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AN ORAL HISTORY OF BRITISH SCIENCE

Professor Robert Hinde

Interviewed by Louise Brodie

C1379/08

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**British Library Sound Archive****National Life Stories****Interview Summary Sheet****Title Page**

Ref no: C1379/08

Collection title: An Oral History of British Science

Interviewee's surname: Hinde Title: Professor

Interviewee's forename: Robert Sex: M

Occupation: Zoologist, ethology Date and place of birth: 1923

Mother's occupation: nurse Father's occupation: Doctor

Dates of recording, Compact flash cards used, tracks (from – to):

9 February 2010: Track 1 [48:15], Track 2 [44:44], Track 3 [52:42], Track 4 [1:07:00]

4 March 2010: Track 5 [1:25:00], Track 6 [1:28:37]

25 March 2010: Track 7 [1:23:34]

Location of interview: St John's College, Cambridge

Name of interviewer: Louise Brodie

Type of recorder: Marantz PDM660

Recording format : WAV 16 bit 48 kHz

Total no. of tracks: 7 Mono or stereo: Stereo

Total Duration: 7:49:52

Additional material:

Copyright/Clearance: Open

Interviewer's comments:

[Track 1]

*This is the 9<sup>th</sup> of February 2010, Louise Brodie talking to Professor Robert Hinde.*

*Could you tell me when and where you were born please Robert?*

I was born in Norwich, in what I now know was a very beautiful Queen Anne house, in Gurney Court, Magdalen Street, Norwich. It was also the home Gurney's Bank, a long, long time ago, a Quaker outfit. And, that was in 1923.

*And, tell me a little bit about your father.*

Well, my father was a GP in Norwich. He came from a, he was the, I don't know, from a very large family, and his father was a silk merchant and had a silk business in Norwich, which continued for a long time, over several generations, until it was bought up by Courtaulds. The elder brother, eldest brother, stayed in the firm, and went bankrupt in the 1930s. My father trained as a doctor in Cambridge with the intention of being a medical missionary, but he lost his faith in Cambridge and became, as he put it, 'just a doctor'. Three brothers were in the Church. And he had, my father had, first of all a panel practice in Magdalen Street in Norwich. A panel practice was a sort of, predecessor of the National Health Service for poor people who paid a minuscule amount and got medical treatment for it. And I think it rather excluded the women actually. But he gradually, after the war I think, started taking private patients, and moved up to, literally move up, in a physical sense, not in any other sense, to a road called Mount Pleasant in Norwich, where, from which he ran a private practice for the rest of his life.

[02:42]

*Very nice. So, he obviously had a social conscience if he was part of a panel practice to begin with. Is that right?*

I think, I think he did, yes. I would say very much so. He continued to attend church I think twice a year, once at Easter and once on Gaza Sunday, which was when they had a special service for the Royal Norfolk Regiment celebrating the Battle of Gaza,

which he had been involved in in the First World War. He was a very busy man, and so, I didn't see an awful lot of him, but he did take quite a lot of trouble to take me fishing, even when he hated the cold, and the fishing line froze to the rod rings. And he used to mend my model aeroplanes and that sort of thing. But, on Sunday afternoons he would sit and read... [coughs] I'm sorry, and read *The Cambridge Ancient History* of the... Because he was very interested in the Middle East, having spent several years there during the war, during the First World War.

[04:16]

*Did he talk about his time in the First World War, did he talk to you about that?*

He did talk to me about it. But he only told me slightly funny stories and not the horror. And, I mean the nearest he got to telling me anything awful was saying how awful it was on Gallipoli, on the peninsular, that a Turkish sniper had the path from their place where they were operating to the loo covered. So you had to make a dash for it when you wanted to go to the loo. And that was probably the most risky thing he ever said to me in both senses. He was a Low Church, Church of England background.

[05:11]

*And did he talk to you about the loss of his faith at Cambridge?*

Oh yes. Going back, you said, did he talk about the war?

*Yes. Yes.*

Yes he did sometimes, and, he used to tease me because I used to say sometimes when he came to see me at bedtime, which was not often but, frequent, tell me a story about the war. No, I used to say, 'Tell me a story Daddy,' and he used to say, 'What about?' And I used to say, 'About the war.' So there was a certain interest in it.

*And, do you know why he lost his faith in Cambridge, when he was at Cambridge?*

His scientific training, as a doctor.

*He saw those two things as, as being...*

I suppose so. He, in later life, after my mother died, he went back and, and spent a lot of time reading the Bible, and I'm sure it was a great comfort to him.

*You say that, but, you're sure it was a great comfort to him, so did he then come back to his religion later in life?*

Yes, that's what I'm trying to say.

*Yes.*

He, he spent a great deal of time reading the Bible and, and going to church and all that sort of thing.

*Right. Right, yes, I see. Well we'll come back to that later. So, I'm getting a picture of a, of a kindly man, but busy, and somewhat distant. Is that right?*

[hesitates] I wouldn't say he was distant, but he was very busy. And so he used to always be late for lunch, because he had been seeing his patients, and, sort of whiz off into his surgery, he had a surgery from two to three.

*Did you visit the surgery with him?*

The surgery was two rooms in our house.

[07:16]

*I see. Right, OK. Let's move to your mother. What about her?*

She was a very warm, kind mother who came from Kirkby Lonsdale in Westmoreland. No, it's in Cumbria now I suppose. Her father, I think had had, either her father or his father, had a nail making business. At any rate he died young, leaving my grandmother with about five girls and a boy. And, she must have been a

very spunky woman, because, she set up a cake-making business in Kirkby Lonsdale, and made cakes that were very famous and are mentioned in the history of Kirkby Lonsdale, and were sent all over the world, and that sort of thing. It was only a tiny little outfit, but she managed to make a name for herself. And, the business was carried on by her two sisters, my mother's two sisters, when my grandmother died.

[08:45]

Kirkby Lonsdale is, I don't know whether you know, it's a lovely little country town, with a very beautiful bridge, it's on the River Lune. And, I think my mother's childhood was a very happy one, in which they were sort of all girls together. The odd one out was the boy, who I think was the youngest, I'm not sure, and, he was left for dead at Passchendaele, and, then disappeared. He survived with one arm. And, I only saw him a few times. He did something terrible, like marrying a divorced woman or something, I don't know what it was, I have no idea, and I never knew, and he was rejected by his, most of his sisters, but my mother used to secretly send him money, and sent him the *Westmoreland Gazette*, and that sort of thing. The sisters were a very funny bunch. One, the eldest, became a headmistress at a secondary school in Mansfield; one of them became a nurse in Kuala Lumpur; my mother set off for London and became a nurse in Guy's Hospital; and the two of them stayed at home and eventually married, the business. I think it must have been quite a gutsy thing to do, to set off from, from this tiny little country town, in about, in the first few years of the twentieth century I suppose. And, she became a sister in Guy's at the time when, well I don't know whether she was made a sister then, but any rate, she became a sister eventually, and there met my father, who she said appealed to him because he always had a clean shirt. [laughs]

[11:15]

*Lovely. What was your mother's maiden name?*

Taylor, t-a-y-l-o-r. Yes.

*And was that the name of the cake business that her mother had started and...?*

Yes, Mrs Taylor's Cake Business.

*Mm.*

And it was later known as The Mrs Taylor's Cake Business when she died.

[11:39]

*That's wonderful. And did your mother talk about coming to London in those days, and her training?*

She didn't very much actually, and I was insufficiently curious about it. I don't think I realised then what a big step it must have been.

*Did she help your father in any way in looking after...?*

Absolutely. In the First War, he went, he was off for over three years abroad, and she ran the practice with a succession of locums. And she did the dispensing, I think on the basis of her nurse's training. I've got one or two of her notebooks she had as a nurse, and they're all how to make soup and things like that. [laughs] You know, they're not at all the things you would expect a nurse to know about these days, but...

*How wonderful.*

I think during the war she had a really rough time. My elder brother and sister were both married, both... sorry, born, eleven months apart, in 1912 and 1913. Or was it 1911 and 1912? I don't know. But, they were born very close together. Just before the First War. So my mother was left with them, and had to keep the practice going, and was really exhausted I think by the end of the war. My father's father was kind to her, but he had two daughters called Elsie and Mildred who were, again, two spinsters, who were not very kind to her, and looked down on her as a bit of a country bumpkin. I mean, my father of course had been at Cambridge, my mother was not educated I think beyond, I suppose secondary school to fourteen, as it was then, I don't know. So, they, they didn't invite her to their... they were very holy, and they didn't invite her to their prayer meetings. [pause] The wife of one of the other Norwich doctors, a Mrs Claridge, was her close friend I think, and helped her during that time. And as I say, her father-in-law did too.

[14:48]

*And, you were born much later. So there was a ten... Were there other siblings?*

When my father came back from the war, which was just before the war ended, a month or two before, because I think they wanted doctors because of the flu epidemic, and my sister was born, another sister was born in 1919, and then I came along, a sort of, glorious surprise, in 1923. And, the sister, the 1919 sister, called Wendy, describes being taken to see me just after I was born, and said she couldn't understand why her mother looked so ecstatically happy with this horrible scrawny red thing.

[laughter]

*Excellent. And so, were you close to your brothers and sisters?*

My sister John seemed... Sorry. My brother John, who was the eldest, seemed very much older than me, and, I didn't see a great deal of him. He was sort of, rather glorious. He went to school at Gresham's, and so he was away a good deal of the time. My, the second child, Isobel, was, who was just over ten or eleven years older than me, and was very much a mother to me, and I had a very, she was very kind to me. The other sister, Wendy, the tone of my relationship is a bit described by that story I've just told you of her reaction to my birth. But... My brother died a horrible death in the war, which I will tell you about later. Isobel became a doctor, worked with my father, took on my father's partner's practice during World War II, went into research and started a brilliant research career, I think she was very, she was very clever. And then, became a nun. And Wendy became, after the war, a journalist, not... She doesn't like to be called a journalist. An editor on the *Economist*.

*Oh.*

And various other things she did. But, I don't suppose you want to go into that. She was at Bletchley during the war.

*Oh right. Right. So all, all very hard-working and distinguished.*

They were, yes. I mean Wendy, I think, was handicapped by being a woman. She didn't get the promotions she should have got on the *Economist*, though she was editor for south-east Europe and used to go and interview Tito and, Zoshchenko or whatever his name was, and all these other people. Then when she retired from the *Economist* she wrote four very good historical biographies on, which are quite, I mean even my stuffy academic colleagues here say they were very good biographies, on Castlereagh... They all begin with C. Castlereagh, Canning, and, one other beginning with C. I'm not a very good historian. [laughs] And, she wrote a book on Catholic emancipation in Ireland. So, she was a, a clever woman. She's now ninety-one. No she's not, she's ninety, ninety-one in April.

[19:14]

*Well that's fantastic. And so, what do you remember about your childhood?*

Well, I don't remember really anything about living in Gurney Court, Madgalen Street, because we moved out of there at two. And my memories of Gurney Court were going back there to see my charismatic partner of my father, who still kept the practice running there.

*Why... How do you mean, charismatic?*

Well he just was charismatic. He was a lovely man, who I think my mother thought was rather wonderful. He was a bachelor, and he used to come back from his holidays in the Mediterranean, pull up his shirt and say, 'Look how brown I am.' [laughs] Which, in the 1930s, that was not the thing that doctors did, if you see what I mean. And he used to love pop music of that time. And he died in a car crash in the mid-Thirties with two drunks. And, my father then took another partner, called Robertson, Ian Robertson, who was a nice man. But he didn't have that charisma.

*But why did you move out of the house?*

I think my father was moving upmarket, and, from Gurney Court, Magdalen Street, to Mount Pleasant, in the more... it was a move into a more residential part of Norwich.

Gurney Court was in the middle of Norwich, only a few hundred yards from the cathedral. Mount Pleasant was in the residential area.

[21:22]

And that was a very lucky break for me, because, next door lived a lawyer, solicitor, and his family. [coughs] Sorry. The solicitor was called Cozens-Hardy, and he had a long, he was, a fairly long-established solicitor's business in Norwich. You don't talk about it as a business; what do you talk about a solicitor as?

*Firm?*

Firm. Yah. And, he had a number of children which, Mary, the eldest, was slightly older than Wendy, a few months; then there was John; then there was Graham, who was just a few months older than me; then there was Ann, who was about a year younger than me; and a boy called Jeremy at the end.

[22:22]

And, John, Graham, and to some extent Ann, used to play together continuously. And, it was a nice house that we had in Mount Pleasant, with nearly an acre of garden, and, the Cozens-Hardys lived next door in a comparable house. And we sort of broke the wooden fence between the two gardens down and used to play games. Very much of my time was spent playing games with them. One was called the bang game, which was...

*The bang game?*

The bang game.

*Mm.*

You're dead, sort of thing. And, another was called the bicycle game. We used to play a great deal on bicycles. And, I should say that the father had only one leg, and, he encouraged us to play war games, and to dig a trench in their garden, we had a big trench and a dugout, and he used to let us carry his revolver. And, I think he was coming to terms with his injuries still, and, this was, you see, in the Thirties, and the First War was still very close. [pause] But Graham was my special friend. Ann and I

planned to get married and have 242 children, but it never, never actually came to anything. But we used to do things together when the boys were away. Graham was my, was nearly the same age as me, and, he... Whereas John became a medical student, Graham went for a year to Oxford and then went into the Air Force, and was killed, in, towards the end of the war, end of 1944 I think it was. He was a navigator on Lancasters.

[25:07]

*Oh I'm sorry. So, your... Were you playing these games, were they imaginative games, or were they, did they follow a set pattern?*

Not especially imaginative I wouldn't say. I mean, the bicycle game was, somebody was on a bicycle and they had to ride round and round the house or both houses or something, and the rest of us had to get round the house in the bushes without being seen. It was that sort of thing. And, the bang game, we had, for a while, blank cartridge pistols which are terribly dangerous things I think, you can't get them now, but they fired little cartridges which we used to put on the tramlines, [laughter] which was rather fun.

*So you had trams out, in the road outside, did you?*

Not immediately outside, but a couple of hundred yards away.

*Did you mostly play in your acres of garden?*

Yes. Yes.

*Oh right, so, there wasn't...*

We were extraordinarily lucky. And it was, I was very lucky to have these people next door, who... Really... Ann I've lost touch with really, but John became a doctor, and went into the Navy, did his National Service in the Navy, and then somehow or other became an obstetrician consultant [the interviewee meant to say an 'orthopaedic' consultant], in Birmingham. But he married a Spanish girl, and was

converted to Catholicism, and then... I didn't see much of him, and he went to live in Spain. And then, his marriage broke up, and about ten years ago Joan, my wife, and I were near where he used to live, and I said, 'Let's go and see whether we can find him, what's happened to him.' And, it was a house... He had moved from the house in which he used to live, but it was a house in the same village, and you had to go in through, through the back, through the garden really. And as we went through the garden there was a shed, and in the shed was somebody bending over a bicycle. And I said, 'Hello John.' [laughs] And, he said, 'Oh hello Robert, I'm just mending my bicycle.' And my wife, who is American, just collapsed at the sight of these two English men who hadn't seen each other for forty years. [laughter]

*What a wonderful story.*

And I still see him from time to time when he comes over, he does locums. He lives in Spain but he does locums in England still.

[28:25]

*Did the Depression affect the families at all?*

It affected my father's family, because, his big brother who had the silk business went broke, and, so he had to look after him really financially in other ways and handled a lot of his affairs I think. The one who went broke, Frank, the eldest brother in my father's family, was a keen lepidopterist, and I used to see quite a lot of him, because I used to collect butterflies. He had a wife called Nina, which my mother disapproved of, and I remember her saying with great glee when, when she, I suppose it was when the wife died, that she had a bill for over £100 at Ash's. Ash's was a hat shop. [laughter] And my mother didn't like her at all.

*Oh dear. But did you like her, did you like Nina?*

No. I liked the...

*Frank.*

Frank, yes. He was a big... a big man, [laughs] in every direction.

[30:04]

*So, he encouraged you with your butterflies?*

With nat... Yes.

*Yes, your nat...*

I would say that, that came probably, as much from my father. My father had a keen interest, but a very secondary interest, in natural history, and during the war he used to send a lot of specimens back to the British Museum. Because in those days practically anything you touch was new, and he used to collect insects and things and send them to the British Museum. And, his diary, which we still have, used to... He was in a field ambulance, an advanced dressing station, and there would be months and months and months in which he only talks about the flowers and the insects and things. And then there will be an entry, '242 casualties through the dressing station last night. Too busy to write.' And then it will go on and it would say... That's a slight exaggeration, but it was, it was like that. So he didn't even, he didn't reflect on the horrors of war. [pause] I say... No it's all right. Horrors of war in his, in this diary, bits about it, and we've got letters to his father and other things.

[31:47]

*So, this, your father's interest in natural history...*

Yes.

*How did he pass that on to you?*

I don't know. He was, he had, as far as natural history goes, he had a closer relationship with my sister Isobel, who was a botanist, and he was a botanist, and they used to have a little book called *Hayward's Botanist's Pocket-Book*, and they used to take it out whenever we went on a family picnic or anything and look at the, pull

flowers to bits and see how many stamens and all the other things it had. And, that was very, that was very nice.

[32:30]

Isobel, in her teens, was a big, must have been a lovely girl I think, well covered as it were, but not fat, captain of tennis and hockey and practically everything else at her school. And then, when she went up Cambridge she had anorexia nervosa, and, was thin and underweight for the rest of her life really.

[33:05]

*Did you go on expeditions with Frank to catch butterflies?*

No, never. I just used to take him things to be identified. But I... So, yes, it was only that. And eventually, his butterfly collection came to me, and in an enormous cabinet, which I then gave to the Norwich Technical College. I mean he was just a collector, and, not anything else. I don't know why I started collecting butterflies. I dare say my father encouraged it. And, I also started to be a birdwatcher, and I don't know, I don't know that he really encouraged that either. I remember him writing to me at school that he had seen a, a brown bird running across the road, and it was about, so big and so on. What did I think it was? And, I didn't know what it was, and then, in the holidays it came up again, and he said it was a chicken. Ha ha ha ha ha ha.

[laughter]

*I see.*

[34:29]

We used to go for family holidays of course, and, that was when I saw most of him I suppose. And, I was very much the youngest, and made to walk, go on family walks. Which at the time I didn't enjoy, but I slowly got to enjoy. I mean, you know, John was over ten years older than me and he could stride up Skafell Pike or whatever it was, but, it was hard work for me.

*Did you often go to the Lake District for your holidays then?*

Yes. Well, I only remember three times. Once to, twice to a farm on, on Crummock Water called Rannerdale, and once to a farm near Coniston Water. My mother used to love walking, and she used to love the Fells, having come from Kirkby Lonsdale to flat Norfolk, she really loved to be amongst the Fells, and, she used to, I remember her standing and saying, 'Coniston Old Man, and that's where I walked.' [laughs]

[35:58]

*So, when you were on these holidays, did you pay, with your father, more attention to the natural history around you?*

I think probably, I think probably I did. But he was more preoccupied with the flowers than anything else.

*Right.*

And maybe for that reason I kept clear of flowers. [laughter]

*Did you climb trees? You...*

Did I what?

*Well, I'm thinking of the birdwatching. Did you climb trees, look for nests, that sort of thing?*

Well we climbed trees all... Graham and John and I used to climb trees all the time, but it wasn't for birdwatching. We had a, a tree in their garden which we called the climbing tree, and it was for that purpose. But it was... There was also a conifer which was much taller, and one got very dirty climbing it.

*Did... You never fell out?*

I never fell out of a tree, no.

*Right, that's good. Where else did you go on holiday?*

We went... When I was young, they always used to go to Cromer, as being the nearest place. And Cromer then was a, a sort of respectable resort, with big hotels. But we used to stay in a boarding house, Mrs Kemp's boarding house, which sort of, overlooked the promenade. That stopped when I was, I was old enough to not have to play on the beach. And, we went twice to Wales I think, to Whitby, to Seaford in Sussex, to a place called Abbotsbury or something on the north Devon coast. They were always... We never went abroad. My mother never went abroad in her life, except for a day trip to Zeebrugge, which was a great event in her life. But... Our family holidays were always preceded by an expedition to find somewhere to stay, which my mother used, either my mother or, usually my mother and John used to go on in my memory, he used to drive her, because she didn't drive.

*So do you mean that they would go ahead, and look for somewhere?*

Yes, in April or sometime, and, find somewhere to stay, and then... Great responsibility.

[38:45]

*[laughs] I see. Did you have maids in the house?*

Yes. We had, I think three. A cook, a housemaid and a house parlour maid.

*And, gardener?*

Yes, although I think he was a part-time gardener. And actually we had a chauffeur too. He didn't used to drive my father very much, but he used to look after the cars. This is the 1930s. And he had been a groom, so that when he was polishing the cars, he was, 'mmmmmmmm' he used to talk to the car as he, as he polished it.

*You didn't have a nanny?*

Yes I did have a nanny. I don't remember too much about her, except... Practically the only thing I remember is being, not getting into trouble, but being looked at

askance when somebody said, 'That's Nanny's waist,' and I said, 'Is that where all her waste food goes?' And that was [laughs] considered not a very proper thing to say.

[40:08]

*What was your first school?*

My first school was the Norwich High School for Girls, which, Norwich High School was a Girls' Public Day School Trust school, and, it had a kindergarten where, which took boys. And I have very little memory of it, except that we learnt to cook buns, and, I got into trouble because I had a policeman's outfit and I went to school wearing my policeman's outfit and hit a little girl with my truncheon. [laughter]

*And, did you learn to read and write there, or, or was that later?*

Yes, I think I... Yah. I think my mother really taught me to read and write. My mother did a great deal of my education, up to, I mean up to what she understood sort of, long division I can remember her helping me with, but... [pause] I don't think I learnt anything in... And then I went, with Graham, to a private day school in Norwich called Unthank College. I don't think it exists any more. And he and I used to walk to school together. This was at the age of nine and ten I suppose, something like that. No, it must have been younger than that. But it was close enough to where we lived to walk to, and, I used to get into trouble for wanting to leave breakfast too quickly so that I could be sure of catching up with Graham. And, he was cleverer than me, not very much, but a little bit cleverer than me, and much more charismatic. And he used to, later on he learnt to play the French horn and that sort of thing. What I remember about him is, bringing in a little, one of those little bags that you get at banks, sixty pennies, and then deliberately tipping them up on the floor [laughs] at the back of the class, and getting into trouble for that.

*Why did you have sixty pennies?*

Mm?

*Why did you have sixty pennies?*

I don't know where he got them from. I have no idea. No idea at all.

[43:05]

*So, it was obviously a matter of concern to you then that Graham was cleverer than you as you thought?*

No, I don't think he was cleverer, but he... I spent more time in his house than he spent in mine, I'm sure, but that was because it was more child-oriented. It... John Cozens-Hardy, when I see him now, always says how cold his parents were. That was his experience of them. But, I was always welcomed in their house, and...

*And did you enjoy your lessons at school?*

At that age? I can't remember.

*[laughs] Would it...*

Graham and I used to spend a lot of time drawing maps in our spare time, and, we'd trace maps and, we were both fascinated by maps for some reason. And my parents, I remember, gave me a big, not exactly a Times Atlas, but that sort of thing, for Christmas one day. But the, the dog got hold of it and, [laughs] tore the cover to bits. But it had to be mended, so, it was all right, could be mended.

[44:31]

*So you had a dog?*

Two dogs. One called Laddie, which got run over, and another called Kim. Kim was sort of my dog, and, we used to go for walks together and that sort of thing.

*What sort of a dog was Kim?*

They were both wirehaired terriers.

*Very independent little dogs, aren't they?*

[pause] Depends how well trained they are I think. They... I don't know, whether they're... No I wouldn't have thought specially. I don't think it's the sort of dog I would want to have now, but Kim and I were very good friends.

*But why wouldn't you want to have one now?*

Oh, this is a topical question. And... [pause] Because of having to put them in kennels when you go away and all that sort of thing.

[45:44]

*Right. And so, did you have any particular favourite subjects at school? At this early school stage I'm talking about.*

No, I don't think I did really.

*Do you think you were well taught at the prep school?*

No. It was a, a second-rate private days boarding school, day/boarding school. I mean, day school, not a boarding school.

*Were you good at games, sports?*

I don't think we did much games. Maybe we played soccer sometimes, but, I don't remember... [pause] I went to Oundle at eleven, and that's when schooling really started I think.

[46:38]

My brother John had been at Gresham's and then went to Cambridge, and he did very badly at Gresham's, and almost disastrously at Cambridge, so that, the master of Emmanuel, who had been a friend of my father's when he was up, said, 'You'd better stay on a fourth year and take a Special in psychology. Nobody's been known to fail that.' And... [laughter] John, I think, had a wonderful time in Cambridge in the mid-

Thirties, early Thirties. Must have been early Thirties. And he had a lot to do with the Arts Cinema and used to go to the cinema nearly every day. And, I think had quite a, in an old-fashioned sense, gay life. He used to run, that was his sport, panting round the tracks, and we have pictures of him.

[47:54]

*And you, I've read that you didn't like Oundle, you hated Oundle. Is that?*

I didn't hate it. But I... I didn't make any friends, real friends there, like a lot of people do. We ought to go and eat.

[End of Track 1]

[Track 2]

*You were telling me about Oundle, your time at school at Oundle.*

Well I went there when I was eleven. And I think it's too young for boys to go away to school. And I went to the preparatory house. And, I don't have very many memories of it, none of them were very happy ones. I remember trying to pretend I was sick and putting the thermometer in the fire, thinking I could fake a temperature, and it bust. [laughter] Which got me into trouble. And, it was a... There were forty boys, and, I, I didn't really enjoy it.

[00:57]

But while I was in that preparatory house, one of the housemasters from the main school, called Ian Hepburn, sent me a note to meet him after chapel. Which I did. And he said, 'I'd like to have you in my house.' And I said, 'Well I'm rather involved in, I've got... I'm down to go to School House,' which was the headmaster's house. And he said, 'Well we'll see.' And so in due course I went to Laxton, which was one of the luckiest things that happened to me in my life, because he was a very wonderful housemaster, a bachelor, who believed in sort of doing things with the boys, so, he used to give gramophone concerts every Sunday, and he used to take me birdwatching, and he used to take boys rock climbing in Wales, and, all that sort of thing. And he was himself quite a good amateur botanist, and wrote a book on the birds of the coast [flowers of the coast]. And, I was very glad later on that my, I could show him the proofs of the book I wrote, which was dedicated to the four people who had had most influence on me, and he could see those proofs. He died about a fortnight later. But I was glad just to have been able to show him that.

[02:40]

*Do you remember any particular birdwatching exhibitions... expeditions?*

Expeditions. [pause] Well, we had many expeditions. There was a place... [clearing throat] Pardon me, sorry. There was a place a few miles away where the river used to flood every year, and there was a flock of white-fronted geese used to come there and tens of thousands of duck. And we used to go there quite often. And, the headmaster was also a birdwatcher, called Kenneth Fisher, and he was the father of a man called

James Fisher, who was quite a well-known, became quite a well-known ornithologist. And I have a vivid memory of going down there. And, the headmaster had waders on. I had wellington boots on, and, wellington boots in those days for some reason always had a little hole at the back so that you could hang them up. And I remember the headmaster saying, 'Come on Hinde, come on Hinde.' He was all right; I was all right once my boots had filled up. [laughter] There was nothing else you could do about it. But it was a wonderful place, and we used to go there, as I say, quite often, two or three times a term I should think.

[04:15]

And, then there was another member of staff called Major Collier MC, who had taken up collecting butterflies when he got back from India and had to give up shooting tigers, and, he used to take me to, what's the name of the wood? I can't remember, where we used to catch Black Hairstreaks and various other things. And he used to encourage me in my butterfly, interest in butterflies. And I imagine it was really him who made me interested in, in butterflies. But Hep encouraged me in my natural history and general...

[05:02]

I... You said, did I play games? I did play, I played fives, which is a more or less solitary game, and I played rugger, and I was eventually captain of the house XV I think, and then the second school XV, but never in the first. I, in the summer, we were supposed to play cricket, and, I was appallingly bad at cricket, which was strange because, Graham Cozens-Hardy's father used to, had been an Oxford and Norfolk cricketer before he lost his leg, and he used to give us practice and teach us a lot and all that. I should have been good at cricket, but I wasn't, and, I hated it and used to skive off from the periphery of the field when I could. And eventually I was made to do rowing instead of cricket. And rowing is the most boring thing you can imagine, really, but I didn't mind it, it took us to the river, which was a lovely place where there were redshank and snipe and various other things nesting along the side in the appropriate season. So that was all right.

[06:36]

*And at this time, were you keeping records of what you were seeing and...?*

Yes. I have, I still have a school notebook, which records some of these expeditions, yes. I can't remember exactly when it was it was started.

*And so, what I, I suppose I'm getting at is, how, how much did this feed into your later field studies, or was it much more just a sort of, enjoyable expedition at this age?*

It was... [pause] I would say it was both. It had the additional attraction that I became secretary of the Natural History Society and was allowed to have a bicycle so I can cycle off into the countryside. And... [pause] Yah, it took up a lot of my time actually. [pause] And it was wonderful to have these staff members who encouraged me. And, James Fisher, who became very well known principally as the editor of the New Naturalist series of books, and, I remember him taking me to Ailsa Craig, and we... which is an island in the Firth of Clyde, where we watched, counted gannets. He was engaged in counting all the gannets in the world. And, so that was another positive thing about Oundle.

[08:26]

I always had difficulty in... We went, after, after your first two or three years in the senior house, you went into studies, and you had to share with two other boys, and, I always had some difficulty in finding people to share with. I, I got on with them all right, but I, there was nobody I was close to. [pause] I started off by doing, doing Latin and French and all the usual things, and maths, but, it was a pretty pressing sort of school, and, we did Lower Certificate as well as School Certificate and Higher Certificate. And when it got to doing Lower Certificate, I was encouraged... I should say, the forms were arranged in two parallel series, classics and science, and I was encouraged after Lower Certificate, because I did so badly in Latin, to go to the science side, which I did. And that was when Hepburn got hold of me and encouraged me to come to his house. And I was still in the Berrystead, that's the preparatory house, when I got into this School Certificate form, which he was the master of. And, he could be very sarcastic, and I remember my first few days in his form, he set us to write down a list of five metals and five non-metals, and I wrote down, for my non-metals, wood and paper and string and things like that. And I remember him standing by the window with his back to the radiator, saying, 'Paper and string and wood, was the combination produced by one Hinde, from the

Berrystead I believe.’ [laughter] You know, but he said it in a sort of nice way. He was known as Sarky, his nickname. But, it was all right.

[10:42]

And, chemistry became my favourite subject in school. I was not allowed to do biology, because it was thought that if you wanted to be a biologist, you should learn physics and chemistry and maths as a bit of preparation. And I think that’s probably right, and it’s certainly true today.

*Sorry, I haven’t understood that exactly. What...*

Well, there are various science subjects...

*Yes.*

...including chemistry, physics, maths and biology.

*Sure.*

And, the powers that be considered that to be a good biologist you wanted to have a sound grounding in chemistry and physics. And so I was not allowed to do biology. They made me do chemistry and physics.

*So you would have taken up biology later on, having done those first, is that what happened?*

Well I could have done, I could have taken it on. But, I left school. And, the war came. So I was still at school when the war started, but, is there anything else I ought to say about Oundle?

[11:57]

*What did you do in the holidays, in the teenage holidays?*

Well... We didn’t do anything, I didn’t do anything dramatic. Graham and John and Ann were still there. Graham in the meanwhile had gone to Rugby, he went to Rugby

a year before I went to Oundle. So we didn't see so much of each other from then on. I used to see quite a lot of Ann, and, we used to do gymnastics together in the loft of their, over their garage, and that sort of thing. But, I don't remember doing anything special in the holidays, except in the summer holidays as I've mentioned.

[12:50]

*And at school, were you aware that the war was coming?*

I remember having a, a map of Finland and, above my desk, and putting flags in as to where the Russians had got to and so on. I don't think I thought about it especially as something that was going to happen to us. It's a very insulated place, a boys' boarding school.

*And did your parents show any feelings about the war coming?*

No, I don't remember them. Not that I remember. They may have done, but... My sister Wendy I remember was a member of the League of Nations Union, but I don't think she was especially active in it. [pause]

[13:52]

I was, academically I did pretty well at school, and, I got the junior history prize for an essay on the British Navy in 1805, written during the holidays. It subsequently turned out that nobody else had bothered to write an essay during the holidays, so I was the only one, and that was all right. And, I also got the Weintraub prize for organic chemistry, and, that was because I really enjoyed chemistry, as taught by Hep. [pause] Hep is Hepburn.

*Mm.*

And I, I, I took a scholarship when I left, I was one of, I think three or four boys in the sixth form who took scholarships in science, and I think I was the only one who didn't get one.

*I wonder why that was.*

Because wasn't clever enough. Of course. [laughs]

*I thought maybe you were too busy doing your, your expeditions or something.*

No.

*You hadn't worked hard enough?*

No, I don't think so. I was just not very good at maths. And I had been... I think in fairness to myself, I would say I was taught very badly in maths. For two years I remember we had a man called Fruity Jackson, who, what he loved to talk about was how he had been an observer in the Royal Flying Corps in the First War, and you know, he didn't teach us very many maths, very much maths. And then in the sixth form I got into a maths group that was taught by a very clever mathematician who wrote a lot of school textbooks, but was hopeless at teaching. [clearing throat] Is my voice going to be all right?

*Mm.*

You would tell me if it's not. I'm sorry, it's slowly disappearing.

*I will, I will tell you.*

[16:10]

*Yes, so, now, the war came.*

Well I was still at school when the war came, and, I had been in the Officers' Training Corps as it was called then, and of course I went into the Local Defence Volunteers as the Home Guard was called at first, and, that became the Home Guard. And I, we used to do exercises which were like glorified field days that we'd had in the Officers' Training Corps. And we had, you know, the Germans were expected to land any day from gliders and things, and so we were trained in, having lookout places above the fields so that we could shoot the gliders as they came in. And we put trip wires across paths in the woods so that we could hide behind a tree, and, when the German soldiers

tripped over the trip wires we could go out and clobber them. And, we had to guard the school armoury, where there were a lot of rifles. And I remember spending, we had to sleep in the armoury and take it in turns to do four hours or something patrolling outside. And, I have a vivid memory of watching with someone, taking gun, when I went out to relieve him, I found him crawling on the ground saying, 'I can't find my pipe anywhere.' And... [laughter] Having just finished a small bottle of whisky. You know, it became an opportunity for doing all the things we weren't supposed to do.

*So are your memories of that time that it was fun in a way?*

Yes. The bits of the war that I was involved in, at that stage, were fun. Then... [pause] I was taught for one or two hours a week by a woman who came to teach English, which was sort of preparing me for the general paper in the scholarship, and, that was very important to me because, she continued... She was a very important influence on my life, and, she continued to send me books through the war and that sort of thing. We used to read the, Donne and seventeenth-century poets, and, also the Thirties poets, sort of, left-wing. [pause] I went... I told you I went with James to Ailsa Craig, James Fisher, and, it must have been during the summer, or while I was still at school, I don't know, I went to help him, he was working on rats in the Port of London, and I went to help him with that, and spent, was to have been several weeks with him in London, but, I got a message to say that my brother was missing, and... My brother had gone into, was a doctor, and had gone into the same field ambulance my father had been in in the First War, and they had been around in the Norfolk area, but then they were sent out to the Far East. And, he was on a troopship that was torpedoed. And he had a very horrible death of wounds and exposure in an open boat after they'd been around in the, floating in the sea for, fourteen days I think it was. And, of course my, my parents couldn't hear any details of it for a long time, they were just told he was missing. And my mother said she was sure that he was dead. And, then the news, my father heard of some survivors who had landed at Liverpool, and went up there, and interviewed one of the survivors who had a penknife which was my brother's penknife. [pause] And slowly, the story of his death came out. And we still have the correspondence describing his death, which is a really very heartrending correspondence. [pause]

[21:48]

You, you asked earlier on, had I had much to do with him? He got engaged, like my father, to a nurse at Guy's when he was a medical student, but he refused to marry her until he had a threshold to carry her over. It was that sort of tradition. It was in the Thirties remember. And then they got, I think when the war came, they got re-engaged, and he took Wendy and me... [pause] Oh I've forgotten, forgotten the sequence now, but at one point he took Wendy and me for a week on the Broads in a sailing boat, and, Wendy knew but I didn't really assimilate it, that they had broken off their relationship. And, so it was a sort of tensionful time. And that was a time when I saw a good deal of him.

[22:56]

Anyway, going back to where we were. When I left school, I... Well while I was still at school, influenced by advertisements in the paper saying that you could join the Air Force at seventeen and a quarter and fly above the clouds, and, partly because of that, partly because of a faith, I was sort of brought up in a, a patriotic family, I felt I ought to join, to do something, and so, I did sign up for the Air Force. I was very much influenced also by a notice which had come onto the house noticeboards saying 'A.B.W Illius killed in action', and the date, just that, in my housemaster's writing. And I thought, I must go into the Air Force. And of course I assumed that I wouldn't be killed, as one always does.

[24:18]

But I wasn't called up immediately, and I worked in the, for the YMCA, driving a tea car round anti-aircraft sites around Norwich. It was neither young nor men's nor Christian as far as I could make out, but, it was quite fun. There were I think about five young women and me who ran this outfit in Norwich. And, we used to go around to anti-aircraft sites and places like that, and take them cups of tea and chocolates and all that sort of thing. And it sort of kept me busy. I had to drive these tea cars, and I'd only got a provisional licence, but I did OK I think. Driving a bus I found a bit difficult, because one of them was, was a converted bus, one of the vehicles we had.

*What, a big sort of double-decker bus you mean?*

No, single-decker bus.

*Single... Mm. But still long and heavy.*

Very long and heavy. On one occasion I did drive a car in a blinding snowstorm and I couldn't see anything, I drove a car into a milk, milk van, with rather disastrous results. But that was, that was the only accident I had I think.

*You were all right after that, you personally?*

Oh yes, I... It didn't really hurt anybody, it just spilt a lot of milk, that's all. It's no good crying as they say.

[26:07]

*How did your brother's death affect the family?*

Well it was very devastating for my parents. The war was... We were very much into the war. You see my father had been through Gallipoli and been through the Allenby campaign in, in Palestine in the First War, so he knew what it was all about. And, of course they didn't want my brother to go into the RAMC but he did, and, when I volunteered, I knew my father didn't want me to, but he didn't say anything against it. He let me do what I thought I ought to do. And... [pause] I'm just jumping ahead a bit. He was a very busy GP in the blackout, visiting, especially confinements which always seemed to happen during the night. My mother was an air raid warden, used to patrol the streets whenever the siren went, and go and comfort people and all that sort of thing. We had only one minor bomb on our house, but there was a lot of damage just a few hundred yards away. When John was in the Army and died, Isobel was doing my father's, took on my father's partner's work for the rest of the war. Wendy went to Bletchley, Wendy was at Newnham, and as soon as she finished there she went to Bletchley, decoding wireless messages. And I was in the Air Force. So it was a, we were sort of engulfed by the war really. [pause] Anyway, eventually... [pause] I'm trying to think if there's anything I wanted to say and have left out.

[28:32]

*Were you getting on well with the girls that you...*

Mm?

*You were driving the van with five girls.*

Oh yes, they were, that was quite fun. I was younger than any of them. But I do remember taking one of them to a ball at which a man called Oliver Messiaen was present. He's quite famous isn't he.

*Mm.*

I didn't know who he was, but, they all wanted to go, because... I couldn't dance anyway. [pause]

[29:06]

Well eventually I was, I was called up, and, I had taken the medicals and everything, I suppose when I was seventeen, and I went to St John's Wood aircraft, Aircrew Receiving Centre, ACRC it was called.

*Where was that in St John's Wood?*

In, I have a feeling it was called Grove Court. You know John's Wood? You will, will you? The... A lot of those blocks of flats were taken over by the Air Force, and we used to drill in Lord's Cricket Ground. And we used to go to church, church parades, in a church on a little roundabout which is near the cricket ground, I can't remember exactly where it was now. And, one of these places had a big mess hall where we went, got our meals. And in front of it there was a big thing of water in which you could swirl your irons, your knife and fork, round to clean them.

[laughter] And we used to have inspections of the way in which we were keeping our room. And, we found that if you ran a, a stirrup pump, do you know what I mean by a stirrup pump? If you ran a stirrup pump over the floor, so that it was wet, it looked as though it had been scrubbed. And, you know, that was the way life went. And, there, I got to know a man called Don Lowry, l-o-w-r-y, who was a, a draftsman in an aircraft factory in Wolverhampton, but played rugger, and had sort of, public school aspirations I think. And, I used to go around with him a lot. And, he had a pretty cynical view of women, that's what I remember. And we used to go to dances in the

zoo, in the dining room of the zoo, where, we used to clod around in our Air Force boots. I think it was very bad luck on anybody who was there.

[32:10]

Then after a while I was sent up to Blackpool to await a ship, and my parents in London, came down to London once to see a sort of parade, I think it was, must have been a, a sort of goodbye occasion for them. And, I went to Blackpool and, in digs in Blackpool. And that was the start of my Air Force career, which was mostly waiting and wanting to get on with things. Really incredible, boring. And... But we did our best, and, we used to go to the Tower Ballroom and the Winter Gardens and places like that, and, we had quite a lot of fun.

*Did you read, play cards, what did you, what else did you do?*

I don't remember doing much then. No. I think it was, I was... You know, I went from Blackpool on a troopship, and the troopship was a converted meat ship, and, we had to sleep in hammocks hung from hooks designed for carcasses, and they were very close together, so that you, you had no room. And, I have been against public schools ever since, although my, two of my sons went there, because I think they totally, I was totally unprepared for life on a troopship. For life really. It was such a sheltered situation in boarding schools as they were then. And, my first few months in the Air Force, going on to this troopship, the Highland Princess, I took a lot of getting used to living with people who weren't public school boys, who were very different from me. Thank God I did have that experience, but, it seemed difficult at the time. We used to play pontoon, penny a card, on the troopship. Our great aim, we used to sit all along the decks looking out at the sea, our great aim was to escape Potato Pete, and there was a sergeant who came and recruited people to peel potatoes every day. And, I remember there was housey-housey, which was the equivalent of, what's that game?

*Bingo.*

Bingo. Yes. [pause]

[35:32]

We sailed from Gourock on the Firth of Clyde. And I wrote subsequently to my father to say the last bit of England I saw was a gannet colony, and he was not sufficiently clued up to realise where it must have been. Because there's only one gannet colony where that could possibly apply to. I remember bagpipes wailing away as we sailed down the Firth of Clyde, and I've hated bagpipes ever since. [pause] We lost two ships on the way out to Durban.

*What, you were in a convoy, were you?*

We were in a convoy, yes. I remember the very... One of them just dropped behind the convoy; the other one I vividly remember, its bows down, tail up, and a little rowing boat, seeing it in the distance, the rowing boat, rowing boat getting away from it. And, on top of John's death, this was quite an experience. [pause] Am I going into too much detail?

*No. No.*

We went, for a while... We stopped at Dakar... No, at Freetown, we stopped at Freetown, and that was the only time I fired a gun in the whole war. Because I had, was supposed to be manning an Oerlikon, and I didn't know how it worked. But, a French plane came over, and this was Free French... not Free French, it was Pétain French, and based at Dakar, and they used to come and spy when the convoys were leaving. And so, I was able to loose off my gun at this French place. I always say, the only gun I fired was at a Frenchman. [laughs]

*Did you hit it?*

Mm?

*Did you hit it?*

No. Of course not. It was far too away. I don't think the gun would reach that high anyway. Then I have a very vivid memory of, before that, of going down across the Bay of Biscay and everybody being sick after a meal of beetroot. And... Which made

it very colourful, if you understand what I mean. And, going round the Cape to get to Durban, and very, very mountainous seas, so that one really, this quite large ship was sort of, thrown about.

[38:35]

But eventually we got to Durban, it took many weeks, and, went straight to a place called the Victoria something or other, where there was splendid meals of fried eggs and chips and all that sort of thing laid out for us. And, I think almost immediately we were put on a train for Bulawayo in Rhodesia, which is where I did my training. The train journey took about three days if I remember right. And, I remember the troops in the next compartment got very drunk. I don't know where they got the alcohol from. And one of them was throwing his equipment out of the window, saying, 'There goes the right brace; there goes the left brace. There goes the shoulder straps.' [laughter] And I don't know what happened to him.

[39:37]

The funny thing about that journey was that there were some stations at which the train stopped where there were tables laid out for us, and the local population was there, like Mafeking for instance, and there were some stations one stopped at where the whole place was deserted and windows closed and everything. And that was indicative of the state in South Africa I think.

[40:05]

But anyway, we went on to Bulawayo. And, my first station there was called Hillside Camps, and it was an initial training wing, where we did a few lectures, learnt a little bit of Morse code and that sort of thing. And I remember the maths we had to do was, you know, unitary method. If it takes three men two days to dig a trench fifteen feet long, that sort of thing, how long... Very relevant to the Air force. And so, I got 100 per cent in maths, law, discipline and administration, LDA it was called, and something else, I can't remember what. But anyway, it was a piece of cake for me.

[41:15]

We were living in, first of all in cattle sheds, which just had a roof and nothing else, two lots of cattle sheds facing each other, and a series of pails in the middle for people to go and pee in in the night. And then, later we moved into quite nice, canvas houses which, the wall came up to about that height, and then there was a gap, and then a thatched roof, a reed roof I think, would it be.

*So the, the tent divisions were shoulder height really.*

Yes.

*And then, then you could see over them...*

Yes.

*..before the thatch roof.*

And, Don Lowry, who I mentioned before, and I used to vie with each other about how long we could stay in bed in the mornings. And, Don eventually overdid it, and, had to do jankers, which was, meant he had to put on all his kit and do drill for an hour a day or something for so many days. I managed to escape that. There was a Rhodesian barber who was a real character, and people used to say to him, 'Hi you old bastard.' And he used to say, 'Boys, only my mother can call me a bastard.'  
[laughter] I just have these little flashes of memory. There were two big houses, big halls made out of aluminium I think, which... This whole place, this whole hillside camp had been a market, and there were three big halls, one of which was a, a camp cinema, and one of which was a dining hall, and we used to go and eat there. And that was a long and dreary time, and I just wanted to get on and get trained. And I think I was there, it must have been about three or four months.

*And you weren't really being trained at all at that time?*

No. No. I mean it was a complete muck-up in that they sent too many people out there than the facilities there could cope with.

[43:45]

*So where did you move on to from there?*

We moved on an elementary flying training school at a place called Induna, i-n-d-u-n-a, and, there, it was wonderful to go there, and you could smell the dope that they used on the aircraft wings. It was a sort of wonderful romantic smell. At last we were

getting close to flying. And, that was an elementary flying training school, where one learnt to fly on Tiger Moths, which were little twin-engined, I mean, biplanes, single-engine biplanes. And, [clearing throat] the instructor would sit in front and you would sit behind. And... I'm just going to go and get some water, do you mind?

[End of Track 2]

[Track 3]

OK.

*So tell me about your first flying experiences then.*

Yes. Then, we trained on these Tiger Moths. My instructor was a man called Douthwaite, and, he had been on fighters in the Middle East I think, Hurricanes. And of course all the instructors at a school like that wanted to be back on operations. There was, I remember, a poem pinned up on the crew noticeboard saying, “What did you do in the war, Daddy, to help to make us win?” “Circuits and bumps and turns laddie, and how to get out of a spin.” It was called *The Flying Instructor’s Lament*. [pause] I wasn’t a very good pilot I don’t think, and it took me thirteen hours to go solo, which is rather more than most people did. One was always afraid one would be scrubbed, sent back to train as a navigator or something, and, it took me I think slightly longer than most people to be allowed to go solo.

*Did you actually enjoy it?*

Yes, I think I did. I remember, one occasion after I had gone solo, when I was sent up to practise in aerobatics or something, turning the plane upside-down in a slow roll, and then not being able to turn it up again. And that was about the only occasion I was really frightened, and I was, vomited over the side of the aircraft. But it, it’s all right, it came, [laughs] came... turned... Those Tiger Moths, you know, really looked after themselves.

[02:01]

*Was it the... did you enjoy the sort of technical side of it, did you enjoy looking at the landscape as you were going along?*

More the landscape than the technical side of it. But the airmanship was quite, moderately interesting, I mean, why aeroplanes stay up at all, [coughing] and what wrong in turns and that sort of thing.

*Where was your first posting after that, when you had finished your training?*

[pause-drinking] That was only the start of my training.

*Oh I see.*

That was a twelve-week course. And then I was posted to another station near Bulawayo called Kumalo, k-u-m-a-l-o, to fly twin-engined aircraft. And we flew Airspeed Oxfords. And, the same sort of thing, first of all with an instructor, and then we flew in pairs of two students together. And I used to fly with a young man called Nick Dewdney, who was a much better pilot than I, I think. And the flying instructor was a man called Flight Lieutenant Whiffen, who used to say, used to sit beside me in a very nonchalant... They had the instructor and the pupil. And, in a very nonchalant way, and say, 'Now come on fucking Hinde, just look at your fucking air speed. One hundred and fucking five miles per fucking hour. Now pull your fucking finger out.' That was his method of teaching you. [laughter] [pause] But, I enjoyed flying then, it was really fun, and... I don't remember too much about it. We used to do all the usual things of formation flying, morning practice, navigation and cross-country, all that sort of thing. And the Oxford is a, a rather nice two-engine plane to fly.

*Were you, were you keeping abreast of what was actually happening in the course of the war?*

I don't remember worrying about it. That's all I can say. And probably not very much actually. [pause] I just wanted to get there. That was the most, most people's motivation. You were fed up with training.

[05:02]

*So what happened when, what happened next?*

Well the next thing that happened was, I was sent to my disappointment to George in Cape Province to do a navigator's training. Because, I had been, my whole group had been designated for coastal command, and in coastal command, pilots were trained as navigators as well as pilots. So, I went down to George, which is in Cape Province,

and... [pause] I'm not telling you about my whole truth, I'm not telling you about my girlfriends, but you don't want to know that. [laughs]

*Oh I do. [laughs] Did you have a girlfriend in George?*

Yah. She was very young. And... Her father used to shoot Englishmen, so I could only go and see her when he was away, which was fairly often, and I always took my revolver with me when I did.

*Was he an Afrikaans South African then?*

Yes.

*Right.*

[06:20]

I want to go back to Rhodesia for a moment and Kumalo. Because at Kumalo, some people were recommended for commissions, and some people weren't. And, I was initially recommended for a commission, and, then, they took it away, the recommend... and, people who were recommended, used to go and live in the officers' mess and have a, be treated a bit differently. And, then they took it away from me and I reverted to being with the rest of the group, because I was late on parade and my boots were dirty and all that nonsense. And then, after some weeks the chief flying instructor had me in and said, 'Look here Hinde, you were at Stowe, weren't you?' And I said, 'No, I was at Oundle.' He said, 'Well you're the sort of person who ought to have a commission.' And I regret all my life that I hadn't said, I didn't refuse it, because it was really so blatant. But... And what made it worse was that Nick Dewdney, who I thought was a much better pilot than me, didn't get a commission. So I felt really bad about that.

[07:42]

*If... So you, you got the commission, and, what happened to Nick Dewdney? You were sent off to do the navigator's...*

He was, he was a sergeant pilot.

*I see.*

And he came and did the navigator's training too.

*I see.*

And, we were both directed to Coastal Command. And, we did, I think it was a ten-week course, probably, in George. [clearing throat] So it was a very long training...

*Mm.*

...as you can see, very drawn-out, and very frustrating. And he was eventually posted to a cloak-and-dagger squadron in, based in Madras. Whereas I was sent home to join a squadron, as I thought, in England, but after waiting in Harrogate for a further few weeks, which was just a sort of dump, I was posted to Killadeas in Northern Ireland, on Lough Erne, as second pilot in a Catalina squadron, well in a Catalina crew, which subsequently went out to join a squadron in Ceylon, Sri Lanka. And, so, on Lough Erne we got to know each other as a crew and did a certain amount of flying. Yah, quite a lot of flying I suppose.

[09:28]

And then, for reasons only, known only to the Air force, we were posted to Oban as a crew, and did more flying there, beginning to be operational flying in that we would carry depth charges and things, and were prepared to meet the Fock-Wulf Kuriers if they were about, if you see what I mean. But it was mainly to get kitted up with tropical kit, and, I remember having my photograph taken with my hair smarmed down and a very gaudy tie on, in civvy clothes, to give to the Resistance when we came down in France, to make me look like a Frenchman. [laughter] I mean they were crazy.

*Yes.*

[10:35]

And... So I spent several weeks in Oban, I can't remember how long. And then we flew out to, slowly, to Sri Lanka. And, when I... We stopped several times on the way, and, we had a few days in Cairo, and, I lost my wallet and got into trouble with the Military Police in Cairo. Various things like that. I remember dancing on the stage in a nightclub called the Bardia, but I don't remember very much about it.

*What happened when you got to Sri Lanka?*

When I got to Karachi I had a telegram from my sister Isobel saying, 'Please...' 'Please wire as soon as you can.' And, I didn't know what it was, but... 'All well here,' I think it said, 'but please wire as soon as you can.' It turned out that just after I had left Oban the landlady on whom I had been billeted had written a letter to my father saying, 'So sorry about your son. He was such a nice young man,' and all that. And that was pretty tough on my parents after John's death. And John had been on his way abroad, and so on. And, the conclusion of this, of the tale, is this, that when my wife and I were in Oban two or three years ago, we found a Peace Museum, and we went in and looked at it, and it was about the part that Oban had played in the war. And there were a couple of airmen looking after it, and I asked them, told them the story, and they said, 'Oh yes, there was a Catalina flew into Barrowhead,' and the dates coincided exactly, and it's still there, the engines and things are still littered around on the mountainside. So, probably, my conclusion is that my landlady had heard about this Catalina, which also had a second pilot called Bob, as I was called in those days, and, put two and two together and thought it was me. And the stupid woman wrote to my parents without verifying it. Anyway, that was that.

*Oh dear, your poor parents.*

It was one of the problems with those west Scottish bases, that there were the mountains just behind, and if the weather was bad, you know, it was rough getting in.  
[13:41]

Well we went to Sri Lanka, and joined a Canadian squadron. We were the only British crew on the, on the Canadian squadron except for our rear gunner who was a Canadian. And from there, we used to do patrols over the Indian Ocean, often going, spending time on the southernmost of the Maldivian islands, which was an advance

base where there were two or three aircraft at a time. And, in a way it was boring work, in that, it had its interesting moments of course, but, it meant sixteen-, eighteen-hour trips, often takeoff in the middle of the night, fly until last light and fly back again. And, a lot of it was looking for the Japanese fleet, which we were lucky enough never to find. The only crew that found them lasted just long enough to get a signal off before the Zeros got them. Quite a lot of the flying when we were looking for the Japanese was at seventy feet, and it is very tiring with a fairly large aircraft as the Catalina was to fly continuously at seventy feet.

*So how long were you actually in Sri Lanka for?*

I don't know, but I should think about six months. I ought to have brought my log book, but I didn't bring it I'm afraid. But about six months or something like that.

*Mm.*

[15:40]

And then... I didn't have great faith in the captain of that crew either actually. But anyway, I was recommended for a captain's course, and I asked if I could do that on the squadron, but they said, 'No, you must go home.' So that was another dreary sea voyage. I flew up to Karachi if I remember it, and, on a ship from there, through the Med, and back to... [pause]

[16:20]

I forgot to tell you that after training in South Africa, after the navigator's course, I went home by ship, and the ship stopped off for about a week in Montevideo, because it was a meat ship and it dropped us off in Montevideo because Uruguay was a friendly neutral and Buenos Aires was a hostile neutral. And it was just after the Battle of the River Plate and the German battleship masts were still sticking up above the water in Montevideo, and we were welcomed in Montevideo by the local population who were terribly glad to see English troops. And, somebody had written to the paper before we got there saying, 'Welcome these heroes wounded and bloodied in the bloody battles of the Middle East.' And, nobody let on the whole of the time we were there that we'd just come from training camp. And, we had a lovely

time. It's the only time I ever rode a horse, we were invited to use somebody-or-other's polo ponies and we rode about on the beach.

*Well that sounds fun.*

And that was a long trip back, calling again at Freetown and Gibraltar and so on. And then, and then I went to Killadeas and home. Then going, going back to the...

*Captain's course.*

[18:07]

...captain's course. That put me on a ship, come back to England. And that sent me to Harrogate, which was a, another dump for people to wait in. And then I went to... Where did I go to? Alness, in, on the Cromarty Firth, and was trained to fly Sunderland flying boats.

*Oh.*

Like, somebody sent me a Christmas card with one on.

*Oh right. Yes.*

They were wonderful planes.

*Were they?*

They were wonderful, because, every position in them had an ashtray, and there was a galley where you could cook delicious meals, and, they were very nice to fly. Much more sensitive than the Catalina. And, I enjoyed flying them.

*I was going to say, you're getting used to, I mean you're really enjoying the actual flying now?*

Yes, I was. And... A wonderful feeling to be in charge of one of those. I mean you know, these four 20,000 horsepower or whatever they were engines. And, I had my own crew, I was my own master. And, the first thing I had to do was to take... deliver and aircraft out to Karachi, or out to India. And... I've forgotten where we went to. But that was sort of fun. And...

[20:08]

*Did you enjoy managing the men in your crew?*

Yes, I did, very much. It was the best part of it. I was just going to tell you, I remember going down to the, there was a sort of ward room downstairs, I mean, I shouldn't say downstairs, or whatever it was called, or below decks, or, on the lower deck or something, of these, one of these flying boats. And, I remember spreading a mat out, a map out, on the table, and showing them where we were, and they said, you know, 'Cor blimey, that's the Mediterranean.' And, you know, they had no idea of any geography or anything. And they would have made [inaud], you know. But they were lovely people. [pause] Well now...

[21:05]

*So you got to Karachi. You got the plane to Karachi.*

Yes. And then came back in a, in a transport plane. And there was a lord somebody-or-other on that transport plane and he had just come back from India and had brought a whole bunch of bananas with him, because bananas were worth their weight in gold in England. And we landed in the West Country and were put on a bus to London and dropped outside Victoria Station, and he put the bananas down for a second, and, when he turned round, they'd gone. [laughter]

*Right. I wonder what date we've got to now.*

I should think, early '44 probably.

*Right. OK.*

So, I never got to a squadron on Sunderlands. We were all expecting to be sent out to the Far East and then the bombs were dropped. [pause] But we did a certain amount of operational flying from the Cromarty Firth, and then, when the European war came to an end I remember fetching a whole lot of airmen from Iceland. And we had been told that the cloud tops were 3,000 feet and I should fly up and get above them. And I climbed up to 11,000 feet and still in cloud, and suddenly looked down at my air speed indicator and it was zero. So I pushed the stick forward very fast, in case I should stall. And all these airmen who were standing together, huddled all at the deck at the back, banged their heads on the, on the ceiling, roof or whatever it's called. That was a bad moment.

*But you saved the plane.*

Oh it was all right, yes, there was really no problem. It was just that my second pilot had forgotten to turn the pitot head, the heater, on, that made the air speed indicator work, you know, and stop, prevented icing. And we used to fly to Norway and, do sort of, local things after the war finished. [pause] And, the...

*What...*

[23:50]

Sorry. The feeling of being in charge of one of those aircraft, and especially on convoy escort, looking down at these ships below you, is a very wonderful feeling actually. That I did enjoy.

*Why, why do you think it was so special?*

Well it was the feeling that you were your own master, and, you're in charge of this enormous thing. I don't know really. [pause] Well then for... I had to fly a Sunderland back to Loch Erne, to be destroyed, because they were sinking them in Loch Erne, after the end of the war, to get rid of them. Sounds daft, but...

*Why did they do that? Yes.*

You had to do what you were told. And from there I was demobbed, and came back to London.

*What did you feel about the end of the war?*

[pause] I had mixed feelings. I, I wanted... I felt as though I hadn't really done my bit, because I had been, spent so long pissing around on these training places. And, we had to go and say what medals we, campaign medals we were entitled to, and, although I was, I was entitled to the Burma Star for that Sinhalese bit, but I was also entitled for the Atlantic Star, because I had done operations over the Atlantic, but I didn't put my name down for it, because I didn't feel as though I had avenged John in a sort of way.

*How did you find your parents when you finally got home?*

[pause] I think they were all right. They were... [pause] I mean they were very relieved that I was out of it. I hadn't behaved always as I should, because, some of my leaves I hadn't gone home for, because I had better things to do.

*With your girlfriends?*

[26:38]

[laughs] [pause-drinking water] Then, I should... going back a bit... I told you I had failed a scholarship to Emmanuel College. This is another thing, like my commission, that I'm ashamed of. It was... My life has just been full of good luck. And after I had been in the Air Force for six months, I had a letter from my headmaster, Kenneth Fisher, who was the birdwatcher, saying, 'I've arranged for you to have a closed exhibition at St John's College. [clearing throat] And, a closed exhibition was a special sort of exhibition that was only open to two schools, and was made on the recommendations of the headmaster really. It was thoroughly nepotistic. And there was this Munsteven exhibition which was open to Oundle and King's School, Peterborough, and... So that... In my, when it was getting towards the end of the, my Air Force time, and I, it was clear I wasn't going out to the Far East, I went up to the Air Ministry every day for a week to show them that I had got this Munsteven

exhibition, which was a very special sort of scholarship, and, qualified me for a Class B release, which it didn't. And, eventually I won, and got out. So I got out of the Air Force in about, November or December of 1945 and came up to Cambridge in January... in January, yes. Now...

[28:35]

*Were you... Sorry to interrupt. Were you at all interested or involved in the politics of the time? Because there was that huge change, wasn't there, in the elections immediately after the war.*

I was advised, I think, I was influenced by someone I was quite fond of at that time, and voted Labour in the 1945 Election, and have voted Labour ever since. [laughs]  
[pause] I can't say I was deeply involved in politics at that time.

[29:13]

While I was in the Air Force, I had started a, what do you call it, correspondence course in chemistry with a terrible place in Oxford, and, also in biology.

*What do you mean, a terrible place?*

Well a correspondence college which, I don't... [pause] I didn't think it was very good, but anyway. And on one of my leaves I did some practical chemistry in a, in a technical college in Norwich, sort of, kept my hand in. So that, I took subsidiary chemistry for London University in 1945 some time, while I was up on the Cromarty Firth, and passed that. So that meant I only had zoology to pass to get a London degree. [pause] And going ahead a bit, after I finished my Cambridge, or, after I had taken my Cambridge final exams, I took the final exam for an external London degree as well, thinking that, which was true at the time, that you got a vote for every degree you had, which would have been true, but they cancelled the university vote, which was a shame. And I got a class less in London than I got in Cambridge, because it was a much more factual exam, and, didn't, didn't require you to think very much. I remember the practical exam, we were given a book on shrimps, and we had to identify a shrimp. Well, a shrimp's a pretty complicated thing, and you have to go by the number of little nicks along its spine and that sort of thing. And, we had to share these shrimps between two of us, and, I have never hated anyone so much as the

woman I shared these shrimps with [laughs], because she pulled them to bits, and I felt I wasn't getting a fair deal.

*[laughs] I can understand totally. [pause] So...*

[32:02]

That, that was... Sorry, that was running ahead a bit. I came up to Cambridge in January '46, and was put in digs... Do you know Cambridge? Outside, beyond Chesterton roundabout, sort of, way out. And, didn't know anyone. But... And it was a very funny time in Cambridge, because, there was rather a big division between the ex-servicemen and the other thing. And I was with a whole lot of ex-servicemen who had, who were much more distinguished than I was in the Air Force, and, heavily decorated and all that sort of thing. But one had to learn that when you went into the dining hall, and you saw the knife and fork were crossed in the middle of the plate, that that meant somebody had bagged that place. And I remember a young undergraduate getting very angry with a friend of mine who happened to be a DSO, DFC and Bar, saying, 'You freshers, don't you realise that...' That was a funny time. And, I worked much too hard.

*Why do you think that was?*

Well because I wanted to get on with life. [pause] But I did spend a lot of time on the Cambridge sewage farm, because that was a really wonderful place. And, I used to cycle out there most days. And my last year at Cambridge I shared rooms with a man called Jack Foster, who also was a keen birdwatcher, and we used to go up there together quite a lot. He was a, a very remarkable man and I, I didn't discover until his funeral a year or two ago that he had two DFCs and an AFC, and that after the war... during the war, he had shot down, he was a night fighter pilot, shot down three Junkers 88s in fifty minutes. And, after the war was employed seeing whether he could break the sound barrier in any World War II type aircraft. But I, we were very good friends and I used to like him very much. He was a sort of gentle man.

[35:04]

*Tell me about the birds at the sewage farm.*

Well, it's a very, it was a very good place for migrant waders, and, I used to make observations of what waders were there. And then, with the help of the British Trust for Ornithology, I recruited people from elsewhere to watch other sewage farms, the idea being to see whether the migration took place on a narrow front or on a broad wave. And, I published several papers on migration of waders and terns, and, black tern influxes and things like that. It was really nice going... It's only fifteen minutes on a bicycle from St John's, and it was a wonderful place. And while I was there, I found a bird which I couldn't identify, and I went to tell the man who I knew was an ornithologist in Cambridge, that was the priest at a church in Barton Road, called the Reverend Armstrong, and he wouldn't have anything to do with it, but he told his friend who was W H Thorpe, who was a lecturer in entomology and a keen amateur ornithologist, and, Thorpe was convinced it was a moustached warbler, and, which had never bred in Britain before. And we got various other people to come, famous birdwatchers from all over the country came to see this bloody bird, and, they brought skins to compare it with, and, great volumes of the birds of Europe and everything. And eventually the BO, British Ornithologists' Union, recognised it as a genuine record. And so... I acquired a certain knowledge, reputation amongst the bird community that I... It was ridiculous really.

[037:30]

I should say that, since then the record has been reviewed, I think four times, by the Records Committee of the British Ornithologists' Union, and, each time it was passed, and then it was reviewed a fifth time, and they decided it wasn't sufficiently reliable to count as a British record. I don't give a damn about that. It did me a good turn.

*Well, I...*

It's very like a sedge warbler, if that means anything to you.

[38:00]

*Just describe to me a little what it was like at the sewage farm. I mean...*

The sewage farm has a number of, of beds which they flooded with sewage, and then allowed to evaporate. And, the waders used to come, they used to be full of

invertebrates that the waders liked. It was just an area of, I suppose a dozen of these beds each about twice the size of a tennis court I suppose, something like that.

*And, did you have a hide, did you stand there with binoculars? What did...?*

You stand there with, stood there with binoculars. And, just walked around and see what there was. The 'moustached warbler', in quotes, was in a bit of sort of, bushy covered ponds just nearby.

[39:07]

*Now this birdwatching activity, you said you went most days. But did that actually fit in to the course? I mean you wrote papers about it, but it was separate...*

Oh I, I didn't go most days, but I went fairly often, once or twice a week I suppose. No, it was entirely extracurricular.

[39:27]

*And, how was your course going at this time? Were you enjoying your studies at Cambridge?*

[hesitates] Yes, I did enjoy it. I did, for the first two years I did chemistry, physiology and, zoology. And then in the last year I just did zoology. Yes, I did enjoy it. I used not to enjoy the dissection very much, and, in my third year I used to sit next to a man who was slightly younger than me, but he felt the same about dissection, called David Attenborough. And we used to help each other with our dissections. And, I always claimed that he wouldn't be there, wouldn't be where he is if I hadn't done his dissections for him.

*[laughs] Quite so.*

He's a nice man. [pause] And... I didn't... I think I worked too hard. And the thing I really resented, my tutor, who was, my tutor was a man called Wordie, who had been on the Shackleton expedition, on Elephant Island and everything, and, a Polar explorer, and, his son was more or less a contemporary of mine, a year behind I think.

And his son said to me one day, 'My father thinks you're a fool.' I said, 'Oh?' Because his father was my tutor. I said, 'Oh?' And he said, 'He thinks you work too hard. You're trying to do better than you deserve.' And, I think he was probably right, but, he certainly shouldn't have discussed his pupils with his son, who was also an undergraduate. I never forgave him for that.

*What... Do you think you missed out on other parts of university life at that time?*

Yes, I do. I, I feel as though I was never an undergraduate, a proper undergraduate. I didn't demonstrate... I mean I had my full share of climbing in and out of college and all that sort of thing, because, we came out of the services into this place where you had to be in at ten o'clock at night, which was ridiculous. I used to climb over the North Court gates, which was the best way back into college, or out of college as it turned out. [pause] No. Sorry, you asked me something and I've forgotten what it was.

[42:38]

*Well, I, I asked you if you felt you had missed out on other, other parts of...*

Yes, I do feel as though I missed out in my life on the 1930s, which was a politically exciting time to be an undergraduate, be a student. And on the 1960s, when I was sort of, too respectable and working hard in my research, I didn't get involved in the 1960s. So, that's... Well it's not a strong regret. I was taught when I first came up by two quite honestly pretty incompetent people, one was a man called Frank Hollick who was very shy, and used to sit on his chair, and I'd sit on my chair, and sometimes twenty minutes would go by and nothing, nothing was said. And the other was a man called Colin Bertram, who had been in charge of breeding fish on Crete during the war to feed the troops with. And, that was the only thing he really knew anything about, he never taught me any zoology. And that was all right, you know, one expected that.

*So why do you think you did work too hard?*

Because I wanted to get on with life. I wanted to, I wanted to be sort of, to be a proper person, married, settle down, and everything.

[44:23]

*So, did you have any serious girlfriends while you were at this period of your life?*

Yes, I was... My first wife. I, I've been married twice. And, I met my first wife in my last year. She was at Newnham, reading English. And, it was at a meeting I think of the Liberal Club, being addressed by Kingsley Martin. And, we were married... Must have been in the winter sometime. We were married in August. And, so when I went to my first job, which was in the Edward Grey Institute in Oxford, I was already married.

*So that would have been, '49?*

'48.

'48.

I think. '46, '47, '48 I think, yes.

*I mean it was a funny time, wasn't it, university, with you, with all the experience...*

Yah.

*...service people coming back.*

Yah.

*And then...*

I used, I had a very good friend called Brian Chapman, who I used to play squash with, to try and get a lot of exercise and a little time. He died last year actually. He was a medical student and younger than, you know, four or five years younger than

me. But... Otherwise, I don't remember any of the people who weren't ex-servicemen, except for those who were in my course in the third year, who all seemed to...

[46:18]

I hated Cambridge when I first came up. I really hated it. I was stuck out in these digs the other side of Chesterton roundabout, it was cold and wet and bread was rationed. And, these girls with woollen stockings seemed, were all much more clever than I was. I didn't know anything, you know. And I, I was a term behind anyway. And, the person who saved me, and I'm very glad to talk about this, was a very remarkable man called Roland Winfield. Roland Winfield was the son of a senior fellow of this college, a quite distinguished lawyer. He himself was a doctor, and had been at Dunkirk, and had his ambulance that he was driving machine-gunned by the Germans. And he acquired an intense hatred of the Bosch, and, trained as a pilot when he got back to England, and flew in aviation medicine and flew nearly every sort of operational aircraft on operations, so that he could see the strain that the crew was subject to. And, he taught me physiology. But whether it was a consequence of his war experiences or not, I don't know, but, he was just a little bit round the bend. And... [pause] He used to do things that the college didn't approve of, like arranging to supervise students at 3 a.m., and putting Benzedrine in their drinks and that sort of thing. [laughs] And, I remember, suddenly one day when I went for supervision, one of those small alligators appeared on the wall of his room, and I said, 'Oh where did you get that from?' And he said, 'Oh it was my grandfather. He couldn't remember where he got it from, but he came home with it one night.' [laughs] And, oh he was such a lovely man.

[49:00]

And, and my best friend as an undergraduate, Jack Foster, who I shared a room with, who I mentioned to you earlier, had seen, had known Roland Winfield at Farnborough at the end of the war, Farnborough was the sort of, testing place and all that, and, he had met Roland at the bottom of the up staircase [in Piccadilly tube station] with a broken kneecap, having just won a race down the up staircase. I mean, you know, he, he had a little bit of colour, which so few people in this place have. It's really valuable. And of course the college had to, I don't know whether they requested him to leave or whether they made it impossible, but he, in the mid-Fifties he went. And actually, he, he set up as a GP in the Fens somewhere. But, I think he died a few

years later. It was a great tragedy, but, I owe him an enormous debt. I shouldn't be here, I would have given up if it hadn't have been for him in, in the first or second term.

*Well that's so interesting. So interesting.*

He collect... I mean, I had been a pilot and he had been a pilot. I didn't have his distinction but, we were on the same wavelength.

*Well we all need people like that, don't we?*

Mm?

*We all need people like that.*

Yes, we do, we certainly do.

[50:37]

*So, just before we get on to your first job and your first marriage, the British Trust for Ornithology at that time, was it doing the same thing as it does...*

The what, sorry?

*The BTO.*

Yah.

*Was it doing the same thing as it does now, in sort of collecting volunteers and then analysing...?*

I think it is. I'm not in touch with it now, because, I've really given up being an ornithologist.

*Right. Right.*

I have other things to do. But it did do very good things. It used to run the whole of the bird ringing thing, which was an enormous increase in what we know about migration and so on. And it used to do other, other group things, coordinating groups of people. And so, in the... In, in this work on waders and terns. I, the one thing I carried forward from the Air Force was meteorology, because in Coastal Command doing these long flights, meteorology was really critically important. We lost more, as many crews through bad weather as... And... So, I used to be interested in the relation of weather to the arrival of these migrants and show that it... north, spring migration coincided with warm temperatures in Corunna, that sort of thing. Which was quite fun. And... [pause] My first wife would never forgive me, because, I took some data to analyse on our honeymoon, and, apparently it's not the sort of thing you're supposed to do. [laughter]

*OK, well tell me about your first wife.*

Who has access to these things?

[End of Track 3]

[Track 4]

*Right. Will you tell me about your first job when you came down from Cambridge, and how you got it?*

Yes. I want to go back just for one moment and say, the picture of misery that I have given to you about my time at Oundle and about my various bits of the Air Force were wrongly stated. I mean I wasn't miserable, but I, I don't feel sort of madly enthusiastic about my schoolboy days, or, apart from my contacts with the staff at Oundle. And, I had, I was very lucky in the Air Force in that I, looking back, I didn't have to kill anybody, I went to very interesting places, I learnt a lot of interesting things, and I made one or two friends, not close friends but... So, I mean, it wasn't all doom and gloom. I'm afraid I've given you that picture.

*Well if you did, I'm glad you've set it right, because, that's a good thing to do.*

I'm not really given to doom and gloom, I don't believe in it.

*No, I can see that.*

I don't do it, as they say. One of the people who came to see the moustached warbler was David Lack, who had been a schoolmaster at that avant-garde school down in the south-west.

*Bedales?*

Bedales [correction: David Lack was schoolmaster at Dartington Hall School]. And, written a very good book on the robin, and had become director of the Edward Grey Institute of Field Ornithology, which was sort of vaguely linked to the University of Oxford. And I think when he was appointed, it became part of the University of Oxford. I may have got that wrong, I'm not sure. And, he had been one of the people who I think had seen the moustached warbler. Any rate, knew of me through that episode. And, he offered me a job as a research assistant. [pause - drinking water] And he was kind to me in the sense that he wanted me to work on the feeding habits

of jackdaws and rooks, which was an academically interesting project at that time, because the flavour of the day was Gause's hypothesis, namely that two closely-related species don't... living in the same area, don't compete with each other, because otherwise one would be best and the other better and the other would become extinct, or move elsewhere or something. And I said I don't want to do that; I want to do a behaviour study. And he said, 'All right, well we're just starting a programme on great tits and you can do a behaviour study of the great tit.' Which is what I did. And I spent... I was able to do it in two years, because, ex-servicemen had all sorts of things that they could get away with in those days, and, I did two years wandering round Wytham Wood outside Oxford, and, just with a notebook and a pencil and a pair of binoculars, writing down what I saw. And, Wytham Wood is a most beautiful wood, with lots of primroses and enormous blackberries and sweet chestnuts and, it's a very beautiful wood. [clearing throat] So, that was fine.

[04:15]

*Now, there are various further details I want about that. First of all, was that your only job offer?*

Yah.

*And, was it, being a research assistant, was that something that you had expected and wanted?*

Do you know, I knew nothing about the world in those days, absolutely nothing, and I didn't know anything about jobs, and I was glad to have an opportunity to go on doing something that interested me. And my father, very remarkable, I think he was a very remarkable man in many ways, he said, 'Robert, you will never earn a living watching birds, but if that's what you want to do, you do it.' Which was marvellous really. [pause] I suppose I had some idea of wanting to get a job. [pause] The woman who taught me at school sort of encouraged me in the way of the world about that sort of, about jobs and things. And later on I was offered, would I like to be secretary of the British Trust for Ornithology? And, I said no, I wanted to go on with my academic work.

[05:42]

I forgot to tell you, I left out a very important thing, that, while I was in the Air Force, I came back to England waiting for a conversion course to Sunderlands, for a captain's course, and I taught at Oundle for several weeks. And that was wonderful, because, I taught in uniform, so I had no disciplinary problems whatsoever, and I taught chemistry which, I knew just about enough, and elementary maths or something. But that was quite an important time for me to sort of, I don't know, get in touch with the world again.

*Did you enjoy the teaching?*

Yes I did quite. But it was a piece of cake for me really.

[06:34]

*Now, I don't know this... You've explained the Gause's hypothesis.*

Mhm.

*That was very important at that time, was it, to...?*

Yes.

*That was the sort of flavour of the month?*

Yes.

*But, you have become interested, even at this time, in behaviour.*

Mhm.

*Which of course is a, a long-term interest of yours.*

Yes.

*What had made you interested in behaviour at this time?*

[pause] I, I can't really answer that. [pause] I want to say something which sounds terribly pretentious, but I think it's true, that I really wanted to do something that would help make the world a better place. I think that's gone all the way through. And I thought that understanding how organisms behave was what one wanted to do. And I remember my mother-in-law at that time, not exactly laughing at me but being incredulous, that studying birds could help make the world a better place. I think that's all I can say.

[08:00]

*So, here you are in this beautiful wood, actually looking at what the great tits are doing. And what did you find out?*

Well, it was, all I did was to write a description of their annual cycle, and, how they formed pairs, what their courtship was like, how they set up territories, how the winter flocks behaved, what time they went to bed and what time they got up in the morning and so on.

[08:37]

And, I should add that during that time my first wife, Hester, was teaching in Banbury. I was paid a minimal wage, I mean it was £300 a year I think or something. She was teaching in Banbury, which meant she had to cycle to the station, get on a train, cycle from the station to the school, and so on. And it was pretty rough on her. And, I was, as I have already hinted, slightly over-dedicated to my research. We, we were very short of money and we used to keep accounts of every penny we spent, and treat ourselves to a chocolate biscuit on Saturday afternoons, that sort of thing.

*Where were you actually living?*

In, in part of the house of the youngest coal merchant in Oxford. [laughter] It's true. On the Botley Road, which was convenient to me, because it was near Wytham Wood. And, it wasn't too bad for Hester because it was not far from the station. And we'd just had a, I think a bedroom and a sitting room. I think she used to cook for, cook an evening meal for us or something. And I used to go off with my marmalade sandwiches, which I made every day, for lunch. [pause]

[10:30]

I would like to interject, that, by a very devious route, which didn't involve doing zoology at the university, my younger daughter is now doing extremely sophisticated work on great tits. The great tit became the sort of guinea pig of the, in Oxford, and the population which I studied then has been studied every year since. I used to work with a man called John Gibb, who had been on anti-aircraft guns on Malta during the war, and, he had put up a lot of nest boxes in the wood and looked after the logistics of the whole thing. And he was a good friend at that time. He went out to New Zealand afterwards, but...

*So, really, that's followed on, you doing the pioneering work in this field?*

Well, not exactly pioneering work. I would say this, that there hadn't been many long-term field studies all round the clock [year], of any birds at that... There was one, David Lack had done some work on the robin, and, Mrs Nice, or Nice [French pronunciation], had done some work on the song sparrow in America. But there were... Life history studies were not, not, there weren't very many of them. And mine was eventually published as a supplement, supplement number two, to a journal called *Behaviour*, and, so it was the start of the knowledge about great tits. And, my daughter tells me that students still, still use it sometimes. [laughs]

*Wonderful.*

I think she's perhaps being kind to me.

*That's wonderful. What sort of... David Lack, did he have a supervisory role?*

He was not a very good supervisor, because he wasn't really interested in behavioural work of the sort that I was doing. He was very interested in ecology and evolution, and so he didn't do much more than read my thesis.

[13:04]

But, one of the... Lots and lots of slices of luck I've had in my life. In my... I forget. It was not... after, I had not been in Oxford very long, a man called Niko Tinbergen came to Oxford from Holland. He was a... I should say this. There was a new way of

studying birds, a new, studying behaviour, called ethology. And, the people who had really started that were Lorenz, a German, and Niko Tinbergen, a Dutchman. And, they had been in contact before the war, and Lorenz, they'd both written a number of quite important papers. Later, eventually, they jointly got the Nobel Prize for Medicine, for some curious reason, with a man called von Frisch. But, Niko Tinbergen came to Oxford because there were promises that he could have a sort of, institute in Oxford. He did get an institute, but it wasn't, didn't come up to his expectations. But this was wonderful for me, because, he didn't have any students of his own at that time, and could spend time with me, and I learnt, most of what I learnt in Oxford came from him. David Lack created the opportunity, but Niko Tinbergen was really my mentor.

[14:55]

*What... Can you summarise some of the things he taught you?*

Well I did an analysis of the courtship and aggressive behaviour of these birds in terms of conflicting drives, which was based on a model that he had, and that was, it worked as it were. He taught me the importance of systematic recording. I don't know whether he taught me that, I think I taught myself that, but... It was just having someone to talk to and who understood about birds and... I find it difficult to pinpoint. I mean he was, he had started, he and Lorenz had started this whole business of ethology, although it did have roots going back earlier, and, it somehow made what I was doing not just birdwatching, if you see what I mean.

*Yes, indeed I do.*

And that was a... I'll go on telling about the rest of my, of the history of my relationship with him. He was, he got an institute going in Oxford with a lot of, quite a lot of students and everything, and... Well perhaps I'd better come back to that, but you'll have to remind me, OK?

[16:42]

*All right. Later on. What... Just tell me, at this point, which birds... Had he studied one particular species, or many, in his work?*

He, or me?

*He. He. He, at this time.*

He had mostly been interested in gulls.

*Right.*

But he had studied a number of other species. And, he had gone for his honeymoon with his wife to Iceland, to Greenland, and studied phalaropes and husky dogs and things like that. And, and Eskimos or Inuits as well.

*I see. I see.*

He was a very charismatic man. He had been in the Dutch hockey team, and...  
[pause] I've forgotten what I was going to say.

*And Lorenz, he was the imprinting man with geese?*

That's right.

*Yes.*

Yes. You know about all this, do you?

*I know... No, I know about Lorenz; I've never heard of Tinbergen, before I read your...*

[17:54]

Oh. Well, Lorenz had been, had an institute, or at any rate had lived near Vienna, Altenburg, he was an Austrian. And, was a medical doctor, but spent all his time with

birds and had a collection of birds. Reared geese himself. And then, war came and he joined the Nazi party, and, was a doctor in the German army. And Niko had been in Holland during the war, and had been held in a hostage camp by the Germans from which, when the Dutch resistance did anything dramatic, they'd take one or two professors out and shoot them. And, Konrad denied being, having been a Nazi after the war, but I, the... I've seen a facsimile of his membership card of the Nazi party, he was a... In my view, Lorenz was very charismatic, and he attracted students, and, I must say he was very kind to me when I was young for a few years, not for long, for a few years he was.

[19:52]

Tinbergen was an experimentalist, and did wonderful field experiments with birds, getting at their behaviour, like, how do they recognise their eggs, what were the stimulate that made a stickleback, he worked a lot with sticklebacks, made a signal for aggression in a stickleback? That sort of thing. How they build their nests. And, Lorenz... And he took an experimental approach as well as observation. Lorenz was a pure observer, full of ideas, most of which were wrong, but that didn't matter too much.

[20:45]

*Now this took, this took two years. You had... Was that time specified at the beginning of your work, that it was going to be a two-year project, or, was it open-ended?*

I can't remember. But Bill Thorpe, who had been a lecturer in zoology here, and who had been to see the, the so-called moustached warbler. I think it was a moustached warbler, I still think it was a moustached warbler.

*[laughs] Good.*

Had been to see that. He was just starting an ornithological field station just outside Cambridge, and, he tried to get Konrad Lorenz to come and look after it, and Konrad got some money from elsewhere and had other things to do. Then he tried to get a man called Reg Moreau, who was editor of the ornithological paper, magazine, journal, called *Ibis*, to come, who I had known in Oxford. And, Reg Moreau came to

live in Madingley for a while. Madingley is the village just outside Cambridge where I live and where this institute is. [pause] But he eventually decided it wasn't what he wanted to do, it would be too much administration. So I got the job. And that was a bit of luck for me, because, Thorpe had one thing in common with David Lack, in that he didn't make me do what he wanted me to do, and I owe him a very great debt for that.

[22:34]

Thorpe was interested in the relation between instinct and learning, and in particular in how birds learnt their songs. And he wanted me to work on that. And I didn't realise it until another graduate student came along, Peter Marler, and worked on that, and I realise that that was what Bill had wanted me to do all the time. And Bill was so very kind and a wonderful man in lots of ways. Ahead of his time, but very self-effacing. And I, later on I had to write his biography, his obituary I mean, for the Royal Society, and it was very interesting, I contacted lots of people who knew Bill Thorpe, and they all said, 'Well, I just used to listen to music with him; I didn't know anything about the rest of his life.' Or, 'I used to just watch birds with him; I didn't really know what the rest of the time he did, did the rest of the time.' And so on. It was all like that. He apparently lived his life in little compartments. And I didn't really, I really got to know only one, I realise that I had only known one bit of him really.

[24:01]

*So, so what did he allow you to do, that you wanted to do?*

Well I started off really continuing work that I had done, started at Oxford on courtship of birds, and how you could account for these very complicated movements and so on in terms of conflicting drives of attack, flea, insects, and doing nothing.

[pause] So that's... And I did a comparative study of finches, goldfinch, greenfinch, chaffinch, hawfinch, bullfinch, comparing, looking at the sort of evolution of the courtship postures and how they differed between these species. The chaffinch was my main bird, and my first bird, at Madingley, and that was because, there were plenty of them, I could catch them, breed them in captivity and so on. Well we didn't actually breed them but, they would form pairs and everything. That's them up the top there.

*Right. Right. We're looking at, photo...*

No, the left-hand one.

*The left-hand... Yes, the photograph of the chaffinch.*

Soliciting for copulation. That's bullfinches on the right. [pause] And, my first...

*Actually, that...*

Sorry.

*No, I'm sorry. There was a question I meant to ask you in your first job, was, if you used photographs, or was it all... You mentioned the notebook and pencil, but...*

No, I didn't use photographs, no, I didn't use anything. I didn't have anything. It was after the war, you know, and, money was very tight. And, I just walked around and had a nice time. I did a few experiments, inspired by Niko Tinbergen, but they weren't publishable.

[26:34]

*Could you describe Madingley when you arrived?*

Did I...?

*Sorry. What date are we, when you got to Madingley? It must be...*

It was 1950.

*I've got it somewhere.*

And probably about August 1950.

*Right, OK. And, so, what was Madingley like in 1950?*

It was a field, just a field, with a Nissen hut which had been put up by the Home Guard in one bit of it. And I spent a large part of the first year there making aviaries. I used to work with... There were only three of us. There was Bill Thorpe, who most of the time was in Cambridge, and managed to raise the money; there was Gordon Dunnett, who was a technical assistant, a laboratory assistant; and me. And Gordon and I used to work together. And, he had been a wireless operator on Peter Scott's gunboats in the Channel. He hated Peter Scott because he said, Peter used to take them into attacks on the German U-boats, and he got all the gongs and they just got shot at. He was a lovely, lovely person to work with. [pause] And so there were just the three of us. And we used to, Bill managed to scrounge a lot of scrap metal from beach defences, and they were made into rectangular boxes, six foot cube, and we used to put the wire on them and creosote them and, not creosote them, bitumastic or whatever it is you, black stuff you put on. And I learnt a lot of technical, manipulative skills about how to put bits of wire together and that sort of thing. And...

*So the aviaries were six foot cubes?*

Yah.

*That's quite small.*

Quite small, yes. But... [moving away with mic]

*With a wire... Wait...*

It was big enough...

*Wait.*

What? Oh, sorry. Sorry.

*OK.*

[pause in recording]

*Yes, how many of these did you have?*

We had sixty of these aviaries.

*Mhm.*

And... As I say, and then there was a, a peripheral fence round the field to keep the foxes out, and, this Nissen hut where we used to keep the bird food. And it all had to be got together. And it was all done on a shoestring. I used to have a, I've still got the book in which I, every letter I wrote, I had to put down, I think it was a penny-ha'penny for the stamp, or whatever it was. Account for everything. And, I used to cycle into town to buy a pound of nails or something to...

[30:07]

And I was then living in a flat in Cambridge, and we had one son, who was born in Oxford, while we were in Oxford.

*And what was his name?*

Francis. [pause] And we were living in an upstairs flat in a semi-detached road, but it was quite nice, it was all right.

*How did you feel about being a father for the first time?*

Well I wanted to be a father, I always, it was one of the things I wanted. Mm. And I enjoyed it, I think. Whether I played as much a part in the children's lives as maybe I ought to have done, I really can't say, because I've always been too much of a workaholic. But, I did enjoy them.

*And, Hester enjoyed being a mother? Had she given up teaching at this time, or...?*

Yes, she did enjoy it. You've been reading about me, haven't you? Where do you get it from? From... [laughter]

[pause in recording]

*Yes.*

[31:32]

We had four children in the end. [pause] I'm not going to go into the reasons why we were divorced. They were in the end, they were as much mine, I would say more mine than her, fault than hers. But anyway, we didn't fit each other. And I foolishly, we had four children, and I wrongly delayed the break-up until the youngest was eleven, and I... they've all independently said to me, 'You should have gone much earlier, it was so awful, when you were fighting.' It was a sort of, sad part of my life really.

*Tell me about the children.*

Well there's Francis who's now a, quite an old man really, thinking about retiring, who's a paediatric consultant in Telford. And he's on his third marriage, which is sad. Then there was Kate, two years later. She's read English at Oxford, then she married a young man who had read physics but wanted to be a doctor, so he went, he was an Irish Catholic and he went to Trinity College, Dublin, to do his medicine. I think it was Trinity College, Dublin. It might have been Dublin University. I think it was Trinity College, Dublin. And he then became a GP in Sheffield, and she now, having had five children herself, teaches in Sheffield, and she's sort of, pioneering what's called distance teaching on the... I don't understand it. Then there was Jonathan, there was Jonathan, who went to Oxford. He didn't exactly distinguish himself at Oxford. And, for a long time he taught transcendental meditation, and now still does some of that, and tries to run a business from home. And finally, Miranda, who trained, did a course at Edinburgh in Italian, got a First in Italian at Edinburgh, but then met a man, a Swede, and went to Sweden with him and met, I don't know whether she ever married him, but, trained, did a new degree in Sweden in psychology, and became a clinical psychologist. And, now works in Sweden as a

clinical psychologist. What was nice about it is that they're all in helping professions, all doing a bit of good in the world, which is all one wants from one's children really.

*Yes, that's, that's lovely.*

The bad consequence of it all is that I have, I think it's fourteen grandchildren, and Christmas is hell.

*[laughs]*

Fortunately, Joan is very good at it and does a lot of the work.

*But when you see your grandchildren, do you enjoy them?*

Yes. I... To be honest, I haven't seen a great deal of the ones who live outside Cambridge, just the one really. I haven't seen as much of them as I ought to have done, but I enjoy them when I do. Our... Joan and I have one grandchild, and that's lovely, to go and see her, they live on Skye.

[36:42]

*Right, well, let's get back to your...*

Academia.

*...professional life.*

Yah.

*You're doing...*

So, Madingley. Yah.

*Yes, you're doing this...*

I was just saying, chaffinch was really the bird we studied most, and, a man called Peter Marler came to work at Madingley as one of our, I think our first PhD student. And, he had already done a PhD in botany, but wanted to do behaviour, and was willing to start again at the beginning. And he became Bill Thorpe's student, and, did a field study of the chaffinch, much as I had done a field study of the great tit. And at the same time I was studying the chaffinch in these cages. And, Bill went away for a term or something and I had to be Peter Marler's supervisor. And, we had the most terrible rows because we were both studying the same species, we were both anxious about our future, and, I wanted to describe a certain posture as the 'lopsided wings drooped' posture, and he wanted to describe it as something else. And, we felt it was terribly important, this would go down in the literature and everything. We became friends, we were friends, but, there was this academic competition a bit between us. And he went to America and did very good work there on birdsong.

*Had you... Well, as a matter of interest, had you paid... How much attention had you paid to birdsong, and in fact, had you recorded birdsong in your studies?*

No. I, I... I wrote one paper on birdsong myself. I used to, my main function and what Bill wanted me for, was to rear chaffinches for him, for his experiments. And so I spent a lot of time rearing chaffinches, and it's a devil, you know, they have to be fed every half hour or so, and, they give you no peace.

*And so you were there all night sometimes, were you?*

Mm?

*Were you there all night?*

No. No, but you get up in time for dawn.

*Quite. Quite.*

[39:40]

Later on Bill got other people to do it. But I did spend a lot of my time rearing chaffinches. And also, I reared coots and moorhens for the study of imprinting.

*Oh. So where did that take place?*

On... In this field in Madingley.

*Oh, there was water there as well? Did the river go through it?*

We made a, we made a pond. But actually, the coots and moorhens didn't need it at that stage. [pause] You're really an ornithologist, aren't you.

*[laughs]*

Don't want to waste my precious words.

[40:26]

*[laughs] Right. OK, so, will you describe the field a bit more please?*

Well it was a field, I can't tell you how big it was, but it was roughly 100 yards square, I suppose. But it wasn't square. And it was probably more than 100 yards. But that was the order of it. And, we had these sixty aviaries, mostly in an area of, side of an area of wood on one side of the, this field, some scattered about the field elsewhere. And we also, Bill and I went down to see the Duke of, I've forgotten where he was duke of now, but at Woburn, Duke of Bedford, at Woburn, and bought some ramshackled parrot aviaries off him. And we also went down to see Spedan Lewis, who was the boss of John Lewis, who lived on the Test in Hampshire, to get, to learn from him. So, it was all quite fun setting it up actually.

[41:44]

*How did you capture your chaffinches to put in...?*

Chaffinches are very easy to catch, and I was going to tell you, say that, that was one reason why I worked on them. We just had little, little traps about that big, and...

*Sort of, six inches.*

...a door that snapped shut when they sat on it. And, at that time we could, I used to... Dunnett, Gordon Dunnett did a lot the work, but, we used to catch about 200 chaffinches every winter. And, work that I also did involved studying the way in which they mobbed owls, and, the reason for that was this, that, Lorenz had a model of motivation. He said that for everything you... well, this roughly speaking true. For everything you do, you have a store of reaction-specific energy in a reservoir in your... No, I, I must be fair to him. He said, it's as if you have a reservoir of reaction-specific energy, which is expended in action, and particular stimuli can release the valve and set off the behaviour. And I thought, well here's a form of behaviour that I can easily measure, and we can get the dimensions of Lorenz's reservoir.

[43:30]

And so I spent three winters in a hut which, we had got by that time a wooden hut, kneeling on the floor, recording chaffinches going, chink, chink-chink, chink-chink-chink, hour after hour after hour. And, it led me to see that it was a completely stupid model, and much too simple. And, once I published that, Lorenz was no longer my friend.

[44:06]

And, soon after I got to Madingley, I went to a conference organised by Niko I think in Buldern, which is where Lorenz's institute then was. And this was [almost] the first time that Lorenz and Tinbergen had met after the war, and it was quite tense as you can imagine. And Niko said, told me later, that he didn't mind meeting the Germans, but what he couldn't bear was being in his room hearing German voices outside. And, there was an embarrassing evening when we were talking about displacement behaviour and one of the Germans made a, gave a story about how, when he was a prisoner at Tobruk the British had flopped down on their knees every time a gun went off or something. You know, it was, that sort of tension was still in it. That must have been 1951 I should think. [pause] I had already been under Niko's auspices through meetings in Holland, where I met some of his former students, and that was very nice.

[45:31]

*I mean it, it seems incredible now that you were doing this work without cameras and without recording equipment, isn't it?*

Yes.

*I mean now it would all be done with, with that, wouldn't it?*

Well I, I told you, my daughter, Camilla, who is working on great tits, has 140 nest boxes up in the wood, and, when she was working, doing this work, they had a camera in the roof of the box to record everything in the nest; they had loudspeakers so that she could play back noises to them; they had microphones so that she could record what the birds were saying. There were wires going out in every direction from these boxes. And the data is so complicated, it's beyond my comprehension. It's quite different. But she did employ me for a year as an unpaid field assistant, in which my job was to go round these boxes in the early morning and see whether they'd started to build it or laid an egg yet or not. I was allowed to do that.

*And did you enjoy that?*

Oh I loved it, yes.

[46:51]

*So, how much was your enjoyment doing that sort of field work, and how much was it the intellectual analysis?*

[pause] Well, the descriptive studies that I was doing, like the courtship, greenfinch courtship... sorry, the courtship of chaffinches and greenfinches and things, and the descriptive work I had done on the great tit, I really enjoyed very much, from a, it's not exactly aesthetic point of view, but it was just fun to do. And when I was doing my DPhil in Oxford, one got to know these birds individually, and could follow the vicissitudes of red over green, because he was, lost this territory and got another wife over there and, that sort of thing. And that was wonderful, I loved that. The study of mobbing behaviour, the doing of it, was not fun. It was just very monotonous,

kneeling on the floor so that they couldn't, I wouldn't disturb them. And a very crude set-up we have, and poking an owl model round the door and counting the responses.

*So, have I got this right, this was in the, in the aviaries?*

In their hut... No, this was in a hut, which was about the size of this room, only twice as long.

*So that's, about, four metres by ten metres or something?*

Something like that, yes.

*Yes. OK.*

And, we put up cardboard, hardboard partitions about that high, which were open above, and they had a, a door which was a sloping bit of hardboard which overlapped the back so that you could put models round the edge without being seen. Very, very technical, very very good. And, that, that was, the aim was more theoretical. And, my early work was mostly attacking Lorenz's model, and I wrote a number of theoretical papers on the concept of unitary drives.

*What is a unitary drive?*

Well, like, being aggressive, or being...

*Oh, I see. OK.*

I mean the... It's a convenient way in which to analyse courtship, because you can say it's these conflicting drives, but when you get down to the nitty-gritty, it's a silly way of talking. [pause] And...

*But am I right in thinking that you didn't set out to disprove Lorenz, but you found that this is what the effect of your studies were?*

Yes.

*Is that correct?*

Yes. Yes. I thought I could measure Konrad's reservoir, and it turned out to be a silly... Well, it was a good model at a very descriptive level. [pause]

[50:26]

The nice thing about Bill Thorpe was that, he gave me my head and I could do this sort of work, and he had written an English version of *Ethology* to introduce English behaviour students into this new theoretical approach, and he was, it didn't stop me publishing critiques of ethology. So, my first book which was called, I didn't call *Ethology*, I called it *Animal Behaviour* deliberately.

*Because... This... I mean it was very new wasn't it, the whole...*

Yes.

*...idea of this, was quite new.*

Well, I came to think that most of the really important, or many I should say, of the really important innovators in science who started new fields, were mostly wrong in everything they said. And Lorenz is certainly a case in point. Darwin was wrong about inheritance. Freud was wrong about death wish and his model of motivation. Piaget was wrong in a lot of things. I mean it seems to happen time and time again that charismatic people, they start a field but they start it with the wrong model, sort of.

*Why do you think this is? Do you think it just happens that they...?*

I think it just happens. I don't know, maybe you, you have to... Once you have a model, it can be attacked.

[52:27]

*So, when you were working at Madingley, was Bill Thorpe paying you well? I mean were you...?*

No. It was a year-to-year job. I never had a, an appointment. I was called Curator of the Ornithological Field Station, and, I had a year's... I think I was paid £400 a year or something like that. And I strongly believe, though I'm not sure, that Bill Thorpe supported me himself for one year. I don't know that for sure, but I think it's likely. [pause] He was a Quaker, and, a very, very... I told you how he seemed to live his life in compartments. But, as a scientist, I felt at the time that he always used to prefer complicated explanations when simpler ones would do, in the way, in the sense of more cognitive explanations for what the birds were doing. And, I came to realise more recently that he was more right than wrong, and I was over-critical at the time. One... It's a terrible time when you're post-PhD and in need to make a name for yourself and a job, and all that.

*Because you've got... Well, why?*

Mm?

*Sorry. Would you tell me why, in your own words?*

Well because, at that time I was married and probably two or three children and I, depending on where we'd got to, and, I didn't have a secure job, and, I felt I'd got to acquire one somehow. And, at that time I was working harder than I should have worked for a married man with three children, I acknowledge that. Knowing that my children will probably listen to this tape now that I know it's going to be open to the public.

[pause in recording]

*Let's continue.*

[55:00]

Well I did a number of small studies that are, are not very important, but the main things were the mobbing of owls and the courtship, and then the imprinting work with moorhens and coots. Well now, by coincidence it happened that a London psychoanalyst called John Bowlby had heard of Konrad Lorenz, and thought it was interesting, and he met Konrad at a World Health Organisation meeting. Do you know this story, or...? I'd better tell you anyway.

*No. Yes, tell us, I mean...*

And, John Bowlby was interested in the early relationship of mothers to children, their children. And his interests stemmed from the fact that as an analyst he had treated a number of delinquent youths, and he wrote a paper called *Forty-four Thieves*, and he found that a very high proportion of them had had separation experiences from their parents early in their life. And so he thought that maybe this disturbed parenting had long-term effects on the development of personality. And, so... His evidence was purely clinical evidence, and he needed experimental work to help get his message across. So, we met at a curious meeting of the British Psychoanalytic Society, I think, where I was giving a talk, and, he invited me to join his discussion group. And this was an extraordinary discussion group that met in the Tavistock Clinic, which was then in Beaumont Street in, W1 I think, and it met in a cellar with a dirty window that opened, gave it light onto the outside. And, it consisted of John Bowlby, a Freudian analyst, a Kleinian analyst, a Piagetian, a Hullian learning theorist, a Skinnerian learning theorist, an anti-psychiatrist who used to come along sometimes, R D Laing, myself as an animal chap, two or three psychiatric social workers. I think that was it. A very heterogeneous group. And the interesting thing about it was that we had nothing theoretically in common, absolutely nothing, but we all had some interest in parent-offspring relations. And John Bowlby was picking what he wanted from each of us.

[58:50]

And it turned out that, ethology was one of the most important things he picked up. And, so, we got to a situation where, he used to send me all his papers for a criticism before he published them, and it was a wonderful experience for me. And, as I say, he wanted experimental evidence, to show that the mother-infant relationship could be damaged by periods of separation. And so he helped me set up a monkey colony,

rhesus monkeys, and he came to me because, in part because of the shared interest I think, I mean, because I'd been going to his group, but also because I was the only person in Britain at that time who knew anything about rhesus monkeys really. Solly Zuckerman thought he knew something about monkeys but, he had mostly studied them in the zoo, and Professor Hall, who had been, had a monkey colony at Bristol, had died of a monkey bite, and that colony had been closed down.

[01:00:19]

*But I don't understand how you knew about rhesus monkeys.*

Because... Oh I didn't. [pause] You're right. [laughs] You're right. No, that's... That sentence belongs to a later issue that I'll tell you about.

*Right, OK. OK.*

But, I didn't know about rhesus monkeys. But it was because I was interested in imprinting...

*Great, great.*

...he suggested setting up this monkey colony. So, we did. And, we set up eight... a colony with six cages, each of which was about as big as this room, opening into a central hut where each cage had an indoor enclosure through a swing door, so they could go into the warm, or they could be outside, as they liked.

[01:01:25]

And, that took quite a lot of building, and again, I was involved this time. Gordon... [pause] I'm losing names now.

*Gordon Dunnett?*

Gordon Dunnett, had left by this time, and, it was another man I worked with. But, again we did all, it was all put up on a shoestring.

*But it was all, it was in the Madingley...*

It was in the Madingley field, yes.

*...field. Yes.*

We'll go there if you like.

*Oh I'd love to. I'd love to.*

OK, well we'll think about that.

[01:02:09]

*But, did Bill Thorpe not mind about this, in the...?*

No, he was very encouraging.

*Right. Right.*

Yes. And he... That's what I say, he was wonderful, he let me do what he wanted to do. It had important repercussions in that the Ornithological Field Station could not be called the Ornithological Field Station any more, and it became the Sub-Department of Animal Behaviour. I had already had a student who worked with hamsters, called Thelma Rowell, and, so that was the thin end of the wedge. And then we had already got mammals in there, so, monkeys were OK.

[01:02:54]

And, again, I was putting wire on the metal frameworks and painting it and generally being a labourer, getting this thing built. It took the better part of a year. And then we got a couple of monkeys from Whipsnade, and we had a disastrous beginning, because we didn't know anything about monkeys, and we put two of them together, and one killed the other. And, slowly we got the thing going. And, I had a very wonderful research assistant called Jock Jolly, who had been in the Air Force, ground staff, in the war, and was a great big man, and he used to manage the monkeys. And, there was also a woman called... [pause] When I get tired, names go. [pause] Anyway, she was called John, and, she was harelipped, and a lesbian, and had been in

the Land Army during the war. And she came as Bill Thorpe's secretary. But she was really a wonderful person, and, she did a lot to help get the monkey colony going. And, there was a very unfortunate incident when the door between the inside compartment and the outside compartment came open when she was in the outside compartment, shovelling the shit up, and a male got out and leapt on her back and she had a lot of bites. And she was wonderful about it. She eventually died of lung cancer, she was a chain-smoker.

[end of session]

[End of Track 4]

[Track 5]

*This is the 4<sup>th</sup> of March, second session with Robert Hinde. And we're going to pick up on a few points that we want to amplify from the last recording. Would you start please Robert?*

Yah. Well, one of the things that, I always notice how on the news, when reporters are asked, they always start with 'Well,' [laughs] and I try to avoid it, but I couldn't. One of the things that I don't think I emphasised sufficiently in the first tape was how extraordinarily lucky I've been all my life in all sorts of ways, and, one way is, one of those issues is that, being posted to Coastal Command during the war, you know, area of the war where, although we were looking for the Japanese fleet, the casualty rate was very low, so I came through the war, unlike a lot of my friends. And then I was lucky to come to St John's rather than another college for which I was then entered, after the war, and that was through the influence of my ornithological headmaster who arranged for me a closed exhibition at this college. And another way is really the time that I was born, because it meant that I started in my research when money was very easy to get, in some ways. When we started the Madingley Ornithological Field Station, we did it on a shoestring, and I got I think £300 a year, and, I had to fill in receipts for everything, including every penny-ha'penny stamp that I used, I had to record in the stamp book, and if I went and bought some nails or something for the aviaries, all that had to be receipted and, and accounted for and everything. So we were very... But, within a year or two after the war, or after I started here in 1950, money became much, extraordinarily easy to get, and, I had one grant application to an American foundation that was turned down with a very interesting letter saying, 'We're awfully sorry, we feel as though we can't afford [support] your application. We don't... we think you haven't asked for enough money for what you want to do. Could you do with, send us an application for twice as much?' And, a bit later when I was studying canaries, and I'll come on to that, I was visited by a colonel of the United States Air Force from Brussels, who came to see my experiments, and then I took him into dinner in college, and, I expect we had some sherry before dinner, and we had a couple of glasses of wine during dinner. Then he came back to my room and drank scotch. And about one o'clock in the morning he said, [slurring words] 'Now we'll write your grant application.' And he insisted that I should say that I had

been a pilot, because, 'that will make it more relevant to the generals in Washington.' And, he more or less dictated my grant application to them. And then, three years later he came back when the grant was due for renewal and the whole scenario was repeated. And, again at about one o'clock in the morning he said, 'Well now we'd better write your grand application.' And he had insisted the first time it should be called Nest-Building Skills in Canaries, [slurring words] 'because shkill is what you fly a bomber with,' and, that I should say I had been a pilot. And the second time we were just getting into the Space Age, it was '59 or something, '58 probably, he said, 'We'll call it Sensory Deprivation in Canaries,' because I used to take the nest material away from them for certain experiments. I met him years later, he was a very good and competent cardiac physiologist. But, he told me, during that part of his career, his aim had been to see what he could put across the generals in Washington, and I was his second best project. His best had been a study of Indian fakirs on the grounds that they would help Americans to survive if they came down in a raft.

*Sorry, I haven't understood. Did you say nest? What's the... When he was drunkenly filling in your form for you, what was that you were referring to?*

Sorry?

*Yes, you...*

Yes, you say it, you say it.

*Right, OK. Sorry, I didn't just hear it. The nest-building skills of the birds. Right. Yes.*

That's right.

*Yes, absolutely. Sorry.*

[05:35]

Yah. Now that was a project, the canary nest building was a project which I very much enjoyed doing. It... I was trying to discover... Well, let me put it this way. It

stemmed from an interest of my then boss, W H Thorpe, who had the idea that in order to build a complicated thing like a nest, they had to have some idea of what the finished product should look like. And, he described the building of a long-tailed tit's nest by saying that they put a piece here and a piece there, and it gets nearer and nearer what they ultimately want. And I wasn't sure that that was a right interpretation. And so I worked on nest building, and, I tried to get them to build all the year round, and I was singularly unsuccessful, by manipulating the light and the hormones, and I did some work on hormones. But the interaction of hormones were too complicated for me, and I, I eventually gave that up and, and went to other things. [06:56]

I should say that, through all this period, and actually through my life, I've been very much influenced by, as an ethologist, and ethology was the way of studying animal behaviour that was due to Lorenz and Tinbergen primarily, and involved the observation of animals in their natural habitat. So, in my work at Madingley, although I was then working with captive birds rather than out in the field, the whole aim was to give them an environment as near their natural environment as we could get. Lorenz, I don't think I've talked about Lorenz really have I? Lorenz.....

[pause in recording]

[07:56]

I understand that, my involvement with ethology, which was, I discussed a bit in the first tape, involved the techniques but not the theories. And when, towards the end of... no, in the early Sixties, I started to write a book on animal behaviour, it was to have been a collaborative work with Niko Tinbergen, but he had to drop out after a year or two because he was not well, and so it was, it was marketed as my book alone. Though Niko's ideas are very much in it. And it was called *Animal Behaviour*, and it was a, a good textbook that tried to bring together ethology and comparative psychology.

[08:57]

Now I should say that at this time in my life I, my first marriage came to pieces, through my fault as much as anything else, and I married Joan Stevenson, who was a psychologist from Mount Holyoke and Brown University in the States. And she came across on a year's postdoctoral thing, and stayed. And, we have had two children, one

of whom is, at present is an architect, she trained as an architect, but decided that she didn't like living in London, so she trained instead as a mountain guide/kayaking instructor, rock climbing instructor, and all that. And she went up to Skye and worked in that way for... Have I said this already? No. Worked as an instructor in these sorts of field occupations, rock climbing and so on, for a year. And then she interviewed for a job to a small architect's firm on the Isle of Skye, and she said, she'd like to come and work with them, but she wanted fifty days' holiday a year. And they said, 'What do you want fifty days' holiday a year for?' And, she said, 'So that I can go kayaking, rock climbing and all that.' And they said, 'That's why we're here.' So, she joined the firm, and that was fine. And then she married, somebody she had known for a long time, and they now have a baby, and she does a very little work on architecture, doing a few houses and things, especially her own. But she, her prime interest is her baby and her work as chairman of the south Isle of Skye kayaking society, and is a member of the local mountain rescue team, and she gets herself hauled up and down out of helicopters and all that sort of thing. And so that's fine.

[11:29]

The other daughter, called Camilla, took a first degree in photography, and, then did an OU course in biology, and got to Bangor to do a master's degree; thence to Cambridge to do a PhD, which happened to be, and it was nothing whatsoever to do with me, that, it happened to be concerned with the great tit. And, the interesting thing was the way, to me, was the way science had changed, because when I was studying great tits for my PhD or DPhil, all I did was to wander around Wytham Wood outside Oxford with a pair of binoculars and a notebook and pencil and write down what I saw. And the result of that was simply a descriptive study of great tit behaviour through the year.

[12:36]

Camilla, when she set up to study great tits, had little cameras in the roof of the nest box, she had loudspeakers so that she could play sounds to them, she had microphones so that she could record what the chicks were, chick-begging, and all... and wires coming out all over the place. And it was a, science had become quite different, and used, using the most sophisticated methods of statistical analysis which I can't really understand. But I was lucky when she first started, because, she worked near where we live, she had 140 nest boxes up in a wood, and I was an unpaid

research assistant for a while, and used to go round the nest boxes with a ladder every morning, or, not every morning but most mornings, and see whether they'd started building or not. And that was very nice for me. I haven't said that before, have I?  
No.

[13:45]

Now, one of the important things that happened during the 1950s was, a man called Frank Beach invited me to a conference in Harvard; that was my first experience of the United States. And, that was a, quite a small conference, me and one or two other Europeans. And Frank, who was a very wonderful experimental psychologist who had been interested in the sexual behaviour of rats all his life, it sounds boring but he got on to dogs later on, but he saw that he had a great deal in common with the ethologists in that he had an emphasis on observation, and he did his best to get ethologists and psychologists together. So that the Harvard conference was just a few ethologists from Europe and one or two psychologists including Bill Verplanck, who also had the same sort of mission.

[15:03]

And then a few years later Frank Beach had moved... He was then actually at Newhaven, at Yale University. But he subsequently moved to Berkeley, and, I think just before he actually moved to Berkeley he organised a very important conference in the Stanford behavioural sciences centre, to which he invited about six Europeans and six American psychologists. And the Americans included not only himself but Danny Lehrman, Jay Rosenblatt, Lashley, Hebb, Harlow, all people who became great names in American psychology. And the Europeans included Niko Tinbergen, David Vowls, van Iersel from Holland, Baerends from Holland. All leaders really in ethology. And this was very important to me because, it cemented my friendship with Danny Lehrman. Have I talked about that before? No. Danny Lehrman... Well this goes back to the theoretical basis of ethology, and, Lorenz had a model of motivation which had... Did I describe that before?

*You... Well will you repeat it, because, it obviously fits in...*

[16:48]

Which involved a cylinder, cylinders, of so-called reaction-specific energy. He said the brain works as if there were cylinders of, reaction of specific energy in the brain

which are discharged in action, and that's why you don't go on doing the same thing for too long because the cylinder gets emptied. And, Danny Lehrman had thought this was a very remote and rather stupid model, and had said so. And it caused... Danny Lehrman I should say was from Rutgers University, and his paper, which was called *A Critique of Konrad Lorenz's Theory of Instinctive Behavior*, caused great discussion, great distress really, amongst ethologists, who thought the ground was being taken from under their feet. And we all pictured Danny Lehrman as a mean, thin, skinny, unpleasant man. And, I first met him in about, '54 or, I suppose, when he was coming back from a conference in Paris. And he turned out to be a lovely, thoroughly overweight, rotund, genial, passionate ornithologist, who was absolutely charming. And he and I became friends, and we used to see each other once or twice a year on one side or the other of the Atlantic, from then on really until he died in, I think it was 1971, or 72. [pause] And he did work on the courtship and nest building of ring doves, which was similar and much better than the work that I did on canary nest building and courtship, and he carried on with it for much longer and was able to do... It led to highly sophisticated work on the endocrine basis of, and the interaction between behaviour and, the hormonal basis of behaviour.

[19:27]

So, for instance, in my own work, I was able to show that under one hormone, oestrogen, the canary would build a nest, but then stimuli from the nest that it would build, that it had built, influenced the type of material that it brought to the nest, and eventually brought nest building to an end, and the bird moved on to the next phase, and so on.

[19:57]

Well, this conf... I was going, now going back to the conference in Stanford that Frank Beach organised, was wonderful. I've never been to a conference like it. We all spoke what we thought, and if you didn't finish what you had to say, there was always tomorrow. And discussion would move from the conference room to Dinah's Shack on El Camino Real, and, it was just a wonderful meeting. And I also met Jay Rosenblatt, who became another, an even closer friend than Danny, and who I still count as one of the men in my life who I've been most fond of. [pause]

[20:59]

Now I, I mentioned that... ethology and Niko Tinbergen, and the interesting thing was that Niko Tinbergen and Bill Thorpe, who was my current boss and who started

Madingley, were really totally different personalities, and I can remember Niko saying... Niko had come from being, playing... He was in the Dutch hockey team for instance, and he loved being outside, and, he loved, he was very athletic and he believed that his students should do everything that was necessary for their research, so he made them go out and catch the daphnia that they needed for their sticklebacks to feed on and, all that sort of thing. And Niko once said to me that he could never understand Bill Thorpe because Thorpe seemed sort of, closed and reflective. And he only felt that, he came to understand Bill Thorpe when they were staying on the, in the hut on Scolt Head, which a reserve in the North Norfolk coast. And in the early morning when the mist was rolling in from the North Sea, Bill stripped off all his clothes and ran naked into the sea. And, Niko then thought, this is a man I can, I can do business with as it were. [pause]

[22:37]

Thorpe, I think I've probably already said, was extremely kind to me, and let me do what I wanted to do at Madingley. He really wanted me I think to work on, to build up a station that worked on birdsong, because he was interested in the relation between instinct and learning. But, I wanted to do other things, and he let me. And I didn't realise that that was what he wanted until Peter Marler came as a research student, our first research student at Madingley, and worked on, eventually on birdsong. He did a field study of the chaffinch when I was working on the courtship and copulation in the chaffinch. And Peter Marler and I were both very insecure at that time, because, I was in a temporary job year to year, £300 or £400 a year, and, Peter had already done a PhD at Edinburgh in botany and came to do a second PhD with us, because he wanted to study behaviour. And, we were really very comparable. I was, I think, a bit older because I had been in the war and he hadn't, but, we were both at the start of our careers, and very sensitive, and we had terrible arguments as to what you should call various postures of the, of the chaffinch. And there was one posture I remember that I wanted to call the 'lopsided wings drooped' posture, and he wanted to call it something else. And, that was the sort of thing that at that stage in your career can seem terribly important.

[24:36]

*What about the coots and the moorhens?*

Well one of Bill Thorpe's... Thorpe... Bill Thorpe started the Madingley station, because he was interested in the relations between instinct and learning, and birdsong was a specially good place to study, 'instinct' I use in inverted commas because it's a bad concept. Birdsong was a good place to start that, to study that. But he was also thinking about imprinting, and, I, I started in collaboration with him and later with Margaret Vince, a study of imprinting. Imprinting is the learning process which Lorenz had first pointed to in which young nidifugous birds, that's ducks and geese and things like that, and moorhens and coots, learn the characteristics of their parents. And, what happens is that really early on they are attracted to and will follow a large moving object, a largeish moving object, not too big, as though it was their parent, and they come to learn its characteristics and treat it as a parent, and then treat individuals who resemble their parent as fellow members of the species. And we started doing that, working on that at Madingley, in a very crude way. We had a, a wire stretched down the length of a little pen and a model which we hauled along this wire with a piece of string, and, sometimes we used a box and sometimes we used a, a wooden model, and so on. And this was a study of imprinting.

[26:50]

Now imprinting has gone on to be a very important aspect of behaviour for all sorts of reasons, and, my first student who was, first student that was wholly mine, I supervised Peter Marler for a bit but that was a different, a temporary... Peter Marler... I mean when Pat Bateson came, I handed over the imprinting project to him and he immediately devised much more sophisticated ways of studying it. And that was later taken up by Gabriel Horn, who did absolutely groundbreaking work on discovering the neural basis of the learning and its nature, its location in the brain and its nature and so on. Gabriel Horn was also, became a close friend of mine in England.

[27:57]

Now Thorpe was a man who I think was ahead of his time. He used to look for more complicated explanations in behaviour than I thought were really necessary. But I, I have come in retrospect to think that he was probably right in most things, and that I underestimated his science. He wrote a book called *Learning and Instinct in Animals*, which was not as widely read as it should have been, and, it was a very in-depth book of learning, and I wish that it had been more widely... it went to a second edition, but I wish it had been more widely circulated.

[28:44]

Well now, around this time there was in London a psychoanalyst called John Bowlby, b-o-w-l-b-y, who had been interested, wrote a paper called *Forty-Four Thieves*, and he had been treating adolescents who got into trouble, and he came to see that the thing that was important in their lives was that they had had a period of separation from their parents, when they went to hospital or something, and which they didn't... In those days, I should explain, parents were not allowed to visit their children in hospital, because the nurses thought it just disturbed the children, and it was better to just let them be. And John Bowlby thought this was, was sure that this was wrong. But he needed experimental evidence to prove it. So he invited me to join his seminar as somebody who was interested in parent-offspring relationships from the imprinting work.

*You did mention this last time, so we...*

I did.

*Yes you did. You went to the Tavistock with him, and you were part of his...*

That's right. Yah. And, John Bowlby helped me to set up a, a monkey colony, a colony of rhesus monkeys, in which we could study the effects of separation experimentally.

*Did you... were you both sure that this would, this study of monkeys would be able to be compared to the study of humans?*

No, we weren't sure. But, we had no other option, because you can't do experiments with four-year-old children. And, it turned out that the symptoms that young rhesus monkeys showed when separated from their mothers were very similar to those shown by human children going through a period of protest, then despair, and sinking into depression, and ultimately sometimes some, a degree of recovery. But we were able to show that a ten-day separation from the mother with baby monkeys that were about twenty weeks old, able to feed themselves and all that, could produce effects that we could pick up a year or even two years later in their inability to cope with slightly

stressful situations. And, we did experiments involving separations analogous to, the baby goes to hospital, the mother stays in the group; mother goes to hospital and baby stays in the group; mother and baby go to the same hospital together; and mother and baby go to different hospitals. So we could compare the different things. And what came out was that the separation produced these long-term effects, but there was a big difference from humans, in that, infant going to hospital on its own produced, produces effects that were not much greater than, mother goes to hospital, and, that's different from the human case where it seems that baby going to a strange hospital, strange place, will be more, more affected than when it goes, when it goes back to its mother and she welcomes him and all that. And the difference was because when the mother went to hospital, she had to re-establish her relationship with the other monkeys in the group, and, didn't give the time to cuddle this infant in a way in which it wanted. [coughs] I'm sorry. I must drink. [pause] Well now...

[33:30]

*So this was a... I mean we talked slightly last week, but, but you know, we came to the end, about how you set up this project at Madingley. Would you like to explain that a little more now? I mean you must have had lots of different pens and things, did you, to...?*

We built, we built a monkey house which had six large pens going off it, and each of them opening into an inside room. And, we did it all ourselves, or nearly all ourselves. I had a lab assistant at that time who was, knew a bit about bricklaying, and, we made the outside cages, which I think were about twenty feet long and eight or nine feet high, out of, out of angle iron, and covered them with wire netting and, which had to be painted and all that sort of thing. It was actually a repeat of when we first started Madingley in a way, because when we first started Madingley we made these sixty aviaries, and I spent my first year there putting wire on these aviaries with the then assistant, we only had one assistant then, called Gordon Dunnett. He had been a, a gunner on Peter Scott's E-boats... well, motorboat, motor gunboats, during the war, and hated Peter Scott who, as you probably know, became a very famous ornithologist and did a lot for conservation. Because Peter Scott got all the gongs and he just took them into danger. So he and I were, got on very well together, and became sort of friends.

[35:34]

And, we had to spend a lot of time learning how to keep monkeys, and we had one or two disasters. I, I put two males together and one killed the other, and, when we put the monkeys inside so that the outside pen could be cleaned, a woman, a rather wonderful woman who was working as an assistant then, was clearing up the mess that the monkeys had made outside, in the outside pen, and a male had got out through a defect in the door, and leapt onto her back and, and started biting her. So that was bad. And we, we learnt the hard way, because in those days, very few people knew anything about keeping monkeys. Solly Zuckerman, who was a good scientist in many ways but had written a book about monkeys in the early Thirties, thought he knew everything about them and had discouraged anybody else from doing any work on monkeys, and he didn't really know anything. But that's another story, because, he did wonderful work in other ways.

[36:50]

*Why... So why did you choose rhesus monkeys rather than any other?*

We chose rhesus monkeys because, they were the only monkeys that anybody knew anything at all about, and we knew they'd live in captivity, and we knew they could be obtained from India via the dealers, and so on.

*So, at the time, Solly Zuckerman, I mean, he, he had looked at them in the zoos, had he, in...?*

In the London Zoo, yes.

*In the London Zoo, yes.*

Mm.

*And, did the London Zoo have a lot of rhesus monkeys then?*

It... I really can't remember. I don't think so.

*No. No, OK, no that's interesting, to, to... And...*

I think, I think they were baboons that Zuckerman had been studying, but I, I've just, it's gone out of my mind.

*Mm, no, OK. OK, that's fine. No it's just interesting that, sort of why you chose this particular breed.*

Well, and the... The other person who knew about monkeys at that time was the professor of psychology at Bristol called Hall, and he had died of a monkey bite just about the time when we were setting, before, when we were thinking about this. And...

*Are monkeys poisonous, monkey bites poisonous?*

Monkey bites carry a thing called virus B, which can be deadly to humans. And, you have to be, from that time on we used to look at the inside of their mouths to see whether there were any ulcers or anything. That's a nasty business. So you don't want to be bitten by a monkey if you can help it. Though, all of us were bitten by monkeys lots of times and got away with it, but, you know, there is that possibility.

*That doesn't sound very pleasant I must say.*

No, but they are fascinating animals, and, it was a great achievement when our first babies were born.

[38:58]

*How many years did that take, can you remember?*

About, three or four years I think.

*Mm.*

And, the first babies were called... I can date it exactly, because the first babies were called Yuri, after Yuri Gagarin, and Vostok, after his, you know, the thing that went around the world.

*Oh yes. So what date was that?*

About 1952, something like that.

*Right. That sounds quite early to me, but, you think it's...*

You think it was later than...?

*I don't...*

I, I mean '62, sorry.

*Well I was going to say, it's, it can't be...*

'62. Yah.

*Right, OK.*

Yes, '62.

*Yes, that's, that's more like it, yes. Great. Oh yes, so, fascinating. Mm.*

[39:48]

Well that monkey colony went on, and I went, went on working with it for another, up till, late Eighties I think. But eventually it had, we rebuilt the monkey house, and, on a slightly grander scale, or it was rebuilt, we could get money for it in those days. But then it had to be closed down, because, the ridiculous health and safety people brought in, or not health and safety, animal welfare people, brought in new regulations about how experimental animals had to be kept. And of course they wanted to give the animals what they thought were the best possible conditions. But

they didn't know anything about monkeys and they were quite wrong, and they insisted that the monkeys should be kept within a temperature range of two or three degrees centigrade with so many changes of hour, so many changes of air every hour, and nonsense of that sort, which makes them quite different, quite a different sort of environment from what monkeys are used to in nature. But, there was nothing we could do about it and the colony had to be closed down and that sort of research stopped at Madingley, which was a great pity I think.

[41:13]

*Can you, before we, before we get on to really the, the long-term results of your... just tell me what it was like at the beginning and what it was like at the end of your time.*

Well at the beginning we had one male. We had six cages, six outside cages with inside rooms. And eventually we had six groups, each consisting of a male, three or four females and their young. That was the sort of set-up. And, when we took an infant away, the group remained, remained as it was, and when we put it back, the mother, if she had stayed there, was ready to welcome it, but if we had taken the mother out, she had to re-establish her relationships with the male. So, although the symptoms of separation were similar in children and monkeys, the independent variables that affected the severity of the separation were not the same, because of the different social situation.

*Was the money continuing to come through to support this monkey colony?*

Yes. We got money from the Mental Health Research Trust, and I think from Nuffield Foundation, but I'm not absolutely sure that I can remember now. But, anyway, there was enough money.

[43:03]

*And, obviously during this period, twenty years or whatever it was, you were writing papers, books, or what...?*

Yes, I was just going to say that, the other aspect of this is that John Bowlby was, was forming his theory of mother-child attachment, and that, he, he wrote a very important

monograph for the World Health Organisation in the early Fifties, and, he was slowly trying to write his famous trilogy on attachment. Now attachment theory is now one of the prominent theories in child development, and, the basis of it is that the mother is seen, mother or mother-substitute, is seen as the centre of the child's world, and gives, her availability gives the child a sense of security, and the nature of that relationship with the mother influences all subsequent relationships that the child has. [44:25]

And John Bowlby was formulating and reformulating his theory. And the reason he had the seminars, which I think I described earlier, was because he was picking ideas from each of us. And it so turned out that the ethological approach turned out to be very important for him. And, what had previously been called the irrational fears of childhood, like fear of the dark or fear of falling, he realised when he looked at the ethological data that these were... on monkeys, that these were entirely natural fears that had the function of preserving the infant from predators. And, so, it turned out that ethology made a major contribution to attachment theory. And I was able to help him by criticising his manuscripts and talking things over with him and so on. And, of course... And our monkey work, experimental work, was helpful in getting the hospital regulations changed so that now mothers are encouraged to spend as much time as they can with their children.

[46:00]

*Did you like the monkeys?*

Did I like them? Not passionately. [laughter] I was lucky that I worked with two women who helped me set up the colony, one called Thelma Rowell, who had been a research student at Madingley studying hamster maternal behaviour, and later Yvette Spencer-Booth, who had been studying bees at Rothamsted, and... But I couldn't have done the work without them, and, and they were wonderful and very sensitive to the monkeys. Thelma went, married and went off to, I think she was married at the time, and went off eventually to the, to East Africa and then to the States. And Yvette tragically died of cancer at the age of thirty-something, very young. [pause] The...

*So...*

Sorry.

[47:13]

*No, I was just going to try and get a bit more of a picture. I mean, at this time, in the Sixties, would you go there every day and study them, or, or what were you...?*

Oh yes. Yes, I lived in Cambridge and I used to cycle out to Madingley twenty-five minutes on my bike every day, and, every working day, and sometimes... We used to take it in turns with, when we had just one assistant, to feed the birds and the monkeys on Sundays. So, it would be, some days it was seven days a week., some weeks I mean. [pause] It was still on a shoestring, but it was about 1960 that we got a lab built for the first time. Before that, Madingley had just been a field with aviaries scattered round in it, and a, a Nissen hut, a small Nissen hut, which had been abandoned by the Home Guard, which we used to keep the food in. And it got, a laboratory was built, again with Nuffield and, Bill Thorpe raised the money for it, and the laboratory was, a good, decent laboratory was built in about 1960.

*Would that, in 1960, would that have had microscopes? I mean what would it, what was it...*

Oh yes, it had research rooms, and it was fitted up with microscopes. There was a histology lab that was built, a lab for histology that was built just, gradually just nearby. And there were animals, there were rooms for breeding cockroaches and mealworms and things we wanted to feed, all that sort of thing.

[49:17]

*And, so, during this time, in the, in the Sixties, you were feeding in to John Bowlby's research all the time, is that right?*

Yes.

*And were you also corresponding or going to conferences...*

Oh yes.

*...again in, in America and other places?*

Oh yes, pretty much so. Mm.

*And did you find that elsewhere in the world people were doing similar sorts of work, or not?*

No, I don't think so. I think...

*No, so you were the only one in the field at that time?*

No, sorry, I was wrong. Harry Harlow, who was a professor at Madison, Wisconsin, was studying rhesus monkeys, and he was interested in their cognitive abilities. And, when I went there the first time, I was horrified because there were all... he wanted animals of known history, and there were all these infants that had been separated from their mothers, going, 'wooooo, wooooo,' which is a terrible distress call of these young monkeys. And Harry didn't realise what he was doing. And subsequently he came round to seeing that this, this method of rearing produced rather bizarre animals. I mean it was necessary for his experiments, but the monkeys were normal monkeys. And, Harry was, I got to know very well, and later on I became, I suppose in the late Sixties or Seventies, I, he asked me to join the scientific committee of the Wisconsin primate lab, and I used to go there once a year and discuss his research with him and that sort of thing.

*So that is... When, when he said, when primates, that was monkeys other than rhesus monkeys as well, or, or...?*

No. I think he had mostly rhesus monkeys.

*Oh I see, right, OK.*

I can't remember what else he had. Probably had some marmosets I would guess.

*Are dif... I don't know, are different forms of monkeys very... different species...*

Very different.

*They're very different?*

Yes.

*Mm.*

And, had we chosen... The choice of rhesus monkeys was a lucky break, because, had we chosen bonnet macaques, we might have got very different results.

*Really?*

Yes. I don't know.

*So, so... I mean I, I find that...*

Bonnet macaques are very very maternal. And then others are much less maternal. So, the experience that infants get in these different species is pretty different.

*Do you, what, what effect do you think that information has on the research you were doing as it referred to humans?*

Well I hadn't started working with humans at that time.

*No, no, I understand that. But, you must have realised at the time, did you, that...?*

No, the basic principle that the mother-infant relationship is important, remains.

*Right, right. And so, as you say, the rhesus monkeys, that was a lucky break...*

*Mm.*

*...that you had happened to choose those and had them available, and...*

Mm.

*Mm. Right.*

[53:00]

Well another nice thing that happened to me in this time, two things, one is that I got a Royal Society Research Professorship, and it was one of the first research professorships that they gave. But it was the most desirable appointment that anybody could get, because, in those days they were for life, they're not nowadays I think, and one got £10,000 a year towards expenses. And, there were no rules, except that you mustn't do anything you don't like doing, like administration or too much teaching or anything like that. You must just get on with research.

*How wonderful.*

And it was really wonderful. And, you had to put in a research report every year. But that enabled me to follow my interests over the years, and move eventually to children and other things.

*Just, just hold on. This was the first one that had ever been given, did you say?*

I think it was, I think I was in the first batch, but I'm not absolutely sure of that. I think there were four or five appointed in my, maybe six.

*So, obviously the research you were doing was considered to be very important.*

Well, no, I... I'm very cynical about academic importance, and, I'm quite sure that, the strong influence on, on the decision, was, came from Niko Tinbergen and Bill Thorpe. I mean my two friends really. That's another ridiculous thing. I mean they were my PhD examiners too, Niko Tinbergen who had been my mentor really in Oxford and Bill Thorpe who was my current employer, and they were my PhD

examiners. It's crazy. And, they went on and... So much academic honours depends on words from people you know. I, I mean, I mentioned Harry Harlow, and, we became good friends and I used to go over there every year, and Harry Harlow eventually became somewhat alcoholic. And he was almost obsessed when he retired in getting me into, as a foreign member in the National Academy of Sciences. And he, according to what other people have told me, he used to go around the country promoting this, and eventually it came to fruition. But I mean it's ridiculous, it was... [56:08]

But the other nice thing that happened to me during this monkey project is that Louis Leakey, who was a, you probably know, a well-known palaeontologist, thought that the secret of early human evolution lay with the great apes. So he tried to get somebody to study the behaviour of chimpanzees, gorillas and orang-utans. And he got young women out to Africa and put them through tests as it were to see whether they would be any good, and the first... if they weren't, he discarded them. And so, I think a lot, a number of young women suffered rather from being dumped in East Africa by Louis Leakey. [laughs] The first one to be successful was Jane Goodall, and she did a very good little study of monkeys on an island in Lake Victoria. And, she got going on chimpanzees. She was a very courageous young woman and she went to a place called Gombe Stream, which is on Lake Tanganyika, not very far from Kigoma, and, when she first went there, her mother accompanied her, very courageously. And, Bill Thorpe always used to say that they ought to carry revolvers, but they never did, and, that just wasn't in Jane's ethos. And, eventually, she managed to make contact with the chimpanzees, and later made even better contact by feeding them with bananas. Well, Louis Leakey wanted Jane to get a PhD, and, there was a loophole in the arrangements for Cambridge University that, if you hadn't got a bachelor's degree, you could under very special circumstances be allowed to take a PhD if you had shown yourself as being distinguished in some way. And, somehow we managed to get Jane Goodall through those regulations, and she became a research student and I supervised her. Slightly later, Louis Leakey had set up Dian Fossey studying gorilla on the Rwanda volcanoes, and, I also became her supervisor. [59:10]

And, I used to go out to Africa in the late Sixties, early Seventies, to visit them. The first time I went out was one of the most wonderful years in my life, I... Thelma Rowell was working in Uganda, and... Well, first of all I, first of all I visited my son

who was working in a gap year as a research assistant in Lake Manyara with Ian Douglas-Hamilton. This is my eldest son Francis. And, it was nearly disastrous for his career, because he just wanted to get back to Africa forever afterwards; he was working on, on elephants. And he, they gave him a Land Rover to take his dad round the East African national parks, and that was wonderful, and we went to the crater, Ngorongoro crater, and then to the Serengeti, and so on. And I remember going round a bend in the road with him between the Ngorongoro crater and the Serengeti, and you go round the road, bend in the road, and down below you, stretching forever, are the Serengeti plains. And he stopped the Land Rover and he said, 'There you are Dad, miles and miles of bloody Africa.' And... [laughter] It was such a wonderful moment, that we saw these wonderful wildebeest and things, and lions and whatnot, in the Serengeti plains. And then I went on to Uganda, and Thelma Rowell took me round the Ugandan national parks, and we camped in Murchison. We went up to see Dian Fossey in Rwanda. And, that was a lovely trip actually, we went to Murchison. And, then I went on to see Jane in the Gombe Stream. And that was a sort of, wonderful summer for me.

[01:01:30]

*It must have been. I mean tell me a bit, give me some more details, particularly of the gorillas and the chimpanzees and the set-ups that they had.*

Well, at that time Jane, Jane had habituated the chimpanzees chiefly by feeding them with bananas. And so she had, we, we had tents to sleep in if I remember right. But, she had a little hut, and the means for giving the chimpanzees bananas and so on. And... I had by that time become her supervisor. And, the greatest difficulty I had was to persuade the accounts office in Cambridge to agree to her spending £3,000 a year on bananas, which used to come on a boat from down the lake, and the only receipt that it was possible to get was a thumbprint from an African who didn't understand what it was all about anyway. But anyway, we managed. And eventually they, the accounts people had to, had to lump it.

*That's a lovely story.*

[01:03:02]

Now, my role really with both Jane and Dian was to teach them how to record systematically. They started off doing what I had done for my PhD, wandering around with a notebook and pencil and writing things down. And, I introduced them to use of check sheets for, with different items and behaviour along one side and time down the side, which I had been using for the rhesus monkeys in Cambridge, for our rhesus monkey colony. And, I'm glad to say that, some of that has been carried on with slight modifications at Jane Goodall's camp to this day. So that it's a remarkable series, remarkable continuity in the data on a wild animal.

*So what, what sort of things would you have on your sheets of paper, your forms?*

Oh God! I can't remember now. But, things like, what the animal was doing, who it was with, did it have a, what was its baby doing? Any noises it made. I can't remember all the things. But, one of the things that had become important in rhesus monkeys was recording, when mother and infant were apart, did the infant go to the mother or the mother go to the infant? And that enabled us to work out an index which showed who was responsible for proximity, and, it was the... I can't remember now, but it was a percentage of approaches due to the infant minus the percentage of approaches due to the... minus the approaches of... Sorry. Percentage of approaches due to the infant, minus the percentage of leavings due to the infant, divided by the similar thing for the mother. I think it was something like that. But I can't remember now. But it proved to be quite useful in, in pinpointing differences in the mother-infant relationship between infants. Now, about that time...

[01:05:54]

*Sorry. Can I, can I just add another question in there. I mean you, you have these checklists, and you've talked about the continuity which is obviously very valuable.*

Mm.

*But what extra recording methods would you use today as compared to the Sixties?*

Oh, nowadays they can record it on tape, which Jane was beginning to do by spoken commentary on to tape. But there again you can lead, you can lead it to, can lead to

the checklist when you analyse the tape. But now they have all sorts of devices for computer analysis and so on, which we didn't have. I mean when I was doing canaries I used to sit up in bed every night and analyse the, on a graph, what the... from... I had a system of recording their, where you made lines on a graph according to what they were doing, how long they spent doing it.

[01:07:03]

*Now both Jane and Dian of course had become very well known. But, let's talk about Jane for a moment. Did she have... I mean, what sort of a set-up did she have at the beginning? Was, did she have a lot of assistants?*

When she went out, she had nothing. She had a tent which she lived in, and, nothing else at all. And she just tried to habituate them by sitting still.

*And, I'm interested in the analysis of them as individuals, which is obviously, I mean you know, she was going into a group of, of chimpanzees, wasn't she. But the question of individuals, which you obviously talk about too with the rhesus monkeys, is surely very important.*

Yah. I think, Jane taught me, and, and Dian, taught me the enormous importance of individual differences in, in personality, if I can use that word. [pause] Jane often says that she showed the professors at Cambridge, she hated, when she had to come back here and write her thesis, she showed them the importance of individual differences, because she gave her chimpanzees names, and, that was very shocking to the people in Cambridge. It wasn't true, because our, we had been calling our monkeys by names before Jane was even on the scene. So, so... But she did emphasise to me the importance of individual differences in a very useful way, and it influenced my research from then on actually. I always think that you learn more from your graduate students than you tell, [than] they learn from you. And they learn from each other. The important thing is, is having a coherent group of graduate students.

[01:09:23]

*And so, tell me a bit about Dian. What was her set-up like?*

Her set-up was, Thelma and I went up there the first time we... [pause] I should say first of all that, when I went to Gombe for Jane's place, it was in the dry season, and it was lovely. And I used to go and swim in the lake every afternoon, and, it was very easy. And I, we lived in tents, but that was all right. Dian's set-up was quite different. It was 9,000 feet I think up one of these horrible volcanoes, with very dense vegetation, rainforest. Everything was wet all the time. There were nettles that came above your head. [laughter] A little bit of poetic licence. But it's a little bit, it's more or less true. And you had to follow the gorilla up the slopes of the volcano through earth that was humus, which was about a foot deep so your foot sank in at every, thing. And, the first time I went out with Thelma we were in a tent together, and, that was about the only other thing, apart from Dian's, I think Dian might have had a little hut by then, she might have, but I can't quite remember.

*So the conditions were very difficult.*

Well I wouldn't say they were very difficult, but they weren't easy, and they weren't pleasant. And, Dian was a remarkably dedicated woman. She had passed Louis Leakey's test, I think, when he told her she must have her appendix out before she went out, so she did. And... [pause] It was a wonderful experience to watch these mountain gorilla. You used to go out with Dian, and, you would track, you would find spoor, and you would track them for two or three hours through this jungle. And, then, Dian would hear them, and she'd go [banging chest], and they would go [banging chest], back again. And...

*Banging their chests.*

Banging the chest, yes. And... Chest-beating. And, you would lie down and pretend to be eating gallium, which is...

*Sorry, what's...?*

Gallium was the name of the... I've forgotten what it's called in English now. But anyway, it was the vegetation. And, after a while a, the vegetation would break apart

and a 300-pound or whatever it was gorilla would lie down at your feet and start playing with your bootlaces. I mean it was just amazing. That, the picture of the gorilla there...

*Yes.*

That animal was actually playing with my bootlaces.

*Oh fantastic.*

And he wanted... You gave him things to play with, so I gave him my notebook and he'd throw it away. You'd give him a pen and... You know, and it was just wonderful.

[01:13:20]

The first time I saw them with Dian they fled, and, Dian said, 'They think you're a silverback.' Because you know, the adult male gorilla has a silver back. And my hair had just gone grey. And she, Dian said, 'Put your hat on.' And so I put my hat on, and ever after that it was OK. I never had the scientific courage to do the experiment I should have done which was to take my hat off and see whether that disturbed them. But anyway.

*Well that's fascinating. And she, she hadn't found it necessary to feed them, feed them bana.. well, was it...*

To what?

*Well Jane fed...*

To, to... No. She avoided provisioning, because, people were saying that it affected the structure of the chimpanzee population that Jane was studying. And, Jane subsequently more or less gave it up. It was a way of getting the chimpanzees taped, but then... Tame. But then, then she gave it up and I think... I, I don't remember exactly.

[01:14:48]

I went back to see both of them two or three times, and, gradually became supervisor of other people working in their camps. And, some of my best students were in those camps. And...

*What sort of work were the...*

Well they were working on aspects of the life history of these animals. [pause] And the 1970s were a sort of, gala time in the history of Madingley, because, one had these students coming back from the field who had been studying, not necessarily just chimpanzees and gorillas, but some of them were studying other monkeys, other species of monkey, and, I had some studying elephants and so on. And they came back from the field sort of full of enthusiasm for what they were doing. And, another way in which I've been so lucky is that, I've been in fields where everything was always new, and there was no, none of the horrible feeling of keeping your data to yourself. It was, they shared everything, and were teaching each other. And it was just wonderful. I, I'm afraid that the competitiveness in the world has spread to many groups of graduate students now and they feel that they're competing with each other for later jobs, and they have to keep their data to themselves, which is a great tragedy, because, and is anti-scientific in my view.

*I think that's a very important point, I hope we'll come back to that.*

Mm.

[01:16:50]

*I mean you say that you were supervising other students as well. When you're supervising a wide range of students like that, I mean how, what are you looking for?*

What am I looking for, or what do I do? I mean...

*Well what do you do?*

The students... I didn't ever supervise a wide range. I never took on, I think, I don't think I ever took on more than four students at a time. Because it seems to me, you

can't give them the attention they need if you do. [pause] The students who were working in the field would come to Madingley for a term or two terms, or even a year, and learn the techniques of recording, check sheets and so on, and then would go out into the field and do their thing in the field, and then come back, and maybe they'd go into the field for a year or eighteen months, and then come back and write it up. That was the, the way it worked. And, I didn't always, I couldn't always see them in the field, but, I tried to. And, I had seen enough of monkeys in Africa to know what they were doing, if you see what I mean, after that.

*So you were able to guide them in what to look for and how to make the recordings?*

Yes. Yes.

*And was it still in this time, in the Seventies, was it still pencil and paper, check sheets and that sort of thing, or, what else would it, what else would it have involved?*

Yah. I had tried a, a device for canaries in which you press buttons for different sorts of behaviour, and it was recorded on a, by an ink pen, but it never worked very well. It was invented by Richard Gregory. But, he was a very clever man who became Professor at Bristol. But, no, I'm sure that the, what they do now is much more sophisticated and...

*What about cameras?*

Oh, I didn't use cameras, and, some students did, but... Jane of course, when I first went out, was married to Hugo van Lawick, who was a professional photographer, and, he took the most wonderful films of chimpanzees. And, Dian... And both of them were supported by the *National Geographic* magazine, and they made, had, what was the name of the man who went to Dian's camp? I can't remember. [pause] But she had *National Geographic* people coming. David Attenborough used to, said it's the most wonderful experience he had in his life almost was seeing the mountain gorilla.

*Well of course there were television films. I suppose that was a bit later on.*

That was about that time, they started to be used on the telly I think, mm. And... So *National Geographic* were very, very good, and did a good job I think in supporting these camps.

*It certainly made the work much better known, didn't it, to have that?*

Oh yes. Yes. Mm.

*How did that affect your work? The popular interest.*

It didn't really affect my work very much I don't think. It's... I learnt a lot from, from both of them, but, I don't think I did anything different as a consequence of supervising them.

[01:21:12]

It was work on elephants, has now culminated... started when... [coughing] sorry, the first time I went out, because Francis, my elder son, was working with a man called Iain Douglas-Hamilton who, a very charismatic individual, in Lake Manyara, and, he had with him at the time a woman... [pause] I'm sorry, it's gone. Who picked up sort of recording techniques that I was talking about. And, she went to, later to Amboseli National Park, and there's a long-term study of elephants there, which, where they've had systematic observations on elephants over the years. And they just asked me to write a foreword there in the book, which I was very glad to do, because it's a really good study and it's nice for me to be associated with it, though I didn't really do anything to help them, apart from that. [pause] It's stupid of me that I can't think of her name, because I, it's at the tip of my tongue. Maybe it'll come to me later in the afternoon.

*Mm.*

Or however long we go on for. [laughter] You needn't look so resigned. [laughter]

[pause in recording]

....later on, and then you can give me the name.

Cynthia Moss was her name. And, I had two or three students who worked with her subsequently. Iain Douglas-Hamilton, who is the sort of guru of elephant research in Africa, was an extraordinary man who had the ability to make everybody... I mean it's real, real charisma. And he took me one day into the ground water forest, and, he carried a clipboard in one hand and some, a bag of, lycopodium powder in the other, which he could shake and see which way the wind was blowing, and, thus get upwind of any animals that were there. And he had a, a rifle, two barrellled elephant gun, and, he had five rounds, and he made sure that I knew how to use a rifle. And then he said, 'Well, we'll put two up the spout, I'll put one in my pocket and you put one in yours, and then if you get knocked down we'll be all right.' And you just felt that you were all right. [laughs] He just had that ability to, to... He subsequently crashed an aeroplane and hurt himself, but, I think... but that's another matter.

[01:24:46]

*It, it seems, perhaps it's the popular view, but it seems that this period was populated by very, very, either eccentric or charismatic people, because they all stand out, and the names are known.*

I think that's, that's true. Of course there were some who were less charismatic. But, I mean Jane and Dian were very special people, and very different people. Jane... Well Dian learnt from Jane's example just to sit, and so she never, for a long time, didn't follow the gorilla when they moved. But she suffered much more from interference in her study site. And there were pigmies who came in from the Congo who would kill gorillas, or would set up traps to catch, not always intentionally, they'd use traps to catch deer and gorilla would get caught in them. And, so Dian used to try and scare them by jumping out at them wearing a mask and carrying a revolver and that sort of thing. I remember meeting Dian at London Airport once and she was carrying a big, one of those big handbags made of sort of, pseudo leopard skin or something, and it was full of mace, and, small arms ammunition, and, the sort of thing you couldn't possibly take on an aeroplane these days. But, I mean this was part of her dedication to her research, she really didn't want the pygmies into that area and tried to scare them away. But she... The other side of her which people don't

know was that she was desperately keen on educating the trackers that she used in her own camp, and in educating the Rwandans to these wonderful things they had got, and wonderful facilities they'd got in their country, and she persuaded them to issue a wonderful series of stamps of mountain gorilla to make it better known. And all that sort of thing. She was often maligned as having been racist, but, I don't think she was really racist; I think she, she just was dedicated to her research. [pause]

[01:27:53]

*Well I, I think it's marvellous, and it's wonderful that your work actually spun off into much wider fields.*

I don't know why you think that my field was not wide. [laughs]

*[laughs] Well that's a good point. It was of course.*

I mean, in the sense that it influenced John Bowlby. And I feel that it, it's OK for me to say that, because, he always acknowledged it in his publications. That's much wider than... [pause] I think it's time we had lunch really.

[End of Track 5]

[Track 6]

*Tell me about your second wife, Joan.*

Joan I married in, God! I've forgotten. I think it was 1973. No, 1971. And she had come from the States, Mount Holyoke, and then a PhD at Brown University. And her intention was to work with Bill Thorpe on birdsong, because she was interested in the relation between, quote, 'instinct', unquotes, and learning. She came for a year and she stayed. [coughs] I'm afraid this is going to be a nuisance. And, I used to see a great deal of her because I was Thorpe's sort of, factotum then, and had to look after getting equipment and that sort of thing. And... [pause] She did her own research, and, I'll talk more about that later. She worked with Bill Thorpe quite a lot during her first few years, and then after we were married, or round the time we were married, she got interested in monkey work, and, really started a new interest in animal behaviour on the measurement of individual differences. And she devised a method for measuring individual differences in what you could call temperament between the different rhesus monkeys.

[02:05]

Well now, to move on from... Well, over the time, over the years we've had two children, and I've told you about them.

*Yes.*

As a result of working on the monkeys I felt that children would probably be more interesting than monkeys. So, Joan and I started a joint project on the relation between the mother-child relationship and the child's behaviour in preschool. And this meant working with mothers and children at home, and working with the children themselves in preschool. And, Joan did the home work, because it's easier for a woman to get into the home than it is for a man, and I did the school work. And I had an absolutely lovely time, because, I had two roles, I was the white-haired professor who came to watch the children, and at the same time I was the chap who got sent out to clear the snow out of the gutters or mend the fuses or whatever it was, as the only man about the place. And you have to become, if you work in a preschool, you have to become part of it and sweep up after the children have gone and all that sort of

thing, and it was a lovely time. And I used to be Father Christmas at Christmas time and that sort of thing. And I started off working in the school where our children had been, nursery school, but they had gone, and... I suppose they'd gone... I think... No, they hadn't gone, because... No, they hadn't gone, they were still there. No, they were still there. Because when I was Father Christmas, Lara went home and said that she knew it was dad because, she knew, recognised his watch. [laughter]

[04:18]

And, I foolishly tried to use the sort of check sheet technique which I had used with monkeys on the children, and this was a big mistake, and... Because children are so much more complicated and so different from monkeys in many ways that that sort of check sheet approach on behaviour is not suitable. Joan did much more sophisticated work, and her work in the twenty years or so that we were working with children, she's still going on with it now, was much, much more valuable. It was a really wasted few years for me. But, some papers came out of our joint work. But she went on to focus on attachment, on Bowlby type attachment, and set up a room in the laboratory at Madingley where she could interview mothers and give to the children what's called the Strange Situation test, which is a, a way of assessing the quality of a child's attachment to its mother. A sort of series of episodes. And, it gave rise to some difficulties because, she couldn't work, she couldn't write to mothers on notepaper which said 'Sub-Department of Animal Behaviour', [laughs] because, it would make the mothers less willing to cooperate. But, eventually they came for these tests, and it all worked out very well. And she did wonderful work. And she became one of the leading people in attachment theory in the world. It's very little recognised in this country, and there are very few people who are interested in the attachment paradigm in this country, and I don't know why that is, chiefly because... In my view they got stuck on cognitive, purely cognitive things, and...

*Could you be more explicit about all this? Could you explain?*

What do you want me to say? Explain what? [laughter] What the Strange Situation is?

*Yes.*

[06:54]

Well the Strange Situation is a series of episodes, and I can't give them to you exactly but it's something like, the mother and child sit in a room, and then after a while, I think, a stranger comes in, and then the stranger goes out, and the mother goes, then the mother goes out and the child is left alone. And then the mother comes back. And the really crucial business is how the child greets the mother when she comes back after two minutes, I think, or three minutes or something. And, some children greet their mothers smilingly, and then get on with what they're doing; other children just won't look at their mothers, and, just get on with what they're doing, and disregard them; and others go and greet their mothers and won't leave them. So, it's a way of breaking up children into three groups. And it's due to a woman called Mary Ainsworth in the States, and it's extraordinarily powerful.

*And you say that this is not recognised here so much as it is...?*

Well it so happened that people didn't work on it very much, and I don't know why. It's, they're beginning to now, there are people who are now. But it was, came really a dominant theme in child development in the States. [pause]

[08:40]

And I would like to put on record that Joan never got really the academic recognition that she should have, partly for that reason that there was nobody in this country who could say how good she was, and, she's not a woman who's at all good at advertising herself. And in the early days when we worked together, I got the credit because I was older than her and better known, and she didn't. And that's, we took a deliberate decision not to work together for that reason so that she would get the credit for what she did.

*So, you, you obviously enjoyed your time at the nursery schools, however...*

Oh yes, mm.

*...from what you were saying.*

Mm. Mm.

*Was that because of the...*

It's the bottom row there.

*Oh right. Yes. So, what did you particularly enjoy about that?*

Oh well, four-year-olds are, it's a wonderful age to work with, because, they have very little self-consciousness, so you can stand and watch them without it disturbing them too much if you're a little bit careful. And, they're always friendly and, and nice, and, you know, it was fun.

[10:13]

*When you decided that your checklist thing wasn't going to work, your check list technique was not going to work, could you not devise another technique which...?*

Well, I did, I tried to, but I wasn't very successful, and I regard those few years as a bit of a waste in my life. The only positive thing about it is that I was interested relationships in general, and, I wrote a book called *Relationships: a Dialectical Perspective*, and it tried to give a scientific way of approaching relationships of all sorts. And, although the book itself didn't sell vast numbers of copies, I do think that about that time they started a science of relationships, and, there were two journals started, one called *Personal Relationships* and another called *Journal of Social and Personal Relationships*, and I didn't start, that wasn't anything to do with me. But it was just the right time that interest in people's research, people's relationships, was growing in psychology, and, my contribution really is a very simple one, simply to say that the interactions that psychologists were studying mostly at that time, like, aggression or something like that, were only part of the picture, because, a relationship between two individuals has properties that are not present in the individual interactions. And furthermore, that these two affect each other, the quality of the relationship is affected by the quality of the interactions, and, affects the quality of the interactions. So it's a two-way thing. It's a very simple-minded thing, but, it wasn't, it was made at the right moment and not, people weren't thinking in that way. And, people still use, I made a model of the relationships between different levels of

social complexity with interactions and relationships in the middle, and they all, all affect each other, and the culture affects the nature of the relationships, and is affected by the nature of the relationships. And, that comes on to my interest in morality which I'll talk about later.

[13:14]

*Yes. So this whole assessment that you were doing, the analysis that you were doing, did you bring in things like gender and race as well as the culture, class?*

Well race didn't really enter into it, but, just as I was leaving that field for, to do a college job, I was starting a comparative study on children in Cambridge and in Hungary, and, that was carried on by postdoc workers, though I was very little involved in it. And, they found rather interesting relationships like that the... relations I should say as opposed to... in that the, most of the Cambridge mothers were not employed, and nearly all the Budapest mothers were employed, and they had to be. And, the trouble with a lot of the Cambridge mothers was that they wanted something to do. It was when, this was in the Seventies and Eighties, and, it was beginning to become the norm for women to be working. Whereas the, in Budapest women would love to be able to spend more time at home, and the fathers would love to come home to a hot meal in the evening. And so there was a, a different, a different dynamic in the two places. And, that was quite fun. And, the people who did the work published some very good papers on it actually.

[15:12]

*Why did you choose Hungary?*

Because, when I was involved in this college, the college used to have special scholarships for people in Commonwealth countries, and I argued that the people in Hungary [interviewee meant to say 'in the Commonwealth'] didn't need a lot of scholarships, but the people who did were the people in Eastern Europe who were cut off from the literature. And so we established for several years a custom of giving these scholarships or fellowships or whatever they were to people from Eastern Europe who wanted to come here and read the literature. And, it so happens that several came from Poland and several from Hungary, and some from East Germany,

and, I think it was very successful for a few years. And, I had contacts in Budapest for that reason. So that's why I went to work there. At one point I organised an exchange visit between five nursery school teachers from Cambridge and five nursery school teachers from Budapest, and the Budapest ones were quite rightly horrified by the nature of British nursery schools, and vice versa, I mean they were, the British ones were very impressed. Because, the Hungarian nursery schools had distinct goals, and, were teaching children letters and things, but not in an over-regimented way, and they were just sort of higher quality really. And I went to Hungary several times to see what was going on and so on.

*What did you think of Hungary at that time?*

It was a very... This was in the late Eighties I suppose, and it was... I can't say anything that isn't a platitude, it, it was grey, but, in a sort of way, vibrant.

[17:50]

*The Seventies here of course was the sort of time of feminism, wasn't it. Did that...*

Sorry, say again?

*Feminism?*

Yes.

*Feminism was coming to the fore, sort of in the second half of the Seventies wasn't it.*

Yes it was, yah. Yah.

*Did you, did you find that in these, these studies and...?*

Well that's what I'm saying about the difference between the mothers...

*Yes, yes.*

And, the mothers here, a lot of them were army families. There was... And we worked in a village called Comberton. And, there was nothing for them to do, they couldn't get any employment. And the only money-earning thing they could do was home typing and things like that, which was even more miserable for them because they were stuck in their little boxes. And, the men that they were married to had really everything that their mothers had ever taught them... They both had everything their mothers had ever taught them, nice little house, two little children, and so on, and the... But the men used to go and play football on Saturday afternoons, and, the mothers had a pretty raw deal I think. And, it's a raw deal judged by the culture, the way the culture was moving, that women wanted to have something outside the home. Twenty years ago it might have been different. They weren't clinically depressed, but on average they were below average on the depression scale, or above average of the depression scale.

*Yes, that's sad isn't it. And so... I mean you must have built that into your reports that...*

Oh yes, mm.

*Mm.*

Mm. But that was more Joan's work than mine you see.

*Right. Right.*

Mm.

*Bu it was you who went to Hungary, or did you both go to Hungary?*

No. That was the thing you see, I got these invitations to go and...

*Right. And so...*

Also Joan, not a great traveller, and, liked being with the children.

[20:16]

*How did you like being a father second time round?*

Oh I enjoyed it even, much more than the first time round. Solely... Not that... I'm not saying anything which... I mean the point was that my, I was established in my career, and one of the things that was wrong in the 1950s was that, I went so long without a fixed job. I, Bill Thorpe used to pay me, as I told you, a very small salary, and it was a year-by-year appointment, so I never really knew when it was going to stop. And, in the late Fifties I did become what's called an Assistant Director of Research, which is an official university appointment, and then in, I think it was 1963 I got the Royal Society professorship. And then things were stable in my life as it were, and I knew I had got a future, and didn't have to work so much, so hard. Well not, I didn't have to work... Joan would say I still work obsessively, but, I, you know, it wasn't quite so desperate.

[21:42]

*Do you have any comments on the Royal Society actually, while we're talking about it? What do you think of it as a, an institution?*

Well for me, it's been marvellous. They couldn't have been... That, that appointment is the appointment that everybody would like to have, and, they never interfered or anything, and, for a long time was Royal Society Professor without being a Fellow of the Royal Society, and I wasn't elected a Fellow until, early Seventies I think. But... [pause] I've told you what I think about academic appointments.

*Yes.*

And, I got the Royal Society Research Professorship because of Niko and Bill Thorpe I'm sure. [pause] What do I think of the Royal Society as an institution? It changes with time. I was on the Council for a while, and, I felt that that was a bit of a rubber-stamping business, and that the most important decisions were made by the officers behind the scenes. I could have become, or at any rate I, I could have, I was in the running for being Biological Secretary which is one of the high offices in the Royal

Society, but I would have had to have given up my Research Professorship and would have stopped me doing research, and I decided against, against that.

*Was that a, was that a difficult and unusual decision, or, or...?*

Yes, I mean... [pause] Well I don't like to say this, but it, it leads inevitably to a knighthood, and, it's a very prestigious appointment. But it involved a lot of travelling and living in London two or three days a week and, so on.

[24:13]

I mean I have been so lucky to have Madingley, I never wanted to go anywhere else. Several times I was offered jobs in the States, but I just didn't want to move. And, Madingley had all the facilities that I wanted.

*I am interested that even, even compared with the States, which one hears is so well supplied with facilities and so forth, even compared with the states, that's the case is it?*

Well there was no Madingley in the States, no sub-department of animal behaviour. There were places where behaviour was being studied and studied very well, but not in that sort of ethological tradition. And, with the Royal Society professorship I was secure and didn't want to move. I nearly went to Rockefeller where Peter Marler eventually went, I nearly went to Madison, and several other things of that sort. But, I was happy where I was, still am.

*Excellent. Excellent. Right, no, that's, that's very interesting to...*

[25:34]

Well now, one thing I should say, running through all that I've said so far, is the role that this college, St John's College, has played in it. When I came back from Oxford and started to work as curator of the Ornithological Field Station, I was encouraged to enter for a research fellowship. So I re-edited my PhD thesis, DPhil thesis, and had it beautifully bound, and, I didn't even know what a research fellowship was at the time. And, there was a fellow of St John's... [pause] Of course, competition was not quite as bad then as it is now. It was bad but not as bad as it is now. And there was a

fellow of St John's who had been teaching me who was a very shy man. I came back as an ex-serviceman and, he didn't know quite what to make of me, and, he was a pacifist himself, and we used to sit... His name was Frank Hollick, and he used to sit in his chair and I used to sit in my chair, and, it seemed as though twenty minutes would go by with nothing being said by either of us in supervisions. But, when it came to this research fellowship competition, he was asked by the Council to assess me, and he used to ring me up when I was at Madingley and say, 'Now, now tell me how, how many birds were there used in the table on page twenty-one?' or something of that sort. And he really went into it in great detail, and somehow managed to convince the college that I, that they should give me a research fellowship.

[27:43]

Well that was lovely for me. And I was doing, already doing some supervision for the college of students, of bachelor's degree students, and... undergraduates. I was able to go to have dinner in the college. I was told by the then master, who was a man called Wordie who I didn't like, that, I had the choice, I could either do research, I could do research, administration, teaching, or be married. And I couldn't do all of them, I'd got to make up my mind.

*What date was this, when was this?*

This would be in the Sixties some time.

*Right.*

Fifties, in the Fifties.

*Right.*

I managed to keep out of administration. They asked me to be Proctor in the days when proctors were of some interest, and I evaded that. And, so that was all right.

[28:57]

And then after three years my college research fellowship lapsed, and, they very kindly kept me on in a, as College Steward, which meant that I was in charge of the food and the undergraduates' cellar. And, they didn't know that I know nothing about

food or wine, and I don't care about it either. But I bought a book called *A Plain Man's Guide to Wine*, which said some were red and some were white and some were in between, and there were other useful bits of information like that which helped me. And, I had to see twelve wine, or, or, not twelve but around twelve, seemed a large number anyway, of wine merchants every term, who came to sell their wares to, for the undergraduates' cellar. And I learnt a very important lesson which stood me well for the rest of my career, and that is that if you say to each one what the previous one said to you, you only make a fool of yourself about once in twelve times. So... And that's been really important to me all my life. And, the kitchen manager had been in post for forty-something years, so there was nothing I could say that would make any difference to him. The chap who ran the kitchen accounts, Mr North, had been in, in post for a similar number of years, and nothing I could say to him would make any difference. We had a kitchen garden at that time which, where they kept pigs and grew grapes and things, and cabbages and all sorts of things. And the college garden, there was a man called Thoday, and he had been there for years and years, and he had utter contempt for me, because he knew that I didn't know anything about growing vegetables. And, then, there was an outbreak of swine fever in this part of the world, and I, working in an animal behaviour laboratory, I made them put out antiseptic trays that one had to walk through if one came into the lab. And I went round to see Thoday, and, he hadn't done anything about this swine fever, and I said, 'Put out antiseptic trays.' And from that moment we were friends. Because, it was clear to him that I knew something that was important. Not the academic stuff, but something practical and important. And, Thoday went on to be a great embarrassment to the college because he won a gold medal at Olympia or whatever it's called, the Royal Horticultural Show, and, the college... He won a gold medal for a display of Cox's orange pippins, and the college didn't know what to do about this, but, eventually I think they pocketed the gold medal and gave him a watch or something in compensation. And, every year after that he would win more gold medals, for onions and apples and, everything that you can think of. So, in a sense he was a feather in the college's cap. But, he was a man you couldn't, couldn't gainsay about anything, he really knew... I used to enjoy talking to him. It was part of my job as Steward to go round once every week or two and talk, take up an hour's time, but, because he never stopped talking.

*That sounds great.*

[33:27]

Well then I remember, Frank Hollick, who I told you refereed my fellowship thesis, passed along the table to me at dinner one night a pepper, a glass pepper mill that was absolutely heaving with weevils on the inside, [laughs] and, I thought it was very unkind of him to pass it along the table to me.

*Yes.*

And of course, my responsibility. [pause] Anyway...

*What happened about that?*

Mm?

*What happened about that? I mean there must have been some batch of pepper that was...*

I suppose so, yes. I don't, can't remember what happened. I just remember the trauma of having this sent along to me during dinner.

[34:18]

Well, I think after three years, after, just over three years as Steward, it became apparent to the college that I wasn't any good at that, and they made me a tutor in loco parentis to, about ninety students we had in those days. And, that was something I, I did very much enjoy. And, one got to know the students individually to some extent, some better than others of course. And, one got interested in their careers and so on. And...

*So, how often, did you have regular times to see them, or, how did it work then?*

Yes, I used to have a tutorial... They had to come and see me at the beginning and end of every term, and, they had tutorial hours, probably, two or three hours a week in

the evenings. I used to supervise zoology students in college in the evenings and fitted it in after that usually or something of that sort.

*What did you enjoy about it?*

Really just the individual contact with students. You see otherwise I had no contact really: well I, I'd supervised I suppose. But very little contact with students on a personal basis, except for the graduate students. Graduate students I had lots of, but, undergraduate students, I didn't have much to do with, apart from, I gave two or three supervisions every week.

[36:09]

*And so, this time when you were particularly involved with the students, they were doing very interesting work, or, or how were the...*

No, the, the rule in this college is that you were a tutor to people in subjects that weren't yours.

*Oh I see.*

So I was a tutor to modern languages and geography. And... [pause] It was very interesting, the difference between the modern linguists and the geographers. The geographers in those days were really heavy, solid people. One of them was on the British bobsleigh team in the Olympics I remember, and, they were going to be estate management or something like that. Most of them, I'm just talking in generalities of course. Whereas the modern linguists all wanted to get into the BBC and, sort of effete and, quite a different cup of tea.

*How interesting. So what was your role as a tutor then?*

Well in those days, if anybody who stayed out after ten had to have, I think it was called an absit, and anybody who went away from Cambridge for a night had to have an exeat. So they had to come to their tutor to get these signed. And that's all I did really, sign those things. [laughs] No, there were occasional students who were

problems, and, I remember one who came and said his parents had been killed in a three-lane, in a crash on a, head-on crash in a three-lane motorway. And I had to comfort him. And he was a Catholic and I got in touch with the Catholic whatever it is, padre, in, there is one in the university, and, he looked after this chap. And, about a week later there was a funeral. And I, for some reason or other, I don't know why, I drove him over to, Bedford or somewhere, to catch a train home. And, and he wrote to me and said, 'It's all right, my parents are alive after all.' It was all a big mistake. And, I thought there was something funny about this. And so, another tutor and I went to his room, to see what was in his room, and the mantelpiece was covered in invitations from Lord so-and-so and Sir Ashley Montagu or whatever it is, and, invite the presence of, the company of this young man to this, that or the other. And, that made us even more suspicious. And... [pause] For some reason or other, I can't remember exactly why, we thought that a certain letter couldn't have come to him unless it had come in an envelope, and we went and got the big sack of paper at the bottom of the staircase, which was just going to be thrown away, and went through this great sack of paper, to see if we could find the envelope, and we couldn't. And that made me sure that there was something the matter with him. But anyway, he came back, and went on to finish his degree, and... But he tried to kill himself once. And... Unsuccessfully. And then he went to teach in a Catholic school, and I got a letter from the headmaster asking me whether I would recommend him, and, I said I really couldn't, because he had had a curious history and I thought he wasn't wholly together, and he had had this suicide attempt. And I got a very angry letter back from the headmaster saying, 'I know you Protestants, you never take, you never give a good testimonial to a Catholic boy. We're going to appoint him.' And what happened to him in the end, I don't know.

*What a story. Yes.*

[41:16]

Another student who I took over... [pause] Is this stuff you want to hear?

*Well it is. I mean it's interesting because, I think the job of tutor has changed now, hasn't it?*

Probably has, yes.

*Well anyway, I mean it's just an example of the pastoral...*

Well I'll just tell you about this other student...

*Yes.*

...who I took over in his third year from another tutor who was retiring I think. And, he had gone, he was a modern languages student and he had gone to Poland to learn Polish for a year. And he wrote a lot, a series of very curious letters back. And then got in touch with the Foreign Office to say that he was being offered a job in Hungary if he would stay. Oh he also wrote a letter saying he was being, they were trying to recruit him as a spy. And we knew that he didn't know anything that was of any interest to the Hungarians. He'd been a member of the university squadron, but they didn't want to know about flying tiger moths or anything. And, his letters got curiouser and curiouser, and he never came back. And, they said they'd... or, one letter said, 'They've offered me a Polish wife and a job in Milan.' And, the Foreign Office were wonderful, they said, 'We don't mind what... there's nothing that's of any interest to us that he can do; he must do what he wants to do.' So I didn't interfere. And, he went to Milan... I met him years later, he came to see me, and he told me he had got married and got a job in Milan. I didn't say anything. And, he seemed all right and together. The only merit of it as far as I was concerned was that his mother, who was a bit of a dragon of a woman I think, used to send me a bottle of scotch at Christmas sometimes when I was supposedly looking after him.

[43:51]

I mean, being a tutor had interesting moments of that sort. Why do you think it's very different now?

*I don't know. I'd like you to say.*

Well I'm not a tutor now, so I can't tell, but, there's a lot more form-filling and work of that sort to do as a tutor. And, I imagine even more in the way of testimonials.

*Yes. Yes, quite.*

You, you go on being asked for testimonials for years after you...

*Do you? Mm. Yes, well...*

[44:27]

So, the college kept me on as a fellow while... No, I was a, when I was Steward, I was not a Fellow. But when I was a tutor, I had to be a Fellow, and they kept me on as a Fellow, until in 1963 I got this Royal Society Research Professorship, and that didn't allow me to do anything like being a tutor, so I had to give it up then. But the college very kindly kept me on as a, a Fellow and a title, something or other, which meant I didn't have to do anything for the college, and I just got some free meals, if I wanted to come in. But I didn't have to teach or anything. That's what it meant in those days, it's a bit different now.

*How is it different now?*

Well I think they do have to teach, or do, do something.

*[laughs] OK.*

And, they kept me, my Research Professorship went on and the college kept me on, until 1989 when I was elected as Master. And...

[45:53]

*Tell me about the, well, the election.*

To Master?

*I, I'm thinking of C P Snow and all that.*

Yah. I thought C P Snow wrote a rather nasty book, *The Masters*, really. And, it's never been like that in this college. This college has a tradition, and I'm very proud of

being a member of it, that, you can be absolutely divided and then a decision is taken, and the two sides come together. And, we were very slow in admitting women, and it took years and years and opinions ran very strongly about it, and, the thin end of the wedge was then, when the Master got through, got the Council to agree that we could have women guests in hall, who, if they had been men, we would have invited. Which was a way of stopping people bringing their mistresses in. [laughter]

*I see.*

That was the thin end of the wedge, and then they started taking graduates, graduate student women, and then, the lot.

*Can you put any dates on that, do you know when that, that...?*

Well I think this college, I can't give you a precise date, but, first took women in about 1980. Which was rather after the median date for the colleges as a whole. [pause] I sat through many meetings in the governing body. One of the duties of a fellow is to go to a governing body meeting once a term, and, those meetings gave me a very early insight into college life. There was one very early on when Pye's, the local firm, had given two television sets, this was the early Fifties, one for the Fellows and one for the undergraduates, and the undergraduates' set seemed to work perfectly, but the Fellows' set didn't work. And, it was because they had put the aerial inside the chapel tower and the windows of the chapel tower were all covered with gauze, with wire netting, to stop the, keep the pigeons out. And there was a wonderful discussion about this, and eventually they decided that it could be put on the tower roof, provided that it was at such a height that it could only be seen from fifteen miles away. [laughter]

[48:50]

And then there was another meeting where... The second court was, at that time was cobbled, and some people wanted to put a paved path down the middle. And, feelings ran very strongly about this. But it was finally resolved when somebody said that in the Loggan print, which I think was about 1800 or something, of the college, there were paved paths down the middle. And then there was no more argument.

[49:31]

And then, what I was, what got me on to this was that, the... I'm told that the first discussions about admitting women were in 1947, but I wasn't part of that, but while I was a fellow, it was always coming up. And the arguments that were advanced were absolutely amazing, like, it would stop the young men working, they'd be distracted. And the gem was, we couldn't have women because the toilets aren't suitable.  
[laughter] The mind boggles.

Yes.

So, I've been involved in the college since 1946 really, except for my two years in Oxford, and, it's been marvellous to me, really marvellous. And the combination of that and the Royal Society Research Professorship is really all every, anybody could ask for. [pause]

[50:45]

Well the election of Master wasn't... I didn't think... Well I've been in other elections before and since, and, people make speeches about candidates, and, you know that some people favour some and some the others, but... [pause] It doesn't get vicious on the whole, so far as I have been aware. I mean some people feel strongly and some people didn't, but, in the election, other elections that I've been in, ranks have closed once the election was made. The same as after we decided to admit women as undergraduates, then the two sides came together. There was one, one man who had been very, felt very strongly about it on religious grounds, and, then he, after the decision was made, he used to go out of his way, and overdid it terribly, to be nice to women, you know.

*Were you... I mean, were you with women from the beginning?*

Was I what?

*Well, you were for women being allowed in, I presume?*

Oh yes. Oh yes, of course.

*And, and had that been the case from the beginning, when it first...?*

Oh yes, of course.

*Mm.*

Mm. One obstacle is that my good friend in college, Jack Goody, was for having women, and, there was a sort of feeling that, [laughs] anything that Jack supported was dead on, on the starting line, but, eventually it got through.

[52:43]

*So what made you decide to stand as a candidate for Master?*

My wife, Joan.

*Oh. [laughs]*

I didn't want... I was asked to stand and said no. And I really didn't want to do all that administration. Because I'd never done any administration to speak of, and I had no knowledge of, of what was involved. I, I, to be honest, I'd been a parasite on the college for years, since they made me this title, something or other, fellow, and I came in and had meals here and that sort of thing, and I had a small room here, but, I wasn't, wasn't involved in the college, and I'd just been a parasite. And, I didn't think it was my cup of tea. And, they pressed me about it, and I think I'm giving an honest account, because, I was the... The other candidate, the other poor old candidate, was a contemporary of mine who was a classicist, a classical philosopher, and, conservative, and right-wing, and the previous Master had been in my view very conservative, and the young Fellows wanted a change. And I, for reasons I don't understand, had a reputation for being left-wing, and... [laughs]

*You don't understand why?*

Well... And so I, it was the young... I'm told, it was the young Fellows who voted for me, and carried it on the first vote actually.

*Mm. Very popular obviously.*

Mm. Which was very hard on the other chap, because, it was something that he had really wanted all his life, was to be Master of the college. Whereas I really didn't want it very much. And, I remember one evening we were having a bath, and Joan said, 'You've got to do it.' And so I did. [laughter] I yielded to that.

[55:15]

*You say that the previous Master... Who was the previous Master?*

Hinsley.

*Hinsley. And, you say that he had been conservative. But what were the issues that were facing you when you came?*

Nuclear weapons.

*Right.*

He was the official... He, he'd done very well at Bletchley, and had been decorated for really valuable things he did at Bletchley. And, he was a historian, and he was one of these people who thought that there'll always be war, [clearing throat], there will always be wars, and, there's nothing we can do about it. Just turn it off for a minute.

[pause in recording]

*OK.*

OK. Is it working?

*Yes, it's working.*

Right.

*Yes, he had been at Bletchley. Hinsley had been at, at Bletchley...*

At Bletchley.

*...and was much decorated.*

And he was a historian and he wrote the history of Bletchley, the official history of Bletchley, all it did in the war. [pause] And, he and I were good friends in a way, but there was nothing, absolutely nothing that we agreed about. And he thought that the more nuclear weapons we had, the better, and I thought that the fewer we have, the better. And eventually we had a debate in front of the undergraduates on this issue, without a vote taken at the end, but we were both able to air our views.

*Was it just the two of you?*

Yes.

*And the undergraduates were allowed to ask questions, or what?*

[sneezes] Sorry. I don't remember. I don't think so. Yes, I think they were, they must have been. It was a sort of fun thing to do, for the Master to have a debate about something with somebody else. [pause] Well then... So I became Master. And...

[57:28]

*That was in 1989.*

Mm. One of the things they had asked me, when I was interviewed by the Fellows beforehand, was whether I would attend chapel, and support the chapel. And, I said I would, but I did a deal, a deal with the Dean, saying I didn't want to wear one of those white dressing gowns, because I thought they were a sort of... The Fellows traditionally wear a white surplice when they go to chapel. And I said I don't want to do that, because that's a sort of badge, that you believe, and, I said I'll come but I'll just wear my black gown and a hood. Which I did, and he agreed to that. So I can still go to chapel in good conscience.

*Let me get that straight. You, you don't believe in, in everything, or anything, is that right?*

Well we'll come to that later on, OK?

*OK, OK, fine. So that was one question that the fellows asked you.*

Yes.

*And what other questions did they ask you?*

Oh God! I can't remember now.

*Oh that was the one...*

I mean all, all the usual questions. One of the questions was, 'Would your wife be happy being a hostess in the lodge?' And I said, 'No, she wouldn't be.' She works, she has a full-time job, she's a scientist in her own right, and, it isn't her cup of tea. Actually, when it came to the point, Joan was wonderful, and, a very good hostess, but she didn't run coffee parties for Fellows' wives or anything of that sort. Which is what the predecessor had done.

*Did, did someone else do that, or did that just fall by the wayside?*

I think it fell by the wayside.

*Mm. Yes, no, it's just, just interesting how these things...*

Mm.

*So...*

When I was first a Fellow, St John's used to have things, a little printed card saying, 'St John's College, Fellows' Wives' Informal Parties'. And they used to go and have coffee together in the evenings or something. And, my first wife refused to have anything to do with it, because, she felt strongly that it wasn't right either.

So...

[01:00:17]

Well I was pretty naïve as Master I think. But fortunately I had a very nice man called Ben Garling, who was President of the college. President is a sort of vice-master. And he told me what to do. And then his place was taken by Malcolm Schofield and he was equally helpful. I don't... I think I should have made a complete mess of it if I had come in from the cold without their help.

*So what was your primary purpose, your primary role, as Master?*

As Master? Well you're college of a large... Sorry. You're a chairman of a large number of college committees, and, some of those are interesting and important, and some of them are very trivial. But mostly they're, they're... I think it's worthwhile, but it becomes a bit boring after a bit.

*Are you a good chairman, a committee man?*

Am I...?

*Are you a good chairman of committees?*

I don't know, you would have to ask the fellows that. I think it probably depends how much I'm interested in them. Some of them are, are very worthwhile.

*Which were the ones that were worthwhile?*

Well, I mean the obvious things like the finances and things like that.

*And St John's is a very wealthy college isn't it?*

Nonsense!

*[laughs] Obviously I'm wrong.*

[01:02:00]

One of my main roles as Master was to raise money for a new library, which is across the way there. And, I did over sixty meetings up and down the country, in the States, in Canada, and France, and, I used to give them a couple of glasses of wine, then make a little speech about how much we needed money for a new library, and then let them ask questions. And it was lovely. The commonest question I got... I was always terrified that they'd ask me about the college accounts, because, I didn't really know anything about them, the details. The commonest question I got was, 'Tell me Master, do the porters still wear top hats?' And, what was so nice about it was that all the nostalgia came out. Of course it was the loyal Old Johnians who came to these meetings, but, it was really lovely, their, their love of the college and, and showed the importance of, of maintaining certain traditions.

[01:03:33]

And, the interesting part of my time as Master was in the planning and building of this new library, which, we had a big debate for instance about whether the library should be open all night or not, and, there were some Fellows who thought that we shouldn't encourage the young to work at night; they should go to bed. And... [laughs] Very paternalistic. And others of us who felt that, you know, it would be a good idea. And, eventually we decided we'd have it open all the time, and books would be tagged so, make it difficult for anybody to take them out without registering it. And, I was living in the Master's lodge when it finally opened, and after a few weeks I looked out of the window in my bedroom at four o'clock in the morning and I could see six heads bent over desks in the library, and I thought, ah it's working. It was a lovely feeling actually.

*Lovely. Very good. That's fantastic.*

We had a, a very good architect.

*Who is that?*

I knew you'd ask me that, and, you know by now that I can't remember names. But if anybody wanted to know, they could find out, so...

*Yes of course, absolutely. Absolutely. And were you pleased with the design?*

Yes. I mean the big issue in a library is, do you have the stacks and the reading place totally separate, or do you have them all intermixed? And we've got them all intermixed pretty well, and, it works very well. The trouble is that, before exams, students tend to establish their territories and leave all their books in a place. And the other thing that went wrong was that we had a, there is a circular staircase in it, and, it's made of very beautiful hardwood, and that proved to be a mistake because the clitter-clatter-clitter-clatter-clitter-clatter of feet going up and down was too disturbing, so we had to put carpet on it. But, otherwise I enjoyed that very much and it went very well and I'm proud of the result of it.

*That's excellent, to have that during your mastership.*

[01:06:27]

Mm. Yes it was, it was nice. And I used to quite enjoy going to... I didn't, I wasn't a great supporter of sport, but, I used to go and watch them rowing, as being... and I used to watch the Flamingos. The Flamingos... The Eagles are what St John's, the team is called, were either Lady Margaret or the Eagles, the rugger team is called the Eagles, and, the women call their boat, call themselves the Flamingos, because they were, I suppose, red and... The nice thing was that, they used to ask me to their dinners, and, they won, they came head of the river, I think it was the second year I was Master, and they all got either Firsts except for one or two 2:1s, which was lovely.

*So, the rowing hadn't interfered with their academic...*

Yes.

[01:07:42]

*Yes. Yes, fantastic. And what other sides of college life did you enjoy?*

I didn't enjoy making speeches after dinner, it's horrible. You can't drink. And, it's very difficult when you have to make a speech at the same dinner in successive years, because you know that there are Fellows there who heard you last time. I didn't exploit to the full a resource which my successor did, namely the college archivist, because he used to come up with stories of what had gone on in the hall in previous years or something. And I, I, I missed out on that.

[01:08:29]

We lived in the lodge here of course.

*Yes, I was going to ask you if you enjoyed that.*

And, Joan loved it, because, being an American, it was like living in an English country house, sort of feeling. I didn't like it very much because it wasn't cosy, and we were only there for five years, and we knew we were only there for five years, because it had a retiring age of seventy, and, I... We never made it cosy. And it was badly designed so that, the secretary's office, the Master's secretary's office, was practically next door to the Master's bedroom, and so if you wanted to go and have a sleep, you were very public. Joan didn't like that at all. And, it's recently been refurbished so that the secretaries are downstairs, and that's a great improvement, but there are other things that have been done which I think have been a big mistake. But that's another story and, I won't go into the details of the lodge.

[01:09:53]

*Well you said you enjoyed being able to look over to the library, but were there other nice or difficult things...*

Oh there's a wonderful garden, which you don't have to look after at all.

*That's tremendous.*

The garden on the edge of the river. And you can go and sit on the wall at the edge of the river and watch the people falling off punts and all that sort of thing. Oh no, it's a lovely place in many ways. There's little steps going down to the, down to the river, and one evening the Provost of King's College, who was a former student of mine, came to dinner in a punt, came up the punt steps, and, you know, that sort of thing.

*Well that sounds great, that sounds absolutely great.*

Yes, I mean on the whole I did enjoy it, and I enjoyed the Old Johnian dinners, Old Johnian meetings where I was raising money, because they were all nice people, and there was never any acrimony about it, or any major difficulties.

[01:11:08]

*Did you find it easy to raise money in America for instance?*

It was in the mid-Nineties or early Nineties when there was a recession on, and, we got very little large grants. It was completely different from the way in which the college is going about it now. We, we had a fundraiser but I had got rid of him, because I didn't think he was any good and decided I'd do it all myself. And, we got, by virtue of these meetings, we got a large number of small grants, which amounted to about, was it £4 million I think or something like that. Which was very nearly but not quite what we wanted for the new library. [pause] And I've forgotten what I was going to say.

*We were talking about raising money, and you sacked the fundraiser, and we were talking about America.*

Yes. Oh we did get, we did get one large grant and that was from a thing called the Kresge Foundation in Detroit, which gave us a matching grant of, I think, I've forgotten what it was, £50,000 or something, if we could raise a similar amount. That was one of the few large grants. Mostly they were £10,000 or under.

*Well that's hard work doing it that way isn't it?*

It was hard work, but, it was my role as Master and it was quite good fun.

[01:12:47]

*What is the relationship between the colleges in Cambridge?*

Oh we... There was a Colleges Committee, which used to meet on, on Saturday mornings I think, and, it was very very formal, and, you would hear somebody saying, [mimicking] ‘Mr Chairman, may I through you address the Master of Corpus Christi College?’ [laughs] It was hilarious, really hilarious. And while I was on it, I don’t think it ever discussed anything useful at all. But, now, I’m told, they do discuss useful things and, it’s much better and less formal.

[01:13:38]

*And, did you have an input into the different academic sides of St John’s?*

Well one of the things the college has to do is to decide whether it has the right balance of teaching in all the subjects, and so this affects, affects the election of Fellows, or what have you, teaching, what are the teaching needs. And, I won’t say I, I played a big part in that, I just chaired the committees for it. [pause] I mean one one’s role as a Master, I didn’t do anything great in the college. I, I did the library, and, I think I helped to bring it out of the seventeenth and into the eighteenth century, but, certainly, it’s better now than it was before then. [pause] I think that’s a fair claim, that I helped to bring it up to date. But, I don’t feel as though I did a great deal. I think that was quite important actually, but I don’t feel as though I’ve got much practical to show for it except for the library.

[01:15:13]

*So, what in summary if you like and conclusion, what influences do you think you brought to bear while you were Master?*

I think, I hope, I introduced greater informality into college meetings, and made them more real. I tried to make sure that they were genuinely democratic. I didn’t impose anything on the Council. [pause] It’s in, in that sort of way that I think it’s important, that I contributed to the college. The college is now writing, is producing a history of

the college, in time for our 500<sup>th</sup> anniversary next year, and, to my annoyance it's stopping at 1989, because the chap who is writing the twentieth century thought it was improper to have a history of a Master who is still around. But, maybe he is just concealing all the nasty things he wanted to say about me because he thinks I might get my own back or something. I don't know. But I don't think so. But, that chapter was to have been written by Peter Hennessy, who is a historian, who was in the college, and he told me that he thought that what I had done was to bring the college up to date in its, in the way it functions and in its personal relationships. And I was very happy to hear that, I, it's... Colleges so easily become hierarchical and sort of autocratic. I don't know. But I'm just quoting him.

*Excellent. Excellent.*

Mm. [pause] The nicest thing that happened to me as master was, on my last Christmas... No it wasn't, it was... Was it Christmas? The doorbell rang one night, and... I can't remember what they were singing now, but, the doorbell rang one night and there was twenty or thirty undergraduates outside who sang me a song, and I can't remember whether it was a carol or what it was now. I should ask Joan, she... But it was such a nice tribute I thought.

[01:18:16]

*Well that's lovely. Lovely. And would you like to round off this period of your life just by talking about the...*

Well in a way, I couldn't do any research when I was Master, so, my pre-Master research came to an end then. And when I look back over that research, one thing that's curious about it is that I changed fields so many times, from ornithology to animal behaviour, and animal behaviour to human behaviour. [pause] I was lucky to be able to do that, because, the connection with the college and most especially the Royal Society Research Professorship allowed me to do what I wanted to do, so, I followed my interests, and, I always thought that studying behaviour would be a contribution, however tiny, to human happiness, that working with John Bowlby and helping to change the hospital regulations was a real human problem that one could tackle. And, then, moving from monkeys to children was because I felt, I wanted to

do something more practical. And, what we were able to show or confirm was that, the children who were a nuisance in preschool were the children, tended to be the children whose mothers were neither very controlling nor very laissez-faire, but those who gave love and measured, sensitive control. And that I think is quite... It had been found before with older children, but I, I think it's an important finding and it fitted with the attachment theory that other people were working on.

[01:21:00]

I gave up working on attachment theory and it was a mistake in a sense, because, attachment theory became limited to a small group of people, and there was a good reason for that, that the Strange Situation technique was a very specialised technique and you really had to learn how to score it, and how to classify the children on the basis of agreed criteria. And that caused the attachment theory to be limited to a small group of people who all knew each other and... And I thought that was a bit anti-scientific. I can see now that it was necessary, but I wanted to get... my mind was on being a bit more objective about it. And, I, I acknowledge freely that I was wrong.

[01:22:09]

The research I suppose that I was best known for at one time was getting ethology away from the model-building of Lorenz, and showing that that was hollow, and, taking it in, taking it on from that point. [pause] Konrad Lorenz was very friendly to me as a young researcher starting in research. He became antipathetic, antagonistic to me when I started to criticise him, and, the long research that I did on the chaffinches and mobbing owls was deliberately designed to investigate the properties of this reservoir that he postulated, and it made me see that it was a useless model. And he never really forgave me for that, and that was a pity, because I, I admired many things about him. I disliked his authoritarianism, and, because that was his background, and, of his Nazi past, lurking behind the scenes. [pause] So that was, I think, a quite important contribution.

[01:23:55]

The work with the canaries wasn't as well-known as Danny's work, Danny Lehrman's work on ring doves, but he had much better facilities and carried it on for longer than I did. I think the work with monkeys was worthwhile because of the spin-off, both into attachment theory and practically into hospital management. The school work that I did was I don't think very important, but, in so far as it was started with

Joan and she went on to do such really important work, it had a spin-off in that way.  
OK.

[End of Track 6]

[Track 7]

*This is the third session with Robert Hinde, 25<sup>th</sup> of March.*

*We're just going to catch up on a few things that we didn't talk sufficiently about last time. I'd like you to tell me where you felt that your work with children led to.*

Well, it was, my work with children was initiated by John Bowlby, who, as I think I've mentioned, helped me to set up the monkey colony in which we did experiments on the effects of separation. Now, previously John Bowlby had only clinical evidence that early separations could have a long-term effect on personality development, and he wanted to harden this evidence with experimental evidence in order to get hospital regulations about visiting changed. And, this provided the experimental evidence that he wanted. So, where it's not all that important on its own, it was power to his elbow in getting the hospital regulations changed.

*Good. Thank you for that. It's, it's good to have a, such an obvious positive outcome from your research.*

Yes.

*What other...*

On that topic, I also saw a great deal of John Bowlby over a few years, and, I think I mentioned the seminars that he used to hold, and it turned out that ethology, the scientific study of animal behaviour, in the end produced, formed quite an important part in his attachment theory which has become one of the most important sub-theories in the study of child development.

*Good, thank you for clearing that up.*

[02:16]

*I'm also interested in the influence you've had on other students. We've only mentioned a couple.*

Who have I mentioned?

*You mentioned Jane Goodall and Dian Fossey.*

Oh, Dian Fossey. Well, that was the start of my involvement in primate research, because their two field stations which they had established provided places for graduate students to work, and I had a whole lot of students who worked in one or other of those sites, and I would mention especially Richard Wrangham, who is now a professor at Harvard, and Tim Clutton-Brock, who's a professor here in Cambridge. Then there were others who came, there was Robert and Dorothy Seyfarth, who came to work on, on baboons, they actually worked in South Africa, and, various students who worked on elephants, such as Phyllis Lee and... It's awful, the name's gone.

[The interviewee is referring to Joyce Poole]

*Never mind, we can, we can check it out.*

Mm. Who had worked on, did very important work on the must in the African elephant. But it's invidious to mention names, because, there were lots of students, and, some of them became more distinguished than others, but... And then Judy Dunn, who was not actually a student of mine... Well she was originally a student of mine when she first came to Madingley, working on the effects of brain lesions on maternal behaviour in rats, and, she gave up that work and went off to America with her husband. And... But later came back to Madingley to do work on child development, and she really helped me to get it started in transferring from primates to child development.

[05:08]

I would say that I have always maintained that research students learn more from each other than they do from their supervisors, and certainly, I as a supervisor learned as much from my students as I taught them. During the period of the Seventies and early Eighties, was really a gala decade at Madingley when we had students coming and going from the field, they'd come for a term or longer to learn techniques and think about what they had to do, and, then go to the field for a year or two, and then come back to write up their stuff. And, there was a lovely sense of cooperation amongst

those students. They weren't in any way competing because they all had their own theses, and there wasn't... There was an infinite amount of data, and it was a wonderful period for all of us.

[06:27]

*Good, that's lovely. Is there an evolutionary strand to your work, or is that not something that has come out or concerned you?*

Of course there's an evolution. I'm a biologist by training, and, the evolutionary aspect has always been central, well not central but always been present in my work. In the early work on finch courtship, I was interested in the evolution of courtship, dances and courtship signals. In the, I suppose Sixties, I wrote a paper on speciation in biological reviews, speciation in, in birds and fishes I think it was principally, and the mechanisms that were involved, and stressing the importance of isolation. I wrote a paper at one stage on the *Die Systematische Stellung der Gattung Fringilla* with Ernst Mayr. [pause] But, for the ethologist, evolution was one of four questions about behaviour: what causes it; how does it develop; what is its function; and how did it evolve? And... Have I said this before?

*No you haven't. It's fascinating.*

To take it... If you think about your fingers, you've got one funny one that sticks out the side which we call the thumb, and the question is, why did one of our fingers, why do we have thumbs instead of five fingers? And there are four answers you can give. One is that it developed the nerves and, and bones and things developed differently, that's a developmental answer. One is that it functions differently in that, for picking things up and for holding branches. One is that you cause it to move in a different way when you use it. And one is that it evolved in monkeys for obvious reasons, and we are descended from primate-like animals.

*That's an excellent example, thank you.*

That was central to the ethological background that I acquired from Niko Tinbergen.

*Great. Thank you very much for that.*

In fact I think it's the most important part of, about ethology actually. And that you don't have full understanding of any behaviour until you've answered all four questions.

[10:00]

*Right. Excellent. Just another more personal question. Did you actually enjoy lecturing? We've talked about tutor...*

I quite enjoyed lecturing, but, I didn't, fortunately I didn't have very much to do, because, I've never had a... Well I only briefly had a proper university job, when I was a, an assistant in research and subsequently an assistant director of research. And that only lasted a few years. And as a Royal Society Research Professor, I was only allowed to lecture in the subjects in which I was interested. I mean I couldn't be... Well, yeah, in my early days I did once for a while lecture in embryology, which I knew nothing about, and, had to read it up the night before in my bath. I'm very ashamed of that. But, I quite enjoyed that because I used to make lovely diagrams of the amnion and allantois and the yolk sac in the embryo of the chick. But... All in different colours, it was all very satisfying. And much simpler than the story that's told nowadays.

[11:26]

But later on I lectured just about behaviour, which was the one thing that was central to my interests. And, I gave a course of lectures on behaviour to the third-year students, over a good period of years, I can't remember how many, when I was a Royal Society Research Professor. [pause] Yes, I enjoyed talking, lecturing about what interested me, because I was excited about it, and it was wonderful to communicate it to other people. The other side of it was that, I always had something better to do, which has been a problem most of my life, and lecturing cut into time for research.

[12:15]

*Could we talk now about animal rights?*

Animal rights. Well I, when I was working with rhesus monkeys, I got into trouble with the animal rights movement for separating babies from their monkeys, from their mothers, because they make heartrending distress calls, and, one is clearly being cruel to them, not by inflicting actual operations on them or anything of that sort, but just by maltreating them, or what could be seen as maltreating them. And my defence to that was that we used very very few monkeys, I think, I can't remember exactly how many, but disgracefully few by modern standards which would require much greater statistical power than we had in our experiments, and that the work was directed towards a specific human problem, the consequences of early separation from the mother, and that justified it. And so... [clearing throat] Sorry. A few years later one of my colleagues was in trouble with, in Scotland, with accusation of cruelty to animals, because in studying the predatory behaviour of cats and how they got to be predatory on birds, he... or how many individuals do, he exposed live canaries to cats and let them catch them. I think I'm remembering it right. And, I was asked to give evidence against him, and, it was a very difficult problem for me, and a lot of heart-searching. But eventually I did give evidence against him, because, I felt he could have learnt, he could have used other things like locusts instead of live canaries to come to similar conclusions. Also I felt it wasn't justified by its effect on humans. So, I've been on both sides of that fence. I, I gave evidence to a procurator fiscal in Scotland somewhere.

[15:21]

*Have you got any comments on animal rights today?*

I was on the scientific committee of the primate centre in Madison, Wisconsin, for quite a number of years, and, when Bob Goy was Director, and I used to go there about once a year. And they got into trouble with the local animal rights people because some of the things they did were very cruel. And, Bob Goy did, I think, a quite brilliant thing, was brilliant at the time, and that was to recruit the leader of the animal rights people onto his research committee. And that really killed the problem. And he saw why they were doing what they were doing. And, there is no doubt that there have been times when scientists have been quite unnecessarily cruel to animals. We had one man who came to work with us in Madingley, and I didn't know too much about his history, I wasn't the boss in any sense, and, I didn't know too much

about his history before he came. And, he had been doing experiments on the early development of rats, and the measure he took was, survival time with total food and water deprivation. In other words, he was starving them to death. And he actually published a paper in *Science* saying, it's such a good dependent variable, because all you have to do is to go into the lab every morning and pick out the dead ones. And it was really quite horrifying, and I could barely speak to him for the rest of the time he was at Madingley.

[17:43]

So, I mean there's no doubt that, there were times in the Fifties and Sixties when unnecessarily cruel experiments were done, but the world has changed since then, and now, the regulations for the use of animals in experiments are very strict indeed, and, the great majority are used in testing medicines for human use, and, that has to be done, in this country and in most countries by law, they have to be tested on certain types of animals, before they're tested on humans. And every effort is being made to improve the experiments so that the minimum number of animals are used, and to find ways of doing similar tests in vitro so that animal, live animals are not used.

*Good. Good. Yes, as you say, things have moved on haven't they. [pause]*

[19:12]

*We'll move now to your involvement in science and religion, and trying to prevent conflict. Would you introduce that for us please?*

[coughing] Well, in... Gradually after World War II... I should explain that I had a relatively easy time in World War II, in that I was flying flying boats on long-distance ocean reconnaissance, and mostly in the Indian Ocean, and we were looking for the Japanese fleet, and fortunately we never found them. I mean it was work that had its interesting moments, but, it was a much, much, much lower casualty rate than for instance in Bomber Command. However, my brother died quite early in the war of wounds and exposure in an open boat in the Atlantic after his troopship was torpedoed, in great pain as one of the survivors wrote to my father. And, I lost a lot of friends in the war, including a boy who lived next door with whom I played all my youth, Graham Cozens-Hardy. So, after the war, I am ashamed to say that I was happy to bathe in the kudos of having been an RAF pilot for several years, and this

was perhaps understandable in retrospect because, I came up here early with respect to most ex-servicemen. I perhaps should explain that my headmaster at school, I don't know whether I've said this, had been a birdwatcher, and used to take me out birdwatching, and when I failed a scholarship at Emmanuel College, Cambridge, he got hold of the papers and wrote to me after I'd been in the Air Force for about six months to say, 'I have arranged for you to have a closed exhibition at St John's College.' And, that was the most important thing in my life, because, it got me out of it, I was able to persuade the Air Ministry that a closed exhibition, which, you don't have closed exhibitions any more, but they were exhibitions for, limited to certain schools, and so were really very nepotistic things. And, I went to the Air Ministry every day for several days when I was on leave, and persuaded them that a closed exhibition was a very special form of scholarship, and entitled me to an early Class B release. I was also lucky because I came to St John's College, which is a much better college than Emmanuel, and I've been here more or less ever since except for two years in Oxford, and I'm very fortunate to have been here.

[22:56]

So, I got out of the war a bit earlier than most ex-servicemen and was able to come up to Cambridge in January 1946, and there were about, ten or a dozen other ex-servicemen in St John's College at that time, there may have been more, but I knew a few of them, and we used to sit together at dinner and be very scornful of the undergraduates who were mostly medical students or conscientious objectors. And, the other ex-servicemen, one of whom became a very close friend, were all much more distinguished than I was, as, I mean they were all DSOs and DFCs and that sort of thing. [pause]

*You started a...*

[24:00]

So, for a few years after the war I, as I say, I didn't think really very much about it, about its horrors. Then I gradually began to think back and it, it came to me. And I started to write a book about nuclear weapons and the horrors of them. And, I used to sit up until three o'clock in the morning trying to write this book, and I realised I couldn't do it, and, eventually I got the help of a group of other people, and we produced a book called *Defended to Death*, which was edited by a young graduate

student in Emmanuel, who turned it from what we had intended it to be, namely a book for people to read on the train, to a sort of PhD, heavily documented PhD thesis. And so, it didn't have the impact that we hoped it would have. But it... I think, I can't remember exactly what happened when, but, also about that time I tried to get a letter to the *Times* signed by the heads of all the Cambridge colleges, and I spent many hours arguing with heads of colleges trying to get them to sign a letter simply saying that nuclear weapons were a bad thing and ought to be abolished. And I couldn't get a single one to sign. So I descended to professors, and eventually got a letter to the *Times* from, I think a dozen Cambridge professors, one of whom was Martin Rees... sorry, Martin Ryle, who was the radio astronomer, and, he became quite a friend, and was one of the authors of *Defended to Death*. [pause] But it was extraordinary at that time what a difficult thing it was to get anybody here to see the wickedness of atomic weapons, and... [pause] Can you.....

[pause in recording]

*Mm, OK, I'll start it again now.*

[26:58]

We started, around that time we started a thing called Cambridge University Disarmament Seminar, and we used to try and get, and we did get, politicians and people to come and give lectures. [pause] And I was regarded in the college as a long-haired leftie, who was a bit crazy, I think. [pause] It's extraordinary how things have changed, and now opinion is, is, most people think I take a sensible point of view about these things, though they don't do anything about it themselves.

[27:49]

As well as... About that time too I got into an organisation called Ex-Servicemen's CND, which helped to make the Campaign for Nuclear Disarmament respectable. And, the Campaign for Nuclear Disarmament, which was frequently demonstrating at that time, was always pictured on the media as a lot of long-haired lefties with long hair, not only with long hair but with torn jeans and all that sort of thing. And we used to go along in our demob suits and our medals and ties and all that sort of thing, and demonstrate and try and make the Campaign for Nuclear Disarmament look respectable. I remember standing demonstrating with a group in Whitehall near the

Cenotaph and, with a group of about a dozen of us, and, a colleague, former colleague came by, said, [mimicking] ‘What on earth are you doing here?’ [laughter]

[29:10]

Anyway, as... I can’t remember exactly how it happened, but in the mid-Eighties I got involved in the Pugwash, British Pugwash Group. Pugwash was an organisation started originally as a consequence of a paper by Albert Einstein and Bertrand Russell emphasising the wickedness of nuclear weapons. And, that led to... I’m sorry. That paper was signed, that manifesto, it’s called Russell-Einstein Manifesto, was signed by, I think it was about twelve well-known scientists from both sides of the Iron Curtain, including a man, the youngest of them was a man called Joseph Rotblat. And, this was in 1955, soon after the invention of the, or demonstration of the hydrogen bomb.

[30:22]

Joseph Rotblat had been a, was a very important figure in my life, he became. He was a Pole who had happened to be on a postdoc in University of Liverpool when the war started. He had tried to get his wife to join him, but was unsuccessful for various reasons, unfortunate reasons. He tried to get her into, to get out through Denmark and through Holland and through Italy. She nearly got out through Italy, but just got to the frontier when Italy declared war and she was arrested. And of course he never heard from her again. He joined the Manhattan Project, and participated I think for a number of months but not for very long in the Manhattan Project, inventing the first atomic weapons. But, in 1944 it became apparent through intelligence sources that the Germans had given up trying to make a bomb. He had always thought it was an evil thing, but he felt it was the only course for the Allies, was to have a bomb themselves, to stop the Germans using it. And so in a sense he was the first person to advocate the doctrine of deterrents. When it became apparent that the Germans were not going to be able to make a bomb in 1944, he immediately resigned, and this caused a considerable stir. He was branded as a communist, and as a coward, and all the other possible evil names that he could be given. And he came back to Liverpool and took up his work there. And later got a job at St Bartholomew’s Hospital lecturing, turning his research from the physics of nuclear energy to its use in treating humans. [pause] But he became heavily involved... I mustn’t go on about Jo Rotblat, but he became heavily involved in the anti-nuclear movement, and he’s up there, and, ran an atomic train round big cities in England which put on

demonstrations at each town of nuclear energy and its possible civilian use and its use in war.

[33:53]

And, when I joined the British Pugwash Group he... He remained the, I should say, the moving spirit in International Pugwash, and International Pugwash became a meeting of international scientists interested in this issue, mostly physicists but not all, and they now have representatives in over fifty countries, and they have big meetings usually once a year, and they have many workshops on all sorts of things related to the use of science in international affairs, or in world affairs, but especially toward nuclear weapons and other weapons of mass destruction. When I first became involved in British Pugwash, Jo was I think chair of it, and, I got to know him at that time.

[35:03]

*What date did you actually join?*

Well I can't remember, I'm ashamed to say, but it was some time during Eighties, and I certainly went to a conference in Sochi, which is in the south of the Soviet Union as it was then, in '87.

*Right.*

So it was about that sort of time.

*Do you have to be asked to join Pugwash?*

I can't remember how I got in. But, nowadays the British Pugwash Group, which is probably the strongest group there is in the world, national group, recruits members, which is anybody who wants to join who is reasonably respectable, and, they pay a small subscription. And we have meetings in London or elsewhere on related issues several times a year. But we all... The prime aim of the Pugwash movement is not to have popular meetings, it's not a grassroots organisation; it's an organisation that tries to influence politicians directly. And the... I was Chairman of the British Pugwash Group for a number of years up till, I retired last year, and the present Chair, who has

enormous energy, is a man called John Finney, and he has started a parliamentary liaison group to liaise with politicians on the question of the renewal of Trident primarily, Trident submarines.

[36:58]

I want to say just one word about Joseph Rotblat. He was the most incredible man I ever met. I mean he was, he still retained his Polish politeness, and would shake hands with you every time you met, even at a conference, every morning he would shake hands with you. And, he was saintly. And had enormous energy. And, he died when he was ninety-six, a few years ago. One of the stories that's told about him which I think is, is certainly true, and is very illustrative, was that, when he was about ninety-four he was running up the escalator at, I think it was Oxford Circus, and he passed four, it was a group of youths, and they shouted after him, 'Hey old man, you shouldn't be in such a hurry at your age.' And he stopped and he turned round, and he said, 'It's precisely because I'm old that I'm in a hurry.' And, he went on working right until a few months before he died really. [pause]

[38:37]

And, he and I wrote a book together which was in 2005 I think, called *War No More*, and we were going to write another but, he had to drop out because he wasn't well enough, called *Bending the Rules*, which was about sort of immorality of institutions in society.

*Would you like to say a little more about those books?*

Mm?

*Say a little more about those books for the record.*

Well, the Rotblat one, the *War No More* one, was about how to stop war, and it dealt with the causes of war and how to, how to stop it. The *Bending the Rules* book was about how moral rules in our society, like, 'Do as you would be done by', the Golden Rule, get distorted in the institutions which are necessary for our society. So in business for instance car salesmen invert the Golden Rule to say, 'I am going to get the best I can out of you, because I know you are trying to get the best you can out of

me.’ And this is accepted on both sides. And, it deals with war and with politicians and so on. Excuse me.

*Yes, of course.*

[pause in recording – telephone]

Yah. Well, *Bending the Rules* really links up with my interest in religion, which I’ll come to in a minute. I think in a sense that’s all I want to say about my anti-war activities. I’m still active in the British Pugwash Group.

[40:40]

*Could you tell me a little more about what you do for British Pugwash?*

Well at the moment I do very little, but...

*All right, what do you did as Chairman.*

Well, I’ve told you I think. We run this group, it has a fair number of members in the UK, and we try and influence politicians. And that’s the main aim, not to be a grassroots organisation, like the Campaign for Nuclear Disarmament.

[41:09]

I’m also involved in a movement that Bruce Kent I think started, called the Movement for the Abolition of War. I think I’m president of it or something. But, I don’t... You know, I... Once one gets on this, there are a lot of things one gets involved in. And I think, war is such a stupid way of solving disputes, I mean, how can you settle a question by killing each other? And, it’s something I feel very passionate about.

[41:51]

*And so when you’re trying to influence politicians, how do you go about that, apart from meeting them at Pugwash meetings?*

Well by lobbying them, getting them to come and speak, arguing with them and so on. It’s not something I’m specially good at, but, others of my colleagues are good at it.

*And you as Chairman, did you organise all these meetings and seminars and so forth?*

Well I was chair of the...

*Yes, you were Chair of...*

...executive committee, so... [pause]

[42:27]

When Jo Rotblat was dying, I saw him, I think it was either the day or, I think it was the day before he died, he held my hand and he said, 'Robert, we think alike. It's like being one person.' And I felt he was sort of handing over his mantle to me as far as British Pugwash was concerned. And so I did my best for a number of years in British Pugwash, and in International Pugwash, but, I don't want to go into all that, because, other people will be writing the history of that.

[43:30]

Well the other thing in this part of my life was that in 1989 my Royal Society Research Professorship came to an end, and I had to retire. And coincidentally... Well in the same year, I was elected Master of St John's College. I could, I was on the Council of the Royal Society at the time, and I was asked if I wanted to stand as its biological secretary, but I decided that I didn't want to because I wouldn't be able to do any more research. But then, at the same, soon after I retired, I was elected Master of St John's College, which is a funny election really because, I hadn't done anything for the college. They'd made me a professorial Fellow a long time ago. I had a brief period as, well, ten years or so when I used to supervise zoologists, and about six or eight years as a tutor, but since 1963 I hadn't really done anything for the college, and they were just, they just very kindly made me a research... I can't... it's called a Title E Fellow and I can't explain what it is, but, it involves, involved a room in college and meals and everything, but no salary. Anyway, the... My predecessor as Master had been very right-wing, and we disagreed about nearly everything. We were quite good friends, and we always used to, you know, not in any way enemies, but we absolutely disagreed about everything. Now he wrote the history of the, I suppose of Enigma, and the, Bletchley Park, but I think it was of British Intelligence through the war. And, he believed passionately that the more nuclear weapons we had, the better, and I had a contrary view. So, we had a debate in front of the undergraduates in the

end, not a debate with a vote but a, we argued in front of the undergraduates, which was I think a fairly unique thing, I don't know whether it's happened since.

[46:39]

When I came up for election, I didn't want to do it actually, but, my wife eventually persuaded me that I should allow my name to go forward. And I think I was voted in because I was seen as a... I was voted mostly for by the younger Fellows because I was seen as a contrast to the right-wing and rather old-fashioned way in which the college was seen to be being run at that time. I also had the illusion that as Master I would be able to carry on with some research. That was a total illusion, because I got involved in raising funds for...

*For the library.*

...a new library. And, that came at a time of financial recession, and I got very few major grants for it, but I did about sixty meetings, over sixty meetings, up and down the country and in the States and Canada and France. And I quite enjoyed that, in a funny sort of way. They were, I used to give them a couple of drinks, and say a little bit about how much we needed money to build this new library. Because we hadn't got a proper library for undergraduates to use.

*You have mentioned this before.*

I have.

*Yes.*

Oh I've talked to you about that. I can't think what context I mentioned it in.

[48:34]

*Well we were getting back to religion I think.*

Oh yes. OK. And, well while I was Master, I... [pause] When I... While I was on a troopship in the war, did I, have I mentioned that? No.

*I'm not sure, but go on please.*

While I was on a troopship in the war at one stage coming back from training as a pilot in South Africa and Rhodesia, it was a very long journey via South America, and we had to watch for submarines. And I used to watch with another young man who was a passionate atheist. And at that time I was, I had been brought up as a Christian, evangelical, somewhat evangelical Christian, and, I, as with so many, had been losing my faith as a teenager, and I was, but still a mild Christian. And we talked for about twelve weeks as we watched for submarines and other things. And when we got to England he was a Christian and I was an agnostic. It was a sort of double conversion. And we, he sent me his, all his agnostic books by H G Wells and so on, after he got back, and he said, 'I shan't need these any more.' The Thinker's Library books. And, then he disappeared into Bomber Command, and, I, I never heard of him. Very nice. I expect he died. [pause]

[50:28]

So, one of the things I decided when I was Master for five years and subsequently was that I would try and come to terms with this religion business, which I had put on the back burner when I was quite young. And, when I was in my... well, at that time, when I was in the Air Force, eighteen, nineteen, must have been, I first finished off a job I wanted to do by writing a book on human personal relationships, and how they functioned. It was called *Relationships: A Dialectical Approach*. But then I started to write about religion, and I wrote a book in, it was published in 1999, called *Why Gods Persist*, and, it gave the, the views of a biologist, and I, in working with children I had dabbled in psychology, and I read a little bit anthropology. It put these things together to argue that you could account for... that religion consisted really of six elements, structural beliefs, such as the Trinity, which are outside time; narratives, which are sort of, expand the structural beliefs, like the Gospels; ritual; a moral code; religious experience; and a social aspect. And, what I was trying to say was that I believe that each of these you can account for in, as consequences of human nature, and that you don't need to postulate a deity. Most important in my view is the question of the moral code, and religions deserve great credit for having purveyed that down the centuries. And I wrote another book called *Why Good is Good*. [pause] And, that's really where I've got to. I've just done a second edition of *Why Gods Persist*.

[53:22]

*Just tell us a bit about Why Good is Good.*

Well that, you, you, you can... It isn't, it's still controversial, but you can account for why... It... Let me start again. It's easy to account for why human beings are selfish. It's more difficult, in evolutionary terms, because those who are selfish do best, but it's not so easy to account for why we are pro-social. And it's easy to think that man is inherently bad. And I contest that view, because I think we're also inherently good, and that we get this impression because the newspapers report murders and muggings and so forth, and not all the 101 nice things that people do every day. And, it is possible, although it's still controversial as to exactly how it happens, to account for man's pro-social implications. And morality, in my view, holds the balance between these two. You've got to be a little bit selfish, otherwise you would be done down by easy-riders. But you've got also to be pro-social to members of your own group, because otherwise the society would, if everybody was selfish, would just disrupt. And it's important to say that's members of your own group, because it accounts for xenophobia. But I think it's important to say that this doesn't, is not saying that biology is right, and that what we need to do today amongst other things is to see that we've got to embrace the whole world in our pro-sociality, not just the members of our own group. [pause]

[56:04]

*So the two things link, don't they, the religion and the conflict and wars and...*

Yes, they do.

*Yes.*

They come together very much. And, I, I got into this in part because you don't have to get grants to study religion or war, and it's a very, I've been very lucky to have got into this in my retirement, because I haven't been involved in trying to get grants for anything. And I, my involvement in the war thing, I've edited a number of books on that. But, my main interest in the last few years has been in religion, and, it's a tremendously exciting field at the moment. There's a lot of people interested in it, in,

especially in the States. And there's a growing department in Oxford in the anthropology department there under Harvey Whitehouse.

[57:10]

*Can you outline some angles that these academics are following with regard to religion?*

Well, most people are interested in the cognitive aspects of religion, how... Let me just give you one example, because I can't off the cuff go through the whole thing. But, if you are walking through a wood, and you hear footsteps or, or bushes, you immediately think there's someone there. And this is what, we have a, all humans have a propensity when they hear a strange noise to think it's a human being who might be dangerous, or an animal who might be dangerous. That's one thing. So that, it's very easy to see how gods were acceptable, because, they account for anything that happens. When a volcano erupts, you say that Zeus is angry. [pause]

[58:28]

The theory of mind in psychology which is concerned with how we interpret other people's behaviour in terms of intentions, so that we interpret these noises that we hear in terms of somebody intending to do something, and Pascal Boyer pointed out that gods are all, they all have... they're not very improbable, but they're somewhat improbable. So that a god is a human being. I'm not talking about Christianity at the moment. Most gods are humans but have a mysterious power of being everywhere at once, or, in the same way as a ghost is a human being but can walk through walls. So that the human, the functioning of the human mind enables us to assimilate the idea of a god relatively easily. [pause] And, the morality, as I have just mentioned, also comes from the necessity of living in a society, in groups.

[01:00:04]

What I am dubious about is the recent work of Richard Dawkins and others who say that because the world wasn't made in six days, because you can't walk, Jesus can't have walked on water, because you can't feed 5,000 people on a few loaves and a few fishes, then all religion is nonsense. And I am unhappy about that, and I can epitomise it in this way. A few weeks ago there was a programme on the television in which they were interviewing the families of people who died in Iraq, and one after the other they said... not one after the other, but many of them, said, 'He's up there,'

and pointing upwards with their finger. Or, they said, 'I shall see Him soon.' And it seems to me that we have no right to take that source of comfort away from people who find it useful, until we've got something better to put in its place. I know that in the agonising time when my brother was missing and we didn't know what had happened to him, my mother found great comfort from religion, and my father, who was an agnostic all his life nearly, or who lost his faith at Cambridge, in his last few lonely years he turned to the Bible and got great comfort from it. So I think we've got to be jolly careful what we're doing, and, I'm trying to see how we could construct a society which, in which morality was central, but gods weren't. And it means a society without heaven and hell. And I think there are other reasons why people can be persuaded to be good.

[01:02:40]

*Where do... do you personally believe in something up there?*

No.

*No. No, but...*

I... I mean I, it's a silly argument because, you can't prove it and you can't disprove it.

*Exactly, exactly.*

So... I don't think, I don't spend time on that. What I do want to spend time on is, is how to construct a world that's a bit better than the one we've got today.

[01:03:11]

*The moral codes which are so important to us, I mean religion has a lot to say about that doesn't it.*

Well, I think that, all religions have certain, have a moral code, and as far as I can see, the great majority of them if not all of them, the Golden Rule is basic. Because you can't have a society without the Golden Rule. And, in a meeting of churches in Chicago in the early Nineties, they had about 400 different churches represented. The

only thing they could find to agree about was the Golden Rule. They're also, societies have their own specific rules, one of which is, you must... some of which involve, you must worship the Lord or whatever it is, you must submit yourself to the deity, and others are specific to the society in question. So that for instance, in the Ten Commandments there's a society... there's a Commandment, 'Thou shalt not covet thy neighbour's wife.' Well, that would be meaningless in a society that didn't have an institution of marriage. And there are quite a number of societies, there's a, a South American group, the Aché, in which, they believe that the foetus is fed on semen and the more... Well, I'm slightly caricaturing it, but, it doesn't matter where that semen comes from. And, there are groups in South Africa that don't recognise... in... sorry, in Asia, South-East Asia, and China, which don't recognise biological parenthood, but only social parenthood. And the women live with their brothers who become social parents to the sister's children. And the sisters and the biological parents are met by the women outside the house as it were, and they get pregnant in that way. But then the brothers look after them.

[01:05:58]

So, what I'm saying is that, some societies are made in very different ways from our own, and we mustn't think that all our, all our moral rules are ubiquitous. I do think that the Golden Rule is probably basic. And it's very interesting the way in which things that are ubiquitous, for instance, parents ought to look after their children. Well parents want to look after their children, in all mammals as well as in humans, but it's also become a moral rule, because, if parents don't look after their children, we think they're evil, or wrong or something. So, a lot of these rules are... It's very interesting, fuzzy boundary between biology and society.

*Yah, that's, that's very interesting.*

[01:07:14]

It is interesting, and I've been a very lucky man, all the way through my life, and that's what I'd like to finish by saying. Because I, I, I came through the war, I had a very good upbringing, I came through the war. I got out of the Air Force early and came up to Cambridge before most ex-servicemen. I got a job at Madingley just as it was starting, in the so-called Ornithological Field Station, and it sort of grew up round, round my interests. Bill Thorpe, who was the boss, let me do what I wanted to

do. And, Niko Tinbergen had influenced me while I was a PhD student, that was a bit of luck, he just came to England when I was there. And, I've been lucky to be at St John's which has been enormously kind to me. And it's a great privilege still to be able to have a room here and to have lunch and talk to interesting people every day and so on.

[01:08:29]

*I've got one sort of question coming out of all this. I mean, how much does your later work on religion and conflict, can you see those elements in your previous studies, of birds, of monkeys, and, coming into humans?*

Well it sounds a very precious thing to say, but I, I... and I don't, I, I suspect everybody's the same, but I have always been interested in doing good in the world. And, I remember my mother-in-law of my first marriage, which was, we had four children, but it wasn't a great success, and the two older sisters in her, in the family, were both married to Oxford philosophers, and I was regarded as a very inferior being as a biologist. Her mother saw me as rather dangerous. And, her mother could never see, I remember trying to explain to her how studying bird behaviour was going to put the world to rights, and she being very scornful. And I can remember having conversations with the, there were five history dons when I was first a fellow of St John's, and, they all went on to have very distinguished careers. But they used to tease me by saying, 'Here's young Hinde, he think he's going to put the world to rights by studying chaffinches behind a pub in Madingley, and we know, we historians, that nothing will ever put the world to rights. And, in a sense, that has been a guiding principle, and that's why I moved from birds to monkeys with John Bowlby, and to schoolchildren because I thought that was more relevant. And hence these other things. It sounds very pretentious and precious, but... and I think most people would like to feel they were putting the world to rights. Some don't. But... Does that answer that question?

[01:10:55]

*I think so. But I was really looking for a more... Yes it does answer it. But I wondered if there were things in bird species to do with, obviously not religion in the*

*terms that we think about it, but doing good to other birds, and conflict, doing harm to other birds.*

I don't believe in direct parallels between animal behaviour and human behaviour.

*Right, OK.*

And I think that's very dangerous. But I do believe in abstracting principles from animal behaviour, and seeing how they apply to the human case. And that is relevant to what you were saying about religion, about evolution, that we can extract principles from animal behaviour, and see whether they could account for the nature of human beings as they are. And mostly they do, but sometimes they don't. And for instance, the most viable view I think about human, pro-social behaviour, is that they, that it evolved in human groups because, the groups competed with each other, and the groups with more pro-social individuals within them were more likely to be successful in competition with other groups. It seems that that mechanism couldn't apply in, in natural selection of genes in animals, but could apply in cultural evolution where the transmission of the behaviour is not in the genes but in tradition, roughly speaking.

*Right. Right. Yes, I think, that's a good, good way of dealing with it.*

[01:13:16]

You asked me about international awards and, and things. And, I think it's very clear in academia that a great deal, not everything, but a great deal depends on who you know, and, if people get into the Royal Society, anybody who gets into the Royal Society deserves to be there, but, lots of people who deserve to be there don't get there, and just, principally because they don't know the right person to propose their names. The other issue is that, there are a lot of, there's a bell curve of merit, and, there are a lot of people at the top of the bell curve, or a number of people, some of whom get recognised and some don't, and it's, at the top, flat part of the bell curve, there's very little difference in merit and a lot of luck I think in, in who gets... I mean I have honorary degrees in various universities because I happen to know people there.

*Well I think that's very modest of you, but your work has been recognised in very many areas of the world, so, that's, that's good. And.....*

[pause in recording]

[01:15:00]

What was it about?

*Well, what are you involved with at the moment?*

Oh. I do feel that the, my interest... I've been very lucky that my interest in war and in, especially in ethics, are the most important things that I've done in my life. But I also recognise that I have come into it as an amateur, I haven't really got the ideal training in either cognitive psychology or anthropology to do the sort of job I would like to do, and that I, I've got to be careful of going on writing things that are not of top quality, or that I don't think, see as top quality. So, I'm not writing much more, I don't think. [pause]

[01:16:04]

I mean, eighty-six, I don't... with cancer and everything, I, I don't know how much longer I've got, and I don't feel... I'd like to write one more, two more papers, one a popular one about religion, and one about the six subdivisions of religion, suggested to me by Harvey Whitehouse. But, I don't want to write anything big any more on that. I shall continue to be involved in war, anti-war organisations, especially Pugwash and, more, the Movement for the Abolition of War. But again, I'm an amateur in it, I'm not going to be involved full-time, and, what I can contribute is mostly, a certain amount of enthusiasm. It's, I think that, well, it is a mistake, which I've perhaps made already, in writing things which, when inflicting them on the public, when one's no longer really capable of, of doing a good job.

[01:17:27]

*Would you like to comment on where you think these movements are heading?*

Well I'm sure that, as far as religion goes, it will be a long, long story, because, religion is so well established. And we've got to find... I mean my last, the new edition of *Why Gods Persist* is, the most important part is outlining how we can have a new sort of morality without religion, and I really think that's terribly important.

*And so, how do you think we can?*

[pause] Mm. Well, by an emphasis on the Golden Rule, by an emphasis on what already exists, namely that we have a propensity to punish people who don't obey the morals of our society, and to reward those who do. And that's all, is already well documented. And, that's the sort of way in which it must go, and can go. So we don't really need heaven and hell. And we already have very good mechanisms for, for recognising deception and so on.

[01:19:13]

*And... OK, religion. What about war, where do you see these organisations?*

That, I, I'm not prepared to say anything about, because I think it's a terribly dangerous situation. And just at the moment the British Government is deeply involved in financial issues. It can't afford the social services, it can't afford the conventional forces that we have now, and it's thinking, almost certainly... well no, thinking of embarking on making, building four new nuclear weapon, armed submarines. And it's totally ridiculous, there's no possible enemy which they could be used about. And most service people are against it. And it's a matter of prestige that the governments, politicians tend to think we shan't have a seat at the top table if we don't have nuclear weapons. Which is just total twaddle. [pause]

[01:20:27]

The most important treaty, the Nuclear Non-Proliferation Treaty, we're not meeting our obligations by disarming as rapidly as we could, getting rid of our nuclear weapons I mean, not disarming, as rapidly as we could, and neither are other societies. Whether Obama will, how much he'll be able to do, I don't know. But they're all, you can't see into the future because of the uncertainty of political moves, and as long as there are major parties that are, have masses of nuclear weapons, you can't blame other societies for wanting to have them.

[01:21:20]

*Final question, Robert. Where is ethology going now?*

I think ethology is, has done its job. Its message of the, that you must start with the observation of, if you're studying behaviour, you must start with the observation of what happens in natural societies, natural environment, has been taken up in all sorts of... and of the four questions, four whys that I outlined earlier, causation, development, function and evolution, have been taken up by many other scientists. I mean, you can see this in what we've discussed already, like, in religion, we're talking about what would have been useful in the hunter-gatherer society, and, so the function and evolution questions come together there in the development of cognitive abilities in present-day man, and how those develop in the young child. It all comes together. And in many other... I wrote a book called *Ethology* at one time, which talked about different disciplines and how ethology had influenced them. I don't think ethology... I, my view is that ethology as such is no longer especially interesting, because, answers to all those four questions have become more specialised answers, and the functional question is now in behaviour, ecology and so on, and, there's not been... It's all there, it's all happening, but not under the name of ethology.

*Well that's interesting. Thank you very much Robert.*

And thank you.

[End of Track 7]

[End of Interview]