

AUDIO INTERVIEW TRANSCRIPT

Bainton, David: transcript of an audio interview (11-Jul-2000)

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Date of publication: 02-Feb-2017

Date of interview: 11-Jul-2000

Publisher: Queen Mary University of London

Collection: History of Modern Biomedicine Interviews (Digital Collection)

Reference: e2017044

Number of pages: 16

DOI: 10.17636/01019123

Acknowledgments: The History of Modern Biomedicine Research Group is funded by the Wellcome Trust, which is a registered charity (no. 210183). The interview was funded by a Wellcome Trust grant (059533; 1999-2001; awarded to Professor G Davey-Smith, Dr A R Ness and Dr E M Tansey), and its publication by a Wellcome Trust Strategic Award entitled “Makers of modern biomedicine: testimonies and legacy” (2012-2017; awarded to Professor Tilli Tansey).

Citation: Ness A R (intvr); Tansey E M, Thomas H (eds) (2017) *Bainton, David: transcript of an audio interview (11-Jul-2000)*. History of Modern Biomedicine Interviews (Digital Collection), item e2017044. London: Queen Mary University of London.

Note: Audio interviews are conducted following standard oral history methodology, and received ethical approval from UCL (2000) and QMUL (reference QMREC 0642). Related material has been deposited in the Wellcome Library.

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Bainton, David: transcript of an audio interview (11-Jul-2000)*

Biography: Dr David Bainton MRCP (1941-2002) was a member of the scientific staff of the MRC Epidemiological Research Unit (South Wales) from 1970 to 1973. He left to take an MSc at the London School of Hygiene and Tropical Medicine, then moved to the Avon Area Health Authority and later the Gwent Health Authority. He was Senior Lecturer at the Centre for Applied Public Health Medicine, Cardiff, at the University of Wales College of Medicine from 1989 to 2001 and Honorary Consultant in Public Health Medicine at Gwent Health Authority from 1994 until his retirement in 2001.

AN: Andy Ness

DB: David Bainton

AN: David could you start by telling me where you were born and a little bit about your early family life?

DB: I was born in 1941 in Usk about five miles from here. My father was in the prison service and we travelled around a great deal. We seemed to move house about every 18 months or two years and I ended up at boarding school from the age of 13, although my parents, I think, had never had any intention of sending us, either myself or my brother, to boarding school. But we ended up the two of us going, I won't go into the reasons now, but we ended up going simultaneously me at 13 and him at 11 to Bedford School. And so I was five years at Bedford and then I went on to Cambridge. And I went up with the intention of reading medicine, but my first week or so in Cambridge I found very unsettling. I actually had concerns about reading medicine and went and talked to my tutor and ended up reading natural sciences, but not doing anatomy, but as it's a bit like a modular course, where you build up your Tripos, and I did do physiology and biochemistry, so that if I decided to do medicine later, I would at least have done some of the core subjects. And that's briefly what I did. I did my part one in two years and then instead of doing a part two I went and did all my anatomy in one year. So that got me ready.

At the end of three years I was then ready to go to, in those days, usually a London medical school, because there was no clinical school in Cambridge. And I went to UCH (University College Hospital) and I went to UCH because none of my family are doctors, but a doctor my father knew when he was governor of Northallerton Prison seemed to rate UCH quite highly, of the London teaching hospitals. And I was reassured at my interview that I didn't have to weigh in to see how much I would contribute to the forwards of the rugby team, and of course it's like a lot of other things, what do you compare it with? I had no direct experience of Thomas' or Mary's. But also at UCH there are quite a lot of mature students – the people who had reached medicine by interesting routes. There was a Fellow from All Souls who was a musicologist and he was writing a book, a collection of Beethoven's letters I think, but had been attracted by psychiatry, but the problem was he had to do some A-levels in physics, chemistry and biology and he had gone to a crammer to do that, and then gone into UCH to read medicine, with a view to training as a psychiatrist. And there was somebody who was a zoologist, a helminthologist, he was a leading authority on nematode worms. He was so eminent that they were naming new worms after him.

* Interview conducted by Dr Andy Ness, for the History of Twentieth Century Medicine Research Group, UCL, 11 July 2000. Transcribed by Mrs Jaqui Carter, and edited by Professor Tilli Tansey and Dr Hugh Thomas.

And there was somebody who had worked as an ICI technician, washing test tubes and glassware in his twenties, and had gone to night classes to do A-levels. I had chosen UCH because it seemed quite an interesting place and I enjoyed my time at UCH very much and we had lectures from Richard Doll as part of our epidemiology. I don't think it was called epidemiology, it was probably called social medicine, but some of the lectures were by Doll and I remember being struck by some of the things he said. For example, the distribution of MS (multiple sclerosis) by latitude. I am not even sure whether that's now still accepted, but in those days, the story as told was that there was a relationship by line of latitude, I think with increasing prevalence as the further north you went, or the further south you went, from the equator. And I think I was interested in the social aspects of disease and illness and also occupational disease. I suppose the other thing that was toyed with was endocrinology, because I remember being asked in my house jobs what I wanted to do, and I remember mentioning epidemiology, but I also mentioned endocrinology if I had stayed in clinical medicine.

My first job was a paediatric job at UCH and my boss, who was the professor of paediatrics at UCH, asked what was I thinking of doing, so I mentioned epidemiology, and so he said, 'Oh, you should talk to Richard Doll.' At that time Doll was at the MRC (Medical Research Council) statistical unit, which was where he worked, just round the corner in Gower Street, and he said, 'I'll arrange for you to go and see him.' I suppose being quite a sort of, I don't know it's difficult to talk about myself too readily, but I wasn't particularly pushy, and nothing happened and then in the last two weeks of my job, he said, 'Oh, I have seen Doll, give his secretary a ring and he will speak to you.' So I did that and I went round to see Doll, who was actually engagingly open and I remember asking him about how he got interested in smoking and lung cancer, and he said, 'Oh it was by accident, it was an afterthought.' He explained, 'the first thing to do was at the end of the 1930s there was concern about the apparent increase in lung cancer, but was this an artefact or was it real?' Then he said that some work established that this was probably a real increase, and so the next thing was, well what was it due to? And I think at the time they did the initial case control studies it was very much about atmospheric pollution, car and diesel exhausts and he said most of the questions were directed that way, and then someone said well what about smoking? Well they said there's no harm in including it, along with this list of other things. And it was the thing that jumped out when they did the actual analysis. And Doll's advice to me was, 'Go away and get a good medical training, a broad clinical training, and do Membership of the Royal College of Physicians, and if you are still interested then consider moving sideways.'

That was advice I followed. And so I did a surgical job at UCH and then I looked for a SHO (Senior House Officer) post in or around London. My parents at that time lived in Sydenham, and I wasn't married, but doing junior hospital jobs. You really didn't have a sort of base, you just lived out of a suitcase for six months, and then moved on to the next job. I failed to get a job, quite an attractive SHO post in general medicine at the Central Middlesex, and I got a job at Addenbrooke's and I went as a houseman, because I actually hadn't done any adult medicine, I had done paediatrics as my medical job, but I hadn't done any adult medicine having qualified. And then in the period I was waiting to go back to Addenbrooke's I basically got some chest pain, pleurisy chest pain, and a small haemoptysis and night sweats, and I went back to UCH casualty actually and saw one of my contemporaries who was the casualty medical officer, who said 'Oh I think you have got galloping consumption', sent me off for a chest X-ray, and I had got a cavity. So I was then admitted to UCH and she said, 'Which chest physician do you want to be under?' and so I said, 'Howard Nicholson'. I hope I don't sound pompous here, he was a nice cultured man, he was an interesting man, and very gentle. So anyway I had acid-fast bacilli and so on and I was on treatment, I had streptomycin for three months. UCH had a sort of TB colony down in Devonshire Street; just behind Harley Street there was this brick building which was like a small private hospital really, but it was part of the NHS. So I was in hospital for three months, having streptomycin PAS/INAH (para-amino-salicylic acid/isonicotinic acid hydrazide) and then when the sensitivity came back I had to carry on with PAS/INAH for two years, or the remaining two years. I wrote to Cambridge and said, 'I am sorry I won't be able to come' and they said, 'Oh well we will fill the post, and you come in May, and you will have the job next time.' So I went to Addenbrooke's. This is relevant because I worked for a man called Theo Chalmers, who was the uncle of Iain Chalmers. I met Iain later in Cardiff. Iain Chalmers is younger than me and he would have been a medical student probably still at the Middlesex. I

went to work for Theo Chalmers, who was a general physician with an interest in endocrinology, and I had quite an interesting time there and I did some assisting of the research that the senior registrar was carrying out, which was on vitamin D metabolism, and so I would go and anaesthetize small pigs, piglets, for Peter Adams. Peter Adams was a Cardiff graduate and when they knew I was interested in epidemiology, they said, 'Oh, you should go and work with Cochrane.' I had never heard of [Archie] Cochrane, I have to admit, partly because the literature was much smaller, but also I was doing full-time clinical medicine, so apart from smoking and lung cancer and Doll and Hill, and Donald Hunter in terms of occupational disease, his textbook, there weren't many names. Anyway I explained that I was working towards Membership first and they said, 'Oh, Cardiff's very good medically.' And, rather like I was saying, Peter Adams arranged for me to meet the professor of medicine in Cardiff. Nowadays it would be illegal to appoint anybody like this, basically after a phone call, and perhaps a supportive letter from Cambridge. So I went to Cardiff and met Harold Scarborough. It was agreed that at the end of my job in Addenbrooke's I would come to the medical unit in Cardiff, and I was an SHO on the medical unit doing general emergency intakes and working for some of the senior lecturers on the medical unit in rotation, and I did Membership and I got it. Before I got the results I also went to Sully, which in those days was the cardiothoracic centre in South Wales, now it's a geriatric hospital. I did a chest and cardiac job there and the initial appointment was for a year, but then I gave my notice after six months to go and work with Archie, because I had got my Membership. I hope I had done more or less what Doll would have approved of in terms of getting it.

I started with the MRC in January 1970. When I arrived, somebody called Jean Weddell was about to leave. She had got, I think, a senior lecturer's post at St Thomas's with Walter Holland, in his unit, so there was some work that Jean was doing that Archie wanted someone basically to take over and this involved two things, I remember. One was a trial of mild to moderate hypertension, a randomized trial that was twinned with Thomas's. There were two centres, there was a South Wales one, I think I am right in saying, this precedes the larger MRC study, which was based with Bill Mall. In fact, looking back it could only be described as a pilot, whether it was seen as a pilot in advance I honestly can't remember, but the numbers were never going to be large enough. Basically, Jean Weddell was running a clinic, if these patients were eligible, if they were above a certain threshold then they went in and they were monitored and so on, the usual sort of thing. So I took that on and also a stroke study, trying to get some information about the incidence of stroke and also some of its immediate consequences. So that meant trying to set up a notification system where GPs would inform the unit and then Jean and later myself went out and saw the patient and the family. And I continued to do some clinical work, what that really meant was outpatient sessions with a gastroenterologist from the infirmary who I had worked with on the medical unit. And it was he who said that it would be interesting to do some work with gallstones, and particularly as the pathophysiology of gallstones' inflammation was becoming clearer and there was an opportunity of medical management, where you could change the composition of the bile, to prevent the stones forming. And so I basically looked at what work had been done on the prevalence of gallbladder disease, particularly when I did population studies and so on, and so basically I developed that as my main piece of work. We did a survey in Barry and the exploration of finding an acceptable test that one could do on a population basis, because this preceded ultrasound for gallbladder disease. The technology existed, but it really didn't seem sufficiently well validated at that stage to actually use with any confidence and the data that one would collect. We used a sort of limited cholecystogram to reduce the radiation. I say limited to reduce the radiation, and we didn't actually approach any woman of child-bearing years. I would have, personally, felt very uncomfortable about it. And now I think the climate has changed even more so. But what I did was collect estimates, by using sensitive patches, on patients who had been referred for clinical reasons for having a cholecystogram, but then persuaded the radiologist to use the technique we were proposing to use for a survey and in that way submit measurements as part of the getting ethical approval from the MRC. In those days, I think the MRC decided completely in-house, with probably no lay representation.

And I think I mentioned as part of my work or time there [Epidemiological Research Unit (South Wales)], I ended up in Singapore and really began to think, well if I am going to do this I need to get some sort of formal qualification or recognition, something as a marker at least, your Equity card. In those days, as I

have said, the whole thing was much less formal. I did a bit of work with Peter Elwood, working with Peter on some of the surveys he was doing. Mike Burr arrived. There was [William] Estlin Waters there when I arrived, who then went off to Southampton. We overlapped by a short time, by about nine months, before he went off to pick up his chair at Southampton. Mike Burr arrived after me and I really don't know the circumstances, but I remember Archie was never a very private person in one sense. He always talked, he would show you letters that I am sure you shouldn't have seen. Not that they were particularly damning or incriminating anybody, or highly critical. I will talk about Archie in a minute. But Mike Burr was a deputy director of public health, a deputy MOH in Staffordshire, I think it was, and with the reorganization of the health service in 1974 I think Mike thought he was going to jump, and came to work with Archie. He developed an interest in asthma and then more recently, or after that, in terms of dietary components and ischaemic heart disease. And I don't think Hugh Thomas was there when I was, but also Archie was interested in applying experimental, randomized trials, to various sociological issues, and he had tried to do something before with truancy I think from schools and also smoking. And then when I was there, there was also a sociologist called Dee Jones, who was working with somebody called David Reynolds, who I think became professor of education in Cardiff, but in those days he was a lecturer in education, but they were trying to look at truancy and also academic performance of schools. They used the Rhondda [valleys], the argument being that the area was reasonably homogenous and therefore it could characterize children who were drawn from similar backgrounds, to determine the contribution of the school and so on. I remember David Reynolds saying it was the headmaster that was the key factor, the headmaster. How far you could extrapolate from the Rhondda to other situations, I am not sure, and it had the advantage from the design, as I said, that you could argue that schools are reasonably homogenous. And Peter Sweetnam was there as the sort of senior statistician. I think David Hole came shortly after I arrived, or he may even have [already] been there, who then went to Scotland. And Peter and David were really the statistical part of the unit. Peter Elwood really almost ran a unit within a unit.

Archie was, I suppose the word is, wily or astute. My judgement of Archie is – the phrase now would be that he was emotionally dim, as opposed to being emotionally intelligent. I think his intellectual abilities were enormous – to see him go into debate or discussion was impressive. I don't think he handled people well, I think he misread situations, I think he was offhand. Even small things like picking the phone up, his telephone manner, was offhand to the point of rudeness. I remember him saying something like, 'I don't know who you are', just imagine this could be from someone he genuinely didn't know, but who was trying to make contact, 'I am afraid I don't know you, you must have the wrong number', and putting the phone down. It is funny on one level to relate it, but in real life it is just wounding. So Archie I think was not good as a manager – that responsibility of being leader/manager of a unit. I think as I said in terms of his intellectual abilities, one would have nothing but respect for him. And Archie, was a life-long bachelor, and had shared Rhoose Farm House, which became his house, with a number of other people when they were bachelors and before they married. One of them was Stuart Kilpatrick. Now Stuart married, I don't know what her maiden name was, somebody called Joan, who was a very able woman, she was good in lots of ways. I think she was probably excellent at running a house, but she was not just a good housewife, she was intellectual, she could have held down quite a responsible job, and they had no children, she and her husband, so they had more time, more energy, for things related to work. Joan worked in the MRC as a, she was probably called a senior clerk or something, basically she had a clerical job. And to Peter Elwood, I think Archie had perhaps suggested something about her doing some work on anaemia, and then he started to do some work with Stuart Kilpatrick who was the physician on that arm of the study. My understanding is that Peter Elwood came from Belfast and joined them, and I think Peter felt that [the] data that he saw as his, was used by Stuart Kilpatrick or the Kilpatricks. I think Archie did try to deal with it, how he dealt with it I don't know, but it was before I joined the unit, but I think Archie really found it all too difficult. There was loyalty to a friend, someone he had shared a house with, but I think Peter Elwood felt that Mrs Kilpatrick had shown the data to Stuart who could then use it as part of a talk or a presentation or something. So what Peter did, I think probably from that experience, made him develop almost a self-sufficient unit within the unit, so he had his own field workers, his own secretary, and so on, and while they had the same address it was uncomfortable and I think everybody was aware of this.

I felt slightly awkward because Joan Kilpatrick took an interest in me and in fact I learnt a lot from Joan Kilpatrick, she was someone who had done it, been there, done it, and I had never done a survey before or a private census. I mentioned with the gallstone work we needed to know not just that people were over 18, which of course was fine from the point of view of using the electoral roll, we wanted to identify a subset of the electoral roll. So we did a private census. I think it was a bit like Orson Welles, how was it that he made *Citizen Kane* at the age of 23 or 22, he acted in it, he directed it, he wrote the screenplay, he did everything but almost write the music, and he said he had the confidence that went with ignorance. And anyway with Joan Kilpatrick's support and help, and she did things in a nice way, she would always put them in the form of a question, it wasn't direct, and you would think, 'Oh thank you, thank you for bringing that to my attention', and I learnt a lot, but I felt that I was probably not trusted by Peter Elwood because I didn't seek his advice, but Mrs Kilpatrick almost took this maternal interest in me as a new recruit.

The unit was small in terms of numbers, so I thought Peter Elwood probably wouldn't trust me with information about what he was doing, because I might pass it, perhaps unwittingly, to the Kilpatricks, or to Mrs Kilpatrick. And this sore, I talk about a running sore, is what persisted, and I don't think Peter Elwood probably ever spoke to Stuart Kilpatrick again, or just nodded as they passed if that, but certainly no collaboration, no working together, and Stuart withdrew from doing any field work or any epidemiological work, he just got on with his chest medicine.

AN: So you joined the unit in 1970?

DB: Oh I left in 1973, the autumn of 1973, to go and start an MSc at the [London] School of Hygiene [LSHTM], which in those days Jerry Morris ran, I think the first year was about 1971 or 1972, an MSc in social medicine. This was anticipating the reorganization of the health service, the 1974 reorganization, where you got rid of the original tripartite arrangement: the MOH (Medical Officer for Health) department, the hospital department, and primary care, that is the old executive committees. In those days I think it was seen that the MOH's training was inadequate or insufficient. One may have been a little overconfident about the decline in infectious disease, but also recognizing the increasing importance of the management of chronic disease. And as the wider factors influencing health became apparent I think it was felt that, as I said, the old DPH (Diploma in Public Health) was not satisfactory, it may have been necessary, but not sufficient, for community medicine as it was then called. So basically I went to the School of Hygiene and did this two-year MSc, the first year was an academic year, the second year was a dissertation, a Master's dissertation, which was a whole year. I was married, the first time I got married, I got married in 1968, so I had lived in London in digs basically, in a student hostel from Monday to Friday and went back at weekends, I came back to Cardiff where we had bought a house. So I arranged to spend that second dissertation year in Cardiff and the unit provided me with a postal address and so I worked there.

AN: You were seconded from the epidemiology unit?

DB: Not seconded, I resigned. I got a bursary. The Department of Health or DHSS [Department of Health and Social Security] as it was in those days, was offering a limited number of bursaries for people to train in 'community medicine' and I was paid at this sort of SHO grade, to do this, so I did that MSc, and I came back as I said to live in Cardiff and use the unit as my base. Then I started looking for jobs in that second year, because the bursary lasted two full academic years, October to September. I had been approached by Phil James, he's now at the Rowett Research Institute [of Nutrition and Health], Aberdeen, he was then at the Dunn Nutritional Laboratory (now Human Nutrition Research) in Cambridge, an MRC unit, and he had approached me while I was at the School of Hygiene. We met and the reason I knew Phil was that he was an ex-UCH graduate, I was a medical student on his firm when he was a houseman on the medical unit, and I think he was quite intrigued that I had ended up doing epidemiology. I don't know whether he had made any phone calls or anything, or whether he was just basing it on any clinical skills I had, but anyway he basically said would you like to come and work in Cambridge. So I said well it will

partly depend on what's on offer elsewhere. I don't want to just jump at the first offer. I think I had become, as a result of doing the MSc, more interested in service issues, as opposed to disease aetiology, and I can't think what else I explored, but the job I ended up doing was applying for a job in Bristol with Avon Area Health Authority, a man called Alan Snaith, who is still alive I think but he retired some years ago, in fact he retired in the early 1980s, he took early retirement. I enjoyed working for Alan Snaith. Basically we were called community physicians, you usually had brackets after your name such as [child health], another one [clinical disease], and another one [planning and information]. And I applied for the planning and information one. There was just this one job on offer. And I rang Alan Snaith and said could I come and talk to him about the job and he said 'oh just apply in the usual way', he was really quite offhand, and I was hoping that he might invite me over and we would have a talk before putting a formal application in. Anyway I was put off by that, so I didn't actually apply, and then about three weeks later I got a phone call from Alan Snaith, saying he would like to meet me, so I went over to Bristol, and we talked about this job, and it resulted in me putting an application in, and I think there were two or three other applicants, who were shortlisted. Anyway I was offered the job and I accepted it, and I hope this doesn't sound immodest, but I think I fashioned that job. There was no detailed job description, and having been influenced by Archie's concern about the absence of evidence, I had sat through the gestation of Archie's Rock Carling monograph [in 1972] and commented on various chapters. I am not trying to take any credit for the content, but as chapters were produced he gave them round the unit for comments. And I think I said what we needed to do was to set up what would now be called a research and development unit, but I said a research and evaluation capability within the NHS. In those days there was a region, and then there was an area and then there were districts. And Avon was made up of four districts, which rapidly became three, because the poor relation, Weston, wasn't viable on its own, and Weston went in with Bristol, Bristol Royal Infirmary basically, and you had Southmead and Frenchay as separate districts. So with Avon you were getting about 800,000, I think was the population if I remember rightly, it didn't include Bath. So you had the fact that it wasn't coterminous with local government, because Bath was part of Avon, but looked to Wiltshire and therefore Wessex for its health care, whereas Avon was part of the South-West in terms of health regions. Anyway, I don't want to suggest that I went in necessarily with that clear picture, but it emerged very quickly. Because Alan Snaith asked me about evaluating a stroke unit and he had already got Walter Holland to come down and look at it before I actually took up the post. I don't know what Walter's advice was, but I got the feeling that it wasn't very clear, and so I went and talked to the neurologist, who had got the money from Keith Joseph, when Keith Joseph was Secretary of State [for Social Services], he had argued for the importance of stroke care and he got money for a stroke unit. They built a building, and as with all these things, I think there was limited revenue, so there were a small number of posts attached to this, and they had to borrow speech therapy and physiotherapy from the main hospital, that sort of thing. And I came back and said to Alan, 'I don't think you can evaluate it in the sense of having a clear answer about the value of stroke units.' The Department of Health wanted it evaluated, which was not unreasonable, but without defining the question and I said I don't think it is answerable, one stroke unit in one district. I said what we could do though is try and evaluate some of the components of stroke care and I found a speech therapist who was prepared to concede that there might be some adverse consequences of speech therapy, so it became much easier to say, 'Oh let's do a trial, let's do a randomized trial.' You appreciate that if at worst, it was neutral, it was difficult to, in ethical terms, to try and get it so this is a balanced question. So what we did was very tentatively run a pilot and we wrote a protocol and without additional resources we ran it for six months. We compared, what was the contribution of speech therapists, professional speech therapists, over and above a lay volunteer, who's hopefully expressing the same commitment and enthusiasm but doesn't have the particular skills of the speech therapist, and we randomized patients. They had to have sufficient degree of dysphasia and so on, but we checked that and then we applied for a grant, we could use our pilot data to furnish the application and we got a three-year grant from the Department of Health, which effectively paid for a full-time speech therapist to act as a manager of the study and also as a therapist when required. And I got Peter Sweetnam involved, I came back to the unit for help, because I wanted to make sure, both for his comments on the protocol which I think he passed, and I think he did do some power calculations, all the things you are supposed to do. What it illustrated was the dictum that there's nothing that makes a common disease rare as starting to set up a randomized trial. We got about 160 patients I think it was, but by the time you have broken them down as you will appreciate into age, sex,

level of dysphasia, intervention or control, you have got quite small numbers. But what was quite clear was that, volunteers were as good as, or actually they were better, but not statistically significantly better, than speech therapists. It raised, as always, all sorts of other questions. That was really the first major study that I got involved in and what I found is that you acted almost as a source of advice sometimes, and people would go off and do their own study and you weren't involved at all. Other times you would actually make various suggestions and almost helped them write a protocol and maybe work with them. And then there were other times, which were studies initiated just from within the department of community medicine.

For example, we had been talking about looking at the value of immunisation. At one level there wasn't a lot of tetanus and diphtheria about, so something seemed to be working. But we knew we were dishing this stuff out like Smarties to kids, and as I said it wasn't as though we were trying to be particularly iconoclastic or rocking the boat, but we were just concerned about it. Okay there's not a lot of disease about but, and there was a case of polio, and obviously a flurry of activity. Anybody whose jaws could be forced open had a sugar cube put in their mouth, and also whatever the contacts there were, and the immediate population that was felt to be at risk. We said well maybe we should perhaps think more carefully about doing a study to find the exact questions we want answered. And then there was a second case, not very much later, as far as we could tell it was completely separate, there were no links as far as we could determine with the first case, but another case of polio. So more immediate activity, and I said well we probably better get on and look at this, because if this pattern is going to continue, everybody will have been boosted. And what we did, in terms of getting measurements, what we decided to do was to look at the level of antibody measurements. Now obviously when the initial vaccine was introduced, there were some short-term immediate acute studies, but we decided that the best way was not to take a random sample of children in each year, but we took three cohorts, seven year olds, eleven year olds, and fifteen year olds, and basically asked them for a blood sample, and we used the child health register as a sampling frame, and we then went and asked for a blood sample. Looking back, I am embarrassed that we didn't ask ethical approval. I raised it, but Marie Freeman, who said 'no, no, this is monitoring, this is my job as an SCM' [Specialist in Community Medicine]. She wouldn't get away with it now, but it was done, as so often things are, with the best of intentions, but we wouldn't have had a leg to stand on if we were trying to do it now. And we used clinical medical officers to take samples, which I regretted because they were clinically clumsy about taking blood. It was appalling, one of them said 'do we give an anaesthetic?' and I almost said 'do you mean general or local?' We got response rates, which Archie would have approved of, of about 97 per cent, to giving a blood sample, not just to a limited questionnaire. And obviously as one would expect, you got distributions. The people who did the estimations of the antibody were the National Institute of Biological Standards and Control (NIBSC) in Hampstead. We got their diphtheria expert, their polio expert, their tetanus expert – their tetanus man was also doubled up with diphtheria. But we sent them these samples. They were delighted because this was an unselected population, we had got their immunisation histories and so on. And the polio data really scared them. One learnt a great deal, like you do in epidemiology. Suddenly you become an 'expert', because I suppose on the whole if you are a thyroid clinician you concentrate on clinical aspects, but there are a limited number of people who have bothered to look at the population perspective. Anyway I discovered there was this debate, which was raging in the States, it didn't seem to have crossed the Atlantic, which was the concern about oral vaccines, the Sabin vaccine. Now I think it is part of the dialogue, part of the discussion, the risk that with a live vaccine someone would get polio. And it wasn't usually as you probably know, the recipient of the vaccine, but an adult contact of the child who had received it. Of course with the killed vaccine, the Salk vaccine, it was much more controlled, you were giving it to an identified individual, and the effects didn't extend beyond that individual. The original claim made for Sabin was that not only did you inoculate a child, you inoculated a cluster, with the sort of faecal or oral transmission rate and kids' personal hygiene being what it is. And that was seen as an advantage. Anyway, of course, the problem was that the baselines shifted. There were six US manufacturers of polio vaccine at the time we were doing this, and I think they had all planned to stop producing it maybe because legally they felt the damages they would be forced to pay should there be a case of vaccine-associated polio, and you could determine whether it was the vaccine virus or a wild virus, so they basically made a decision they were going to stop producing. The United States was then faced with the fact that it was going to have no home producer and it was going to be dependent. I think the States were going to have to import from Canada, but they got quite nervous

about this, being dependent on an external source. And so this was the debate that was going on. And we showed, as you would expect, with the scatter of results and my understanding that with polio the really serious complications, the neurological ones, are dependent upon the level of circulating antibody, which is what we were measuring. We didn't try and measure cellular memory or cell-mediated immunity, it was just we went for a relatively simple marker. And there was real concern and we debated about what to do about these and one option was to boost them again, but then the older children had had a booster already, so I said well why don't we build in a trial, randomize the booster, and we will use an oral booster and compare it with a killed vaccine given by injection. So we built this intervention study on the back of the initial prevalence study and we got high response rates and the results were dramatic. It was one of those things where you didn't have to bother with statistics, there were just two different populations. The results just jumped out at you. We had a ceiling, I think the highest titre was 1 in a 1000, and I think all the children that had had Salk vaccine, apart from three or something, were, if you do it as a graph, were clustering at this titre. The oral Sabin vaccine was much more random, much more like a snowstorm.

We wrote this up and we couldn't get it published, not because of journals or referees, but because of the bloody director of the NIBSC, sorry he was not the director at that time, he was head of one of the divisions, because Joe Smith, who was the director, was very sympathetic. Anyway it has never been published. Basically the polio man went off to join the WHO in Geneva as a polio expert. We were just all of us brassed off by the fact. The argument used was we were extrapolating beyond the data, I don't think we were. We argued that perhaps the national policy could be reconsidered and there was a place for an oral and a live vaccine. It may be that the best option was a combination and because I think we were challenging the status quo, I can think of no other reason, because I genuinely don't think we were extrapolating beyond the data. The data told their own story and it was so stark.

Anyway there was really a range of different problems, different issues, different questions, and we developed this almost in-house capability. The clerk or administrator who had run the child health service for a time, a nice man in his sixties, retired at 65. With Alan Snaith's support what happened was that his successor was a medical sociologist with a PhD, from Walter Holland's department, so in the morning he ran the child health service and in the afternoon he reverted to being a medical sociologist. Similarly with the health education officer, the person we recruited was Richard Wilkinson. In those days Richard was, I think he had been an academic, an economist, a sufficiently good economist that he was writing university texts, but I know he was sort of stricken with guilt, that's too strong a word, but he had a very strong social conscience, and felt that he had to have a proper job, he had always been an academic, and Richard was appointed as health education officer. And then he subsequently went off to Brighton and again the rest is history. But we had a social worker working with us on some joint monies from the local authority. We employed another sociologist to do some work on psychotropic drug prescribing. We got a three or four-man practice, in a relatively poor part of Bristol, but the senior partner was interested in the prescribing of psychotropic drugs and I don't think PCs (personal computers) probably existed then. They were probably coming in, but it was still main frames basically. And so what we did was produce, I got a special prescription pad printed with NCR (no carbon required) paper, so we had duplicate copies of every prescription they wrote. Some preliminary work had shown that 20 per cent of their prescriptions were for psychotropic drugs, so with that percentage we said, 'Well, the easiest thing is just to collect a carbon copy of everything and we will sort others and then concentrate on the 20 per cent that were psychotropic drugs'. So we built up a register and that again gave us a sampling frame and we used the sociologist and social worker to carry out semi-structured interviews, exploring peoples' perceptions about psychotropic drugs, debating that they were 'curing them' or was it just keeping everything damped down, what were the symptoms or problems surrounding the initial prescription, who started it, was it a psychiatrist or a GP, and so on. And we worked with a psychiatrist on that. I won't pretend that it was all, that the individual topics were part of a grand design, it was really opportunistic. Somebody had got a problem and we said does this lend itself, what sort of study, is it just advice, is it about some other sort of change or intervention, or is it about setting up a more formal study.

And I thoroughly enjoyed my work in Bristol, because you felt what skills, knowledge one had, was being used. But in 1982 the Department of Health decided to get rid of the areas, this was the Griffiths [Report

of 1983], and the buzzword was ‘management’. We argued that perhaps part of this informal unit that we had created should be kept, and even if we got rid of the area, it could be physically located in one of the districts, but still serving what had been Avon. I don’t know whether we were seen to be too elitist, exclusive, and not getting adequately involved in some of the more mundane issues. At the time there were two of us. I had suggested that Ian Baker, who is now in Bristol, come to join us. We had met at the unit, he followed me at the unit, and I said to Alan Snaith there’s someone else in Cardiff who might be interested in coming to work here. Ian had also done the MSc, I think he did it the year after me at the School of Hygiene, he had been out in Nepal doing some clinical work and then did the MSc, and then came to Cardiff and then he came over to Bristol. So there were two of us who were interested basically in doing fieldwork, although it is research studies. We argued that perhaps this sort of capability that we had developed could be maintained, but whether with hindsight we were seen to be too academic for the service in those days I don’t know, but there wasn’t enough support. And we were fragmented and people left. When people see the writing on the wall, they start looking for jobs or even jumping beforehand. But Ian and I, it was all done in a very gentlemanly way in those days, you didn’t even have to reapply for your job, people found you a job, but the job they found Ian and myself was much more medical admin and that research component really just sort of dropped off. And my marriage broke down, my wife wanted to end our marriage and I stayed on in Bristol, this was 1982, I stayed on until 1985. I had met the chairman of Huddersfield Area Health Authority, Peter Wood, a remarkable man, a chairman who had actually educated himself. He had left school at something like 16 or 17 years old, went into the RAF and spent 16 or 17 years in the RAF. His first child had Down’s syndrome and that’s the reason I think that he left the RAF, because he was being posted to different parts of the world, and he got a job with ICI and he basically became a manager in ICI. He had managed the Huddersfield plant, which was the expensive end of the chemistry industry, he was doing dyes with considerable value-added stuff, so he wasn’t dealing with sodium and chlorine, producing it from salt. And anyway he had managed the Huddersfield plant, which must have employed several thousand people, it was one of the biggest employers in the town, but he came onto the committee of the health council at that time and he became chairman. But during this time he educated himself, he had read Cochrane, he had read Thomas McKeown, he was a most unusual chairman, but recognized perhaps both through McKeown’s and probably Archie’s writings, that there was an absence of hard evidence underpinning much of medical practice. This was in the middle 1980s that I met him. And he wanted to set up some sort of evaluation capability, and he hadn’t got any time for the existing what was then called, the DMO, district medical officer. He thought he was a dead weight, they were just paying him a salary and he got very little in return. And I would never do this again, but I was so naïve, I was set up in a unit, a bit like what I have just said about Peter Elwood, almost in parallel, not formally part of the DMO’s department, yet I was a community physician. My line of communication was to the chief exec and chairman, but the Chairman didn’t have a fixed role, because some days he was chief executive, and some days he was project manager and so on, but it made life interesting, but at times it can cause confusion, I have to admit that. What happened in Huddersfield was that, as part of the Department of Health’s or DHSS initiative of trying to get doctors to be more aware of the financial implications of their clinical decisions, they had instituted something called management budgeting, which is a turnoff for most doctors. They didn’t give doctors the information they wanted, because the level of aggregated data was too high. The new initiative was called resource management and Huddersfield Royal Infirmary was chosen as a pilot site for resource management, along with five other sites. Peter Wood was everything, he was chairman, chief exec, product manager, in relation to this initiative. I was asked to join as the sort of public health representative, and that was very interesting because we had debates about how we going to interpret this brief. The other five sites basically went in for restructuring, into clinical directorates and so on. I don’t think we dismissed that, but what we said was the biggest need is for information and what we did – this was prior to Margaret Thatcher’s [1989 white paper] ‘Working for Patients’ – that was 1986, we said we want to provide an information system which is sufficiently detailed and comprehensive to support medical audit. There were arguments about real time and batch processing and so on and so on, and Peter Wood, who was extremely knowledgeable about computers, not at a very detailed level, but from his ICI experience of computers and trying to design sort of instant communication across a plant. Peter argued persuasively why we should not do this in real time and so on and I think what we achieved at Huddersfield was in large measure due to him quite honestly. And we developed this system. The Department of Health were obviously nervous about giving us, I don’t know

how much money we got, public monies to do this, but they basically added the stipulation that we had to have outside management consultants. And [KPMG] Peat Marwick was the management consultant, and they did provide people who could provide software programs and so on, but what was rather galling was that having invested the intellectual property, of others, not me alone, and particularly Peter Wood, into this project, at the end of this project Peat Marwick bought the copyright from the Department of Health and marketed this system as PIMS (Patient Information Management System) under their own brand name, and very soon this was the system that was running in about 50 DGHs (District General Hospital) in the north. It could have been the NHS copyright, and it was sad to see the rather cavalier way it was disposed of. I was in Huddersfield for nearly four years and it was too far from Bristol where my kids were, I have three kids, and I made a decision to return somewhere closer to Bristol and I started looking for a job closer to where the children were. A job came up with Colin Roberts [in Cardiff], in his department, that was 1989 and I applied for that and I was offered the job and accepted and that's how I came to be back in South Wales. Many of the people in the MRC unit, and clinicians who were working in the hospital service and so on, were still around. So in a sense that was quite nice. So I was initially with Colin Roberts and then with Stephen Palmer and this is my service base.

AN: So you still have an academic base?

DB: Yes. I must say to be honest with you, I had an unhappy relationship with Colin Roberts. Colin had got some money from the Nuffield Provincial Hospital Trust as it was then called, to set up something he was proposing to call the Nuffield Health Care Evaluation Unit, and I did what I hoped was expected of me, but obviously it didn't please Colin. I don't think I was commercial enough in a sense of going out and attracting more money and running meetings and so on. What happened was the health authority, as it then was, the South Glamorgan Health Authority was paying my salary and they were on the interviewing panel. I was asked at my interview would I help evaluate the neighbourhood hospital, the neighbourhood was a flagship of the new strategy for South Glamorgan. It was going to be a neighbourhood hospital in about eight localities in Cardiff, basically 1 per 50,000 population. I was asked, would I evaluate this and so I said yes I would. I think I was a little too quick at the interview, I said well if someone spelt out objectives I would be very happy to evaluate it, it was a little sort of a smart-arsed reply really. It wasn't meant to be, I just spoke too quickly, because my reading before I was actually interviewed was that there was a lot of confusion around this proposal and this concept. Anyway when I came to take up the post and I went to see the general manager again, because they hadn't built any hospitals, there weren't any hospitals to evaluate, so I asked him exactly what is a neighbourhood hospital? He would start reasonably confidently and saying small, close-to-home, friendly, and he obviously got this warm glow somewhere, but he couldn't actually tell you much more than it sounded a bit like a community, or a GP cottage hospital, but in an urban setting. So it was a bit like Woody Allen's description of going to have his eyes tested. The optometrist calls out the letters and Woody Allen says true or false. I was trying to say what would you like me to do? I was suggesting ideas you see. And I said 'would you like me to try and define the concept?' and he said yes. It was a sort of sense of relief. He told me an awful lot, the fact that he couldn't actually give me a brief immediately, what would be useful. So I went away and I read and I did a literature search, visits, I tried to read around what is now called intermediate care, and I produced a paper which was about 40 pages of A5 and so on, trying to define what neighbourhood hospitals were, and they liked it. I had also been given a brief for doing something with medical audit, which had a somewhat faltering start in many places, but I was given the brief, not just in public health, this was for all specialties in South Glamorgan, and it sounded like clever wording to me, but it was pretty hollow. It was something like the public health input into supporting medical audit, I didn't know what that meant. But I had heard about somebody called Christian Schumacher who had done some work with doctors and I thought hmm, well if he is anything like his father, Fritz [Ernst Friedrich] Schumacher, 'small is beautiful', I thought he has probably got some quite interesting ideas. I managed to get hold of his phone number and said I would like to meet him and we corresponded and I sent him various reprints and so on and we met up about a few months later. He rang up and said he was going to be in Newport doing some work for Monsanto and suggested we met for a beer. Anyway I came over from Cardiff and we talked and without almost any sort of invitation or suggestion or steering of the conversation, he told me about this work he had done in Holland, about restructuring a whole hospital, not just a department, a whole hospital, and

how he had started and built it up. It was fascinating and there were some early outcome measures, or interim outcome measures and I thought well this is somebody who could help me work on my neighbourhood hospital, because I knew that I didn't have the skills and I was pretty certain that the planning department didn't have the skills to take a concept and translate it into the sort of organization that functioned with a reasonable degree of harmony. And anyway to cut a long story short, I went back to Nuffield and said would you be interested in funding some of the time of Schumacher. I told them about his work and his approach and so on and got another £20,000. And we did a lot of work, some of the most interesting work I had done, because we really got the commitment of the hands-on clinicians.

Anyway I don't want to go into this too much, because it's now a long way from my time with the MRC. It was just to finish my biography as it were. We did a lot of work and produced a plan for how to introduce a neighbourhood hospital and the health authority bottled out, it was too radical, they just cherry-picked. What had been designed as a whole unit to hang together, they just cherry-picked the bits they were comfortable with. They built what they wanted to build, which was a community hospital, very much like all the old ones, and we tried to really use it as an opportunity to do something quite innovative. That was a failure I suppose and Colin Roberts felt, I suppose because that was not seen as a success, I hadn't been as commercial as I think he wanted, but perhaps I was the wrong person, but I think there are too many units, or departments, where there's too much front and no back. There wasn't a lot of funding to start up with, and perhaps I should have directed my energies at trying to get salaries, or win research projects that would have paid for a research officer, but I had to do teaching, all the other commitments, all the service responsibilities of my honorary contract. Maybe it was me, but anyway in those days, there was Colin Roberts' department and there was also Gareth Crompton. People often said about Cardiff, what is the exact relationship, why have you got two professors of public health? They did have different areas of interest and Colin Roberts did all the undergraduate teaching, but anyway basically I moved from Colin Roberts' department to Gareth's and then when Gareth retired and Colin Roberts took early retirement, the two departments were amalgamated under Stephen Palmer. It was I think unconnected with my performance that I was asked whether I would come and work in Gwent and the person who was in Gwent went to work in South Glamorgan, it was really to help Gwent out. The person who had been the DPH (Director of Public Health) there and had stood down, continued to have an honorary contract, but it was unsatisfactory for him coming back to the department, where he had once been DPH, so that was the reason for the swap. So I went to Gwent.

AN: Going back to your time at Avon, I think that is when you set up the Speedwell studies. Could you just tell me a little bit about how that came about?

DB: Yes. I mentioned Walter Holland's name, I think Walter Holland would also certainly have been asked to look at the Speedwell clinic, and this had been set up under Professor Wolfenden, who was the MOH for Bristol. I think on the basis that a progressive MOH's department would have a screening service somewhere, and when you looked at the tests they were doing they had almost gone through French's [index of] differential diagnosis, looking for those conditions where there was a relatively simple, preferably non-invasive test, but a simple test that could be used without, I think, reference to a population perspective. There may have been some consideration about what do we do with the abnormal results and so on, but my view when I looked at this was that you could not justify this as a service, a routine screening service, there was insufficient evidence to justify some of the procedures, some of the other things should probably have been done in primary care, like blood pressure screening and other things and so on. I came back and said to Alan Snaith, 'I think we should kill it, but of course we won't get the resources back, so why don't we make it into a community laboratory and set up a research study.' In that way there will be enough that if the authority were concerned about closing a service, we could finesse this into having a very different basis for the activity, we'd continue the funding, and we could use it as a community laboratory. And there had been a clinician Chris Burns-Cox, he's retired I think, or in the process of retiring now, from Frenchay (Hospital, Bristol). He had actually in his past done some work with Doll, so Chris has some knowledge and understanding of epidemiology methods, not that he got directly involved, but he was almost one of the steering group (of the Speedwell study) I suppose, but enthusiastic. After the MRC, the epidemiology work, I became friendly with George Miller who was at the

Pneumoconiosis Unit, and George had produced or, with his brother, was in the process of producing the HDL (high-density lipoprotein) hypothesis. George had told me about his work and his ideas and so on, and again, please don't think I am trying to take any credit for that, I am not, but I said to George it had occurred to me that with Speedwell, I said we have got a population we could use, because my recollection is that George had put this hypothesis together and the supported evidence was discrete studies, looking at smoking in HDL, looking at physical exercise in HDL, and so on. I said we could measure all of these simultaneously and see whether HDL still stands up. And then the question was getting resources. Now I was prepared to do the fieldwork, in fact having the medical input into the fieldwork, and I thought well I haven't got any field workers, we had a couple of nurses and a clerk who went with the screening activity, so we held on to them. I came back to Peter Elwood at the MRC and said would you be interested in forming a twin site, say with a common core protocol, if only to help with the data processing and the statistical analysis, which there wasn't in Bristol. There may have been in the Department of Mathematics, and I think Ralph Midwinter taught descriptive statistics, I don't know how much he went into it to undergraduates in Bristol. And John Colley had come to Bristol and he recruited Tony Hughes, because he's really an economist, but also he took an interest and also taught medical statistics. Anyway I came back to Cardiff, I felt that had been my stomping ground, I had good connections. Basically we set up a sort of partnership and I managed to get some money from – who did we get the money from? – ICI, that's right. Because we asked patients to fast, to come fasted, it was a two-stage thing. They would come to the clinic usually in an evening, and then we asked them to fast and come back for the blood sample, and we then had to give them breakfast, and persuading the health authority, and justifying the packets of cornflakes and toast and so on. Yes we provided patients with breakfast after they had given their blood samples. And so we got bits of money, and also we were sending samples to Portsmouth for various platelet function tests, so there was a Red Star carriage charge every week. I got soft money for that. We put a package together based on the HDL hypothesis and with Caerphilly as well, but the trouble is Framingham had already got the data but never analysed it. Of course, within a very short time of *The Lancet* publishing George Miller's hypothesis, they could certainly publish cross-sectional data very quickly, and then they went back and looked at the incidence data. Anyway, but with that population there were various clinicians who got to hear about this ostensibly unselected population and wanted to ask whether there were opportunities for them to do some work. I don't know whether it was always focused about one field but I could say well we could slot this into Speedwell. There was an interesting Canadian gastroenterologist working with Ken, he may have retired, he was on a par with the medical unit in the Infirmary. Anyway he was interested in gallstones and he and I had first met some years earlier, when I was doing work in Barry. This Canadian was working with Ken and he said could we help and I said yes. And what the Canadian was interested in was, what was the normal bowel habit. And so we included him, and I said perhaps we could do our measurements first, being a bit uncertain about quite how patients would respond to questions about their bowel habit, but he appeared in a white coat and came in and he was the last one to see them. And so we slotted those questions in like that. Then we did the initial recruitment phase and we did several follow-ups and Ian Baker joined me in sharing the clinical work and we trained the clerk and the nurses in survey matters, in trying to minimize bias and so on.

AN: What's quite interesting to reflect back on what you have been talking about is that the work that you did seems to parallel what the MRC was doing, except it was led by problems that arose. I wondered how much the MRC unit worked with other clinicians, whether you think it's better modelled to work independently as a unit, or whether it is better to be in the middle of this organization.

DB: I can only really talk about the MRC as it then was, I don't know whether the style is different now, but my feeling was that Archie didn't score highly on emotional intelligence. He managed to almost alienate, certainly put the backs up of local clinicians. His influence was almost directly a function of the distance from Cardiff. In Cardiff, I think there were some natural, I was going to say natural simple jealousies. Archie was bright, but he was also wealthy, he had a private income. On their own, one might have been acceptable, but both, it's a bit like paraphrasing Oscar Wilde, both were unforgivable, but his style was not helpful, because I think publicly, too publicly, he ridiculed clinicians. Yes they should have answered the question 'why haven't you got better evidence?' but I think all of us are prisoners of our own history, or

the times in which we are living. Archie's intellectual contribution was actually taking that leap forward, so I think for most ordinary clinicians, that was the world they knew, and accepted, and recognized. But it wasn't helped I think by Archie mocking them and I think if his style had been different – what has always struck me is why did he have so little impact on clinicians in Cardiff. I think his style was such that he didn't invite cooperation, because why be mocked or ridiculed? There was a difference, if you like, in terms of his writings and his research. They must have had some collaborators to do with all the initial studies of coal miners and pneumoconiosis, certainly radiologists and/or chest physicians in reading films. I am not sure, because it was before my time, I am not sure about the exact working relationships or whether the people all thought they were doing pioneering work and there was enough of that buzz, because they were doing something really quite, at that time, innovative, that it kept them as a sort of reasonably cohesive team, I don't know.

AN: I am not sure how much was in-house within the Pneumoconiosis Unit, they had their own base, their own staff, and I think Archie Cochrane developed a lot of the reading skills, rather than actually relying on radiologists from outside. It's interesting because one almost gets a sense that this poor relationship continued afterwards when Peter Elwood took over as director.

DB: Peter managed to find individual clinicians to work with. There was a Dr Davies, who was a pathologist from Carmarthen. There was John O'Brien who was a haematologist in Portsmouth and to whom we sent samples. Who else at that time? I think Alan Jacobs, who was Professor of Haematology, he used to do his work on anaemia and so on. Yes Peter obviously did use labs to provide the necessary readings, estimations of the samples, but I am trying to think about who else he worked with. I think Peter was probably quite a demanding colleague, Peter worked almost all the hours that God gave him, and I think he expected probably the same sort of commitment and devotion from everybody else. Such that some of the field workers felt almost used or not sufficiently valued.

AN: You were at the unit at the time that Professor Cochrane was coming to the end of his directorship, were you a part of any of the discussions, because it is quite unusual for the MRC to continue units, they often close them with the retirement of directors. I wondered if you were aware of any discussions that led to Peter's appointment?

DB: No I think I had probably left by then, because I left in 1973. Archie retired in, I can't remember.

AN: 1974 I think.

DB: Oh was it as soon as that. Yes I suppose it would have been, because he was born about 1909 I think, so 65 would make it 1974 wouldn't it? And he then, as you probably know, stayed on, and I think that was probably a mistake, the ex-director hanging around the unit that Peter had inherited, passed to him with MRC approval. It must have been uncomfortable for Peter having his former director in the attic.

AN: Another thing I am quite interested in is that the MRC essentially placed a group of researchers in South Wales, and how much they actually were involved with their local population. Again very much your work had been applied and there had been problems generated very much in your population. What sense do you get of support from the local population?

DB: I think 'not much' is the honest answer. I think what had started off at the disease aetiology end of the spectrum, so the point you started there were phases you used were almost a tame captive population who were interesting because of their occupation and they were pretty immobile. Then Archie got interested in issues relating to health care, particularly the monograph *'Effectiveness and Efficiency'* largely relating to health care and Archie had got involved with Gordon Mather in Bristol about the value of coronary care units, but there was no participating unit in South Wales. I don't think there was a participating unit in Wales at all. It was mainly done in the South West. You asked me about the model of way of working, I think in a way it was somewhat elitist or academic and didn't feel that it need concern itself too much with the health service or health service issues. It could actually have achieved more, if it had adopted a more

collaborative approach, of working with clinicians on issues that Archie was obviously good at identifying. That's the sadness in a way, that many of his examples are drawn in terms of health care are drawn from outside South Wales. That is my feeling and I am sure I could be proved wrong about one or two examples, but the examples that he uses from his own unit are, I think, mainly as I recollect sort of disease aetiology examples, Elwood's anaemia and so on, and his own work on chest disease.

I remember saying to Alan Snaith, I was in my thirties then, even so the sum of money would have been far too high, but I just said suppose we only kept half of 1 per cent for R&D, I don't know that I would have said R&D, I might have said research and evaluation. I think Alan Snaith was actually quite grateful for the way I interpreted that post, because I don't think he had that vision when he appointed me. So that role developed and in fact it was written up by him as a chapter in Hobson's *Public Health*, but it has not been repeated in later editions. It's in the second edition, I think it is, but there's a chapter by Alan Snaith, which actually describes what he was doing. Because we were invited to go to the Nuffield headquarters and I remember being part of a presentation talking to some of the trustees and the officers of the Nuffield Provincial Hospitals, what we were doing in Bristol and the way we had approached it, using some service resources, like the child health service administrator, which as I said became a dual post really, and equally with the health education officer, that we had two people who had worked and been trained at the MRC and the School of Hygiene. It was very much about helping the service develop this capability, this function, so you didn't pick the phone up and call in an academic unit and say can you help us out, we have got a problem, you actually used everyday, some of these things you just dealt with with a phone call. There were other things where you could spot emerging themes and we could somehow graft on a study, what was often going to happen anyway, some activity was going to take place. We could graft on something so that we might have two groups, differing in some respects, so that we could actually draw some conclusions. And that is what I think we were trying to do and the reorganization of the health service obviously I would say nipped that in the bud, we were a bit more than just in the bud, but I think it just put the kibosh on it.

AN: And looking back is there anything else that, having worked in different areas, but also at the MRC unit, which distinguishes the MRC unit, ways in which it was different, or particularly successful or unsuccessful?

DB: I think it did a lot of work and a lot of interesting work, but it was in very much the sort of old model for university departments. You didn't have to say well how does this relate to anything else?, it was just knowledge almost for its own sake. You didn't have to say well how does this relate to patients or patient care, are there any connections? There are some I suppose, particularly about the precision of tests and validity and so on, but it was very much a sort of self-contained world and just picking on individual clinicians when you wanted a clinical member of the team. I think it is easy with hindsight to say it, but I think it's a shame, particularly with Archie's perceptive observations and analysis of the situation and that was never, I suppose it was almost like a function of the human condition in a way isn't it, but it was never capitalized upon.

AN: I think that is all I have got, unless there is anything else you want to talk about. Thank you.

[END OF TRANSCRIPT]

Further related resources:

1. Ness A R, Reynolds L A, Tansey E M (eds) (2002) *Population-Based Research in South Wales: The MRC Pneumoconiosis Research Unit and the MRC Epidemiology Unit*. Wellcome Witnesses to Twentieth Century Medicine, vol. 13. London: The Wellcome Trust Centre for the History of Medicine at UCL.
2. Ness A R (intvr); Tansey E M, Thomas H (eds) (2017) *Elwood, Peter: transcript of an audio interview (14-Apr-2000; 28-Feb-2001)*. History of Modern Biomedicine Interviews (Digital Collection), item e2017045. London: Queen Mary University of London.

3. Ness A R (intvr); Tansey E M, Thomas H (eds) (2017) *Hugh-Jones, Philip: transcript of an audio interview (05-Jul-2000)*. History of Modern Biomedicine Interviews (Digital Collection), item e2017046. London: Queen Mary University of London.
4. Ness A R (intvr); Tansey E M, Thomas H (eds) (2017) *Hughes, Janie: transcript of an audio interview (28-Mar-2000)*. History of Modern Biomedicine Interviews (Digital Collection), item e2017047. London: Queen Mary University of London.
5. Ness A R (intvr); Tansey E M, Thomas H (eds) (2017) *Jones, Marion: transcript of an audio interview (10-May-2000)*. History of Modern Biomedicine Interviews (Digital Collection), item e2017048. London: Queen Mary University of London.
6. Ness A R (intvr); Tansey E M, Thomas H (eds) (2017) *Kilpatrick, Stewart: transcript of an audio interview (23-May-2000)*. History of Modern Biomedicine Interviews (Digital Collection), item e2017049. London: Queen Mary University of London.
7. Ness A R (intvr); Tansey E M, Thomas H (eds) (2017) *Miall, William: transcript of an audio interview (13-Aug-2001)*. History of Modern Biomedicine Interviews (Digital Collection), item e2017050. London: Queen Mary University of London.
8. Ness A R (intvr); Tansey E M, Thomas H (eds) (2017) *St Leger, Selwyn: transcript of an audio interview (27-Jul-2000)*. History of Modern Biomedicine Interviews (Digital Collection), item e2017051. London: Queen Mary University of London.
9. Ness A R (intvr); Tansey E M, Thomas H (eds) (2017) *Sweetnam, Peter: transcript of an audio interview (31-May-2000)*. History of Modern Biomedicine Interviews (Digital Collection), item e2017052. London: Queen Mary University of London.
10. Ness A R (intvr); Tansey E M, Thomas H (eds) (2017) *Tudor Hart, Julian & Thomas, Mary: transcript of an audio interview (14-Jun-2000)*. History of Modern Biomedicine Interviews (Digital Collection), item e2017053. London: Queen Mary University of London.
11. Ness A R (intvr); Tansey E M, Thomas H (eds) (2017) *Waters, Estlin: transcript of an audio interview (14-Jul-2000)*. History of Modern Biomedicine Interviews (Digital Collection), item e2017054. London: Queen Mary University of London.
12. Ness A R (intvr); Tansey E M, Thomas H (eds) (2017) *Yarnell, John: transcript of an audio interview (18-Apr-2000)*. History of Modern Biomedicine Interviews (Digital Collection), item e2017055. London: Queen Mary University of London.