds of the film is looking like it's the trial of a new vaccine, and you see, and of course I keep it in, they're not allowed to cross their legs, that's anthropologically interesting isn't it? You know, and they're not allowed to leave the thingummy bob and go and look at the peasants, 'Oh that's sort of interesting, bit unusual isn't it?' And these things happen, and then while we're driving back in the minivan, the commentary comes in and is designed to kind of really change the movie altogether. It says, 'I who am making this film at this point felt I couldn't go on, I felt that I was seeing something that was not producing scientists', and I lay out the stuff. And then it goes straight into the interview, bang, and he says, 'Mr. Goldwyn you are wrong', and of course you are convinced by him because it is important to keep these scientists there. So the last third of the film was seeing these things that you've seen before with new eyes. You now see why he's smiling at Selwa's wedding and giving her a present, you now see him with the young man, helping him with his so-and-so. It worked, I thought it worked.

Q: Tell me what happened to Ruth at the end of the film?

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A: So the film actually was quite successful, Channel 4 based a series on it, I didn't know about this, you know, and I thought it was, you know, they were rather excited to have seen anthropology about science and so on. So that came out of that, and unfortunately Ruth failed her English again.

Q: In the meantime people were dying of bilharzia, so which side did your film take?

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A: Well, first of all, bilharzia is a very slow and insidious disease, so you die slowly, it's not something that happens, so you start peeing blood and things happen over the years. But what the film circled round, in the end, is actually pointing out the difference between, in a Muslim country, that you actually had this culture of obedience, it was the culture of the civil service that was defining the science, to the Quran.

Q: And did you come down saying that was a good thing or bad thing or neither?

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A: I thought it was a good thing that they were keeping the scientists in Egypt and I thought that was, kind of, worth doing.

Q: You followed that up with a similar project in Israel, can you tell me about that?

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A: It was (er), it was an idea that you'd suggested to me, you'd come back from a conference and you'd said, (er), 'There is this man', whose name will come to me in a minute, 'who is the dean of this Beer-Sheva medical school', and you said he was marvellous, 'just go and think about it'. So I went, and I got in touch with him, and I spoke to various medics in London who had been there and looked at it, and I thought it sounded good. And so I went and spent about a week setting it up, and then a kind of week filming and coming back and doing it. It was Naomi's turn, that's the middle daughter, to come and that didn't work well at all, because she got quite lonely and she wasn't terribly interested in the medicine. She tried to be but she was only about 15, so sent her back at the end of the first week, which was a bit of a pity, but anyway.

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Q: But it was a topic which involved you greatly and actually changed the medical teaching practices in this country.

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A: I got a very, kind of, odd letter via the DG after it went out, from a medical school in Nottingham, I think it was, which said, 'Congratulations the BBC, showing new developments in medicine, as is happening in the

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Beer-Sheva medical school', they said, 'However it might have been equally appropriate to show similar developments happening in Nottingham, rather than having to travel all the way to Israel'.

Q: So they were already doing it?

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A: I don't know, I mean I never found out. It was pretty involving, there was, I can tell you one nice anecdote about it. The main, the main concept was that young people who want to be a doctor are doing because they have an inner feeling of wanting to help people. And the conventional stuff in the British Medical School is actually, to almost destroy that, or certainly ignore it for the first two or three years. You get them to cut up dead bodies, you get them to do experiments on rabbit hearts and all sorts of stuff like that. And they're nowhere near a patient. So this course is around the basic idea that you build on the desire to care for people, so in their very first year, first year students are in the Accident And Emergency room, not to give medical treatment, but to help the patient bear it through, to explain to them what's going on and to give sympathy, really, which will help the pain. And I thought that was good, and I think we, sort of, conveyed, and

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we were in the Casualty Department with a young Israeli girl called Betta, quite plump, nice little thing. And she was there waiting, quite innocent of medicine milieus, couldn't have been more than about six months into this course. And the cameraman said to me, 'You know without the patient this is all a bit pointless', and I said, 'Yes I know, don't let's run too much film, let's just try, we can put commentary over it, or something or so on'. And then a helicopter landed, I should say just before it landed the sound recordist said, 'What we want is a patient who's brought in in three separate trolleys', anyhow, this helicopter, they brought a soldier who'd been wounded by being run over by a tank, or something, not in war but was seriously, seriously ill. And they brought him in and the doctor said, and explained to Betta, 'I'm going to have to do an operation to get a cannula in, behind the collar bone, into the main vein that comes up here, or artery, whichever it was, because otherwise this guy won't survive'. And he was saying all the time, 'It hurts, it hurts', and Betta was holding his hand saying, 'You'll be alright', and this accident and emergency doctor was going at it with a needle, it was like a number

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seven knitting needle, digging into this guy's thing here, and so on. And you could actually feel the whole reason for this medical school being in this form was being demonstrated there. I mean you could see Betty was going to be a great doctor.

Q: Some people say the *Horizon* editors were very hands on, some people were extremely laid back about editing. How did you get on with the various *Horizon* editors?

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A: I think I treated them like supermen, I thought they were terrific, I thought they were gods, I thought their opinions were terrific. And they were very concerned that one didn't fail, even if you had to be really cruel, you weren't going to be allowed to fail. So it didn't matter how tired you got or how desperate you got. And there's a story I'd quite like to tell about that.

Q: Medium-sized one?

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A: This was the first one that I made, the one about the children, if at first you don't succeed, you don't succeed. I researched everything, you know, I had a research thing that was this thick with this is what you'll see at Tavistock, and this is what you'll see at Harvard and this is what you'll see and so-and-so etc. And I was

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just about to go filming, you know, everything was just ready, and I was so upset and so distraught and I went home and I said, 'Chum', my wife, I said, 'Chum, break my leg', and she said, 'Why?', and I said, 'Look, I can't go through with this. If you break my leg I can back to The Open University and it will all be due to an accident and there won't be any, you know, it'll be clean', and she said, 'Why?' I said, 'I don't think I can go through with it, I don't think I can manage, I can't do it', I said, 'And I'm going to go mad'. And she said, 'Have you told Peter about this?' and I said, 'No', and she said, 'You know, it's not fair', and I said, 'I can't do it', she said, 'Look, it's not fair. He's gone out on a limb to have you and you should talk to him tomorrow, I can't break your leg. Tomorrow'. So I went in to see Peter, you know, and I said, 'Peter, I, I, I think I should go back', and he said, 'What is it?' I said, 'I don't think I can go through with this', or something. And dandruff was starting to fall, sun coming through lights it up, and so on, and he said, 'What's the matter?' and I said, 'I don't know, I can't feel it any more'. And he got out this thing, he said, 'Look, sequence one, it says Edinburgh, is this real? I this, what you've written here really what

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happens in Edinburgh', I said, 'Oh yes, yes it is'. He said, 'You mean there are babies there who will switch lights on and off and do so-and-so and so-and-so', and I said, 'Yes', he said, 'Well that's very interesting', he said, 'So on the basis of sequence one I can't see any reason whatever not to carry on'. And he said, 'The is sequence two, this is at the Tavistock, it's John Bolby. Is this fiction or is this...?' I said, 'No, no, that's true', and it says here, 'John thinks so. Is that what he thinks?' And I said, 'Yes', 'Well', he said, 'I can't see a reason, this is good, this is interesting, you might not film it very well, but it's interesting'. He went through the whole thing, and he got to the end and he said, 'Look, I'll be really sad if you didn't go on with this', he said, 'Because it's all there and I'm convinced you can do it, and let's try'. And I got up and I felt so clean, you know, all the things kind of disappeared and I went out really... Now that's the sort of thing I mean, I mean I think it was terrific the way he handled it, he could have easily said, 'Oh yes, I'm sorry, shake hands, I hope you enjoy The Open University', and that would have been the end of it.

Q: Were there editors which you felt were not handling

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the situation properly?

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A: I think you and Peter were the most gifted. I think some of them were semi-gods, if I can put it like that.

Q: What about your production team? How did you work with them?

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A: Well I like them, and I really like having them and depending on the stage that we were at they (er) they had all kinds of different roles. Because in the beginning I was fairly desperate to learn stuff so I was encouraging people to get on the phones and find things out and bring ideas, I didn't mind if you were a secretary or a researcher, or what, you know. If you felt you were interested to ring up and find out who was doing what, and I like to talk in the office about what I'd found interesting and encourage people to tell me that they didn't find it interesting, and find something else, you know. But as it went on I think, I, you know, perhaps, instead, being receptive, I started to get obstinate and then, you know, they found it more difficult to contribute and I think at some point, sort of thing there, I was needing them to be psychiatrists rather than other things. So it varied, and it varied according to the stage we were at, there was some

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points that there was little stress, the beginning hasn't got much stress. You start to have real stress when you're trying to make a document out of it that represents what you're trying to do, and you're trying to evaluate is this more important than that, and so on and so forth. And maybe I pushed people to come to opinions they really thought were my job to come to anyway. But once one got to the editing, it was strange the way they kind of got left out, 'cause the editing now was between you and the film editor I'm talking about, and the assistant. And they were left with much more mundane jobs like typing out shortlists and doing the commentary and so on, typing the commentary.

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Q: How did the end of your first project happen?

A: The one about children, it was ok, it really was ok, it had a lot to say about important things, about how a mother should behave with her child in order to make it understand mathematical kinds of things. Things like, you know, if you do this, then I shall have a headache tomorrow, that's got 'If, then', statements, you know. And cause and effect, if it's built into the language of discipline it gives the kids the background. Lots of stuff like that, and lots of stuff in it about living in a slum,

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about living very poor, about having a husband who's awful, actually interferes with the mother's ability to communicate logic to the child because her life isn't logical, and so on. So that was all there and there was a good sequence about a mining town, an ex-mining town where the mothers had been part of a project run by the Institute of Education to teach these mothers, who were living in the slums, how to be with their children, how to talk to them, how to play puzzles and so and so forth, ok. And the film got to the end and I was busy over the weekend writing the commentary, it always took me a full weekend to write it. And Peter was coming in to listen to it at about 6 o'clock on the Sunday, and we went through the film and got to the end. And I've forgotten what it said at the end, and you know, and Peter said, 'Look, I'm very pleased we went with all this. This is worth it', he said, 'but you don't say anything at the end'. I said, 'Well what do you mean?' He said, 'Well do you think that the Minister of Education should be sacked?' I thought, 'Oh my God! Who am I to say? I am just, you know, an ex-academic sort of person'. He said, 'No, no', he said, 'do you think the Plowden Report that you referred to, you know,

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should it be seriously in the newspapers, that Plowden should be implemented or something?' I said, 'Who am I to say this? I do think that....' Peter leaned forward, and he tapped me on the knee, and he said, 'Look, you've been in touch with everybody who counts in this field, and probably for the next month you're a pretty important expert on it', he said, 'It's an important subject, for Christ's sake say something, from you', and he said, 'Show me tomorrow what you've written', and he went, you know, and I was left, over the machine, absolutely terrified. And in the end, I did write something, something like, I've forgotten it kind of too seriously, but it said something like, 'If we know how to prevent misery and pain, if we know how to prevent failure for half our children, then we must act', and I wanted Vaughan to deliver the Act strongly. And I felt so good after it, you know, I just cried and cried buckets, and cried, you know, for about 15 minutes, uncontrollably sobbing. And that stayed with me ever after, when I get to the last piece I think, 'What is it that we've got to say, having gone through all this'. And there was one film where it was really quite, quite serious, this business, it was the film about

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microprocessors.

Q: What was the other film you wanted to talk about?

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A: Ok, this was a film about the rise of the microprocessor, the extremely cheap computer, and it slowly became clear to me, while I was making it, that this was a very revolutionary thing. I'd had some briefing from civil servants actually, in the Ministry of Technology, Gerald Kaufman's (er) team, when I went to consult with who's knowing what, I mean I always went to talk to everybody, they said, 'Thank God you're doing this, we find we can't get anybody in government to pay any attention to this', which stuck in my mind very much, you know. And they kind of half knew about it, I mean, being civil servants they probably didn't spend hours and hours and hours at it, but they were aware. And the implications of all this were that the big industries were going to be replaced by software industries, and that an enormous amount of change would happen in Britain, and the film really justified it, it showed the (er) microprocessors being made, it showed the new kind of technology in action; it had British engineers in New York, selling their wares and so on and so forth. And I got in touch with (er)

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Kaufman's PR lady, and said, 'Look, I want to come and talk to him and get his opinion about this film that I'm making, and I'd like him to see a rough cut first'.

And she said, 'No, no, no, no, if you're coming, (er) you just come and ask your questions, there's no point in seeing a rough...' I said, 'Look, if I come and talk to the minister, and he will make these 'light at the end of the tunnel' kind of rubbish remarks, it will just end up on the cutting room floor', I said, 'I'm embarrassed about doing that, I don't want to waste his time, and it's important, what I've got to say to him is important to him and important to the nation'. And she said, 'No, I'm

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terribly sorry, you know, you can come and ask your questions, and he will answer, but we're not getting involved in anything beforehand'. So I felt kind of very lonely, and I was cycling in to Kensington, passing over Hammersmith Bridge, wanting to kind of know how to end this film, and I thought, 'I'm worried, I'm worried', and a bus, a number 9 bus came towards me, and there was the driver, and he wasn't worried, so I said, 'He's not worried. I'm worried, she's not worried, he's not worried; I seem to be the only bloody person who's worrying', and I thought, 'That's it, that is it, that's the

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end of the film'. So the film ends with (er) laying out all the problems and that if all the employment changes, people don't have a job, and if they don't have a job they don't have a role in Britain, and if you don't have a role maybe democracy goes, and if you don't have this, really what I thought, quite serious kind of stuff. How do you give the money out if people are not getting wages, and so on. So these were the questions, and the shot was a shot down the gangway of an automatic warehouse; so you had huge piles of palettes, stretching above what looked like quarter of a mile down the road, and you were on the platform of an automatic thing, going up and down, going through all this stuff. It was quite eerie, and it suited the commentary very well, 'cause I'd come in and I'd said, 'Ted, this is the end, we're talking about this, what have we got that we can actually use as the end?', and he said, 'Well there's that very long tracking shot we've never used, that would...' 'Tell me Ed, what you're thinking', and he said, 'Emphasise that, and then that will make it more relevant'. So he puts it on, and it's, you know, about 30 seconds worth, and he starts it up, and I say this stuff about, 'These are the questions,

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INT. GOLDWYN CONT – HORIZON AT 50

these are the questions, and these are the questions', I said, 'But no-one in government is thinking about this, no-one is paying it any attention', I said, 'The questions shout, but the silence is terrifying'. And I looked up from the machine and the shot it ended in, we were on the bank wall at the end and it was dark, and Ted said, 'That's great', he said, 'So then we can, that's it'. So we timed it a couple more times and got it just right at the end, and that's how the film ended. So they filmed it, the silence, go to black, because we'd gone to the end of the thing, is terrifying; pause, and then the titles came on.

Q: How did you manage with other broadcasters in the world?

A: Well I liked them, and I liked the people I met. And I kind of quite liked making co-productions, but there were some big disadvantages. There were some advantages, in that it made it easier making contact with Americans, 'cause they all knew *Nova*, and, you know, and wanted to be on it, but it wasn't difficult, as you said, you were the BBC. The disadvantage was that it made the programme more general. You could never kind of conceive of saying, 'And what does this

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mean for us in Liverpool and London? Or what does this mean for the people living here?' You had to retreat into a more philosophical kind of mode; what does this tell us about science or existence? So the chips programme could never have been made, because it was about what was happening in England. It would have been advances in microprocessors rather than a social programme. The other disadvantage was that it was (er) about six minutes longer, the *Horizon* co-production. There was an advantage in that, that you, that you had an extra week's editing, but of course you tended to mortgage that if you were in trouble about making the English version better, and I would, if you'll permit me, like to tell you an anecdote about that (OVERLAP – anything you say that's fine).

01 01 57

Q: Ok, go ahead

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A: It was a film about cancer in China; there were a group of scientists, in order to avoid the kind of terrible privations of cleaning lavatories and being stoned and so on during the cultural revolution, had taken themselves off, away from Mao's interests, and gone up to a very small valley, quite hidden, in order to do some work together. There were about 15 of them, and

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they were trying to research why this particular valley had a really, really heavy prevalence of cancer of the oesophagus. Ok, we made the film, it was terrific, lots of kind of quite lovely and delightful things happened, but we were cutting it in the cutting room, when we got it to the British 50 minutes, perfect. And then, now, we have to make the (er) 56 minute, or whatever, 56 on American television lasts 60, because it goes slightly slow. So we have to find an extra six minutes. Well, we've obviously cut some sequences, there was that one of the man on the bicycle, taking the results to the hospital, and so we'll put that in 'cause that makes it another half minute, and there was this bit happened and that, and so, using all the pre-cut film that we'd taken out, all the film that had been cut already and taken out, we'd got in up to almost time, there was about 40 seconds left, and there was very little time left in the cutting room to, to do it, and so on. So I said to Ted, you know, 'Have we got anything?' He said, 'Well there's that very lovely shot of three old men sitting on chairs, in the middle of a field, with some high mountains behind them'. I said, 'But they're just talking rubbish, all they're doing is talking about their visit to

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Peking, when they went for their operation.’ Ted said, ‘Yes, I know, but it looks alright’, and he said, ‘And it’s a long shot, and we can measure off 40 seconds, he said, ‘You know, can you think of something to say?’ ‘What do you mean say?’ He said, ‘Look, if you put commentary over it, you’ll never know what they’re saying’ (LAUGHS). So I thought, ‘Well, what could we do?’, you know, and so I said, ‘This, Mr So and So, he went to Peking when he was little, and he remembers this, and this one and this one...’, and wrote it, and it seemed fine, and stuck it in, and I thought nobody would notice, it would be all ok, and so on. So the British one went out, and there was a lot of lovely things said by my mother, and by my wife, and various other people, and so on, and it was quite successful. And then it went out in America, and I got a phone call from a very close friend who lived in San Francisco, and said, ‘Ed, I’ve just seen the film, and I knew halfway through it was yours’. I said, ‘Yes’. He said, ‘This one about the cancer, as soon as I saw that wonderful sensitive shot of the three old men in the field, talking so poetically about it, I knew that was you. That’s been the best moment I’ve seen on television

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this year'. I never told her it was actually a last minute desperado.

Q: Let's talk about audiences. What sort of audiences did you think you were aiming for? Did you expect much prior knowledge?

01 06 21

A: The presumptions I made about the audience were that they would not be doing anything else, they would actually be listening and be stimulated to try and make sense of it. I wasn't talking to somebody who was making omelettes at the same time, or something like that. I didn't expect anybody to know much more than the word kind of 'atom'. I didn't expect, for example, people to have a technical sense of what the word 'energy' meant. If I needed it technical, I would use Anglo Saxon words in such a way it was clear what I was talking about, and I'd try to avoid the jargon as much as possible. I think I was prepared, anybody who wanted to know should have access to what was in it, and that's what I wanted. And if there was something which I thought was going to be important, but unless you had a certain language or bit of training you wouldn't be able to understand it, I occasionally used a technique of what I would call 'parking it', I created a

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little encapsulated bit, I would say, you know, almost, it never quite was these words, but it was something like, 'If you know about so and so, then the next minute and a half is for you, but don't go away the rest of you, because we'll be connecting with that in a minute and a half', and found ways, sometimes, of doing that, which was alright. But my main, main thought was this, that if anybody who's watched this, who's, you know, good, intelligent, working class lad or woman, and is in the pub the next night and says, 'Saw this interesting stuff on television last night, so and so and so and so, and they've been getting down into rats' brains, and they can now do so and so'. And somebody would say, 'Well how do they know that?' So I wouldn't leave them looking foolish, I wouldn't leave them so they'd say, 'Oh I don't know, I've forgotten, it was something'. They should know because it was clearly in the programme how they know. So I think that was respecting someone's intelligence and curiosity and if that explanation wasn't there, I told the audience it wasn't there, I didn't pretend, with any kind of smooth, slick line, that, you know, by analogy or something, I said, 'This is unknown, now', you know, 'But there are some

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thoughts that it may be so and so'. So I wanted it to be very clear, I didn't want people left looking foolish.

Q: Did you pay much attention to audience reaction indices?

01 08 58

A: Oh yeah, I mean if they were positive I thought they were wonderful.

Q: And if they weren't?

A: I tried a bit more (LAUGHS)

Q: Did audience sizes matter?

A: Yes, you know, I guess so.

Q: So you were looking to pull in a big audience?

01 09 25

A: (er) I wouldn't know how to maximise or diminish an audience. I felt my obligation was to actually give people who'd paid the money, the taxpayers, and wanted me to go out and find this stuff, for me to tell them this stuff. If they choose to ignore it, that's, in a sense, up to them.

Q: Did you feel as if you were working in a very specialised team?

01 10 08

A: (OVERLAP) It was a very supportive group. I mean, it was quite important, sometimes, I just needed to go in and ask Chris La Font, or Chris Sykes, or Alex, or somebody, 'Am I going mad? What's the way out of

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this dilemma? Who do you know who knows about so and so?’ Other people would come in, I mean, Fisher would come in, or Martin would be not sure as to whether he should go this way and that way, and it was very supportive. I mean, I think we really trusted each other. It could have been quite easy, in a sort of Cambridge-like, where people were trying to step over you, to have killed it all, but no, it wasn’t like that.

Q: Why did you stop making *Horizons*?

01 10 52

A: Because I was 50. (OVERLAP – there’s no time limit on..) There was no other reason. I’d said at home, to the family, ‘I’ve gone straight from school to be working in (er) a hospital physics department, and then to the BBC. If I stay in the BBC all my life I’ll have never experienced anything outside’. So they said, ‘Yes dad, yes dad’. I said, ‘I shall leave when I’m 50’, and I’d been saying that since I was 35 or 40, because I’d seen James McCloy, who stayed in the BBC until he was 65, who loved it, who lived it, and the day he retired he started dying, and within six months he was really pitiable, and I thought, ‘There goes me’, that was just like me (er) but they took James’s phone away, and he couldn’t say, ‘I’m a BBC producer’, he had

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nothing to do anymore. So I thought about that, so on my 50th birthday at home, the family said, 'Well, you're 50, what are you going to do?', and I said 'Well, I'd better leave then', and that was it.

Q: Did you leave the BBC altogether?

A: Yes

Q: And you went independent?

01 12 11

A: Yes, and missed it like crazy.

Q: Did you make any more *Horizons* after that?

01 12 14

A: Yes, the one about the poison that waits.

Q: What was it like being an indy?

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A: (OVERLAP) Not very different at first. It was, some things were odd; I was setting up a cutting room to cut this film in, and I was asked (er) you know the wax pencils you mark the film with to show where you want to cut, they said, 'What colours do you want, Ed?', I said, 'They're all yellow, aren't they?', 'cause we always had yellow ones, he said, 'No, you can have whatever colour you like, green, or red, or blue'. 'Jesus', I thought, 'I never knew that!' So I said, 'I'll have a red one'. So we cut that film using red pencils.

Q: Did you see around you that the programme was changing in any way over that period?

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01 13 27

A: Not that I noticed, no.**Q:** What do you think of it now?

01 13 44

A: I think there's some, kind of, really quite good ones, no that sounds too... I was really impressed that somebody made a film about before the Big Bang, and it was a very stimulating programme considering how difficult it must have been to grab hold of it. And I remember an absolutely fantastic one that Zoe Heron made about people walking, learning how to walk upright, the development of the skeleton over the years. She's a terrific story teller. I think there was a patch when I thought, 'Oh God I'm going to see people raising pre-, (er), like putting a menu up on a news programme. You may want to know about this and that and the other, and then the titles and then it, sort of, follows mechanically through', and I didn't like that section of it. Anyway, enough of that.

Q: (INSTRUCTIONS)

01 15 15

A: What John was talking about was, that I was describing to him about being an outsider, not an insider, and so on, that in *Horizon* the steps you went through. You started with the meeting in which you would either be sold the programme or *Horizon* would

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buy one. And then you then, a fortnight later, you actually went in and there was a decision to go, or no go, little ones in-between, but that was a big thing. And then (OVERLAP – mobile phone rings) there was (er) the rough cut viewing and what the rough cut viewing was like, and then the fine cut viewing and then the commentary. That sounds like mine.

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