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Interview Transcript Title Page

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Forename:	Heinz
Interviewee Sex:	Male
Interviewee DOB:	29 April 1928
Interviewee POB:	Berlin, Germany

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Name of Interviewer:	Marian Malet
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REFUGEE VOICES
THE AJR AUDIO-VISUAL TESTIMONY ARCHIVE

INTERVIEW: HEINZ WOLFF

TAPE: 146

DATE: 1 FEBRUARY 2007

LOCATION: UXBRIDGE

INTERVIEWER: MARIAN MALET

TAPE 1

Tape 1: 0 minute 20 seconds

MM: We are interviewing Professor Heinz Wolff, the date is the 1st. of February 2007, we are in Uxbridge, and my name is Marian Malet.

MM: Professor Wolff, could I ask you to please state your name at birth - your full name at birth, your place and date of birth to start the interview?

HW: I was Heinz Siegfried Wolff – Siegfried after my grandfather. I was born in Berlin on the 29th of April 1928.

MM: Thank you very much. Was your name originally Heinz or was it Heinrich?

HW: Nein, sorry I mean no, I was christened – christened is not the appropriate term - I was named - on my birth certificate, I was named Heinz.

MM: Thank you very much. Good. Right. Can you tell us first something about your family, your parents and grandparents perhaps?

HW: My father's parents - Siegfried Wolff - until the inflation was rich. He was in those days a Goldmark millionaire and he had a wife called Selma who was born in Stettin I believe and he had a sister called Hilde. And I obviously visited them as my grandparents. The business which my grandfather was in where he had made all his money was the import and sale of textile waste - it was really a sort of a rag and bone business on a very large scale. And my father was really brought up with the thought at least at the back of his mind that it was unlikely he would ever have to work for his living and did indeed spend seven years in Heidelberg. But the interesting part of this is that my father was vaguely to become a chemist and in those days had a schoolboy chemistry laboratory which would have sent every health and safety inspector absolutely mad by

the quantities and types of chemicals which he had, but as you will hear later this had a great effect on me. His parents objected strongly to his becoming a chemist because they were aware that I.G. Farben and companies of that kind had an anti-Semitic policy – even in those days, pre-Hitler - and that he would never get any where being Jewish - though they didn't I think ever explain it to him in that sense. He even ran away from home to underline his desire to become a chemist, when he was 16, and eventually his parents gave in and with the contrariness of children, later on went to Heidelberg and studied economics and philosophy and spent seven years there.

Tape 1: 3 minutes 37 seconds

MM: Did either of your parents have brothers and sisters?

HW: Sorry, I haven't told you anything about my maternal grandparents

MM: Exactly.

HW: My maternal grandparents were called Zahlfeld. My grandfather owned a furniture factory in Helmstedt near Braunschweig. He was an inventive character and invented furniture of all kinds – particularly tables with all sorts of complex mechanisms for making them bigger and smaller. I don't know a great deal about the parentage of my grandmother except she was an exceedingly nice and good-looking lady. And they had two daughters, Margot and Edith. Margot who was my mother and Edith who was three years older was my aunt who again figured prominently in what I will have to tell you later.

MM: Thank you very much. Did your grandfather have – or did you have uncles and aunts on the other side of the family?

HW: My father's father had a sister, who was partially paralysed in the sense that all the time I knew her she lived in a wheelchair and became very good at needlework and things of this kind and even accepted commissions to embroider different things. My maternal grandfather had no Zahlfeld brothers I know about. I'm finding this mighty difficult because my memory is not well functioning. My maternal grandmother had brothers who were vaguely related to Rothschild [?] - in fact Rothschild was her maiden name and there were these two brothers who married. And we were on social visiting and family terms with both of…with both of these. This was not true on my father's side. Apart from this Aunt Fanny I know of no other relations of my father or for that matter of my father's mother. I know of no brothers and sisters.

Tape 1: 6 minutes 25 seconds

MM: Thank you. Could you tell us something about your father and the First World War? Do you have any knowledge of this?

HW: Yes, I mean my father and a friend of his called Kurt Weill went to school together

– throughout their whole school, through Gymnasium in Berlin. And in 1914 when my father was 17 and my uncle must also have been 17 they volunteered for the army in a surge of patriotism. Because, as was common at that time, when Berlin had really quite a large Jewish population – something of the order of 170,000 - that people were Germans, Germans, Germans - and then Jewish. I mean they were aware of the fact that they were Jewish…

MM: You mean they were so assimilated?

HW: So assimilated. And certainly I am a third-generation non-orthodox practising Jew. I still feel Jewish but nothing in my childhood or for that matter in my father's childhood would have really… I mean was orthodox in any sense other than…than in…well, not even possibly keeping the festivals.

MM: Right…

HW: You were just Jews and you knew you were Jews.

MM: Not even the high holidays or the high holy days?

HW: I don't know about my grandparents. I don't think so. I only became aware of the Jewishness through Hitler and I'll tell you a story about this in a moment…But as far as I'm aware there was no tradition of that on either side of my family.

MM: Can you tell us how your father…Oh, a little more about the First World War. So your father and his friend fought in the First World War?

HW: In the First World War…Yes, my father contracted tuberculosis relatively early in the war or rather just before the Battle of the Somme, I think, or one of these very large battles and was invalided out of the army and because his father was well-off was sent to Switzerland to St Moritz, and recovered. My uncle I think served rather longer in the army, and I don't exactly know when he was but I think he was probably demobbed at the end of the war.

Tape 1: 8 minutes 50 seconds

MM: And your father recovered well from this…?

HW: From the tuberculosis, yes, but I mean this was one of these interesting social inequalities in those days that, had one not had the money to go into a sanatorium, one might not have recovered.

Tape 1: 9 minutes 5 seconds

MM: Exactly Yes... Could you tell us how your father and mother met perhaps?

HW: Yes. Well, I don't know the exact circumstances, but both my aunt Edith and my mother Margot went to the same girls' school with my mother with a – they were both black-haired with a thick plait at the back of her head. And they met – my mother and my father met when my mother was 15. She was born in 1905, so she was eight years younger than my father who was born in 1897. They met and as far as I understand more or less that was it. And my father who already had – according to the story - the privilege of putting 'Doctor' in front of his name would occasionally write her an excuse not to go to school – pretending that the Doctor was medically qualified. But anyway they met then and indeed his friend met her sister Edith and they must have married roughly the same time though I haven't got the date. My guess is that they married in around 1926 because I was born in 1928 and I think there was a two-year gap.

MM: And where did they live – within Berlin, where did they live?

HW: My parents lived on Kurfürstendamm 103-104, which was a large house – large four-storied house on the continental pattern with a number of courtyards stretching from the back to the front, and in the front one could overlook the Kurfürstendamm. And I was brought up – wrongly as it turned out, it appears to me anyway - on the basis that we were relatively well-off and therefore could afford a seven-room apartment and a nanny for me and a governess later on who I hated. The nanny I kept contact with for many years. My aunt and uncle lived in Brunswick – Braunschweig - because my uncle actually worked for my maternal grandfather in the furniture factory – this being in Helmstedt - Braunschweig was the place where they used to live. So for the first few years of my life I was virtually unacquainted with them. They then joined us. In 1933 they joined us in Berlin and shared this large flat which we had.

MM: Why was that?

Tape 1: 11 minutes 48 seconds

HW: I think it was partly financially and partly because once Hitler came into power, the Jewish furniture factory was no longer something which was a business proposition and also my grandfather was getting rather old, so effectively the job disappeared. And my uncle became an accountant and made, I suspect, a not terribly good living at that, and the fact that we shared all the facilities of this large Kurfürstendamm flat made life easier, and really from that time onwards with minor gaps until I was more or less an adult, and certainly until the end of the war, we lived as a nuclear family – a family initially of six because my mother was alive at the time – but later reduced to five. So I was almost brought up with my cousin as a sister who was a year and a half younger than I am. And the family says that when we first met - I can't have been more than about five at the time, in 1933 I was five - I didn't really know how to start a conversation with a three-year old. And I'm alleged to have said, 'Sag mal, Schrank' - that's 'Go on, day cupboard' - because she didn't talk very much but we really as children were relatively close for quite a long time.

MM: You were an only child?

HW: I was an only child and she was in practice an only child though she had an older brother who died very early in infancy by something that now would have been called a cot death, but we were both brought up as only children.

MM: But, as you pointed out, together for quite a lot of the time?

HW: Yes, and with an age difference which meant that we were more or less for a few years the same age.

MM: And you got on well together?

HW: On the whole yes, I think so. I think there was always a certain degree of competition between the two parents – particularly between my aunt and my mother because they felt themselves with the smaller income and all that sort of thing to be somehow or other not quite equal. But I also remember my …when we no longer had a maid – you know there was a law in Germany that your maid had to be over forty-five so there would be no 'Rassenschande' between your maid and their employer. And we ceased to have a maid of tremendous gigglings in the kitchen and so on as the two sisters who obviously really got on pretty well together. So I think those were momentary tensions which on the whole did not exist.

Tape 1: 14 minutes 40 seconds

MM: And have you…Do you have a lot of memories of the flat itself?

HW: Yes, I could more or less tell you where every piece of furniture was and not so very many years ago – and by not so very many years ago in my age, could be up to twenty – I had something to do in Berlin. I had to give a lecture in Berlin and I took my wife with me. And I had a day to spare so I visited the paths of my youth, so obviously the first place we went to 103-104 Kurfürstendamm and walked up the stairs - we lived on the fourth floor - and discovered that the flat where I'd been brought up had become a private hotel. The front door was open and I knew my way around it still because it had a very long corridor between the living rooms in the front – the sitting room, the dining room and the library which were in the front and the nursery and a separate lavatory and so on which were in the front - even office - and a long corridor and then the bedroom of my parents and the nursery. And this corridor was very much imprinted in my memory because I learned to ride a bicycle in it. It was long enough for me to lean against the wall until I had the confidence to actually balance on my own. And we walked up this corridor and there was the door to my nursery at right angles to the door of my parents' bedroom. We didn't dare to go into it. I then had and still have the ambition to book this room as a hotel room at some time if the opportunity arises – I would do so. So I have a very… almost autistic kind of memory of what the flat was like. And I will also tell you another story - that in 1933 I remember standing at the window of what was then the library and looking down at the torchlight procession – the 'Fackelzug'when Hitler came to power – going down the Kurfürstendamm and almost at that stage becoming conscious that I was

Jewish. Because I'd heard my parents talk about Jews without ever explaining what it meant, and I in my childish imagination thought that Jews were people who looked a bit like Chinese, wearing red berets. I mean I don't know how I…

Tape 1: 17 minutes 16 seconds

MM: Why red berets?

HW: I have no idea. And I think I really recognised at that stage that I belonged to what was then in Germany really a rather different kind of lot of people. Well I remember the 'Fackelzug' – the torchlight procession I really remember very vividly.

MM: Did that give rise to any sort of feelings in you when you saw it?

HW: No, because I think as a child you feel safe in the family and are less conscious of whatever dangers might be lurking outside. And I must say that…that I very rarely - I can only really remember one or two occasions when I personally encountered anti-Semitism on my own person. I was of course aware of park seats being painted yellow and of signs that said 'Juden unerwünscht' and things of this kind. But in terms of actually feeling it on my own person… I was once way-laid riding a bicycle. I was allowed to ride a bicycle in those days around a square of streets which were in the block where our flat was and I was once way-laid by two boys who were much the same age... They were obviously Hitler Youth but not in uniform. And more or less robbed in the sense that I had a torch in my pocket and they went off with this. The interesting thing was that I mean I kept a stiff upper lip in all this, but I was obviously upset and they had let down the tyres on my bicycle. And rather remarkably, having got their loot, which can't have been very much, they pumped my tyres up again so I could ride home. I went to a school which was a Jewish school called the Lesslerschule in Berlin, and curiously enough – and you might like a photostat of this - my wife, turning some things out, found the bound book of my 'Zeugnisse' - of my reports from about 1934 when I went to school until about 1939. So on the whole I was a reasonably good boy, well behaved, during this time. But as I say anti-Semitism I got in conversation, and later on when I was a bit older in occasional visits by the Gestapo, but I got very little of it on my own person.

Tape 1: 20 minutes 3 seconds

MM: Now to ask you a little bit about school…You went to the…

HW: To the Lessler Private Waldschule in Grunewald. I went there by tram every morning. There was a lady of reduced circumstances, I should imagine, who was retained to accompany us – I mean we had to catch a particular tram and to do the same on the way back. And I went to the 'Grundschule' class, the primary school, which were normally four years. I jumped the fourth year, as a small proportion of us did, to get to what I suppose might have been called the secondary school - the Sexta, because of Sexta, Quinta, Quarta and so on - when I was rather younger…, and I notice from my school reports which always say 'He did so and so in spite of being the youngest boy in

the class.' I was really happy at school. I must say I had no problems at school and…

MM: Why was that school chosen for you?

HW: Well, I suppose to start with it must have been a private school so somebody must have paid for me to go there. It was moderately difficult to get into 'Volksschule' – even in 1934 it was possible and my cousin did indeed do so. You know this was one of the possible tensions I was mentioning before that there were financial difficulties between the two halves of the family. I thought it might have been appropriate that I should have gone to a Jewish school which had a high standard and I must say I never interviewed anybody about the reasoning behind it. It was the natural thing to do.

MM: No it just seemed a way away to me from the Grunewald…to the Kurfürstendamm.

HW: No, Kurfürstendamm was quite a long street and we lived at the Halensee end of it which was appreciably nearer to the Grunewald than if you'd started in the middle of Berlin at the – what's it called again – the 'Gedächtniskirche' which is the other end of the Kurfürstendamm.

MM: And how long did that school remain open?

HW: Well it remained open until I left. I mean these are not connected. It had to close before I left Germany so it must have closed I should think early in 1939 because I think my last report is dated early 1939 and I then transferred momentarily to the 'Goldschmidtschule' which was another Jewish school also in the Grunewald or close to the Grunewald. I hated it there, not because there was anything wrong with the school but because they were the opposition as it were. And then I think that closed as well. And for reasons which might become obvious I went to live with my grandparents and there was another school not very far away, the exact name of which now escapes me, where I went for a few months. And was, I think, quite naughty, because in the meantime my mother had died and that clearly, even though I didn't show it outwardly very much, must have had a fairly devastating effect on me.

Tape 1: 23 minutes 35 seconds

MM: You said the 'Goldschmidtschule' was the opposition. What did you mean by that?

HW: Well, it's the same, I mean if you have two grammar schools in the town. I was brought up in Oxford for my grammar school and there was a school I went to and there was another grammar school and somehow or another the other schools felt each other as being the opposition.

MM: I see.

HW: I don't think…There was no logical basis for this.

MM: I see. What did your mother do? She didn't work, I don't think?

HW: When I was very small we had a maid and we had a nanny called Detta which was not an unusual German abbreviation of what the children said. I think Detta probably looked after me until I was one or one-and-a-half years old, so I kept in contact with her and I still was in contact with her until I was ten years old. The governess – called Fräulein – who I suspect I had when I was about three or four, but I don't think she lasted all that long because the financial circumstances of the family deteriorated materially as Hitler got a greater grip on trade. But my mother was of a generation where it was still possible to fill a day buying a hat. When I was very much older, I spent three or four weeks in Buenos Aires in about – I don't know -1956 or so. And the society of Buenos Aires in 1956 was really not at all unlike the society of Berlin in the 1930s when it was still possible, because there were domestic servants, when it was still possible to spend a hard day buying a hat and having a cup of coffee or perhaps arranging what meal you were going to have in the evening.

Tape 1: 25 minutes 35 seconds

MM: Meanwhile I wanted to ask you one or two more questions about your father. You said he studied philosophy and…

HW: And economics…

MM: Economics at Heidelberg. What… he was brought up not being expected to work but…what happened?

HW: What happened afterward was that inflation came in Germany. And my grandfather lost most of his money so he was no longer a rich man. And for a time my father attempted to continue to run the business of his father. His father died in 1927 so I actually never…so we never… our lives never overlapped. His wife Selma – and I think I misinformed you earlier on - had brothers and the brothers had - at the turn of the century had emigrated to Spain and started the sugar beet industry in Spain. And one of them was a German Consul – complete with feather on his head - in Spain. And their marriage, the Levin-Richters as they were called - my grandmother was a Levin by her maiden name - and I think that after my grandfather's death and fairly soon afterwards, the cessation of Siegfried Wolff – the business dealing in textile waste that my father attempted to keep going obviously increasingly difficult again because of Hitler - they lived very largely by subventions from their brothers in Spain and my father went into business. But what kind of business? He was much concerned with what was known as **'**Gleichschaltung'. 'Gleichschaltung' was an attempt that Jewish businesses should become Aryan businesses and my father really made a career out of trying to get the best possible terms for the original owners out of these deals, particularly as people who wanted to emigrate were in a sort of Catch-22 situation. Many countries, particularly some of the more desirable countries to which you might want to emigrate, insisted that there should be some capital in the country so that you wouldn't become a burden on the rates while all you could take out of Germany was 10 Mark and this really was difficult. And in the

period from, let us say, 1934 to…when we finally left in 1939 most of the business of my father was concerned either with 'Gleichschaltung' and getting good terms for people or much later, and I'll tell you about this in more detail, with brokering business deals which were in a sense faked business deals, which allowed people to build up capital abroad in spite of the regulations in Germany.
Tape 1: 28 minutes 41 seconds

So it was an interesting business, and something which I could never understand but which has stood me in good stead, was that from about the age of four, my father allowed me or got me to sit in on really quite high-powered financial discussions. So at a very early age I knew all about arbitrage, rate of exchange, transfers and things of this kind. Why he did this I cannot imagine because it must have been a risk because most of these deals were to say the least of it on the border of the current legality of the country. But my whole attitude to money and how one manipulated money I suspect was laid down at that time by this very early acquaintance with some of the intricacies of moving money about.

Tape 1: 29 minutes 38 seconds

MM: So he took presumably some sort of a cut from people for doing this?

HW: Yes, yes he must have made a living out of it although our living was quite thin at times in spite of the rather grand style on the Kurfürstendamm where we lived. Well, he did that and he also acted as a financial advisor and so on. In a sense I suppose one would say he lived on his wits up to a point. He would really have liked to have been an academic and this was in his upbringing. The other thing he would have liked to have done and which he finally managed to do but not until very, very much later was to either be a publisher or a bookseller. Because a friend of his whom I remember and he had met at Heidelberg, and their great desire was to have a bookshop between them, almost as a hobby rather than as a way of making a living. And I mean from my point of view in my own intellectual development, my father played a very considerable role because my father was always keen that I should have straight answers to questions. There were always books. He had a 'Bibliothek', a library, and he was very much a book lover and there were literally thousands of books in the flat and what was most significant for my future was that in the loft – because we lived at the top of the house, we had the top flat in the house, we had access to the 'Boden', the loft. All the chemistry equipment which he had accumulated as a child was still there, including all these large jars of dangerous chemicals, and from the age of about four on Sunday afternoons we did chemistry.
Tape 1: 31 minutes 39 seconds

And so my little pudgy hands over this little flame waving a test tube was something giddy. And I still find it intensely nostalgic because at the end of these, I was allowed to put a lump of sugar into the bottom of the test tube and make a sort of toffee out of it – and the smell of burning sugar is still intensely nostalgic as far as I'm concerned. And I relatively recently – again recently meaning ten years or something like that - did a biographical lecture of myself to the Royal Society of Edinburgh where I actually

repeated some of the experiments using contemporary test tubes and wooden test-tube racks and so on, and re-created the kind of atmosphere in which I grew up. And I was always well supplied with bits of wire and batteries and the equivalent of meccano sets and **'**Stabile Bankkassen**'** was the equivalent of Meccano in Germany, so my youth was… I always… I mean I obviously had a natural bent for technology and, people not being so safety conscious, I remember repairing electrical appliances from the sort of age of five. I understood how it worked and I could use tools and I was allowed to do this without apparently much restriction. And I even sort of remember, although I don't know whether I remember or because people told me afterwards, when children are paraded in front of relations or acquaintances it was said of me that I was likely to want to become a chemist, and I must have been all of five at the time but I said, 'Ich bin nicht nur chemisch, ich bin auch technisch.' - 'I'm not only chemical I'm also technical' - trying to emphasise that I wasn't that narrow-minded to become a chemist. And indeed I became technical rather than chemical through another accident. So my youth up to let us say 1938 – beginning of 1938 - was on the whole really relatively undisturbed except perhaps economically by the Third Reich and I could say that I'd a happy - a happy youth. We were then going to emigrate…

Tape 1: 34 minutes 8 seconds

MM: May I stop you for a moment? I didn't ask you about your relationship with your parents.

HW: Yes, well my father I just explained to you…

MM: Yes.

HW: My relationship with my mother was also obviously a loving relationship. My mother was very keen that I would do well at school and there were times when there was a good deal of tension, not because I wasn't doing well at school but that I should do my homework to the very high standard which she required. And there were occasional tensions from that. But I mean we were on the whole a happy family and went on holidays together and so on and had fun.

MM: Where did you go on holiday?

HW: Well, remember that at that stage money was beginning to become a problem, so the holidays I remember from my youth was a holiday to the Tyrol – the Italian part of what used to be Austria – Ortisei was the place we went to but where one could still speak German because it had been Austrian after the First World War. I remember going to Titisee which was in Germany of course, in the Black Forest and I remember going to - those are the two foreign holidays I remember. I remember going to – quite frequently – to a place which wasn't very far from Berlin and the name escapes me for the moment – it was a Jewish guesthouse with a lake. And I swam – I learned to swim quite early in my life and parents weren't so safety-conscious in those days. I was allowed to row boats and catch tadpoles, 'Kaulquappen', and do all sorts of things that children do.

MM: Did you go to - the two foreign holidays – did you go without the other half of the family or the nuclear family or not?

HW: No, both of them they were there as well but not staying at the same hotel which was one of these subtle distinctions which…and on the Titisee one my mother and myself went by train and the rest of the family went by car, because we had acquired a car at the time, and they actually had an accident on the way, with relatively minor injuries but nevertheless they had an accident which shook everybody up a bit. And I remember that and the black eye that my father had appeared with and various other contusions. Yes they were there, but not exactly in the same place.

MM: You spoke about there being lots of books – thousands of books – in your house. I wondered whether you went to the theatre or the opera – those sorts of things - other cultural things the family did.

Tape 1: 37 minutes 06 seconds

HW: No…No member of the family was musical so that cut out... My father I think liked music and would listen to concerts on the radio. Certainly I never remember going to a concert. I remember going to the occasional play and there was a Jewish theatre in Berlin – something, 'der Kulturbund' I think it was called - which I remember going to for occasional performances, but it was certainly not a major part of life. What my father and I did was to go to exhibitions. I lived in the shadow almost of the 'Funkturm', this Eiffel Tower-like structure in Berlin – to the point where the rotating light at the front on top of it shone into my bedroom and I got used to the periodic…I mean it was an appreciable distance but nevertheless it's a large structure and around the bottom of the 'Funkturm' was an exhibition. And I remember going to – particularly – cookery exhibitions with my father on at least two occasions and I guess that was a fun thing to do. But it was not something which we did.

MM: Were you aware of any political attitudes on the part of your family?

HW: Well, it wasn't… I remember at the time of the vital election, which must have been 1933, I remember going to a pub which were used as voting places in Berlin, in the Joachim-Friedrichstrasse which was just around the corner from the Kurfürstendamm and my parents arguing, 'What do we actually vote for?' As the vote was unlikely to be in secret anyway and they said 'well, all we can really vote for are the Social Democrats' and that's what they voted for. No member of my family was politically active in the sense of being a member of the Communist Party or anything which really required a large degree of commitment. It was merely a question of trying to live as decently and as comfortably as possible under the conditions.

Tape 1: 39 minutes 42 seconds

MM: I see - good. Thank you very much. Now I didn't ask you yet about languages. Did

you learn any languages at school?

HW: I learnt a bit of English. And before our…the emigration became really imminent, I was sent to English lessons…

MM: Private lessons?

HW: Private lessons yes, actually by somebody who was much older than I, was but probably wasn't actually any older than 16, who was supposed to give me English lessons. But I don't think it had any great impact on how quickly I assimilated English when I got here which didn't take very long. I went to school almost immediately and performed reasonably well at the school quite quickly.

MM: I would like to take you to 1938 now and I believe your mother died in that year. Can you tell us something about that?

HW: Well we were actually supposed to emigrate in 1938. And my mother became ill with an infection of the heart - an endocarditis - which these days a few shots of penicillin would have cured. She was ill for several months. We had moved out of the Kurfürstendamm into a private 'Pension' where we had I suppose two rooms in this place and in preparation having put all our furniture into the much-vaunted lifts - those very large boxes. This was one time of separation whilst my cousin and aunt and uncle moved into a flat in a different – I mean not a very different part of Berlin but some distance apart so that I still saw them quite frequently. And my mother…after six months of illness or so my mother died…It almost…I mean it ruined my father in a sense even more financially because no penny was spared which was for all intents and purposes in those days an incurable disease and there wasn't…It was just before sulphonamides and sulphonamides might have done something for her. And she died. Again, I'm a fairly controlled person and I kept a very stiff upper lip but couldn't really bear to talk about it.
Tape 1: 42 minutes 15 seconds

And then there was a short period where there was a theoretical – not all that theoretical – there was a plan to send my cousin and myself to Brussels where one of the Rothschilds [?] had moved to. There was a brother of my grandmother called Hugo who had moved to…Fortunately it didn't come to anything because I think this would have torn the family apart and we might never have managed to get out of Belgium again. And we stayed…We got closer and closer to going away. I went to live with my grandparents – my maternal grandparents - still doing chemistry and making all sorts of pictures, building radio sets and things of this kind which boys of my age might have done at the time. I was about 10 or 10 and a half at this time. And…Well, it got closer. My father's activities became increasingly unlawful, I suspect, to the point where after the Kristallnacht, which I remember incidentally quite vividly, there was a time when my father and I slept in a different place every night because he didn't want to be caught, as it were. And the interesting thing is it was exciting. There was no sense of danger about this – it didn't particularly affect me. My father went to live in a hotel. I lived with my grandparents. And in due course on something like the twenty-fifth or so of August,

1939, or maybe within a day or two of that, we went to Holland - to Amsterdam - because there was at least a theoretical thought that Holland might stay neutral. And we all had affidavits for America and if you went to any kind of tea party – a Jewish tea party – almost the first question you were asked was 'What is your number?' you know because there were only 10,000 or so admitted per year. And I think for some reason or other my father had applied much later than my uncles because they had a much lower number. And, well theoretically, I think we might have got here in 1945 or something like that under the quota arrangements. But I remember that as being a subject of conversation. And we had an uncle - again a brother of my maternal grandmother who I think put up the guarantees for the affidavit which you had to have it in those days.

Tape 1: 45 minutes 17 seconds

Well eventually I remember a taxi about the twenty-fifth of August, driving down the Unter den Linden driving past the British Embassy which was being evacuated at the time because all the diplomats were leaving because war was obviously fairly close. I also remember – still living in the 'Pension' - of the previously – there was almost an outbreak of war previously - that's when Chamberlain came and… 'Peace in Our Time'. And this came for me at a really critical point in my life because having just about lost my mother, I thought my father would be called up and I might have lost my father as well. And I was really frightened… for a time – I mean not desperately frightened but I was frightened, because I was quite … didn't know what would happen to me. But anyway that all blew over. And so we left and we went to Amsterdam with the hope of getting some sort of visa to stay in Holland. When the Dutch authorities said, 'Well, unless you get out within the next 24 hours we send you back to Germany.' It wasn't a particularly friendly attitude, although some of my best friends now are Dutch. And we caught a boat which went to Gravesend. Hell-for-leather taxi ride to the coast somewhere…And arrived at Gravesend at the moment when the first air raid sirens blew on September 3rd. As enemy aliens, with one of these grey enemy alien books, stayed in a hotel for the first night where again there was another air raid although it probably wasn't a real one. Found ourselves some rooms in Greencroft Gardens behind John Barnes and then very soon after that – meanings perhaps a week or fortnight after that, moved into 24 Maresfield Gardens which was next door to Freud's house because the people had evacuated themselves from that and there was a great surplus of houses. There wasn't any difficulty getting somewhere to live. And that's where we stayed, certainly for the winter of 1939 and the spring of 1940. And that was really the start of my existence in England. And my memory is probably rather more reliable for that time than it has been for everything I've told you so far.

Tape 1: 48 minutes 7 seconds

MM: Thank you. I wanted to take you back briefly to Kristallnacht. You said that you had very vivid memories of that. Could you just tell us a little bit about that?

HW: Well, Kristallnacht was of course… the precursor to it was that all Jewish businesses in whitewash had to have their name written on the shop window that they were Jewish businesses. I also remember, probably rather earlier than that, the so-called

boycott when brown-shirt people stood in front - or the doorways - of Jewish shops and one really had to crawl between their legs or something if you wanted to get in, which some people had the courage to do.

MM: Do you think that is the boycott of the 1st of April, 1933?

HW: No, it was later than that.

MM: Later than that… Of course there were other ones…

HW: I would have been too young I think to remember that…

MM: Yes…

HW: I remember a particular occasion when my mother and I went to the cobbler, the shoe-mender, and there was the shop opposite where one of these SA people was. I must have been older than that. But I remember the Kristallnacht. I remember that the Jewish shops already had to have their names written on them so that they were easily identified. I remember next morning all the glass and things of this kind all over the place. Interestingly enough, the Kurfürstendamm - that end of Berlin seemed to be always less affected by these kinds of things.

MM: Why was that?

HW: I don't know. I mean maybe…It was of course an intensely middle-class part of the world and I suspect that had some dampening influence on the excesses which the SA produced. There were probably also more Jews living there.

MM: Sorry?

HW: There were probably also more Jews living there. But it was, I suspect, a fairly middle-class part of the world and I remember next day saying that all the synagogues had been burned and by this time I must have been about nine or ten - well, ten - you know, being aggressive about it and saying 'Shouldn't we immediately start rebuilding the synagogues? Or at least having some kind of substitute for them?' But what can a ten-year old do? I think that the significance of the position of Jews in Germany perhaps hadn't totally penetrated to me, as indeed it hadn't for the majority of Jews.
Tape 1: 50 minutes 59 seconds

I mean the reason that so many Jews remained in Germany was of course that there was a wide-spread belief that it wouldn't last. That this Hitler thing was an aberration and it wouldn't last. They were wrong. It depends on how much of the future you were prepared to… And so many people and my father was one who was very fond of the…of German culture right to the point and I'm really anticipating here, where during the war, we lived in Oxford, he belonged to various organisations where he gave lectures and so on – my father also gave lectures, where he tried to dissociate German culture from

Nazism – that these were not synonymous with one another. And he did indeed get an Order of some kind - a medal from the President of Germany after the war. This is again out of sequence. Also what some people find almost unbelievable is that throughout the year a newspaper called 'Die Zeitung' was published for the benefit of German refugees in German, which was, I think, an interesting phenomenon. And at a lecture which I gave the day before yesterday to these 100 headmasters - and I've also made the same statement before - was that at no stage of my school life in Britain which exactly bracketed the war, with the fathers and brothers of school-mates of mine being at the front, being killed, being shot down in airplanes and so on, did anybody ever say 'You bloody German. It's all your fault.' And I don't believe this could have happened in any other country. I think this…I mean, it might not be like that now I think, but at the time…I find now in retrospect this to be quite a remarkable phenomenon.

Tape 1: 53 minutes 29 seconds

I mean there must have been a personal quality about this as well because as people always said the people who suffered most from anti-Semitism: it's like dogs knowing that you're afraid of them attacking you. There is … Some people attract anti feelings more that others. And I was always, if you like, I appeared to be either not afraid or not somehow or other not to have this smell about me of being an attackable person or bulliable person. I wasn't very big so it wasn't my muscle power. But I always say this with some considerable emotion that through those five or six really very difficult years for this country, that no-one ever held my Germanness against me.

MM: Remarkable. Very good. On the journey through that you made to Holland, and then on, were you aware of any emotions?

HW: No, as it was all terribly exciting. Remember I was eleven years old, driving through the night in a taxi and things of this kind. Going on a ship which carried melons, a freight ship, and arriving. It was all so immediate – I mean that I don't think there was any sort of long-term thinking about what was going to happen in the future.

MM: Do you have any memory about the immigration officer coming into…?

HW: Yes, I remember going through what looked a bit like customs and it wasn't a particularly harassing thing. We got our little grey books – our enemy alien books – and which of course prevented one from working and so on – there were difficulties about this. But my father had built up a certain amount of money as he had indeed for other people and actually you haven't asked me to tell you about that, what my father did in the latter part of our stay in Germany – so we had some money. And the economics of it did not appear to be a problem, certainly in the early stages of our emigration.

Tape 1: 55 minutes 57 seconds

MM: Well, you did tell me about the fact that he helped people to leave and to sell their businesses. Was there anything else that you wanted to say about what he did?

HW: Well, yes, I mean as it got closer to 1939 and the authorities were becoming more vigilant, my father was actually for a very short time taken to the Alexanderplatz to where there was a prison and we had a number of visits from the Gestapo who never found anything of any significance. But my father managed two things which were … which helped considerably. One of them was that by setting up what effectively were bogus business deals of apparently importing something for which you then had to pay…when what you imported was for all intents and purposes worthless, like watch parts from Switzerland and things of this kind. This then enabled people who paid invoices to accumulate balances in foreign countries and this was…this might well have saved the lives of some tens of hundreds of people, actually managing to establish the money which had to go to England. You couldn't get into England without having… unless you were a domestic of something of this kind you couldn't get into England without having the cash. The other one was that after Kristallnacht and so on and people were taken to concentration camps, he had a non-Jewish secretary who was very devoted to him, who had some connections to the Gestapo. And again I knew about this, now why one would tell one's son about this was dangerous. She had ways and means where money undoubtedly changed hands between the Gestapo and her… that files be put on the top of the pile and things of this kind, and people got released on the basis that they left the country within so many days and things of this kind. And he made use of those connections.

MM: I see. I think we have to stop now to change the tape.

Tape 1: 58 minutes 19 seconds

TAPE 2
Tape 2: 0 minute 5 seconds

MM: Did the Gestapo visit you and take your father away at Kristallnacht?

HW: No, as far as I remember there was nothing directly affected us on Kristallnacht though I do remember going to school on the next days and some of the teachers
having disappeared and reappearing much later with minor damages like a…like a paralysed hand or something of this kind which had been frozen and so on. I was obviously unhappy about it but not in my immediate environment – nor for that matter was my uncle taken away. But I think we were… neither of them were at home as it were. This may have overlapped with the time of not sleeping at home, though it seems too early for that.

MM: Yes.

HW: But moving about helped.

MM: I'm sure. Good, now perhaps we can go on to England and we started already to speak about that. You came to England and you went very quickly to Greencroft Gardens where you lived and then Maresfield Gardens. Did you go to school? You came in

September ’39, right? How quickly did you get into a school?

HW: I should think not much more than a month. We went to a place called St Dunstan’s School, which was a tiny prep school along the Finchley Road nearly in Golders Green which only had two forms. And my cousin and myself roughly being the same age went together, and apart from totally disorganising the school for a time by always asking ‘What does that mean?’ when we didn’t understand what the word meant, as far as I remember within 6 weeks or so we were relatively integrated into the school and really quite soon we were writing essays and so on. The language - I don’t remember that the language ever really presented a major obstacle.

MM: Can you remember the first day you went to school at St Dunstan’s? Everything must have been so different from a German school.

HW: Yes I must admit I have nothing which…which impressed me. I mean, St Dunstan’s was run by three elderly spinsters as sort of little prep schools at that time were done. It was really, the house was more or less an ordinary house along the Finchley Road, I could probably still find it. The playground was the back garden in effect, and I remember snow-balling and so on in winter. And again it was something which was pretty untraumatic.

Tape 2: 3 minutes 3 seconds

We did our homework and learned all sorts of more or less useful things and I had always been quite good with my hands, so we had fret-working classes and I remember excelling in those. And I was then destined to go to University College School…

MM: Did you go there straight from St Dunstan’s?

HW: No I didn’t ever actually go to University College School. That was only an intention. We…some time in the spring of 1940 we moved from Maresfield Gardens and moved to Bridge Lane in Golders Green where a house had been vacated. And that more or less coincided with the beginning of the Blitz.

MM: With?

HW: Of the Blitz…and there were air raids. I did what all the children did and collected shell splinters from the road. I was always quite keen that we might sleep in the shelter which wouldn’t have actually protected us any better than our own house did. Then one day a landmine, which was one of these parachute mines, fell into the Hampstead Garden Suburb onto the primary school (which will play another part in my life later on) and destroyed it and damaged the house – not badly – but damaged the house in which we lived in Bridge Lane. And the family decided then that they would evacuate themselves. We had a friend in Oxford. She was actually a domestic - that’s how she got here. And she had arranged for us to stay at least for a limited period in the house of her employers who were the Hume-Rotherys. Hume-Rothery was the Professor of Metallurgy at Oxford and by one of these curious coincidences his now very ancient wife was actually looked

after in a sort of CVS nature by my son when he went up to Oxford. So these circles kept on closing. And they were very nice to us and we might have stayed there for a week or a fortnight, I don't exactly know for how long.

Tape 2: 5 minutes 45 seconds

I remember conversations where he took me really quite seriously - I was now eleven or twelve perhaps - talking about scientific matters with Professor Hume-Rothery, who was a very eminent scientist in his day. And we found a boarding house effectively at 110 Abingdon Road which was again in Oxford. Mrs Wood-Mason who really ran a commercial boarding house where commercial travellers stayed with her and she took us in. And the first thing she did was to go to the local police station and say, 'Is this all right? They're Germans.' She was nice enough but 'Is this all right?' and she was assured that we weren't enemy agents. And this was all six of us so we stayed at 110 Abingdon Road. And I will tell you something in brackets about this in a moment. And we were really very well looked after by Mrs Wood-Mason. Now what I haven't told you, which was at a time earlier than that, while we were still in Bridge Lane the internment business reared its head, and my uncle was taken to the Isle of Man. My father wasn't at that very moment, so my father put on dark glasses, got himself a walking stick and, leaning on my shoulder, walked to Golders Green police station where a sort of kangaroo court was sitting in the cycle sheds of Golders Green…and obviously the impression which we made was such that he was unlikely to be a danger to the country. And he was not interned. It was a fairly arbitrary but excusable situation where - fifth column panic and so on. I bear no ill will about this. My uncle was in fact at the Isle of Man when we moved to Oxford, so there were only five of us initially for Mrs Wood-Mason.

MM: Which camp was he in?

HW: I don't know – were there more than one on the Isle of Man, was there?

MM: Yes, Onchan and Hutchinson and…

Tape 2: 8 minutes 0 second

HW: I don't know, I don't remember. If you were desperate I could possibly find out but I don't know. My father had begun to run businesses – he must have got an 'Arbeitserlaubnis' – permission to work somehow or other and whilst we were in Oxford started a number of small companies which made things which big companies which were now at war didn't make like pipe-cleaners and hair curlers and things of this kind. And ran relatively successful small businesses with my aunt acting as secretary. He used to commute into London, not necessarily every day. But my aunt had been his secretary already sometimes in German, so this was only a continuation of the arrangement. Now what I wanted to tell you in brackets about 110 Abingdon Road was that three or four weeks ago the family - this is the family consisting of my wife, myself, and the wives a children of my two sons and my two sons themselves, so there were ten of us - had a family party in Oxford - because two of our grandchildren…it was the only year when two of our grandchildren would be at Oxford simultaneously, one at Magdalen and one at

St John's College. And I said, 'Now if I don't do anything else, I must visit 110 Abingdon Road and the recreation ground which was next door because this is where my youth was spent'. So we did indeed set out to 110 Abingdon Road. My younger son, who had the cheek, went up the steps and knocked on the door and explained to the people who I was. And there we were in the sitting room where I'd spent most of the evenings during the war playing rummy or other sorts of family games – all relatively unchanged. Though they were South Africans who had no particular connection with Oxford. And we did indeed go to the recreation ground a few doors away which was also relatively unchanged - the same swings and so on but some of the more dangerous machines had been removed and the swimming pool which was behind as well. Again they had played really quite major parts in my life. So that was an interesting nostalgic… because I hadn't been in that room for over…about,… well over 60 years, well, that it should have been so unchanged – close brackets again now. So we lived there and both my cousin and I went to school. And we both initially went to elementary schools because that's how schools started. Even though I was of an age when I could have just about got into the grammar school but there wasn't any space.

Tape 2: 11 minutes 1 second

So I went to an elementary school quite near the centre of Oxford while she went to an elementary school in Hinksey which was roughly speaking where 110 Abingdon Road was. Did well. My cousin did a scholarship exam and got the 11 plus by which it was subsequently known and got into the girls' grammar school. I stayed a bit longer… No, I certainly stayed some time at the elementary school, where again it was entirely enjoyable except instead of doing one year a year I did one year a term. So I went from Standard 5 to Standard 6 to Standard 7, which was normally the leaving year at 14 or something, in a relatively short time - it can't have been more than a year. When I then got into the third form at the City of Oxford School, which was the city grammar school, where I spent the rest of my secondary education. It was a 300-boy grammar school which I think was a very good school in its day. It made a bargain with the city just before the war that it would cease to be a public school which I think it started off being, and in exchange the most magnificent suite for the time of laboratories was built at the school, so this was very lucky for me. I was already committed to science in one sense or another. I had an advantage over some of the other children - that German was one of the subjects which I could have taken - of course I did not do it anyway. It was in fact impossible to take German and chemistry because they collided in the timetable. So I had a School Certificate and a Higher School Certificate in effect for nothing because I already spoke the language and had a relatively uneventful war. Oxford was never bombed. I did all the things which schoolboys do, and…even including fire-watching which in the sixth form one was allowed to do because there was always the chance that there might be an air raid. I built a school stage because I was good with electricity and learnt a lot of chemistry and physics and so on. I had no shortage of girlfriends supplied by my cousin from her school. And we lived a life of going for picnics and things of this kind in the surroundings which could not have been very different from a pre-war life.

Tape 2: 13 minutes 44 seconds

So again, I was very lucky that neither - I mean admittedly my uncle being interned and

coming back then and joining us back afterwards and again working as an accountant in the coop in Oxford – my father was running his various business ventures - having a relatively painless war with no close relations involved in the war and again not dissimilar from what I told you about my school-mates. Mrs Wood-Mason had two sons in the Air Force, both of whom were killed in the war, and yet this never reflected itself in her treatment of us so at the time – this was before Auschwitz and so on - the recognition that we were genuine refugees, as it were, and weren't on the wrong side was sufficiently prevalent in the population for us not to be discriminated against. I think one cannot emphasise this enough that how relatively lucky many Jewish refugees were in the way in which they were treated.

MM: Did you have…among your family circle, the friends of your family, were there other ex-refugees?

HW: Yes, a few. We had friends in Oxford some of whom were Germans. I don't remember a great deal of socialising with other families. I socialised of course with the parents of my school friends, with some of whom I'm still in contact – or their descendants – I'm still in contact. But there were…I do not remember any sort of German Jewish tea parties and so on. It would have been technically quite difficult to arrange as well because we were already pushing the capacity of the house. There were five extra people who were there all the time. But in 1943 or '44 the rest of the family decided to go back to London because the Blitz was over or at least when the bombing of London was over – or largely over, we decided to go back to London. And I just got into the sixth form, so we could date it more accurately. That must have been 1944 when they went back to London. I said 'Look, school's just become fun. You're somebody when you're in the sixth form. I would like to stay.'

Tape 2: 16 minutes 24 seconds

And I stayed as a boarder if you like with Mrs Wood-Mason until I disgraced myself because she still had commercial travellers, and without any malice on my part at all I wrote a postcard to my father saying 'You won't believe this but it's really funny. There's one commercial traveller who comes on Mondays, Wednesday and Fridays and another who comes on Tuesdays and Thursdays and so on, and they both have the same serviette!' And somehow or other Mrs Wood-Mason saw this and she kicked me out. She had me back later on, as it happened, but at the time she kicked me out and I lived in other digs in Oxford. So I was living on my own relatively early in my life. I went to see my father quite frequently in London.

MM: So you took well to living on your own?

HW: My father was a widower, so he had other associations for a time but I got to the point where I was looking after myself, as it were. I was responsible for myself from about the age of 15 or so onwards - in a sense had left home because there wasn't a home for me to go to. I did quite well at school – got my school Certificate and then my higher school Certificate. And I was very young, so I decided to take a second higher school Certificate in slightly different subjects and built the school stage during this time and all

this for some trivial sum of money which going to school cost. This was before the Butler Education Act, so it cost to go to school something like £12 a year or something like that. It was not a large sum. I had a girlfriend and actually one of my digs after I left school was in the house of her mother – I went to live there. And then something happened to my life which would change the whole of my life. I had a place at St Catherine's College in Oxford to read chemistry – the second generation who wanted to do chemistry - and I got a postcard one morning which said 'Look, all the ex-servicemen are coming back. Is there any chance of you deferring your coming up to the university for a year so as to make more room for the ex-servicemen?' And I said, yes, I'd do that and I got myself a job at the Radcliffe Infirmary in Oxford which was a teaching hospital in Oxford – a very high-reputation hospital. And went and worked in the Haematology Research Unit run by a marvellous man called R.G. Macfarlane as a laboratory technician. So I was 17 or about 18 at the time. And work in the laboratory was of course something which I rather enjoyed, but it was brought to my attention that Harwell - which was not effectively… was the centre of atomic research - there was a major problem at Harwell that one of the ways of getting to see whether people were damaged by radiation was to count some of their blood cells. And they got themselves almost to the stage where one half of the population of Harwell was counting the blood cells of the other half of the many people there, and there was no practical piece of machinery for counting blood cells automatically.

Tape 2: 19 minutes 56 seconds

And I had an idea how to do this, and for the next four years in fact, working with the machinery, teaching myself engineering on the way, as it were – particularly electronics on the way, I threw up my place at Oxford because I wanted to work on that. A very understanding boss, this man Macfarlane, and we did indeed build the machine which incorporated – long of course overtaken by events now – which incorporated the principle which made it possible to count cells automatically and published my first paper in 'Nature' in 1948 or something like that, which was relatively unusually early in my life – maybe even earlier than that - '48 I must have been 20. It must have been earlier than that. And…Got a bit fed up with being paid £2 four-and-sixpence as a wage because I was still being paid as a technician. And got myself a job as the – at Oxford University – again as an electronic technician but at twice the salary in the Department of Physiology which was just changing over at that time from doing things on smoke drums with straws scraping things on smoke drums which was a standard recording system which was used in physiology going over to electronics with cathode ray tubes and things of this kind. So I had this position and learned quite a lot – stayed there for about a year. And then saw an advertisement somewhere saying that the Pneumoconiosis – just for the record pneumoconiosis is a disease miners get from breathing coal dust - Research Unit in South Wales wanted somebody – wanted a physicist to devise a means of counting dust particles because the unions by this time had become quite shirty – quite rightly so – about pneumoconiosis and wanted something done about it. The Medical Research Council which employed me for many years subsequent to that was given the job of getting something done about it.

Tape 2: 22 minutes 12 seconds

And in South Wales was the obvious place to do that so there was a unit and Llandough Hospital just outside Cardiff. And I got various people, including my ex-boss, to write, saying, 'We have a man here who knows how to count small objects possibly more than anybody else.' And I got the job and moved to Wales and amongst other things met a very pretty staff nurse called Joan Stevenson who subsequently became my wife and again for the fun of it she didn't live in a nurses' home at the time, she lived in a sort of lodge which was in front of the nurses' home in a corner room and because her off-duty was very irregular we had developed a code of how she left her windows to tell me - to tell me like a semaphore code almost – what time she going to be off duty, which of course had to be fairly complicated because it had to take account of weather as well. You couldn't leave all you windows open if it was pouring with rain but fortunately she had a corner room so there were two possibilities. And quite recently we found the piece of paper which had the code on it. Anyway in due course after other things which had happened, we got married, but that's how I met her. And where I met all sorts of highly influential medical research workers because the new Research Unit had attracted all sorts of interesting people. And again I was just a technician, but I did indeed invent another piece of equipment called a Conicycle which didn't count dust particles at all but acted rather like the lung in terms of the particles retained in it because very big particles get stuck in your mouth. You don't swallow them; they don't get in your lung. And very tiny particles behave like a gas – you breathe them out again. So there's a range of particle sizes which are actually deposited in your lung. And I made a piece of machinery which acted a bit like this so that at the end of a shift we could actually weigh the dust rather than this extremely tedious business of having to count particles in a microscope. It was called the Conicycle. I worked on this for about a year and produced working models of this. And then the Medical Research Council said 'Look Heinz, you've got to go and get yourself a degree.' I had made sort of tiny attempts to get a degree because while I was still at the Radcliffe I went to evening classes at what is now Oxford Brookes University and what was those days the beginnings of Oxford Polytechnic. And on the basis that, having some years ago given away degree scrolls to the students, I claimed alumnus status of Oxford Brookes and am now on their list.

Tape 2: 25 minutes 9seconds

But…Interesting job, girlfriend, motorcycle, night school - somehow or other night school never got very high up on my list of priorities and I did a few months of this before I got this job in Wales. And they made me an offer which I couldn't really resist - to say, 'Look, we'll pay for you, we'll give you a State Scholarship in effect to read anything you like at any university you like – I mean, if they'll have you - you don't even have to come back to us. But the one thing which we do insist is that every one of your long vacations you work in a different Medical Research Council Unit – of which there were in those days about 50 spread all over the country with different specialities , so that you will have some idea what the Medical Research Council is all about. However, there was a snag which was discovered at a very late stage. And I must tell this story against myself. And though I had a really quite passable School Certificates and High School Certificates, what I didn't have was a credit in Latin, and in those days you couldn't go to Oxford or Cambridge without having a credit in Latin. I was supposed to go to Trinity College in Cambridge to read Physiology and suddenly discovered that I didn't have this

credit in Latin. So they said, 'All right, go to a crammer.' I did go to a crammer and didn't pass. And so they said, 'Never mind, clever chap you are. Start a term late. Do some more cramming.' And I did some more cramming and went to Cambridge and went to take the exam and found the examination schools were empty. We then discovered that they had printed two timetables, but one of them was wrong with the wrong dates on it, but they had preserved a sufficient number of copies to send me the wrong copy. So I went to tell my tutor with some alarm and said 'Look, what am I going to do?' and he said, 'Never mind, never mind. Take the examination now, in my rooms' whilst plying me with sherry. I took the bit of unseen Latin to English translation which I'd actually seen in the sense that in my training I'd come across it. So I thought I'd done rather well. I went up to Trinity, got myself the bicycle and the obligatory gown - to be told a week later that I hadn't passed. History does not tell whether they had not accepted the fact that I had taken the thing a week late or whether I really hadn't passed at all. So anyway strings were pulled and in no time at all I was into University College London which didn't have this regulation. In a physiology course, again very eminent people teaching the physiology course, and was sent to do an honours degree in physiology. In a sense I'd done engineering, I thought – I was self-taught admittedly - and in those days one had to do two subsidiary subjects as well, so I did physics for a year and chemistry for another year. And really started the business - I had a really quite interesting time because my very first long vacation was spent in King's College in the year of the double helix. But the King's College team was the unsuccessful team – Rosalyn Franklin, whose biography has only relatively recently come out - and I knew or I got to know all these people and made all sorts of clever and interesting bits of equipment for them. So that was in itself an interesting time.

Tape 2: 29 minutes 1 second

But a friend of mine and myself also set up a sort of business because we wanted a bit more money to spend - making electronic equipment which one couldn't buy, largely for the Pharmacology Department at King's College. It was all done in my bed sitting room. I did it by myself initially, designing and making and electronic equipment and getting paid for it. I used very crude tools and so on but there wasn't much electronics to be bought in those days. So there was a little Jewish radio shop in Goodge Street which gave me unlimited credit, so that…because we didn't get paid until we delivered so we could get the bits and pieces, the valves and everything which we would get on there. I didn't work desperately hard but I was interested and much to everybody's surprise I got a First at the end - one of only two and four or whatever there were in London at the time. In the meantime I'd spent my second long vacation in the Division of Human Physiology at the Institute of Medical Research in Hampstead - which also was an interesting place - which also had a problem in that Field Marshal Slim of wartime fame (I mean by now we were a few years after the war) had been to Sandhurst and said 'The recruits look a bit skinny, don't they?' And everybody panicked, the War Office panicked and the Ministry of Defence panicked and said 'Maybe all these National Service people - we're underfeeding them!' and this could affect the health of a whole generation. And the Medical Research Council was tasked through a committee called The Army Personnel Research Committee to establish a balance of whether the output and input were reasonably in balance. But for that you need an instrument to measure how much work

people do and in my second vacation again I designed a bit of equipment called an IMP, of which there is one in the room somewhere I think, which was compatible with the sort of things armies did, going over assault courses and so on, and which would measure how much oxygen people were using because there's a fairly steady relationship between the amount of oxygen you use and the amount of fuel you burn, as you would expect, because that's how you get the energy out of your fuel. And for virtually every spare minute of my last year at university I had a key to the whole of the National Institute in those days to get into it. I worked on this bit of machinery to the point where in my final examination, this no doubt has contributed to my getting a First, I was able to quote my own publications and say 'Wolff showed in 19-whatever it was…' and so on.

Tape 2: 32 minutes 2 seconds

I also managed to get married during this time. During my last year at college I got married to this pretty Joan Stevenson. It was widely held in the family that I married a uniform actually because in those days nurses had extremely attractive uniforms with cloaks which were red on the inside and blue on the outside and cross straps and so on. Anyway she was a very, very pretty girl apart from having other very positive qualities and she in the meantime had become a sister – a night sister – so she could arrange with the other night sisters. She could get three or four or five days off at a time and she used to come and see me in London. And we got married during my last year at university. We went to live in a room with a tiny kitchen in Golders Green Crescent, again in Golders Green. She was working part-time. Part-time in those days meant 48 hours a week in an accident department at St Leonard's in the City as a nurse earning £6 a week. We had a big tin box. Whenever we had a few pennies to spare we used to put them into this tin box. When we had enough we always used to go to the cinema. I mean a perfectly reasonable, perfectly happy early start to a marriage. And we did well…we then moved. By sheer luck I saw an advertisement in the local paper and moved into a flat in Wyles Close in Hampstead Garden Suburb in the house – the name may not mean anything to you - called John Bowlby - John Bowlby is one of *the* child psychologists who stopped all this business about parents not being able to see their children in hospital and things of this kind. John Bowlby is a real name to conjure with these days. He had a house in Hampstead Garden Suburb where the first floor had a flat in it. He let us the flat and we lived there until we had our second child. In fact we'd undertaken to move when we had a second child. They were very surprised that we kept this but we were losing our time on the housing ladder and in the meantime I had opted to work at the Division of Human Physiology at the National Institute of Medical Research so I was really working not that very far away – in fact on the other side of Hampstead.

Tape 2: 34 minutes 33 seconds

MM: May I stop you there a moment and let's try and put a few dates to some of these things I've been telling you – or you've been telling us.

HW: Right. Go back.

MM: Right. As I said, you told me several things there which I think it would be useful to

have dates for if you…When did you finish at university…when did you get your degree? What year?

HW: I got my degree in 1954. Yes and I got married – I've got to get this right because we had our Golden Wedding I think in 2003. I must have got married in 1953.

MM: Right…before you…

HW: In March 1953. I got my degree in '54 – yes, that seems probable because we survived one winter in that bed-sitting room so there must have been a winter in between. I started work in 1954 for the Medical Research Council. I left school in 1946 and my father remarried Ilse Loewenthal, who had been working at the Wiener Library almost since its inception, shortly after I got married – I don't know the exact date but I remember with a perfectly straight face going to my then boss and saying 'Could I have the afternoon off to go to the wedding of my parents?' which in those days would have been rather an unusual request - nowhere near as usual as it would be now. And an exceptionally happy marriage. They lived in Hampstead… but down Haverstock Hill a bit. And Ilse continued to work at the Wiener Library while in the meantime post-war after my father had some very thin years immediately post-war when the basis for these businesses which he'd started evaporated.

Tape 2: 37 minutes 2 seconds

HW: But he then started a book import business.

MM: What was its name?

HW: Interbook - book import business, which was not entirely unconnected with Maxwell because Maxwell had similar ideas… I mean in the fact that they had trade relationships because libraries in places like Poland and so on – East Germany - had to be re-established and therefore there was a question of selling to Poland and East Germany and so on, so as to re-establish their libraries. This was, I think, one of the starting points of Interbook. So Interbook became both a book importer and exporter. It had its offices in Fitzroy Street which is parallel to Tottenham Court Road which is parallel to Gower Street when I was at University, so my father and I used to lunch together quite frequently and my father became quite a well-known figure in the medical school canteen where he would get lunch for one-and-eightpence while every so often my father would take me to Schmitt's in Fitzroy Street and have salad of hare or something. I don't know if Schmitt's is a concept to you – a very Germanic pre-First World War restaurant. And I did some of the bookkeeping for my father as well in the very early stages of the business. His business also started going into publishing – the imprint was called Oswald Wolff Publishers. And at the death of my father Ilse almost seamlessly took over the running of the publishing business and ran the publishing business, I think, for about another eight years or so.

Tape 2: 38 minutes 55 seconds

I'm a bit hazy about the dates exactly when this started and this finished. My father I think died in 1968, so that must have been the time when Ilse left the Wiener Library – those must be dates which can be fairly easy to establish - and again, my father, my wife and Ilse all got along famously with one another. So again there were no conflicts in the family. And I think my father was very fond of my wife in much the same way that I'm indecently fond of my daughters-in-law.

MM: Well, that's a very nice tradition to carry on. What was happening to the other half of the nuclear family during all this time?

Tape 2: 39 minutes 45 seconds

HW: Now the other half of the nuclear family well they went back to London and rented a flat of their own in West Hampstead, pursued restitution with much greater vigour. My father always had considerable resistance to pursuing restitution and I don't think in fact that he did, even though he might well have done. My uncle went on working full-time, my aunt went on working in a secretarial capacity for some time. My cousin went to school then went to London University to get two degrees, one in History and one in Modern Languages, became a teacher, actually taught at the Jewish Free School for a time. But taught at other schools as well, including a girls' grammar school which is opposite the house where I now live but it's become a bit of Thames Valley University in the meantime. She never married – my cousin never married and lives in the outer reaches of Hampstead Garden Suburb or in Finchley. And, for reasons which I will explain if you like, I mean my relationship with her has always been… I see her relatively rarely. The relationship between my wife and her is, I'm afraid, rather poor and the reasons it is rather poor - I don't take sides in this - my aunt died of a cancer. She desperately wanted, I think, to go into some kind of private hospital. Somehow or other my cousin – there was no shortage of money about at the time – did not organise this. And my wife wouldn't forgive her for this. And I have grave great difficulty in even organising one or two times a year when we might meet. Now I don't know the ins and outs of this. But it's become… My wife is on the whole an exceedingly nice and soft and forgiving person, but she simply can't get over this.

Tape 2: 42 minutes 8 seconds

MM: And I believe that you have some children?

HW: Yes, I have got two sons, called Anthony and Lawrence. They have an age gap of five years. One was born in 1956 and the other one was born in 1961. They were both born and brought up in 'the suburb' and both went to the primary school on which the bomb fell which persuaded us to emigrate – to evacuate ourselves to Oxford – which needless to say has been rebuilt in the time. So this primary school reappears and we lived, after we moved out of Wylde's Close and the house of this well-known child psychologist we lived 110 Millfield Way which is almost opposite the primary school in Temple Fortune. The children had a near-idyllic childhood because the way 'the suburb' – I don't know how much you know about Hampstead Garden Suburb. It was built or

conceived by a philanthropist called Dame Henrietta Barnett which is the name of the school which always does very well in the league tables - as a village in London with the idea that all social classes should live in it. That didn't work because she didn't build any factories, so there weren't anywhere for the working classes to… so it became a middle-class enclave with the Heath in the middle of it. I mean, it's a marvellous part of the world to live. There was a time when over a quarter of all MPs lived there because it was 20 minutes from Westminster. We still have many friends there. The suburb is about to celebrate its hundredth anniversary of having been created. But the beauty of it was that, particularly where we lived, the back gardens in adjacent streets backed on to each other and there was a little path between which was a pretty safe roadway for the children to use. And we never really quite knew how many children we had because the children tended to eat wherever they happened to be. And as I say there was a wood to play in and we had a big dog and I mean…everything which the children could…The school was good and they both got into what used to be Hendon County Grammar School but then became a comprehensive school for my younger son and… so… stop there for the moment before I tell you about the children.

Tape 2: 44 minutes 53 seconds

So I have two sons who were educated partly within 'the suburb'. You notice I use the word 'the suburb' as if there are no others but the toffee-nosed people who are in 'the suburb' do that. They call it 'the suburb' rather than Hampstead Garden Suburb. And went entirely through the state system with a slight gap in it in that my elder son was apparently slightly dyslexic and was not doing as well as all his intelligence scores should do so, he spent a year or so at a prep school in Hendon somewhere, caught up, and then went back into the state system. They both did reasonably well at school, again a happy childhood first in Willifield Way, then we moved to the Meadway opposite the – what are they called…the something Cohen's…the well known company with Ali G who belongs to - Baron Cohen's? Again by sheer coincidence, I shared a platform with the brother of Ali G who's a well-known expert on autism a few days ago at a conference where he was trying to live down his brother, I think, if indeed it is his brother, I mean it is certainly a close relation. And lived in Meadway, by which time I'd had other jobs. I'd left Hampstead Institute of Medical Research and moved to Northwick Park Hospital where a new Medical Research Council laboratory was established called The Clinical Research Centre and I'd become head of the division of bioengineering at one of them and became head of a new division of the National Institute of Medical Research. So I got my Chair, as it were, early in my thirties, and was responsible for a fair number of people. However, it made me miss out completely on the sort of years abroad which most academics have - that they go and work at another university or in America because I always had too many people to look after to go away for any length of time. And I don't quite know along which branch you now want to go. Whether my children's branch or my branch or my wife's branch or...?

Tape 2: 47 minutes 28 seconds

MM: Right. So, let me see. Let me make a little résumé. You were assimilated into

English life because of course you went to an English school and you had… the social life that you created...

HW: Very largely English.

MM: It was obviously very largely English. So you didn't have much contact to refugees probably, or to refugee organisations?

HW: Certainly not to refugee organisations. If anything I had a slight antipathy. I'm not sure this antipathy was strong. I didn't see what I could contribute to…I lack a few genes in my personality makeup and one of them is the anger gene. I'm very rarely angry. It's very difficult to make me angry, almost impossible. I don't really have much of a revenge gene in me either. So I didn't quite know what all this refugee-ism was really about. I mean, I didn't see myself as playing a part in this. If I'd been able to play some useful part in it I think I would have done this because I've worked for innumerable charities and so on, so that it isn't being unhelpful or being unsympathetic, but I couldn't see a role for myself in the refugee movement.

MM: You didn't have any connection with organised Jewry in this country really because you were…

Tape 2: 49 minutes 18 seconds

HW: Well I did a Bar Mitzvah I must admit. I did a Bar Mitzvah largely because in Oxford…

MM: Yes?

HW: I lived at 110 Abingdon Road and either at 112, or 114 maybe, a rabbi called Weinberg lived, and occasionally because I was almost 13 I was called to make a minyan in his house – you know there's a collection where you have to have 10 men or something for a prayer meeting - and I was persuaded to be Bar Mitzvahed in a small synagogue which exists in Oxford. And well I did it. It was done. I don't think - I mean apart from the fact of having to learn a certain amount of Hebrew which I didn't understand what it meant – in order to be able to recite. It wasn't a great event in my life, so it was thought that to be respectable I had to have a Bar Mitzvah.

MM: Do you think this was…Was this your father or was it the rabbi who…?

HW: It was the family as a whole. I mean there was a time under Hitler where I became very keen that we should celebrate Hanukkah and things of this kind. You haven't incidentally asked me whether my wife is Jewish or not...

MM: Well, we need to put that down on the record, certainly.

HW: And it was done but, as I say, I mean I find it quite difficult to put into words but

there's no doubt that I feel Jewish. And that I would always stretch a point – if I knew that there was a Jewish organisation I would exert myself more than if it wasn't. That I'm unquestionably on the side of Israel even though I can see that mistakes have been made. And I probably in some subtle way react differently to people if I know that they are Jewish. But that's…so I've got the consciousness of being Jewish. But this is the time you should ask me about my wife, I think.

MM: Exactly. Exactly. Go ahead –

Tape 2: 51 minutes 41 seconds

HW: My wife is not Jewish. My wife, if she is anything, is of a mixed Scottish and maybe Welsh parentage. Her father actually looked astonishingly Jewish. He was one of these Welsh people with very dark eyes and he could easily have been Jewish. For all I know there is some Jewish blood in there in the background somewhere. I think my wife's mother was quietly appalled when she first heard about it but on the whole I got on well with her as well, I mean even before we got married. We got married in a civil ceremony at the Hampstead Registry Office and went a few hundred yards up the hill to a restaurant to have a reception with a wedding cake with a syringe stuck into it for her nursing and a valve stuck into it for my electronic…and went away on a rather modest honeymoon - because we didn't have any money - in Paris where we cashed in my wife's superannuation which she had built up as a nurse to pay for our honeymoon and spent a week in Paris. And then lived in Golders Green Crescent, as I said, for about a year and then lived in rather palatial surroundings in Wylde Close which was right at the edge of the Heath and again a marvellous place to live. When we had children the pram could stand virtually in the garden. It was like standing in the Heath and the children as they got older would play on the Heath. The interesting thing about my wife is that she has adopted all the qualities of a Jewish momma. I mean she doesn't continuously cook chicken soup but her whole deep emphasis on family life and the amount of effort she has put into both her children and her grandchildren is…would entirely be the characteristics of what one would expect of an almost sort of Hollywood Central Casting. And she actually knows a good deal more about Judaism and practices probably not more than I do but probably knows as much as I do and is very pro-Semitic in the sense that she would take the same sides as I would. And I suppose quietly believes in what it says in the Wikipedia that the Ashkenazi are the only group of people who have a noticeably higher IQ than the rest.

Tape 2: 54 minutes 42 seconds

I'm surprised they get away with it in the Wikipedia but anyway that's what it says. So religion has never played a big part in it, though both my sons married Catholic girls just to complicate the matter further. My younger son probably wears one of these little silver fish on…but… I think the family occasionally goes to church. And certainly my daughter-in-law - this is for my younger son; I'll tell you more about my children in a moment – goes to church more regularly. The other ones, where it's a Republican Irish girl he married – Margaret - have rather less to do with the church itself, although I think they may occasionally go to Christmas Mass or something of this kind. So we haven't got

any Muslims yet or Hindus and so on, so we have to rely on our grandchildren to do this. So I don't know again which route you now want to follow…

MM: I can just ask you for the record how many grandchildren you have?

Tape 2: 56 minutes 17 seconds

HW: Four. And we've organised this as well - each of my sons has got a boy and a girl. They range in age from about 22 to 18 at the moment. Three of them are at university at the moment, two of them at Oxford - one reading Archaeology and Anthropology at Magdalen, the other one reading Fine Art at The Ruskin School of Drawing, which my younger son also did. I'll tell you more about that in a moment. The third one is reading Medicine at University College. And the fourth one is at school with A Levels but is desperately trying to get into the London College of Fashion. If she does that at St Martin's, then we will have them all at university more or less at one time.

MM: You were going to tell me some more about your sons and…

HW: What they do?

MM: Yes.

HW: My older son was at this university [Brunel] long before I had anything to do with it. He was reading biochemistry at this university. And after his first year he was offered a sabbatical to run the print room for the students' union. During this time he got totally hooked on printing, threw up his university and with a friend went to start a small printing business first in a shed in their garden and then a printing business which grew into some appreciable size and some of the old buildings of EMI in Hayes, right to the point where he owned a Ferrari – a red Ferrari. That particular business then fell on hard times. And my wife and I in fact bailed him out of what could have otherwise been a rather messy bankruptcy with loss of houses and things of this kind. However since then he and some associates founded another business which does some very specialised printing which is doing indecently well, so that he is and will be a rich man. And you have to be to have a daughter at Magdalen at Oxford – who wants to do a fourth year at Oxford. You have to be a rich man. So he is a printer in a big solid business where it's very highly computerised printing and concerned with producing documentation for clinical trials of new drugs and things of this kind. It's a very specialised branch of printing for which there seems to be an unlimited demand. My younger son…

MM I think we'd better just stop now because we have to change the tape over. This is the end of Tape Two.

Tape 2: 59 minutes 04 seconds

TAPE 3
Tape 3: 0 minute 6 seconds

MM: …Heinz Wolff on the 1st of February 2007. Professor Wolff, we were talking about your sons, and I think you were going to tell us about your younger son now.

HW: My youngest son really wanted to be a Lawrence Durrell but that place was already taken. And he had a perfectly reasonable school career and he suddenly decided when he was about 16 that art was what he really wanted to do, and locked himself into his bedroom and painted a really very large picture of a woman sitting on a beach with her back towards us, but perfectly decent as far as I could see but with no clothes on. And then took art for A Levels and so on and got into the Ruskin School of Drawing which was the place where you go to do Fine Art in Oxford, and then to Trinity College in Oxford and got a good degree at Oxford. And this happened to coincide, his degree, with the time when Winchester College, the very posh public school, decided that it wanted to have more of a… art had not played an appreciable part in the curriculum and they were going to spend somewhere in excess of half a million pounds – this is some time ago now, 20 years ago - on turning the sanatorium of the school into an art centre. And they let the Slade, and the Ruskin School of Drawing and the Royal College of Art and so on know that they were in the market for a vigorous young man to help push all this along. And Lawrence got the job – first on a year's probation and then as a proper job. And he has been at Winchester, living in palatial surroundings, ever since. He is now Head of Fine Art at Winchester. He paints quite a bit himself, though there are sometimes years when he doesn't, but his paintings sell. I don't think he could live off it but he certainly does paint. He is socially enormously active, as indeed my older son is as well. He runs a Venture Scout troop and sleeps in a ditch for a fair part of… and he does this because he believes this keeps children out of crime and he enjoys it thoroughly as well. So there is a strong theme of public service actually in the family one way and another. So he used to organise all the CVS for the whole of Winchester and built things in local primary schools and got boys to help in the primary schools and so on. But he now lives in a house next door to the cathedral in Winchester which belongs to the school.

Tape 3: 3 minutes 6 seconds

He married a girl he met at Oxford but that wasn't the first time he'd met her. I did the Royal Institution lectures – the science lectures at Christmas '75-'76 and I used my younger son as an experimental subject. I was doing something about energy and I was feeding him Smarties at the same rate as he was expending energy on a bicycle. And there was a girl – I'm not absolutely sure I've got this right – she was either in the audience in the hall or possibly seeing it on television – I'm not quite sure which way around it was - called Augusta. And the girl can't have been more than 14 or 15 at the time. But she is alleged to have said, 'This is the chap I'm going to marry.' And then quite accidentally, at Oxford, at a dinner party, they met, and in due course got married. Her name is Augusta. She was the daughter of a judge in Leeds – rather unhappy childhood for various reasons, partly because of a rather unsympathetic mother, and was actually on the borderline of going into an enclosed order of nuns. So, in a sense, because this was the only retreat which was left to her, we took her under our wing quite considerably when she was at Oxford – or rather my wife did. I mean right down to clothing her occasionally. And they got married in the chapel at Trinity in Oxford and

again a very happy marriage.

She's just taken a whole series of exams to become a counsellor – Metanoia I think it's called. It's a branch. Metanoia is actually a Greek word. And is beginning to build up a practice now the children are nearly independent – to build up a practice as a counsellor. It's somewhere in between being a clinical psychologist and a counsellor and so on, and she's just about to take an MSc in this as well. Again by one of these curious coincidences, the place where her postgraduate lectures are held is in Ealing and she stays for the weekends with us… at the weekends when she's doing this. So that's my younger son and he is a senior member of staff at Winchester and really has no particular intention of moving because where do you go once you have a job at Winchester. Winchester has gone through some hard times. They had problems with the headmaster and so on – it wasn't straightforward. My other son – I can tell you a bit about his wife. He had a friend whom he met at Brunel here and he was his best man and the bride of his friend had a sister who came as bridesmaid, called Margaret. She was about 16 at the time. She came over here and there was no question about it from that moment onward that this was going to be his wife to be. And she went back to Ireland and then came back to this country when she was about 17 or 18. I actually got her a job at Northwick Park with the Research Council so she'd have something to do for a living. As is now fashionable, they lived together for a time which in a Catholic family takes some doing and

Tape 3: 7 minutes 2 seconds

led to some crisis. I mean not real crisis, but potential crisis when her mother came to see her. Suddenly all traces of her partner had to be removed from the flat. And she's an astonishingly capable lady who will cut out a dress, mend a diesel engine, make a cake and look after the children. The seventh child, farmer's daughter – seventh child, I think - her father had a hunting or shooting accident and shot himself whilst climbing over a style carrying a shotgun. So though there are more children they are not all…some of them are half-sisters and -brothers from her. Anyhow, she came from a large family and, as I say, is very pretty and I think astonishingly competent and I'm indecently fond of her. And she's always been a partner in my son's business, even when things were very tough. I told you that once they had a very tough time. She now in a sense runs a business of her own which is also concerned with printing and so on, but she can run it from her house. She's been clever enough that all the business activities she's always been able to do from her home, so that the children haven't in a sense suffered from neglect. She's been a very good mother and has an extraordinarily pretty daughter whose picture is on my notice-board behind you. So those are the marriage arrangements of my sons.

MM: Thank you. One thing that we – an omission that we've made so far is that we haven't talked about your television career which has been considerable, I understand, so perhaps you could let us know a little about that now.

Tape 3: 8 minutes 59 seconds

HW: Right, well when I was working for the Medical Research Council there was a programme running called Panorama. Panorama in those days had some of the

characteristics of Tomorrow's World in that it always had a bit of science in it as well. And they would roam around laboratories to see whether there were interesting things to see. And occasionally found things in my own laboratory because they were…I've always worked on devices which had some sort of human application so they fitted well rather than a more abstruse bit of science, so I got a little bit of television exposure on Panorama. And people discovered that I didn't need a script and I wouldn't use four-letter words and wasn't easily disconcerted. So what every television producer looks for is reliability rather than anything else, so that nothing unexpected is going to happen. So I increasingly did little bits of television including getting Richard Dimbleby to swallow a little radio transmitter about this big which I developed so that gastroenterologists could measure temperatures and acidities in the gastrointestinal tract. It's about 30 feet long and you can't really get happily more than about this far along from either end - it's pretty uncomfortable, so it's something which would travel and had just about become technically possible and we were into this. And I got him to swallow one of these things live on television which was sensitive to pressure and had a little radio receiver which could receive a signal and, by poking him in the stomach, I could make him make noises rather like a teddy bear. And this became the favourite noise of the nation. I got myself a track on the Dimbleby Memorial Record as one of the things which…must have got me noticed.

So I got myself involved with a series of programmes like Young Scientist of the Year which I did for 15 years – not every instance of, but I did…I was often a judge on the Young Scientist of the Year. And I did a number of one-offs for people…. I then started a series called the Great Egg Race which is what everybody associates me with which ran for eight years or even nine years. And the Great Egg Race was a programme where three teams were given a problem of which they had no prior knowledge. And ordinary household tools and household materials most of the time in order to solve the problem in about three hours. The reason we did it this way was that I had a friend called Karl Sabbagh, who is really a quite well-known a scriptwriter, who still exists, and we wanted the antidote to 'Mastermind', where you couldn't learn something and you couldn't prepare yourself and learn everything about Sherlock Holmes and the Hound of the Baskervilles. By that we could have pure creativity in front of the cameras. We thought this would be a good idea to do.

Tape 3: 11 minutes 58 seconds

I think 60-odd of these programs were shown which means that I had to invent that many different games which were visually exciting and which could be played within the time and so on. So I got quite good at this. Around Christmas time, the producers…I ran through three sets of producers. I wore out three producers because to do nine programmes which was what we did per year took about the rest of the year to organise, so I had a producer more or less who did nothing else than the Great Egg Race. And it became a sort of national icon. There was hardly a school which didn't do great egg races and there were books published about it. And there were people who recorded - who switched on the radio, got the problem, switched on the video recorder and went into their own kitchens to see whether they could do it. And a good deal of such notoriety – fame would not be the right word - which I have is derived from the Great Egg Race

because there was a whole generation because it went on for that many years, many of whom have now made it in the sense that they've become successful businessmen and so on. And if I go and walk about London which I do quite frequently or travel by tube, the average is three accostings a day. And somebody says, 'Really marvellous. Why don't they have programmes like this today?' Or, 'I wouldn't be director of this company if you hadn't directed me into science.' Or, 'I wouldn't be a doctor…' and so on. So in its time it had an impact and if you look at the plaque on the front of this building which is now called the Heinz Wolff Building which causes confusion in our post room because my address is now Heinz Wolff, Heinz Wolff it says that these kinds of programmes have probably guided people to science. If you do the sums of how much contact with people an average physics teacher has, in 40 an hour and I used to get an audience of two or three million at a time, it's an appreciable number of contact hours which one has. I then did six films.

Tape 3: 14 minutes 8 seconds

MM: May I just ask you roughly what were the years in which you were doing the Great Egg Race?

HW: The dates you could get out of Who's Who. The Great Egg Race ran from about '78 or '77 to '86.

MM: Thank you.

HW: But I think the exact dates you could find in Who's Who.

MM: Yes, well roughly, I was just interested…

HW: It's still... I mean there's nowhere I can go to dinner or something without somebody says, 'Well, we are very honoured to have as our guest Heinz Wolff of the Great Egg Race' because people remember it because it covered roughly a generation in its formative years from about 12 to 20 or so. And it became sufficiently popular with companies as a management team-building tool for my wife and I actually to form a company in partnership called Romulus Inspiration – Romulus because of the wolf connection; Remus was a bad egg – like the Cain and Abel story in a different shape. To do these things for companies - we did it for a time all over Europe, and we would fly the whole kits to Vienna and whatever it is, and invent a game which was in some way particularly suitable. After the Berlin Wall came down and the ex-Soviet area opened up and there were a lot of management companies who were suddenly recruiting Poles and Czechs and so on and we ran some games in Vienna for them to show how this was done in Britain. They didn't know what had hit them. On various occasions it still happens. We still run the occasional games. So it led to – they were repeated on television two but I don't think anybody saw them because they were on digital television before anyone had any receivers. I still do occasional television but only minutes at a time. Because television is becoming a younger and a much less educational medium than it used to be. But certainly if you ask, 'Who is Heinz Wolff?' they will allude to my television career

rather than my scientific career.

Tape 3: 16 minutes 24 seconds

MM: Yes. Yes, in both of which you've been very eminent, clearly.

HW: Yes, an extroverted type… television was the thing where most people... And I was allegedly one of the ten most recognised people in the country for a time.

MM: Thank you very much. Now, I wanted to ask about possible later connections to Germany that you had.

HW: Hardly any. The nearest I got to connections with Germany was that, for the best part of ten years, I worked with the European Space Agency. And the European Space Agency is located in Paris. About a third of the functionaries are Germans, because Germany was a large contributor to the European Space Agency. I was the Chairman of a whole series of committees partly actually because I was a Brit, because I could speak English and English was the working language. And so I met many Germans whose fathers 'never had anything to do with the Nazi system'. But I found I could get just that little bit further with them by speaking German to them than by speaking Euro-English to them. And particularly since Euro-English is a language in its own right…and words like 'vorgesehen' – I don't know if you speak German?

MM: Yes, I do.

HW: 'Vorgesehen' which really means that you have arranged in advance for something. 'Wir haben eine Million Mark vorgesehen' is translated in the minutes of the meeting as 'foreseen' – 'We have foreseen one million pounds.' And if you correct the minutes nobody understands them, so I gave up correcting the minutes after a time and adapted myself to Euro-English which I think has become a language in its own right after a time. So I met many Germans there. And an interesting story: the director of the science programme of ESA was exceedingly inimical to biology. Now I had been recruited specifically to introduce biology first into the space lab programme and I suddenly found they had a space lab but no experiments to put onto it. And I actually had to form a committee called the Life Sciences Working Group which, after a year, became the Chairman's Life Sciences Working Group, but they had to fight like anything to get any money for this from

Tape 3: 19 minutes 0 second

the director of science who was a German or maybe an Austrian, but I think he was probably effectively a German, until we discovered that we had both bought our electric train sets from the same toy shop which happened to be next door to 103-104 Kurfürstendamm. So after that relations were very much more cordial. So the Life Sciences programme in the European Space Agency was dependent on forging this relationship until we got a budget of our own and so on. We were parasitic on the science budget – there then was a so-called Microgravity Budget and I became Chairman of the

Microgravity Advisory Committee which was really the policy-making body of what would be done in space exploiting the lack of effective gravity in space. But there the ability to be bi-lingual was undoubtedly to my advantage. And that is really the only advantage I can think of other than occasionally speaking to students who happen to be German students. The other thing is that I got my younger son who needed a modern language to get into Oxford – or a credit in a modern language. I taught him German in six months flat because my wife doesn't speak any German other than essential words like 'Leberwurst', 'Steppdecke' and things of this kind which one has to have. By teaching him largely a very odd vocabulary, so doing his oral he was talking about giving injections to hedgehogs: 'Ich spritze einen Igel', which totally flummoxed the examiners and he passed with flying colours! I really haven't used German other than that I still read German and I can relatively effortlessly speak German. And apparently relatively indistinguishable from a German. But I pay for it by having a German accent with my English. I don't have an English accent with my German, as far as I'm aware.

MM: When you came to England with your family – the nuclear family as you've explained to us, did you speak English with them or German?

HW: We spoke Immigranto as almost everybody did, I think. Certainly spoke a mixed language at first because none of us spoke English very well. I think increasingly we spoke English. And because the homework had to be done in English and your friends were English and it would be rude to speak when you had a friend in and so on. So English became the formal language.

MM: Yes. And you never have run into - apart from this man you explained to us who bought his toy train in the same shop as yourself - part from him you never met anyone else you were at school with – and you never ran into anybody the rest of your life?

Tape 3: 22 minutes 15 seconds

HW: No, I don't think so. Again fortunately, as far as Auschwitz and the Holocaust were concerned, my maternal grandmother and her daughter, remembering that my grandfather died in 1927, spent the war in the Canary Islands and in Spain where her brothers were, while my paternal grandmother we left in Germany and I was in fact the last to see them under the vague pretence that the rest of the family would come to see them afterwards but couldn't bear this – no-one did because I was living with them. My grandfather, as far as we can tell, died of natural causes. He was relatively old and had heart disease. We suspect that my grandmother – the Zahlfeld grandmother or the Rothschild grandmother, her maiden name - was on a list to go to Theresienstadt and committed suicide before this happened, but we do not know this – there were various illicit letters via Switzerland and so on which passed between us. But I'm fortunate that no close member of my family was involved because there just weren't any. So again this is lucky not that I deserved it – that the Holocaust affected us, other than emotionally, relatively little. It affected me emotionally and I was thinking about this last night after this big conference at the HSBC. What really frightens me about the Holocaust – and the curious thing is, it isn't the gas chambers and it isn't the slave labour – I mean, it of course horrifies me - but if

you really want to give me nightmares – and I have had nightmares before - are the cattle-truck journeys to the camps. I think it's the horror of having people pressed together so that nobody can sit down… what was really something like an extended torture. I can bear sudden death, I can bear all sorts of other things but extended torture, extended pain and, as I say, if you want to give me a real nightmare you get me to imagine myself into that sort of situation. Now why this should be so, I don't understand. This really is something deeply imbedded in me – the fear and fright and the desperate temperature changes between day and night to which these people were exposed.

Tape 3: 25 minutes 19 seconds

MM: On these few occasions you've been to Germany as an adult, did you… what sort of feelings did you have? Any, or…?

HW: Not very. I mean, it depends when you say…you see, I have been so rarely and I think having been so rarely is itself …indicates my attitude that I have certainly no feelings for Germany. Had I gone there soon after the war, which I didn't, I would always have wondered whether the man sitting next to me in the tram – precisely what he had done during the war. Going much later and having had a certain amount of contact with German students and with young Germans, one really has to come to terms with oneself of whether one believes in the Biblical third and fourth generation, or whether one thinks that this was really a tremendous aberration which could conceivably have happened in other countries had the conditions been similar. I don't believe it could have done. I don't believe it could have happened in Britain, however the situation, that the individual Briton would have lent himself to this kind of policy. But I'm not – I've no…I wouldn't do a German a favour just because he was a German.

MM: So we've touched on this several times during the interview but I just wanted to ask you formally now, what is the sense you have of your identity? How would you describe yourself?

HW: Well, I mean jocularly, and I do this not infrequently when I have to introduce myself to people, I say that I'm an English gentleman with a German accent, or that I'm a *Jewish* English gentleman with a German, accent if it happens to be appropriate. And that's what I feel. I have totally identified with this country. I wouldn't want to live anywhere else in any other country. I would be prepared to exert myself very considerably to benefit this country and I do lecture on occasions on questions which at least touch on this country maintaining its identity. And I'm rabidly anti-EU.

MM: Anti-EU?

HW: Yes, I think it's…I think Britain has done well – I went to an economics lecture a few days ago – has done well to keep its distance and that many of the countries in the EU will live to regret bitterly that they ever joined the organisation.

MM: So you mean to say you wish the English identity to be preserved?

Tape 3: 28 minutes 30 seconds

HW: Yes, to the point where last Tuesday, I gave a lecture to the headmasters. I'd offered them a whole choice of topics because I can lecture on almost anything even if I have to make it up which I do occasionally and I have a contract where I give as it were fake lectures which are plausible but are totally made up. Again, if you look me up in Who's Who, it lists my hobby as dignified practical joking and this manifests itself in giving lectures which are totally fabricated but plausible and people believe me. I even published some in the New Scientist – I mean with the knowledge of the New Scientist's editors, they were fabricated. Sorry I've lost the thread of what you wanted to ask me…I've answered you what my identity was.

MM: Yes, well that was really…

HW: I gave a lecture last Tuesday where I said to all these headmasters - the title was 'Educating the Youth for the Post-Technological Age'. And the thesis, which was deliberately provocative, was, 'I see no reason why within measurable time the Chinese, the Malays, the Koreans, the Indians, shouldn't manufacture almost everything we should want, but there's very little which we can manufacture which they want other than certain kinds of services, so what kind of country were we going to become?' And this obviously has an impact on how you educate people. I said we had two choices. We either become… and lose our identity in a melange of the EU which would be unfortunate for our island. Or we become a larger version of Switzerland with a very high priority to being self-contained, growing enough food, making enough energy, not being blackmailed by the Russians turning off the gas tap, and having an economy which is a little bit like a war-time economy. For a surprisingly large number of people, if you ask them which were the best years of their life, it was the war, when there was a feeling in society of all striving towards a common objective which gave a cohesion to our society which has almost been totally lost. And I was drawing a picture, inasmuch as I could in this little bit of the lecture which I'd allocated to that, as going out particularly to remain British and to have… to preserve… I mean immigration has already, I think, to some extent made this difficult but to try and preserve what could be preserved. And I believe that this could be done by becoming a larger version of Switzerland without any great alliances and certainly not being part of what would be this very much enlarged Europe.

Tape 3: 32 minutes 0 second

MM: Thank you. Finally, I wanted to ask, do you have a message from your life for the people who might one day look at this interview?

HW: I was too young to know what could have been done to prevent the Holocaust. There is no doubt that there must be some guilt to the Versailles Treaty which was much harsher on Germany than - I mean, not that Nazism was justified – but the 'Schuld' - the guilt of the First World War was nowhere near as universally thought of Germany as the Second World War. There was competition; there was no particular reason why

somebody getting shot in Serbia should have led to a World War. There was undoubtedly competition between navies and for world dominance of colonies but this could perhaps have been sorted out without a war. There was no doubt whatsoever that the Second World War was entirely something which was engineered by Germany for its own purposes. And so some degree of generosity of the victor which I think was something which happened with the Marshall Plan and so on after the Second World War, is something which, had we been able to practice it after the First World War, might well have avoided these events. The other thing was that now, with information dissemination being virtually instantaneous, what actually happened inside Germany could not have been so apparently…people knew about it of course up to a point but it could not have been so hidden as it apparently was. There was of course a degree of anti-Semitism in Britain as well and there were people who felt that the Germans got it right and the Jews had it coming to them.

Tape 3: 34 minutes 13 seconds

But had there been an internet or something of this kind at the time and had there been access of the Jewish community to it, Hitler would not have survived. So I think it is unlikely that certainly anywhere in the West or in America or anywhere like that or in South America, anything comparable could conceivably happen again. This is why one of the real bases of the EU of preventing a war in Europe was complete nonsense. There was nobody who had either the intention or the resources to start a war between European countries. And where there was a willingness like in Kosovo and so on it happened anyway. So it is a question of generous victory and distributing information readily with the one proviso, which again was part of my lecture subject, that Government in the new world we live in now has to some extent become impossible. And I had two slides. One of them was 'The Death of Competence' – and I explained why nobody seemed to be able to do anything right any more. The second one was, statistically if it's government policy, and I meant any government in Europe, it is almost certainly wrong - and if you look at what governments intend in terms of how often those intentions are actually justified in their results rather than being unforeseen consequences, there is at best a 20% success rate, and any insurance company who was trying to ensure government policies would be justified in following me and saying to me, 'If it's government policy, it is almost certainly wrong.' I've now tried it on a number of audiences and said 'Look, there are 400 of you of mixed nationalities and political opinions. Lift up your hand any one of you and give me an example where my Wolff's Third Law, if you like, 'If it's government policy it must be wrong' was not true. And I never got a proper response. In no audience did I ever get a response, someone who could quote to me and say 'They obviously got it right this time.' And I think the reason for it is that government as we at the moment know it, in a society where everybody knows everything at the same time and there is no time to make policy or to think about something, knee-jerk reactions are expected the next day, that government as we know it is no longer possible. And we have to find a new way of organising ourselves. And the first slide in all my lectures these days is, 'Innovation in the 21st century is not going to be in science and technology but in the way in which society organises itself.'

MM: Professor Wolff, that's an excellent point to finish on. Thank you very much for

giving us this interview.

HW: It has been a pleasure.

Tape 3: 37 minutes 25 seconds

TAPE 4

Photographs

Tape 4: 0 minutes 5 seconds

MM: These are the photos of Heinz Wolff. Yes, please, the first one?

HW: My mother aged five. I believe this was her season ticket to the Berlin zoo where middle-class children spent their spare time.

HW: My mother Margot Wolff, I should think about 1920 or 1922. She was somewhere between 15 and 17 years old, and I suspect before she got married.

HW: An early photograph of - going from left to right - my mother, my father, my mother's sister Edith who was three years older than he was, and my Uncle Kurt who, together with my father, went to the same school in Berlin throughout the whole of their school years and then married two sisters.

HW: My father and mother in 1926 in Heringsdorf unencumbered by children at that stage because I was only born in 1928.

HW: Probably early in 1929. I must have been about one year old. My fashion sense was ill-developed at the time, as will be seen.

HW: I should imagine my age was about two. I had developed some fashion sense by now but I'm not sure how steady I am because I'm obviously holding on to the table.

HW: I imagine I was about eight or nine. I actually remember the occasion when the photograph was taken, and even though it seems toffee-nosed, I was not entirely unconscious of the fact that I was regarded to be a rather good-looking boy.

MM: Where was this please?

HW: This was taken in Berlin by a photographer called Heinz Zimmer I believe.

HW: My agricultural phase. About 1944. I'm sitting in the opening of a bell tent and I was in the middle of running a harvest camp for City of Vauxhall School where I went where young people were encouraged to bring in the harvest. We were extraordinary that we actually ran the camp ourselves as children rather than having schoolmasters looking

after us.

Tape 4: 2 minutes 58 seconds

HW: 1947. I was working at the Radcliffe Infirmary in Oxford, working on this machine for counting blood cells and with me is my friend Douglas Pressy who taught me a great deal of the electronics I knew at the time.

Very important new phase in my life. I was working at the Pneumoconiosis Research Unit near Cardiff for the Medical Research Council which also had a hospital ward and the staff nurse on the hospital ward was a nurse called Joan Stevenson. And Joan Stevenson became my girlfriend and subsequently my wife.

MM: Did you take this photograph?

HW: I've always been keen on photography for the whole of my life. I took this photograph myself and in fact it was not uncommon for me to persuade my girlfriends or girlfriends-to-be to allow me to take a photograph.

This is about 1955. I'd been married for two years. And left to right shows most of the members of the extended family, my cousin Gaby who's a year and a half younger than I am, my wife Joan, myself, my Aunt Edith and my Uncle Kurt.

Another wedding in 1954 when my father married his second wife, my stepmother, Ilseborg or Ilse Wolff, and in order, again from left to right, we have Ilse's brother with the family name of Zorek [?], his wife Margaret, my father, Ilse and myself and my wife wearing the identical outfit she wore for her own wedding.

Heinz and Joan had now been blessed with issue. This was taken about 1968 with our two children, both boys. The smaller one is called Lawrence, the bigger one is called Anthony.

I'd made very tiny radio transmitters which were actually intended to be swallowed so that they would measure temperature and pressure and acidity in the stomach or the gut. But we used the same kind of device to put into the uterus of a pregnant sheep and to show how extraordinarily noisy pregnancy actually is for the animal. So I was mixed up as always with sheep at lambing time and I picked up these two lambs because they were apparently sweet cuddly things and found that a lamb is really very hard – it was almost as if it had been made of wood and they are astonishingly heavy – I wouldn't have liked to have carried those two lambs for any distance.

Tape 4: 6 minutes 21 seconds

HW: The date for this is about 1968 maybe a little bit earlier but about 1968.

MM: Where were you?

HW: I was working for the Medical Research Council at Hampstead at the National Institute of Medical Research and by that time had been given my own part of the Institute, which was of course the Division of Bioengineering.

MM: But that's not in Hampstead.

HW: No, we didn't keep sheep in Hampstead. It was somewhere on a farm somewhere where some vets were collaborating with happened to be working.

HW: One of the earliest long running television series I was involved with in called Young Scientist of the Year. It was very near the end of it in 1981 and the people I recognise are Sir George Porter first on the right who was then the Director of the Royal Institution and myself, and I'm afraid I don't remember who the other two people were.

Well, this is really rather symbolic. I did eight years of a series called The Great Egg Race of which, together with the BBC producer, I was the instigator and became somewhat of a cult programme because it showed people being creative, solving problems right in front of the camera. And still now which is now more than 20 years after the last programme was broadcast live and no day goes past if I walk around in the street without being stopped in the street at least three times and being asked either 'When is it coming back?' which is pretty unlikely or much more pleasant is, 'If you hadn't turned me on to such a science I wouldn't be the doctor, chemist, engineer, director of the brewery which I am now.'

Tape 4: 8 minutes 14 seconds

The equipment which I am holding and which is in front of me was actually constructed to allow Helen Sharman – about whom I'll say more in a moment - to carry out biological experiments in the microgravity environment in the Russian Mir space station. There's more to this, because various people in London decided it would be a good idea to have a privately financed scientific space mission which the Russians were prepared to fly. And in order to do that somewhere between 10 and 20 million dollars were required as a fare, as it were. We were charged in part with selecting the astronaut with an advertisement in The Times, and the Daily Telegraph, which said 'Astronaut required; no previous experience necessary.' And not unnaturally, we got a very large number of replies, about 12,000 of them. By the time we'd eliminated all those people under 7 and over 70 and so on we had about 9,000. We got a management consultancy company to whittle down with essays and all sorts of things to about 200. These 200 people had a very strict medical examination because it's fairly stressful to be launched into space. We got down to 35. We got the 35 all to dinner at my university because the press was beginning to be interested and we had to hide them somewhere, and eventually got down to 16. And we sent the 16 to Star City in Moscow to have all the same tests done all over again and eventually we picked an SAS officer and Helen Sharman. Helen Sharman had been working as a chocolate technologist, very appropriately at Mars in Slough, and being extraordinarily healthy, very good with languages, scientifically well trained, she was superbly qualified for doing so. Things went disastrously wrong as far as the financing

was concerned because the various organisations which were going to arrange private finance, largely advertising agencies, I think got it wrong in terms of the kind of sources they investigated. They should have been companies who were making scientific equipment and they went to chocolate companies and things of this kind and didn't raise the money. The Russians behaved extremely well over this. Not only did they take quite a heavy financial loss, because I'd spent quite a lot of money constructing this equipment, but also they decided to fly Helen Sharman even though they weren't getting the fare and Helen Sharman did some Russian experiments and is still the only British female astronaut who has ever flown.

Tape 4: 11 minutes 4 seconds

HW: Well this was one of the occasions that one gets to if one lives long enough and I must have been 70-odd – when one receives honorary doctorates from universities. This one was at Oxford Brookes, but I was also fortunate enough to receive honorary doctorates from Middlesex University, The Open University, Brunel which is my own university, and I got an honorary fellowship from the Royal College of Physicians, and there must be another university somewhere…

MM: De Montfort

HW: and De Montfort University in Leicester. But you could have seen me in the same sort of garb handing out the degrees to new graduates. There are a fair number of photographs of that kind about. And it does show that I have no sense of humour. I felt this tassel which hangs from your mortarboard, such a boring thing that I actually made a mortarboard which has a tassel which can be made to stand straight up on top of the head. And I made a set of rules about…under what conditions one would wear it at half-mast and full-mast and so on – what it would be. This is much in demand.

Tape 4: 12 minutes 32 seconds

HW: This is a collection of the whole family, and we do have collections of the whole family together, not that infrequently, because they live within an hour's drive. One lives in Marlow and the other lives in Winchester. They were all there. That's ourselves, our two sons, their wives and our four grandchildren. Each of my sons has a girl child and a boy child. There's one stray young lady on there who at that time happened to be the girlfriend of one of my grandsons. This arrangement is no longer in operation.

A commercial leaflet. One of my early inventions which were actually commercialised and made into something which was sold called the Integrating Motor Pneumotachograph or IMP for short, affectionately. It was a device for measuring how much energy people were actually using. It was used extensively in one of the largest physiological experiments which had ever been done when young men called up for National Service – the War Office got very concerned whether they were getting enough to eat and we established a balance between the amount of energy they were expected to produce and the amount of food which the army was putting into them. And as a result the Army food

ration was actually increased though I doubt whether they were actually starving at the time. Anyway this instrument I partly designed when I was still at university and had the extraordinary experience that in my final examination I was able to quote one of my own publications which referred to this instrument.

MM: What was roughly the date of this?

HW: The leaflet was published in 1956, though the instrument was used – home-made versions of it in the laboratory were used a bit earlier than that. This was the commercial version of it.

MM: Thank you.

Tape 4: 14 minutes 36 seconds