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Dame Anne McLaren DBE FRCOG FRS in interview with Dr Max Blythe Oxford

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MB Dr Anne McLaren, you were born in London, in April 1927...

AM That's right.

MB ...into a fascinating family, which you might just introduce for me now.

AM Right. Well, I was the fourth of five children, so I have one elder sister, two older brothers and a younger brother. My father was a businessman.

MB He was a great industrialist?

AM Rich. Yes, with all sorts of interests in coal and china clay and John Brown shipyard and steel, and all that sort of thing. Did a lot of travelling, all over Britain. It was before the days when people did so much travelling all over the world but he used to do a lot of travelling all over Britain, probably two or three sleeper trips a week.

MB Yes, so he was massively involved in his travels and business. So you saw him less than mother?

AM Yes, but he was an important person to me. My mother had a big circle of literary, literary friends, literary artistic friends and she used to take me around with her a lot. She used to take me to ... well I suppose she went shopping, she went to visit friends, she went to dress shows though she very rarely bought anything. And I remember she once took me to a fascinating place which was a sponge warehouse. It was somewhere in the East End. And somebody had given her this huge sponge and she needed to get it cut up into bits, and so we went to this sponge warehouse, up little garret stairs, all these sponges lying around.

MB So that's an abiding memory?

AM Well, I've a lot of memories like that of childhood. I was very lucky; I had a very varied and rather rich childhood until the war started when I was twelve.

MB Let's just keep you back a bit though, and to those family years in London, because the childhood kind of breaks into two parts. There is the before Wales and then there is the Wales. So we'll stay with that before Wales part...

AM Well, there was school of course.

MB I think ... your early memories, I was going to take you back to early memories though. I think you once said the earliest memory, we tried to tease it back, was Hampstead Heath. Is that right?

AM Yes, I think there must have been one birthday, I don't know which birthday it was...

MB Picnicking on the heath.

AM ...picnicking on Hampstead Heath. Yes, I remember that.

MB What we'll put into context as well while we're, while we're getting into the foothills of family life in those early years, where was the family home? Where was the house?

AM In London. It was in the West End near Hyde Park - South Street. And then there was the house in Wales, Bodnant, where we went for every holiday. Easter, summer, Christmas - year after year.

MB So the family would all pack and go, *en masse*. On the train?

AM From Euston station, met by the station master in his top hat, and our thirty seven cases, trunks, would be counted into the guard's van and then counted out the other end.

MB Really, and then some kind of coach or carriage to take you, to take you to Bodnant.

AM Car. I'm not that old, Max!

MB I just thought it might be that wonderful, Anne, just getting into a world that is pre-war and quite remarkable.

AM My parents, my parents would have gone first class on the train, and the children and the nanny would have gone third class. And in those days there wasn't a second class. It was only first and third class, quaintly!

MB Did that rankle at all, that big, that division, that class division?

AM No, I was aware of it, it was...

MB Because you said, once when we talked, that when you went to parties though, and nannies had to stand behind children who sat, that that did make an impact.

AM Yes, that's true, that's the...

MB The social injustice of it.

AM I think I was, I think I was quite keen on equality, and certainly the contrast between whatever nanny was around. And I guess the one that had most influence on me was a very interesting Methodist woman who came when I was nearly seven and my younger brother was born, so she came to be his nanny. And she wasn't really my nanny because by that time I was, you know, seven and didn't need a nanny anymore.

MB But she had impact?

AM Yes, yes, I used to go with her...

MB Do you remember what she was called?

AM Yes, she was called Miss Sankey, Margaret Sankey(?). She used to take me to Methodist Central Hall in Kingsway and I heard Donald Soper preach there, and...

MB That must have been quite something, because he was a powerful preacher.

AM He still is.

MB Yes, that's right.

AM Yes, yes, at a very advanced age.

MB But then must have been his heyday.

AM Yes. I don't remember anything he said, I'm afraid, but I remember the experience. And she was an enterprising person because in the thirties she used to take holidays abroad, which was unusual for, you know, somebody of that sort of social status in those days. But she went on a cruise to Norway; she went off to Austria. She saved up all through the year, and I knew that she had at one time like a hundred pounds in her savings account. But I also knew that my parents would spend several hundred pounds on a single piece of furniture or a picture at an auction. So I had these sort of ideas in my head that there were different levels.

MB As a young, as a young girl.

AM Yes.

MB You were also quite a strong reader, from very early on. I mean, I'm trying to picture...

AM Yes, yes. No, I learnt to read early.

MB .. .the young Anne McLaren.

AM I learnt to read, yes, before I went to school.

MB So you were deeply into reading?

AM Yes, yes. No, I read voraciously all into my teens.

MB I think you said at one time when we talked that to some extent you made friends, but there was something a bit solitary and you could retreat into self very easily.

AM I loved, I liked having single friends as it were. I didn't like parties, I didn't like social occasions much, but I usually had a friend at school.

MB There were many social occasions in the home though. I think musicians visited, and there used to be parties and...

AM Oh, that's different. That was adults, that was adults.

MB You were kept...

AM No, I was okay with adults.

MB That was alright.

AM No, it was, it was social occasions, parties, children's parties I didn't really enjoy enormously. But I went to a whole variety of schools. I think I went to some sort of outdoor kindergarten in Regent's Park. I think, in the '30s there was a great feeling about the outdoors.

MB The fresh air.

AM The fresh air.

MB The Newman philosophy[1], wasn't it?

AM That's right, I think it must have been that because I remember this outdoor kindergarten in Regent's Park, and I was just learning to read then, but it was pre-school. And I have two recollections of that. One was the rage with myself that I felt at being so stupid because I had a reading book, and I could actually read quite well by that time, but this reading book had the syllables separated with hyphens in between and there was this word 'car', and then a hyphen, then on the next line, 'rot'. And I couldn't make out the sense of that, and I asked a teacher and she said 'Oh that's carrot.' And I just kicked myself for not having seen that. And my other recollection at that school was more rage with the teacher because there was some child being mercilessly bullied and hung upside down on a climbing frame, you know. And I ran off and reported that this was going on and was told very sharply that I mustn't tell tales. That seemed a little harsh.

MB Some stern lessons, in a way. Just coming into the, staying with the family home for a time. We've said father was a distinguished industrialist, with a lot of interests and quite entrepreneurial. We've not quite talked about his industrial empire. We might put on the map, I think, the Brown firms in Sheffield and Glasgow, is that right?

AM Yes, that's right...

MB That's steel?

AM ...John, John Brown's in Glasgow, Clydebank, which was the shipping, and Firth Brown's in Sheffield, which was the steel.

[1] This refers to the ideas of Sir George Newman (1870-1948), the first chief medical officer, who set up a scheme for the medical inspection of schoolchildren, and advocated open-air schools for delicate children.

MB Right, and he was chairman of those companies. Also into china clay?

AM Yes.

MB Lovering Pochin, English clay.

AM English china, that's right. That arose because HD Pochin[2] was my greatgrandfather.

MB Right, mother's side?

AM No, father's side.

MB Father's side.

AM Father's mother's father. And he was the only scientist in my lineage, as it were, because...

MB Right. But you said that you, once when we talked you were very enthusiastic about this Henry Pochin because you said that 'One day, when I've got all the benches cleared and I've retired a bit, I'm going to write, write his life story.'

AM Well, that's right. I've just come across a whole lot of diaries of his and they're fascinating, and I want to get them all transcribed.

MB Where did you locate these? In the family home?

AM Yes, yes.

MB So this is a, this is a treasure.

AM It is indeed, yes. And, as I say, I haven't done anything with them yet, but...

MB Would this be a good time to talk about Henry Pochin?

AM Okay, yes.

MB I'm as fascinated as you are by this man.

AM Well, he was born I think to a relatively humble home, as they say, and was apprenticed to a chemist in Manchester. And he was educated in chemistry, and he was very fortunate because he made two inventions at the same time.

MB Anne, can I just ask one question? I think this was very much self-educated, this apprentice druggist, really grabbing books that he could get hold of and really becoming self-taught? Is that, that was this...

AM Probably, but I don't know, I don't know. Yes, probably. But he made these two

[2] Henry Davis Pochin.

inventions. One was clarifying resin, which is what enables us to have white soap...

MB He changed the soap industry.

AM ...pink soap, green soap, blue soap. And he sold that invention and with the money that he got from that he was able to exploit and work himself the other invention, which was the china clay invention. Because, I think, he discovered that if you put china clay into paper manufacture, you then get that nice glossy stuff that all your photographs are printed on. And so he went into china clay...

MB This was, this was Henry Pochin?

AM Yes, it was used...

MB And he eventually bought up china clay.

AM He bought up these mines in Cornwall because he now had much more use for the china clay products than anybody had had previously. In fact, there was some sort of cleaner, scouring powder, also that was made out of the china clay, and they threatened to call that 'Pochin's Patent Panshine'.

MB He wasn't going to go with that?

AM And he said 'No, no, won't have, won't have 'Pochin's Patent Panshine'.'

MB He doesn't sound that sort of, that kind of a person.

AM No.

MB No, no. I'm looking forward to this biography that you create! But he was the founder of the family fortune?

AM He made the money and, as people in Manchester did, he went for his holidays to North Wales and climbed on the mountains, and so when he got rich he bought this estate in North Wales.

MB This is kind of late Victorian times?

AM Yes, that's right, 1860ish. Yes, 1870ish. Mid-Victorian.

MB Mid-Victorian, yes. And so Bodnant came into the family in that, at that time. Was he a horticulturist? Did he develop the gardens initially?

AM He planted a lot of trees, great trees, and did a certain amount. And this has all been written up by my father and my elder brother who were keen on the garden.

MB Oh, that's right. That part of the story...

AM And then his daughter... He had just the one daughter who inherited the estate, and she and my father together, mother and son, did most of the garden construction.

MB Yes. Your father had a massive influence there. This is in the Conway Valley - we'll come to it in due course. You've got another distinguished great-grandfather as well. We've got one on the record now.

AM I had a grandfather who was head of CID - Sir Melville Macnaghten - in London. Ah, you mean Duncan McLaren, you mean Duncan McLaren!

MB Ah, indeed. Yes, Provost of Edinburgh.

AM That's right.

MB Of great importance.

AM Lord Provost, yes.

MB Yes, fascinating man...

AM He did come, he did come from a poor crofting background, I know more about his background. He came from a poor crofting family, went to work in a bookshop in Edinburgh, and he was certainly self-educated by reading books, reading the encyclopaedia in the bookshop. And, you're right, he went into local politics and eventually became Lord Provost. And his son married the daughter of Henry Pochin, so that's that connection.

MB Who was it who married...

AM And his wife... He had three wives in fact. They kept on dying because they had so many children. But one of his wives, who was the wife who was the mother of my great-grandfather, the mother of my grandfather, she was the sister of John Bright. So there was a political connection there. John Bright was an important person in the family at that time.

MB Yes. That John Bright link must have been phenomenal. I mean, he was somebody from a working-class background again in Rochdale who was really going to take politics into a, into a new orbit.

AM And that was the branch of the family that gave rise to the Quaker cousins that I stayed with later in Oxford!

MB Who we'll come to in due course. AM So it all links up.

MB But not, not at the moment. Anne, we've taken father in, we've taken a little bit of mother's family background in, can we now take in mother? Tell me a little bit more about her personality.

AM Beautiful... beautiful, tall, highly intelligent...

MB She was the social hub of the home? She really did make you...

AM Yes. Married very young, married at eighteen, had been rather a good violinist,

when she married sold her violin and bought a fur coat with the money. I don't think she ever played the violin again. Had her first child, a girl, at the age of nineteen, didn't enjoy the experience at all, knew she had to produce a son, so got pregnant again having taken advice as to how to determine the sex of the next child, and duly produced a son. And the years passed and eventually she decided she would like more children, which was fortunate for me.

MB But this led to this incredibly spread out family that you belong to. Your sister is sixteen years older?

AM That's right. There were twenty-three years between the oldest...

MB And your youngest brother.

AM ...and the youngest, yes, yes. Because there were the two early on, and then after that... I think those two rather squabbled among one another, and my mother found that irritating, and so she thought after that she'd have just one at a time.

MB Yes. I think you said to me at one time that that spread left you a little bit isolated anyway, because the boys had already gone to public school, sister was too old really in some ways to have a closeness with, and a brother seven years down the line, a little bit...

AM I was close to all of them, but it wasn't the sort of closeness that you have with children of your own age.

MB Perhaps we could talk about that life of the girl, in London, just for a few moments. This relatively close family, no relatives coming in...

AM No, no cousins and so forth.

MB ...but a kind of circle of people like the Sitwells[3], HG Wells, a range of literary figures - I'm just throwing in the ones I can manage - coming into the picture on a regular basis, to supper parties and evenings in the home.

AM Yes, lunch parties, yes.

MB Lunch parties, yes. And you, kind of a little bit peripheral to that, but looking in on this...

AM For me it would have been lunch parties. If there were supper parties, I'd have been in bed, sol...

MB But you were allowed to come in and be part of lunch parties?

AM ...but lunch parties I was part of, oh yes.

MB And so you got to know people like, like Wells

[3] Osbert and Edith Sitwell.

AM Yes, yes. And I wrote out place cards and that sort of thing.

MB Right. I think, talking of writing out and being a bit organising, there was a bit of an organiser in you because you said that 'I'd like to take father's mail and open it all and sort it out,' very early.

AM Yes, I used to have breakfast with him and I opened his mail. And I think he very much enjoyed my company. When I was quite small I used to watch him shaving in the mornings, and he used a cut-throat razor and you cleaned your cut-throat razor in those days on a piece of sort of toilet paper tissue, not the soft stuff we have now but, you know. And he showed me how one could fold the toilet paper and make little cuts in it with the razor and then open it out and you had a beautiful mat with all designs, patterns in. He was that sort of person.

MB He wasn't a person that everybody got close to, though. I think you were, of the children you were the one to get closest to this man, who could be quite aloof.

AM Yes, that's right. Well, when the, when my elder brothers and sisters were small I think he was much more involved in his business things and much more of a strict, remote sort of figure for them. They were, they were frightened of him, which I never was.

MB You were not?

AM No.

MB You developed a curious relationship, really an ally, and when you were in Wales you'd walk round the garden... So this was a nice relationship, this was very close.

AM Yes, yes. And we'd drive round and look at different farmers and things, and I was fascinated because I noticed that before he, say we were going to meet somebody and he would say something to them, that he always rehearsed what he was going to say under his breath while he was driving before we got there, which suggested that he was rather a shy man and didn't find it all that easy spontaneously.

MB Yes, yes that's a fascinating character. And by the time you were seven he'd become second, the second Baron Aberconway.

AM That's right, yes, yes. His father died when I was seven, yes.

MB Yes, we haven't said anything about his father. We've talked about more distinguished ancestors, but his father was also a very significant industrialist, and an MP, QC?

AM I don't know much about him.

MB Right, it's a kind of gap in the story, isn't there, really? Because of the Pochins, there's so much excitement earlier on.

AM I think... Well, I think his wife was a very dominating character, and I think he rather

faded into the background. But you're right, he was an MP.

MB Yes. And he established the link with the Firth Browns, and the industrial empire - he created it initially.

AM I don't know too much about that.

MB Right. I did just have a, have a little look at the records Anne so I'm slightly ahead, because we'd not ... it was curious that we'd not talked about him too much before and you've explained that now. Yes. Sister, sixteen years older, did have an impact.

AM Yes, oh yes, I was very fond of her.

MB Did have an impact because she tried all her boyfriends out in a way by saying 'This is what he does.' She kind of looked for your approval, you as an indicator paper really...

AM Well, she used to bring boyfriends home, and so of course I met them. And, in the way that things are, the boyfriends I suppose felt that if they could get on my good side, my good books then that would influence things with my sister. And so there was one called Morsten Lewis(?) who painted pictures for me. And, oh, I helped her with them. One of them ... was very keen on Greek literature, and so she learnt some Greek and I had to listen to her Greek poetry and check that it was correct, and...

MB But that didn't last long, she was constantly moving to new boyfriends...

AM That's right, yes, yes.

MB You got involved with one, now I'll just have to [get] into this story, you got involved in a child act, a memory act.

AM Oh yes, yes.

MB But this is, this is curious. Tell me about that.

AM No, she was highly intelligent, a very intelligent woman. Brilliant bridge player, scrabble player... Anyway this boyfriend had a sort of connection with some community in the East End that laid on shows for old age pensioners, that sort of thing. And so my sister agreed to go along and put on a bit of a show in one of his dos, to please him. And she took me along with her, and she rehearsed with me a memory show. And I can't exactly remember the details, but I think members of the audience held up objects and she asked me 'Is it this, is it that?' And it was something like whatever object after the black thing that she asked me about was the correct one. It wasn't, it wasn't very sophisticated! But it was highly successful.

MB But it wasn't approved, I think, by the family, was it?

AM Well, unfortunately my sister caught impetigo, and that was very unpopular with my mother, and so that put an end to those visits to the East End.

MB Right, no more East End.

AM Impetigo is a nasty thing.

MB Hmm. A brother also got you involved quite early on in the ballet scene in London in the, in the 1930s.

AM Yes, he used to, he used to take me on some Saturdays to see the Russian Ballet in London, and other Saturdays he'd take me to see Arsenal playing football, both of which I enjoyed enormously.

MB A golden period for both.

AM Yes, absolutely.

MB The Russian Ballet must have been superb.

AM Oh, it was.

MB Who did you see dance?

AM Toumanova[4], and Buchinska(?). Oh, the lot, you know. Beautiful, yes.

MB This must have made you want to be a dancer.

AM Well, yes indeed. I went to ballet classes, I went to Ballet Rambert, and if it hadn't been for the war I would have gone on with ballet, though I wouldn't ever have been very good. But I did enjoy it enormously.

MB Perhaps we should put your brothers, we've mentioned sister, brothers in perspective now, because there are three to come into the story. Two who were senior to you, who were away at school, but a brother who is most senior taking you to Arsenal and taking you to the ballet. Their names?

AM Charles was the elder one, John was the next one and my younger brother is called Christopher.

MB Right, and your sister's name we could...

AM Elizabeth.

MB Right. So the family's all there now. I'm just looking at other things that happened in that period. One of the things that fascinated me is that you became, for a short time, involved in a film.

AM Oh, the HG Wells film, 'Things to come'.

MB In 1935?

[4] Tamara Toumanova.

AM Yes, round about that time.

MB Yes, I think he'd published that in '33.[5] And that was 1935?

AM Yes, yes, it was. Alexander Korda made it out of the old Elstree studios. And my mother thought that she would play this joke on HG Wells, because she'd seen the advertisement for small girls to take this part. And she didn't, she didn't say anything to HG Wells, but she took me along for auditions and she coached me a little bit beforehand, how to act a little things and what to say, and so forth. And I got the part. And I think I had something like five days filming, I'd have been seven or eight, I suppose, and I earned five pounds a day, which was duly banked for me, duly banked for me.

MB You didn't go for that audition, I think, under your own name?

AM I think I did.

MB Did you? Oh, right.

AM It would have been my mother who wasn't under the name of, she'd have kept her Christabel McLaren name.

MB Right. She was very close to Wells; they were very close friends. And how did that film turn out? I mean, was that something that...?

AM I think it's a great film, I think it's a great film. You can still get it on video from your local video shop.

MB Really? And you see Anne McLaren for thirty seconds!

AM Well, only about thirty seconds. I think each time they redo the film they cut out a little bit of me. But child actors were so artificial in those days, and it's really rather embarrassing.

MB But it's a nice clip, you're talking about the future...

AM Yes, yes. Mice...

MB ...and video.

AM ...because they sent round the moon. Oh yes, there was the video screen. My great-grandfather in the film, who was an actor called Charles Carson, he was teaching me history. It was a history lesson on this video screen, and we saw the rocket going off with the mice in, and I said 'Mice that have gone round the moon!' And then he said 'Yes, and in those days, you know, it was dreadful back in those early days because people had awful diseases. They had things called colds, and they sneezed.' 'Atishoo', I had to say, 'Atishoo, atishoo.' Deeply shocked.

MB Anne, talking about mice round the moon, though, I mean you're going to send

[5] HG Wells, *The Shape of Things to Come*, London: Hutchinson, 1933.

mice on far more fantastic journeys in due course, which we'll come to.

AM Well, I tried to, I tried to send mouse embryos into space but unfortunately ... [with] NASA ... it didn't quite work out. There was the Challenger disaster just at the wrong time.

MB Yes, which we'll come to in due course. Let's take you to school. We've talked of this kindergarten in Regent's Park with the Newman open air and the milk and the food controlled. What next, after that?

AM Next was a private school in, I think Gloucester Place it's called. The headmistress was called Miss Betts(?), and she was a wise woman. And it was a good school. We had, every morning, a non-religious assembly where there were songs and little talks.

MB A coming together?

AM A coming together. And I don't remember much about it but the one, her talk at assembly I do remember was where she said one morning 'You see, each one of you...' - and there we all were, the little ones were sitting on the floor and the bigger ones were sitting on chairs behind, and she pointed to a little boy sitting in the front row - she said 'Each one of you knows more than I do about something or other. Now, little Johnny down there, he knows more about trains than I do.' And I thought that that was a very intelligent thing to say to children because normally children feel very small and ignorant, and there she was boosting our morale.

MB You were on one of the chairs. You were about seven by then?

AM Yes, I can't remember!

MB Trying to work backwards... You didn't stay there though because it was, there were pressures to stay in afternoons and mum wasn't having that.

AM That's right. No, my mother wanted me to do French lessons and painting lessons and that sort of thing in the afternoon, rather than school work.

MB So, you studied painting.

AM So, she took me away from Miss Betts and sent me to a more traditional school, I think, in Queen's Gate. Again a private school, called Miss Spalding(?). I don't remember much about that.

MB Right. But you got home and painted in afternoons, and learnt French.

AM Yes. One afternoon a week, and some friends came round and we had...

MB Were you any good?

AM I enjoyed it, I enjoyed it.

MB Do you still paint?

AM No. There was a good teacher called Miss Richardson who wrote some books on calligraphy.

MB Oh, Marion Richardson.

AM Yes.

MB Yes. So she came in, the family arranged for her to come in once a week.

AM Yes. And I suppose there were four or five of us, five or six of us in the class.

MB You had some friends who came in from other families and joined you for that.

AM Yes, yes.

MB It sounds a most exciting home, with so many things going on. Family, quite a, I mean a relatively large family - you know, three brothers, a sister - and all kinds of things going on. London alive, but there were clouds. And I think you picked up just a feel of those clouds at the time of the Spanish civil war.

AM Ah, I used to...

MB You were only nine or ten.

AM There was the radio. One listened to the radio. There were newspapers.

MB Listened to the nine o'clock news and things.

AM Not the nine o'clock news, that would have been too late!

MB Too late!

AM Six o'clock news.

MB But I think you said the fall of Madrid, it registered, and you had a feel for what was happening a little, as far as you can at nine.

AM Yes, I remember that as an event, yes, yes.

MB I'm just moving us forward, because from that London of the thirties and the clouds that may have seemed artificial for a time, but they surely came and grew banks of dark clouds. And in the early months of the war...

AM Well '38 of course was the whole Munich, Sudeten, Germany, Czech business. That was a big cloud, yes, yes.

MB And the war lands on us, and very quickly you are taken to Bodnant.

AM Yes, yes.

MB And I think you once said to me that was the end of a whole era in your life.

AM In fact it was the summer holidays, you see, so one was there anyway.

MB Family life was...

AM One just never came back to London, or at least not for years.

MB Things were never going to be the same again.

AM That's right.

MB The house was closed up.

AM Yes, I never saw 38 South Street again. And that was it.

MB And you went into a period that you called, at one time, the hiatus kind of period.

AM Yes, yes.

MB Can you lead me into that Anne, there was that early war period?

AM Well, for the first, for the first few months there were quite a lot of other children around. Children of friends of my parents, some of whom I liked and some of whom I didn't. And then they drifted away. During that early period there was a governess, and she went off to do war work. And then my parents thought that the local vicar, Mr Jones(?), could come in and give lessons to myself and my younger brother who was seven years younger than myself. And that was absolutely fine for him. He thought Mr Jones was great, and they played cricket together and Mr Jones was his tutor.

MB But that wasn't your impression of it all?

AM It didn't work for me. I found it really rather embarrassing to have these *tete-a-tete* sessions with this chap, and I wasn't into religion.

MB Your brother did get a little bit into religion. I think father was a bit worried for a time! Because it wasn't a religious family.

AM Yes. No, we weren't brought up religious, but because of Mr Jones being a bit hero-worshipped by my younger brother I think my younger brother did go to church every now and then. Yes, my father said to my mother 'Do you think there's any danger of him getting religious mania?' But anyway, I mentioned to my mother that the Mr Jones thing really wasn't working very well, and so she stopped that. It didn't last very long. And after that I did correspondence courses with some, I think it was a London school.

MB Yes, for about three years, all education by correspondence?

AM Yes, yes.

MB So your reading...

AM Probably more, four years... Five years, or four years.

MB So you reading continued, really strong reading, but a lot of writing now.

AM Well, writing essays for the courses, yes.

MB For the correspondence courses, yes. I think you said by the time you did get through that period and move on to another school, I mean your writing was far more experienced than most people there.

AM I'm not sure that's really so. I don't think I did more writing than I would have if I'd been at school. But one wrote, one wrote essays. I think I wrote quite well, but I think that's because I'd done a great deal of reading. I hadn't done all that much writing.

MB Just keeping to one of the laments of those years, was that there was a practical person trying to come out, I think you said. You made a hen house and did various other ... but no one was there to train you to put your, put your hands to these things.

AM Yes, yes. No, that's true. I had no practical training, and I would have liked that and I'd have benefited from it. I did, I did make a hen house because I thought I should do my bit for the war effort when I was about fourteen. And so I thought I could make a hen house; I'd found in a newspaper plans, blueprints for making a hen house. And when it was finished I duly asked for four hens as my Christmas present. But making the hen house was interesting. I had a saw and...

MB I think that was the only implement you had, I understood Anne.

AM I probably had a hammer, but I had pinched the planks from the sawmill that was on the estate and they were lovely, lovely planks. I hadn't realised how valuable they were, but they were all tongue-and-grooved so they fitted into one another. And eventually the wretched carpenter who worked down there came and said to my father that the numbers were decreasing somewhat, and somebody noticed that there were some planks knocking around in the house. And so my father questioned me about this and I said yes, yes, I had taken them for what I felt was a good cause. And he said 'Well, if you'd asked me... If you'd asked me I could have got them brought up for you and you wouldn't have had to carry them up.' But he didn't quite realise that that wasn't the point.

MB Absolutely. You went out doing all kinds of things like, with this saw, I've got a picture of Anne McLaren going out walking, on solitary walks. This was a period of solitary walks, with a saw; you often walked with your saw?

AM Yes. Well, only when I wanted to cut down ivy because I'd been told that ivy killed trees, and there was one particular tree by the road a mile or so away that seemed to me to be suffering from its ivy. And so I went off every morning and sawed away until I'd got rid of that particular bit of ivy.

MB This period also involved you in some childcare for the first time.

AM Oh indeed, yes, because my elder sister was with us all during the war. Her husband was in the army - in North Africa and then in Italy. And she had one daughter who was born in 1939, and then two years later she produced twins - a girl and a boy - and of course when the twins arrived she had great need of additional childcare.

MB So you were really involved. Second mum to these, to these twins.

AM Sort of, yes, yes.

MB So I get a mixed, a mixed feeling about these Welsh years. I get a feeling that some exciting things take place on some kind of remote, on some kind of remote estate, where you quite often felt lonely and there were thoughts back to London and what had been but wasn't going to be again.

AM Yes, I guess so.

MB So there was a little bit of sadness, and there was a concern about the war?

AM Always.

MB A real concern about the war.

AM Oh yes. I mean, then we always listened to the nine o'clock news, every night, every night.

MB So we'd got to the nine o'clock news by now! You were there.

AM Yes, we'd got to the nine o'clock news now! But of course it was, it was wonderful country and I did enjoy walking on the mountains. Though that meant ... because there were, you know, no cars, it meant taking a bus or a train on my own and then walking up, or walking a long way to get to the bottom of a mountain and then walking up it and walking back again. So I did a lot of walking on my own, which I enjoyed.

MB What a beautiful place, Conway Valley and the mountains.

AM Oh, it's a beautiful place, yes, it's a beautiful place. And of course the garden was beautiful also.

MB Yes. Did you feel that about the garden? I know father had this great passion for it.

AM Yes, yes, I was interested in the plants.

MB Is it vast acres, the garden?

AM Yes, it's vast acres.

MB Yes, and it's now the National.. .[6]

AM And in those days I knew a lot about the plants and their names and that sort of thing, which I have now quite forgotten.

MB Yes. When you were there was mother there, sister there, you there? Younger brother there also?

AM Yes, yes.

MB That was the kind of family nucleus. Father was away most of the time?

AM Yes, he came back weekends every now and then, you know.

MB So we go through that hiatus period. Have I missed anything? We've had Mr Jones; we've had building hen houses, doing... You didn't like hens though, Anne.

AM Oh, I hated those hens.

MB You loathed them.

AM I called them alpha, beta, gamma and delta. And they produced a lot of eggs, and I don't know whether you've ever actually watched an egg being laid...

MB Anne, I have not seen this.

AM That will be a pleasure, a pleasure in store for you. It's disgusting! And these hens weren't very nice to one another; they'd peck one another and they were not very nice at all. I probably wasn't very nice to them because it was important to get as many eggs as one could, and there was something called Carswood Poultry Spice(?) which was red and peppery which one mixed in with their food which was supposed to make them lay more eggs.

MB So you pushed them on a bit, gave them kind of accelerated ovulation and all that.

AM And they certainly laid a lot of eggs, yes. MB
Did you eat, you took a share of eating them?

AM Oh indeed, yes. And the ones we couldn't eat were laid down in icing glass. I'm not sure what icing glass is but there was this great big pottery jar with a lid, filled with clear transparent stuff, and you put the eggs in it and then they lasted.

MB Anne, we've got to take you out of this North Wales scene now, but before we move on and take you to school, I think near Cambridge, we're going to wind down and have a short coffee break...

AM Okay, that's fine.

[6] Bodnant Garden is now owned by the National Trust.

MB ...and come back in five minutes.

AM Good, thank you.

MB Anne, we've virtually covered most of the days in Wales, most of the central themes in life. You've just said though we didn't talk about your being interested in mathematical puzzles, and we ought to put that on the record.

AM Well, I was always interested in arithmetic and mathematics. Arithmetic was a nice subject because it was the only subject you could always get 100 per cent in. Other things you couldn't. And when I was very small - again this is the other recollection [along with] the 'car-rot', when I was cross with myself for not recognising that word - and my other vivid recollection was when we were given some mental arithmetic test. And I suppose I was six or seven, and it was a question of 'Ten lampposts in the street with, I don't know, flags between each. How many flags were there?' And I said 'Ten', and that really rankled for years and years afterwards!

MB You don't like that kind of thing.

AM No, I don't like that kind of thing. But during the war, again there was no proper mathematics teaching but there was something on the correspondence course. But Lewis Carroll, [Charles] Dodgson, has excellent books of mathematical puzzles -'Tangled Tales' I remember was one[7]. And although I didn't have the technical expertise to approach them in the proper way they were fun sort of trying to, trying to work out. I remember also at one time in the family somebody put a question, maybe it was in a newspaper or something, if you have this rod of one inch diameter and you have a one inch diameter tube that bores through it at right angles, what is the shape that you produce? And there were a lot of guesses round the family and they were really not quite correct.

MB But you got it right?

AM I got it right, and then I made it out of plasticine. And it was a very satisfying shape, a very satisfying shape. I enjoyed that.

MB Great. Anne, we're going to move on now from North Wales, about 1943, '44, thereabouts. Quite a lot of the war years have gone by. Things aren't quite so black, I suspect.

AM My younger brother was, by then, of an age to be sent off to prep school and my parents thought that I would be lonely left in Wales without him, so I was sent to boarding school for a year, near Cambridge, a school called Longstow Hall.

MB Anne, just before we take you there, you've mentioned one brother going off to prep school. Were the other brothers on war service?

AM Yes.

MB Right. So you must have been quite anxious, to some extent, about members of the family actually in the fighting line.

AM Yes, yes, that's true.

[7] Lewis Carroll, *A Tangled Tale,* London: Macmillan, 1885.

MB But, from Wales you go to Cambridgeshire.

AM That's right, Longstow Hall.

MB Was that, was that a bit of a kind of culture shock, having been rather solitary? All of a sudden in dormitories with other girls...

AM Well, I wasn't all of a sudden in dormitories with other girls because my mother felt that it would be a culture shock, and so she arranged with the headmistress that unlike all the other girls in their dormitories I should have a single room all to myself. So I was put in this single room. And anyway, I had rather odd, old-fashioned clothes. I mean, other girls had fashionable coats and skirts - costumes I think they were called - and I had little dresses and little... You know, it was different.

MB So you were a bit separate.

AM Yes, and I learnt later that the other girls thought I must be slightly strange in some way, perhaps a little bit off my head. But they were very nice to me. And I, of course I wanted to be in a dormitory, I wanted to be like them, so I think halfway through the first term I got accommodated in a dormitory.

MB What kind of a school had you found? Was it good teaching?

AM Yes, I think it was. I think it was good teaching.

MB So you covered the whole School Cert range of subjects, apart from the chemistry and some of the sciences. I suppose that was more of the biological sciences, the botany, for the school at that time.

AM Yes, yes, we had a biology teacher. We had a biology teacher but no physics or chemistry.

MB Was there a feeling at that time that biology would figure in your horizons? AM No.

MB There wasn't. In a way you were a bit literary, you were on the English side of the fence. Is that right?

AM Yes, yes, because I was good at writing essays. And so that was what people thought. When I revealed that I wanted to go to university, which was a bit of a shock, it was assumed that it would be to do English Literature because that was what I'd got good reports for. Well, I had got good reports but I don't think...

MB Was that a bit of a shock? It was a shock to the family, not to the school?

AM Yes. No, no, it was the family. I'm not sure the school...

MB Your father, he wasn't sure about that at all.

AM No, no, he had never thought of any female member of the family going to

university. But, you know, things were changing with the war.

MB Your mother talked to him about it.

AM Yes, mother was supportive.

MB She was very supportive.

AM Mother was always very supportive. So the question then arose, where could I go in order to be coached for the scholarship and entrance exam?

MB There was no question that you'd go to Oxford? That was it, there was no thought of anywhere else?

AM It was Oxford or Cambridge, but Oxford was where my two brothers had gone and where my father had gone. So, yes, that was it. And they dug up a coaching establishment somewhere down in the West Country called, I think it was called the Wise Monkeys Club(?), but I...

MB How do you ever get a name like the Wise Monkeys for a...? Unbelievable! But you were put down to go to the Wise Monkeys.

AM Well, you know, it's 'see no evil, hear no evil, talk no evil.'

MB And the Wise Monkeys accepted you?

AM I guess so, yes, yes, but I never went there.

MB Before we take you on this next step, kind of bypassing the Wise Monkeys, the school we're talking about in Cambridgeshire, were there any teachers there who made impact that we ought to put on the record?

AM I'm sure there were, but shamefully I don't remember any of them.

MB Right. So there's nothing more to take on with this. It was, it was just settling down, steady classroom work, not much laboratory work, a fairly classical education?

AM Yes, yes, and all these girls who I was very interested in.

MB Yes, you made friends. I mean, you had a chance to make friends.

AM I made friends, yes.

MB Some of them who still are friends?

AM I haven't seen any of them, no, since but I was always interested in observing people, and there were a lot of new people and new sorts of people there to observe. So I enjoyed that.

MB And the School Certificate results said lots, because they were good results.

AM Yes, yes, lots of distinctions.

MB So you could plug in to the idea of Oxbridge, without a problem?

AM That's right, yes, yes. In those days, on School Certificate, if you did sufficiently well in a sufficient number of subjects you could get matriculation so that got one into Oxford. But of course it was entry into a college, and that was what required the scholarship and entrance exams, and that was what one had to be coached for.

MB The reason for not going to the Wise Monkeys, you know, that's fascinating, because all of a sudden when you get a syllabus plans have to change dramatically. Tell me about that.

AM Well, the idea was that I should get in on English Literature, and I wrote off for sample exam papers to see what these scholarship and entrance exams would be like. And Oxford sent me a whole bundle of several years and I looked through them. And I was appalled by the English Literature papers because there was no way that I could do them. And there was no way that I could swot up in eight/nine months, which is what I had to do them, because it would have meant reading all sorts of things like Milton and Walter Scott and so forth.

MB And Dickens. He hadn't been on your list.

AM Dickens I'd never read. No, Dickens wasn't on my list, no. So...

MB A formidable list, that there was no way you could accommodate.

AM Indeed, right. If I'd gone to a conventional school I guess these would have been part of the course, you know, but I hadn't. So I didn't fancy, I didn't fancy that. And looking through the exam papers it looked to me as if... I think it was biology it was called rather than zoology, I think it had some plant questions in it ... biology was the easiest paper to answer. And so I said that I wanted to do biology. In fact, I didn't say. I didn't say. I was just very upset about the whole thing and didn't know what to do, and my mother came into my bedroom one evening and found me weeping...

MB Yes, you were really down.

AM ...yes, yes, and asked what the matter was. And I explained that, you know, I'd had this ambition to go to university, but now I realised that, you know, it was beyond my capacity to do it in this way. And so she hoisted that in, and she hoisted in about the biology. But of course the Wise Monkeys had no science teaching at all. And so she got on to whoever gives advice on these things and found that the only
place at that time which really did coaching for university entrance in science was day coaching in Oxford.

MB Some kind of a cramming establishment.

AM Yes, cramming establishment, exactly, exactly. And they were actually extremely good, but of course the problem there was where would I live? I was

seventeen years old, inexperienced in life; my parents would have been very worried to think of me in some bed and breakfast somewhere. And then my mother remembered these old Quaker cousins, descendants of John Bright, who neither she nor my father had seen for many years and I'd never met them. And so she rang them up, out of the blue, and they were very surprised but she explained the situation. And they were very hesitant because they weren't at all sure that they wanted a seventeen-year-old dumped on them! However, they assented...

MB What was the name of this family? They were...?

AM Gillett. Arthur and Margaret Gillett(?). He was a banker, they were both members of the Society of Friends, and they had I think three or four grown-up children.

MB They lived somewhere in north Oxford.

AM North Oxford, Banbury Road, yes. 102 Banbury Road.

MB And so there you came!

AM There I came.

MB They took you on board, as a trial.

AM They said they would take me for a term. But in fact we got on prodigiously well. They were great people, and very supportive, and that all worked out. And the coaching establishment provided me with superb teachers.

MB Tutors, yes.

AM Tutors.

MB And you were allowed to go to some of the university lectures, I think?

AM Absolutely, yes. The prelim lectures and practical classes, yes.

MB Kind of a good early experience.

AM Yes. And these tutors, who opened all sorts of doors to me that had never been opened before... Because conversation, conversation at home was gossip about people, to some extent talk about maybe paintings, maybe a little bit books, garden, land, business, that sort of thing, but never ideas, never ideas and never any politics. Never any of the sort of wider sociological things that you get in Oxford scholarship and entrance general papers. And so I was coached in all of that, and of course I found it tremendously exciting.

MB Being exposed to ideas now.

AM Absolutely, absolutely. No, it was mind blowing, yes, yes.

MB So Oxford, Oxford was immediately a revelation.

AM Absolutely, yes, yes.

MB I mean, it was going to become, I think you once said to me 'I feel perfectly at home in Oxford more than anywhere else on earth.'

AM Yes I, well I was there for eight years. And I didn't feel like that to begin with, of course.

MB But it began to take...

AM Yes, yes. And it must have been a very concentrated two terms, because I only had two terms before the scholarship and entrance exam but I got a scholarship and got accepted to LMH [Lady Margaret Hall]. In fact I was the senior scholar there, which meant that I had to read the lesson in chapel on the first Sunday that I was a student. And I wasn't very used to chapels and churches and reading lessons but it was a fascinating lesson that I had to read. It was that bit that says ... how does it go ... 'he that hath should be given, and he that hath not shall be taken away even that which he hath'[8] And that did stick in my mind as a summary of the times, yes.

MB Lynda Grier was head of LMH still at that time?

AM She interviewed me for my scholarship...

MB Right, and was just about to...

AM ...but she retired before I went up.

MB Yes. You must have impressed her though, to get the senior scholarship.

AM I must have done, mustn't I?

MB You must have done wildly well...

AM Or something that I'd written must have, yes, yes.

MB You'd got philosophical, though. You'd got all these ideas flowing.

AM I think, I think she said ... I think I thought I'd done quite well on the general paper and not so well on the essay paper, but I think she told me she thought I'd done well on the essay paper. This was a sort of extended essay that one had to write. And I think the topic my year, or the topic I chose - there were probably several - was something like 'Disinterested curiosity is the lifeblood of true science.' Something like that. And in a true Brains Trust, Joadish way[9], you know, I said 'It all depends what you mean by disinterested, or it depends what you mean by curiosity,' and so forth.

MB So you dissected it down and gave them the full measure.

[8] "Unto every one that hath shall be given, and he shall have abundance: but from him that hath not shall be taken away even that which he hath." Matthew ch.25 v.29.

[9] The Brains Trust was a popular radio programme, starting in the 1941, in which a panel answered listener's queries. One of the panel, philosopher and psychologist Dr CEM Joad, was famous for beginning his responses to questions with "It all depends on what you mean by...".

AM Yes, yes.

MB LMH. A joy to be there? You're going to be there for three or four years.
AM Four years, yes, because I did Honour Mods in zoology, physics and maths and then at the end of two years I went to specialise in zoology for two years. So it was four years altogether.

MB Let's pick into that course, because you had some fine tutors. Can we go through people who had an influence in that first, in that first degree?

AM Well I did, I did the four-year course rather than the three-year course, because the three-year course one would have to do prelims, and to do prelims one would have to do chemistry. And again, I looked at the exam papers and it dawned on me that it was an awful lot of rote learning, which I was very bad at, and I had never ever in my life done any chemistry. But the physics and maths ... seemed to be more in my style of thinking.

MB Yes, so the physics was the one that needed the dealing with, principally.

AM Absolutely, because I'd never done any physics and practical courses. For instance, I had no idea how to connect a wire up to a plug or anything like that that of course boys would have been taught at home or at school. It was quite interesting because [on] the zoology course there were something like 40 per cent women in those days, mathematics 15 per cent women, but physics I was the only woman in the class. And they were ever so nice to me! I mean, the young men were all very keen to show me how to connect wires up to plugs...

MB And these were the golden post-war years, yes.

AM ...and prove Amperes law and all that, you know.

MB And these were the golden post-war years we're moving into, so there were many senior figures coming back from the war.

AM Absolutely. Right. When I say young men, they weren't all that young because they were being demobbed. You're right, they weren't, they weren't straight from school.

MB Oxford was never like that, I mean that was a unique period.

AM Much more interesting, yes, much more interesting. No, it was a fascinating place to be at that time. And the ex-servicemen very quickly, for example, disposed of the rule that undergraduates shouldn't go into pubs, you know. Try and stop a lot of ex-soldiers going into pubs, you don't get very far.

MB Just thinking of Anne McLaren though, this rather shielded young woman, and you had been pretty shielded down the years...

AM I stopped being shielded.

MB All of a sudden... Mm?

AM I stopped being shielded.

MB You stopped being shielded. So you started to have boyfriends.

AM Friends. Yes, well, friends of all sorts, yes.

MB Yes. So this was a big coming-out time, revelations all round.

AM Yes

MB We were talking though about the tutors and the people who were significant. You'd got into this physics and we got into the mathematics and the biological end. Who were the great tutors who stand out from that period?

AM The chap that I went to during the coaching period for biology was called Dr Hobby(?), and I think he was a beetle expert.

MB Right. But he was, he was good.

AM Yes, he was good, he was good. He knew the syllabus, and he got me through it and told me the right things to write and I wrote them. So he was good, yes. And then, when I was an undergraduate, yes again I had very good, very understanding tutors when they realised that I'd never done any physics in my life before and not much in the way of mathematics after School Cert.

MB So they really supported you?

AM Yes, that's right.

MB So there was a feel that they were building the help around you all the time?

AM Yes, they were surprised, surprised but...

MB But they could cope, and they knew you could.

AM Well I suppose, you know, again the war made a difference. People were being a bit shaken up in their ideas, so it wasn't quite so strange to have a...

MB They were welcoming a new generation and a new era. People like Alister Hardy, did they, did they teach you in those years?

AM He lectured to us in the zoology course. Alister Hardy, with his continuous plankton recorder that towed behind the ships, oh yes. And EB Ford, for genetics, who was I think the most influential lecturer from my point of view. He was a brilliant lecturer and I found genetics extraordinarily interesting.

MB He was your tutor as well?

AM For a short time, yes. I think I was...

MB He wasn't renowned for liking women though, I think.

AM I think I was his first female ... tutee I think the word is. For all I know I may have been his last.

MB Well, was he hard on you?

AM No he was, he was fine. He was a good tutor, interesting, yes.

MB He had a phenomenal record as a tutor. Who else?

AM Well, other lecturers who were in the department were Harold Pusey, who was doing research on a fossil frog. And he'd, during the war he'd been involved in interpreting aerial photographs, 2-D photographs, but having to interpret them in 3-D. And apparently this was very helpful for putting together this fossil frog, which I guess, you know, is again a 2-D surface, and that you have to make a 3-D frog out of. So that was interesting. He wasn't the world's most charismatic lecturer. He lectured to us on embryology, and as a result of that I swore that whatever else I did in my scientific career...

MB It would never be embryology.

AM ...1 would never ever do any embryology.

MB Which is exactly what it was going to be!

AM Partly!

MB How wrong you can be occasionally, Anne!

AM It was his very elegant chalk diagrams on the blackboard, you know, with whatever it was...

MB It made embryology really flat and...

AM ...green for endoderm and yellow for ectoderm and blue for mesoderm, and all those embryonic membranes didn't, didn't grab me, no, didn't grab me.

MB In the few moments we have to devote to that particular part of the Oxford years, summarise that course. You came out fairly well in that course?

AM Well, yes, yes, I got a first. There were two parts to the course. One was animals. This was the third and fourth year when I was specialising in zoology. Animals were vertebrates one year, invertebrates the next - they alternated and I can't remember which I did first. But that was fascinating, especially the invertebrates, because one heard about all those strange animals. Willy Holmes was a good lecturer. I remember him lecturing to us about the Mesozoa, creatures like *Golftngia* of which only I think two individuals had ever been found, on a golf course.

MB But this was a wide, a wide zoological survey?

AM Yes, and nothing that I did in this course was ever of any direct use to me later, but nonetheless it was fascinating.

MB It's all about perspectives in biology, though.

AM Yes, yes. And then the other part of the course, apart from the animals, was the concept part. And of course some people were grabbed by ecology, I was grabbed by genetics and cell biology, chromosomes, all of that, and also by evolution, because it was a great time for discussions about natural selection versus random drift. And there was JBS Haldane and RA Fisher and Sewall Wright and Waddington[10] all writing about evolution. And then on the, on the other side, the genetic cell biology side, of course it was the protein versus DNA discussion that was going on at that time.

MB Yes, and it was wide open.

AM But it was clear, well it was clear certainly to me and to many of us that it must be DNA because of the experimental work that had gone before. But it was, it was exciting times, the 1940s.

MB It really was exciting, yes. Had you decided, whilst there, that quite early on there was going to be a research career?

AM Yes, yes. I wanted to do research, and so I entered for the Christopher Welch prize. And that involved, it involved doing a mini research project and writing it up, and then a written exam of a very interesting kind because each person who sat the exam was asked to suggest two topics that they would like to answer questions on. And so when you went into the exam you found this lengthy exam paper with your two questions written there that of course you'd swotted up in advance, and then there was a short section at the end. I think you spent one hour out of the three hours answering a general question, but the main part was your prepared questions.

MB Yes, your agenda you'd set.

AM Yes, yes. Which was an interesting sort of exam.

MB But the research, the mini-research project, that wasn't so easy to get started? I think there were problems.

AM No the mini research project, I wasn't quite sure how to set about that, because I didn't have any lab contacts. I wasn't a nature person, you know, I wasn't one of those who went out to Wytham Woods and studied beetles or whatever. And fortunately, one of my fellow students was Avrion Mitchison, who was the nephew of JBS Haldane, so he said 'Why don't I ask my uncle if you can go for a month or so to his lab at University College [London]? And maybe they can find you some little research project to do while you're there on *Drosophila.*' And so I trotted along, and I was very scared of course of JBS Haldane and his wife Helen Spurway, but they were very nice and they said I could come along. And so I learnt how to...

[10] Conrad Hal Waddington.

MB When you say you were scared, was this the reputation? I mean, this, or was there a...

AM Well, they were both, they were both rather formidable people. Haldane because he didn't talk much at all, he just grunted at you most of the time. So that wasn't exactly, it didn't put a rather shy young girl at her ease!

MB But they made an effort.

AM And Helen Spurway was the other way round, she shouted in a very harsh and strident voice. And I only learned later, and, you know, I was rather sorry for her, much later she said at tea one day 'None of you realise that I'm deaf. If I wasn't deaf, do you think I'd talk like this?' So, you know, anyway I was a bit scared of them, but they were nice and said I could come along. And there were students and technicians in the lab who looked after me and showed me how to sex *Drosophila* and tell the difference between one *Drosophila* mutant and another.

MB So this was getting down the classical *Drosophila* avenue, really.

AM That's right, yes, that's right.

MB But that wasn't where you wanted to go, I mean...

AM Well, at that time it wasn't a question of where I wanted to go.

MB You were just getting the project done.

AM I just wanted, you know, quickly ... quickly a mini-project to write a mini-report on. I was a very pragmatic sort of student, I think. But anyway, nothing really presented itself in the way of a *Drosophila* project. And then I noticed that some of the milk bottles that the *Drosophila* was kept in had these ... well there were funny little white things crawling around in the food and there were pink things attached to the *Drosophila* legs, and I was told that this was an infection with mites. And this seemed to me really interesting, and so I took some of these white things and some of these pink things and kept them in separate bottles and looked at them. And the white ones turned into pink ones, but the pink ones never turned into white ones. And I discovered that some of the *Drosophila* strains were much more afflicted by the pink ones on their legs, and of course those were the ones which couldn't fly very well, so they were sitting down on the floor...

MB More ground-based.

AM Yes, so they were parasitised. And there were some, there were some investigators in the lab. Alex Comfort for instance.

MB Alex Comfort was there?

AM He was there, and he's a great poet and a great writer and a great man, but he wasn't a particularly expert investigator and his flies always got more mite infections than anybody else. So I had enough to write my mini report on.

MB So that was, that was a few weeks in London at UCL.

AM Yes, University College, that's right, yes.

MB Did you, you stayed in Oxford and you travelled up there daily or something?

AM No, no, at that time my parents had a house in London, so I was...

MB Right, so you joined the family again.

AM .. .in the house they had there, yes.

MB It wasn't going to be a common feature, I think that we've said, and that after the war you steadily, and during Oxford and afterwards you steadily moved away from the family.

AM Yes.

MB And, so you weren't going to know father so well.

AM That's right.

MB It didn't come together again.

AM No, no.

MB Right. I just wanted to put that on the map there. You get this Welch, Christopher Welch award?

AM Yes, yes, I got that.

MB Great joy. And now you think you can do...

AM Yes, first woman, first woman Christopher Welch scholar.

MB That's terrific.

AM And, so that gave me a one year studentship, I think it was one year or two years, but anyway the remainder...

MB Are we talking about '49 now? 1949 have we got?

AM Yes, yes. DPhil was '49 to '52 and one or two of those years was Christopher Welch and the other one or two years was MRC [Medical Research Council] studentship.

MB Right, right. Let's get into that first year though because, yes, we've got to talk about what you chose to do! Which was, to take you very quickly to actually have a first sighting of Peter Medawar?

AM Not a first sighting, because I'd come across him earlier when he was in Oxford, but unfortunately he moved away from Oxford and took the Chair in Birmingham the same year that I graduated. But for the first year of my DPhil, he was my supervisor.

MB So he was your supervisor even though he was...

AM But sort of in...

MB ...yes, a kind of distant...

AM ...yes, *in absentia,* yes, yes.

MB .. .distant figure, yes, who really supervised. You just got on.

AM I tried to get on, yes, but...

MB It wasn't an easy year?

AM Well, I'd chosen to do a topic that was a fascinating topic, which was to do with whether the immunisation of the mother against, in fact it was the lens crystalline of the eye(?), would affect the development of the eye, because there'd been a claim by these people called Guyer(?) and Smith(?)...

MB Guyer and Smith, yes.

AM ...that it would indeed affect the development of the eye. And what's more, if you then bred those animals, they too, the progeny, a sort of inheritance of acquired characters. And this was very interesting because I was much more interested in as it were the exceptions to conventional genetics, than simply Mendelism and gene-linkage and mapping genes, that side of it.

MB I mean this was the classical period of mapping *Drosophila,* the *Drosophila* genome, wasn't it?

AM Yes, yes. That was less interesting to me.

MB Listing everything, getting... That's not your door, I just wanted...

AM No, no, it was much more the interaction between genetics and development, and I thought this apparent demonstration of inheritance of acquired characters was fascinating. And I thought the first thing to do was to repeat the Guyer and Smith experiment on pregnant rabbits and see what happened. And it shouldn't have been too difficult, it's easy, I went off to the slaughter-house and got lots of sheep and cow lenses and prepared crystallines and all of that, and learnt to do the immunological tests - precipitin, agglutination tests, all of that. But in the whole of that first year the Oxford animal house only managed to get me two pregnant rabbits. And, don't ask me why, there must have been some, I don't know, epidemic or incredibly bad management or something. But there was clearly no future in it, because I only had three years to do a DPhil, and if I only had two pregnant rabbits that didn't...

MB You were getting nowhere.

AM I was getting nowhere.

MB You got the techniques, and were getting nowhere?

AM I got the techniques, I got the *in vitro* techniques, but there was no way that I could do the *in vivo* experiments that I wanted to with the material that was to hand. I did try on mice - I injected mouse brain to pregnant mice, but again that wasn't, that didn't look very promising. So at the end of a year, I thought cut my losses and do something else. And fortunately there was a group in the department led by Kingsley Sanders working on RNA viruses. It was the days of polio, infantile paralysis, before the two polio vaccines had been developed. There were epidemics of infantile paralysis in America, in Britain; people were very concerned about it. And Kingsley Sanders had these model systems for mouse neurotropic viruses, and I thought viruses breed quickly, one can do a lot of experiments in a short time...

MB You say model systems, Anne. These were models looking at the influence of these viruses on muscle tissue?

AM No, these were, these were neurotropic viruses which crawled up nerves and affected the brain, model systems in the sense that they were mouse neurotropic viruses, but they had the same effects of paralysis and death that polio virus...

MB Right, so you could model at that level.

AM ...did on the human. So it was using the mouse as an animal model for the, for the human. And so that's what I did my DPhil on, and I was able to get enough in two years...

MB And viruses breed a bit quicker than Oxford rabbits?

AM Well exactly, that's right. Yes, it's the pragmatic approach again.

MB So you crushed it in two years.

AM Yes, I did two main projects. One arose from the observation that was puzzling people at the time, that it was very often the fittest people who came down with infantile paralysis, and it was very often the limbs that they had been using in whatever it was, swimming or running...

MB The principal musculature.

AM That's right.

MB In oarsmen and people, the principal musculature.

AM Yes, yes. And that I looked at in mice. And the point about those neurotropic viruses is that they can just remain in the blood. You get a viraemia, you think you've got

maybe a slight 'flu, you know, a slight temperature, but with a bit of luck it goes no further and the body gets rid of the virus. But if you lower the resistance between the blood stream and the nervous system, then the virus can get into the nervous system, and you get your paralysis.

MB So this is a blood-nervous system barrier phenomenon...

AM That's right.

MB ...that we're looking at.
Am And so I was able to show, by artificially lowering the blood-brain barrier in particular limbs, and showing that it was that limb that got paralysed if the mouse had the viraemia, that showed that was the cause of that.

MB So that was a fascinating study?

AM Yes, yes.

MB And you looked at age susceptibility as well, I think.

AM That's right. It was known, I suppose not just for neurotropic viruses but probably many viruses, that baby mice are more susceptible than adults. And I didn't do so much on that.

MB And this is [because] the barrier hasn't quite got to where it needs to be? I mean it's...

AM Well, it wasn't so much the barrier in that case. But it turned out - gosh, I can't even remember which way round it was - it was a question of whether the older cells stopped the virus getting into the cell, or whether having got into the cell the virus proliferated less in the older animals. I think, I think it was the passage into the cell. Yes, I think the cells were more resistant in the older animals.

MB So you got a DPhil.

AM So I got my DPhil.

MB In time as well, while the MRC money comes!

AM Absolutely, yes, yes.

MB Before it ran out! One...

AM And in time for me to marry, in the next few weeks, my fellow DPhil student, Donald Michie, who I'd then started doing research with. So we both had to finish our DPhils, and get them written up and submitted by the end of August so we could get married in the middle of September, and start our, start our Agricultural Research Council funded project on October the first.

MB Which we'll come to in a moment. Donald Michie, he'd been a collaborator for a

while though Anne, you've just brought him into the story...

AM He wasn't a collaborator. He was doing a DPhil under EB Ford on genetics. So he was around, he was a fellow, a fellow DPhil student rather than a collaborator.

MB You'd been sharing accommodation with him though, and kind of spending time with him...

AM We'd been living together, yes.

MB ...and had a mind that really must have been... I was meaning by collaboration, he was full of ideas and must have been a great support during the DPhil?

AM Yes, indeed.

MB That's what I was meaning! Cleared the, cleared the story. He had a fascinating background, which we might take in at this point.

MB Mm-hmm. Yes, he'd worked at Bletchley Park during the war on cryptography, knew Alan Turing and was involved in all of that. And he had, from Rugby School that he'd been at, a scholarship to come up to Oxford, to Balliol, and do classics - Greek and Latin. But, as with many people at the end of the war, he felt that he wanted to do something that actually wasn't Greek and Latin and so he enrolled as a medical student. And he did two years of being a medical student, which was the pre-clinical part in Oxford, and he enjoyed that and because he was ex-service that gave him a degree. But he didn't want to go on in medicine because by that time he'd got extraordinarily interested in mouse genetics.

MB He'd been to St Gile's Fair, I think?

AM Yes, he'd bought a few mice in St Gile's Fair and started breeding them in the kitchen, and they produced funny colours!

MB The colour variations, I mean he was just caught up by that.

AM Absolutely, yes, yes.

MB And that took him into a DPhil.

AM Yes, that's right, that's right.

MB And he wasn't sure what to do with that colour variation initially? I mean, he...

AM He went to EB Ford who was the genetics expert in Oxford. And EB Ford is a butterfly man, he's not a mouse man, and EB Ford said 'Ha. You need to go and see my friend, RA Fisher, in Cambridge.' So Donald, Donald wrote off to Mr Fisher in Cambridge and got a very nice letter back saying 'Yes, please come and see me, but please bring your mice too so that I can look at them.' So, in those days there was a train between Oxford and Cambridge, I wish there was still, and so Donald loaded his boxes of mice onto the train...

MB Were you involved in this part of the story? You didn't go on that trip?

AM No, no, this was before I knew him. He was still being a medical student, in his spare time! And his mice, his records were all in terms of names. I mean one mouse would be called Marmaduke Smith and another one would be David Parry. They all had to have names, and so the cage cards had the name of the mother and the name of the father written on them. And when Donald arrived in the genetics department in Cambridge, he must have taken a taxi I suppose from the station, he unloaded all of these boxes into the hall of the genetics department in Storey's Way. And the people in the genetics department gathered round and looked at the cage cards and started giggling, and this young man, who looked about sixteen anyway, got more and more embarrassed and more and more pink. And then Fisher himself strode into the hall, and took one look at the cage cards and realised what the situation was and said 'Mr Michie, what an excellent method of record keeping'. And they were very good friends thereafter. And of course, because of Donald's wartime experiences they were able to talk mathematics, statistics together.

MB Yes. And that, that mouse genetics was supervised subsequently ... was that, did Ford...

AM EB Ford, yes, yes.

MB ...take that on board, that supervision?

AM Yes.

MB Yes, and that was a good association. So we get to a point where you've got a DPhil, Donald's got a DPhil, you're happily together, you're in love. Oxford seems like it's never seemed before, it's incandescent, and you've got a future, with new grants to take up with the Agricultural Research Council.

AM That's right. We got a small grant from the Royal Society, I guess that must have been perhaps in the last period of our DPhils, when we were writing up or something. We wanted, we wanted to try keeping some mice and we wanted some money to get started. So we got a grant, I think it was a grant for a hundred pounds from the Royal Society, and we bought a whole lot of baking tins and that sort of thing from Woolworths and made mouse cages out of them, and kept some mice.

MB It was a real cottage industry though.

AM Absolutely, yes, yes. But then we got a proper grant from the Agricultural Research Council.

MB And that was going to be taken up, not in Oxford but elsewhere.

AM That's right. Back now to University College, where Medawar had moved from Birmingham.

MB He was head of department now.

AM He was now head of department there, and it was a department... Actually Haldane's department was in the same accommodation, so there were these two professors there. And Medawar accepted us as ... post-docs they would be called now ... in his department.

MB That particular journey I'm going to save until we've had a break and taken some lunch, because I think we can meditate and come back...

AM Okay, fine.

MB ...refreshed for that tremendous research that was to follow.

AM Right.

MB Thanks, Anne.

AM Thank you.