Wellcome Witnesses
to Twentieth Century Medicine

CLINICAL RESEARCH IN BRITAIN
1950–1980

A Witness Seminar held at the
Wellcome Institute for the History of Medicine,
London, on 9 June 1998

Witness Seminar Transcript edited
by L A Reynolds and E M Tansey

Introduction by David Gordon

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INTRODUCTION

The British, it is said, are not revolutionary by nature. However, in the last century, we created two organizations that have revolutionized the possibility and reality of clinical research, with worldwide influence.

The first was the formation of the Medical Research Council (MRC). The Medical Research Council was the successor of the Medical Research Committee, appointed in 1913 to administer funds provided under the National Health Insurance Act of 1911 (see note 49). While there may be doubt whether or not these funds were intended primarily for research into tuberculosis or for medical research more generally, we cannot doubt the boldness of the step. A government set aside money for medical research, rather than devoting the funds available for a medical problem solely to prevention, diagnosis and treatment.

The second revolutionary step was the creation of the National Health Service. The National Health Service Act of 1946 gave Ministers powers not only to conduct research, but also to support the research work of others. The notion of a population-wide, comprehensive healthcare system, free to the patient at the point of consultation, and able to support the clinical infrastructure of research, was truly revolutionary, and might have been impossible were it not for the appetite for social change created by the Second World War.

The combination of government funding for medical research, and a health service in which research on patients could be carried out, was a recipe for success. In this Witness Seminar we learn – from those who were there at the time – of the success of this combined venture. The Seminar brought together a remarkable group of individuals. Some had undertaken clinical research in the decades before the chosen starting point of 1950. We learn of the difficulties, whether created by institutions or by individuals, of clinical research in pre-war days. The situation was quite different in the 1950s. We hear from many witnesses of the positive atmosphere, of the research funds available for good ideas from the MRC and other sources, of the symbiosis between the Health Service and universities and of the freedom under which people could work. In Sheila Howarth's words (see page 10), research workers could be 'rather a happy crew'.

This freedom was hard won, and the outcome of the battle to win it was, at times, close. We are reminded that provision for teaching and research in the National Health Service Act was only secured following the intervention of members of the 1942 Club (see note 24). As well as the debate about whether the Medical Research Committee was only intended to support research in tuberculosis, the extent to which the Medical Research Council would support research in universities, or in postgraduate institutions, or in its own research laboratories, was not clear. Again,

evolution and happy chance led to a broadly-based portfolio of Research Council and charity-funded research that led to the progress of the 1950s and 1960s. This was also an era, as described by many who contributed to the Seminar, where those bodies that did not actively support research also did not constrain it.

However, the past, even through our rose-tinted spectacles, was not perfect. We learn how some universities apparently resisted the opportunity of obtaining external funds for research. The geographical disposition of hospitals in London was not ideal, either for their clinical service or (as a consequence) for research. (This may explain the pre-eminence in clinical research of some of the great provincial schools in this post-war era.) Most importantly, Governments began to demand a different and more precise outcome from their expenditure in research. Politicians failed to learn the lessons of success: the first quarter-century of the National Health Service had been relatively free of top-down direction, and successful in the production of research work of both fundamental and applied importance. Contributors to the Seminar described, from their own experience in the early 1970s, the process whereby funds were to be transferred from Research Councils to their 'customer' departments (see note 149). It is inimical to the political mind to allow freedom in the use of public money, against the possibility of *post hoc* accountability: the urge is to control from the start. This Seminar showed the way in which the reforms following the 1971 Rothschild Report and the 1972 White Paper were introduced, made to work against all odds, and eventually disentangled. We would hope that such disastrous shifts towards more 'directed' research will not happen again in the same way.

Not all the failures in the era under review were caused by political errors. Excellent ideas, such as the development of the Medical Research Council's Clinical Research Centre, did not have the success that they deserved. The Seminar touches on this at many points, but comes to no clear resolution as to why the Clinical Research Centre eventually failed to obtain the backing (both financial and political) that it needed, and was to close. This is a subject deserving of further study. One possibility is that the failure lay in the hands of the Medical Research Council, in not taking its ideas for a clinical research hospital through to completion earlier in the history of the Council.

The present Government, in the year 2000, repeatedly describes its programme for universities and for the Health Service as one of 'modernization'. What could be more modern than a Health Service, universities, Research Councils, and others, all working towards a common aim of supporting excellent and applicable clinical research? During the period covered by this Seminar, there were many steps that were thought to be towards further 'modernization'. Some succeeded, but many failed.

We must learn from the remarkable group of individuals who gave so freely of their time for this Seminar and who, in these pages, give us their own experience of an extraordinary era in clinical research.

David Gordon.
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WITNESS SEMINARS: MEETINGS AND PUBLICATIONS*

In 1990 the Wellcome Trust created the History of Twentieth Century Medicine Group to bring together clinicians, scientists, historians and others interested in contemporary medical history. Amongst a number of other initiatives, the format of Witness Seminars – used by the Institute of Contemporary British History to address issues of recent political history – was adopted, to promote interaction between these different groups, to emphasize the potentials of working jointly, and to encourage the creation and deposit of archival sources for present and future use.

The Witness Seminar is a particularly specialized form of oral history where several people associated with a particular set of circumstances or events are invited to meet together to discuss, debate, and agree or disagree about their memories. To date, the History of Twentieth Century Medicine Group has held 24 such meetings, most of which have been published, as listed in the Table below.

Subjects for such meetings are usually proposed by, or through, members of the Steering Committee of the Group, and once an appropriate topic has been agreed, suitable participants are identified and invited. These inevitably lead to further contacts, and more suggestions of people to invite. As the organization of the meeting progresses, a flexible outline plan for the meeting is devised, usually with assistance from the meeting's chairman, and some participants are invited to 'set the ball rolling' on particular themes, by speaking for a short period of time to initiate and stimulate further discussion.

Each meeting is fully recorded, the tapes are transcribed and the unedited transcript is immediately sent to every participant. Each is asked to check their own contributions and to provide brief biographical details. The editors turn the transcript into readable text, and participants' minor corrections and comments are incorporated into that text, while biographical and bibliographical details are added as footnotes, as are more substantial comments and additional material provided by participants. The final scripts are then sent to every contributor, accompanied by copyright assignment forms. All additional correspondence received during the editorial process is deposited along with the records of this meeting in the Contemporary Medical Archives Centre of the Wellcome Library.

As with all our meetings, we hope that even if the precise details of some of the technical sections are not clear to the non-specialist, the sense and significance of the events are understandable. Our aim is for the volumes that emerge from these meetings to inform those with a general interest in the history of modern medicine and medical science, to provide for historians new insights, fresh material for study, and prompt fresh themes for research, and to emphasize to the participants that events of the recent past, of their own working lives, are of proper and necessary concern to historians.

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* The following text also appears in the 'Introduction' to recent volumes of *Wellcome Witnesses to Twentieth Century Medicine* published by The Wellcome Trust.

1993 Monoclonal antibodies[1]
Organizers: Dr E M Tansey and Dr Peter Catterall

1994 The early history of renal transplantation
Organizer: Dr Stephen Lock

Pneumoconiosis of coal workers[2]
Organizer: Dr E M Tansey

1995 Self and non-self: a history of autoimmunity[1]
Organizers: Sir Christopher Booth and Dr E M Tansey

Ashes to ashes: the history of smoking and health[3]
Organizers: Dr Stephen Lock and Dr E M Tansey

Oral contraceptives
Organizers: Dr Lara Marks and Dr E M Tansey

Endogenous opiates[1]
Organizer: Dr E M Tansey

1996 Committee on Safety of Drugs[1]
Organizers: Dr Stephen Lock and Dr E M Tansey

Making the body more transparent: the impact of nuclear magnetic resonance and magnetic resonance imaging[4]
Organizer: Sir Christopher Booth

1997 Research in General Practice[4]
Organizers: Dr Ian Tait and Dr E M Tansey

Drugs in psychiatric practice[4]
Organizers: Dr E M Tansey and Dr David Healy

The MRC Common Cold Unit[4]
Organizers: Dr David Tyrrell and Dr E M Tansey

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[1] Tansey E M, Catterall P P, Christie D A, Willhoft S V, Reynolds L A. (eds) (1997) *Wellcome Witnesses to Twentieth Century Medicine,* vol. 1. London: The Wellcome Trust, 135pp.

[2] P D'Arcy Hart, edited and annotated by E M Tansey. (1998) Chronic pulmonary disease in South Wales coalmines: An eye-witness account of the MRC surveys (1937–1942). *Social History of Medicine* 11: 459–468.

[3] Lock S P, Reynolds L A, Tansey E M. (eds) (1998*) Ashes to Ashes: The history of smoking and health*. London: The Wellcome Trust, 228pp.

[4] Tansey E M, Christie D A, Reynolds L A. (eds) (1998) *Wellcome Witnesses to Twentieth Century Medicine*, vol. 2. London: The Wellcome Trust, 282pp.

The first heart transplant in the UK[5]
Organizer: Professor Tom Treasure

1998 Haemophilia: recent history of clinical management[6]
Organizers: Dr E M Tansey and Professor Christine Lee

Obstetric ultrasound: historical perspectives[7]
Organizers: Dr Malcolm Nicolson, Mr John Fleming and Dr E M Tansey

Post penicillin antibiotics[8]
Organizers: Dr Robert Bud and Dr E M Tansey

Clinical research in Britain, 1950–1980[9]
Organizers: Dr David Gordon and Dr E M Tansey

1999 Intestinal absorption[10]
Organizers: Sir Christopher Booth and Dr E M Tansey

The MRC Epidemiology Unit (South Wales)
Organizers: Dr Andy Ness and Dr E M Tansey

Neonatal intensive care
Organizers:Professor Osmund Reynolds, Dr David Gordon and Dr E M Tansey

British contributions to medicine in Africa after the Second World War
Organizers: Dr Mary Dobson, Dr Maureen Malowany,
Dr Gordon Cook and Dr E M Tansey

2000 Childhood asthma, and beyond
Organizers: Dr Chris O'Callaghan and Dr Daphne Christie

Peptic ulcer: rise and fall
Organizers: Sir Christopher Booth, Professor Roy Pounder and Dr E M Tansey

Maternal care
Organizers: Dr Irvine Loudon and Dr Daphne Christie

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[5] Tansey E M, Reynolds L A. (eds) (1999) Early heart transplant surgery in the UK. *Wellcome Witnesses to Twentieth Century Medicine*, vol. 3. London: The Wellcome Trust, 72pp.

[6] Tansey E M, Christie D A. (eds) (1999) Haemophilia: Recent history of clinical management. *Wellcome Witnesses to Twentieth Century Medicine*, vol. 4. London: The Wellcome Trust, 90pp.

[7] Tansey E M, Christie D A. (eds) (2000) Looking at the unborn: Historical aspects of obstetric ultrasound. *Wellcome Witnesses to Twentieth Century Medicine,* vol. 5. London: The Wellcome Trust, 80pp.

[8] Tansey E M, Reynolds L A. (eds) (2000) Post penicillin antibiotics: From acceptance to resistance? *Wellcome Witnesses to Twentieth Century Medicine*, vol. 6. London: The Wellcome Trust, 71pp.

[9] Reynolds L A, Tansey E M. (eds) (2000) Clinical research in Britain, 1950–1980. *Wellcome Witnesses to Twentieth Century Medicine*, this volume, London: The Wellcome Trust, 74pp.

[10] Christie D A, Tansey E M. (eds) (2000) Intestinal absorption. *Wellcome Witnesses to Twentieth Century Medicine*, vol. 8. London: The Wellcome Trust, 81pp.

ACKNOWLEDGEMENTS

‘Clinical Research in Britain 1900–1980’ was suggested as a suitable topic for a Witness Seminar by Dr David Gordon, then of the Wellcome Trust, and a member of the Steering Committee of the Wellcome Trust’s History of Twentieth Century Medicine Group. Dr Gordon and Sir Christopher Booth provided many of the names of individuals to be invited, and assisted us in planning the meeting, and deciding the topics to be discussed. We are very grateful to them for their input. We are particularly grateful to Professor Gordon for writing such a useful Introduction to these published proceedings. We are equally grateful to Lord Walton for his excellent chairing of the occasion. Our particular thanks go to Dr Susie Morrow, who read through an earlier draft of the transcript, and offered us helpful comments and advice, and to Nicky Weston of the Library of the National Institute for Medical Research.

As with all our meetings, we depend a great deal on our colleagues at the Wellcome Trust to ensure their smooth running: the Audiovisual Department, the Medical Photographic Library, and the Publishing Department, especially Julie Wood who has supervised the design and production of this volume. Mrs Jaqui Carter is our transcriber, and Mrs Wendy Kutner and Dr Daphne Christie assist us in running the meetings. Finally we thank the Wellcome Trust for supporting this programme.

Tilli Tansey
Lois Reynolds
Wellcome Institute for the History of Medicine

CLINICAL RESEARCH IN BRITAIN
1950–1980

The transcript of a Witness Seminar held at the
Wellcome Institute for the History of Medicine,
London, on 9 June 1998

Edited by L A Reynolds and E M Tansey

PARTICIPANTS

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Sir Christopher Booth
Professor Arthur Buller
Professor Eric Bywaters
Professor Leslie Collier
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Professor Tony Dornhorst
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Professor Abe Guz
Professor Richard Himsworth
Sir Raymond Hoffenberg
Dr Sheila Howarth*
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Professor Ian McDonald
Professor Donald Munro
Sir Patrick Nairne
Professor Sir Stanley Peart
Professor Guy Scadding†
Dr David Tyrrell
Lord Walton of Detchant (Chair)
Sir David Innes Williams
Dr Peter Williams

Others attending the meeting: Sir Richard Bayliss, Professor Gert Brieger, Dr Mary Cotes, Miss Daphne Gloag, Dr Andrew Hull, Dr Keith Kirkham, Dr Andy Robertson, Professor Tatyana Sorokina, Dr Ian Tait, Dr Billie Williams, Professor John West

Apologies: Sir George Alberti, Sir Melville Arnott,≠ Sir Walter Bodmer, Lord Butterfield,§ Professor John Newsom-Davis, Sir Roy Calne, Sir Richard Doll, Sir Colin Dollery, Sir Terence English, Dr David Evered, Sir George Godber, Dr Malcolm Godfrey, Sir James Gowans, Professor David Kerr, Dame Bridget Ogilvie, Dr Griffith Owen, Sir Michael Peckham, Professor Michael Rawlins, Professor John Swales, Sir Keith Sykes, Lord Turnberg of Cheadle, Sir David Weatherall, Dr J M G Wilson, Sir Henry Yellowlees

* Deceased 31 July 2000

† Deceased 10 November 1999

≠ Deceased 17 September 1999

§ Deceased 22 July 2000

Lord Walton:[1] It is a pleasure and privilege to have been invited to chair this meeting, which is to examine who was responsible for clinical research in Britain between 1950 and 1980. Those dates have been chosen somewhat arbitrarily, but I think that it is very relevant that there was so much development in clinical research, and in its support from a variety of sources that began to emerge in the 1950s. Perhaps almost, one might say, it reached a kind of zenith by 1980. I am grateful personally, because I myself started in clinical research, I suppose, in the late 1940s, but I began work on neuromuscular disease with a grant from the Department of Health, in 1951, and my first personal research grant I brought back with me from the United States when I had had a Nuffield Foundation Fellowship at the Massachusetts General [Hospital] in 1954, a grant from the Muscular Dystrophy Association of America. Subsequently, I held many research grants, including 15 years as a programme grant holder from the Medical Research Council (MRC), and I was personally a member of grant committees and boards, and ultimately of Council between 1966 and 1978. My personal involvement in medical research and in the governance of medical research during that period was substantial. What I propose to do is to ask a number of people to open on each topic for just a few minutes and then to open the meeting to a free discussion. We are supposed to be looking at what is clinical research. What was the effect of the National Health Service Act in 1948? How did the relationship between the Medical Research Council, the charities, and foundations, and the NHS, and the other professional bodies in medicine and medical science, how did those relationships develop?[2] And what was the impact of the National Health Service Act upon medical research? I hope we shall look at expansion of the role of the MRC, the

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[1] Lord Walton of Detchant Kt TD FRCP FMedSci (b. 1922) was Professor of Neurology from 1968 to 1983 and Dean of Medicine from 1971 to 1981 at the University of Newcastle upon Tyne. He was Warden of Green College, Oxford, from 1983 to 1989. He served on the MRC from 1974 to 1978 and has been a member of the House of Lords Select Committee on Science and Technology since 1991.

[2] Professor Richard Himsworth wrote: 'During the period under review the constitutional position of the MRC within the governmental framework changed radically. In 1950 the MRC like other research councils came under the Privy Council and the Lord President of the Council was a senior member of the Cabinet. This was a powerful situation if there were problems with government departments. Furthermore the Secretary of the MRC negotiated the budget directly with the Treasury. In late 1950s the Trend Report [*Report of the Committee of Enquiry into the Organization of Civil Science*, under the chairmanship of Sir Burke Trend. Cmnd 2171. London: HMSO, October 1963, recommended the dissolution of the Department of Scientific and Industrial Research (DSIR) and the creation of the Research Councils, implemented by the Science and Technology Act 1965] led to changes and a transference of responsibility. As I recall Lord Hailsham was Lord President [1957–1959 and 1960–1964] but was also designated Minister for Science [and Technology, 1959–1964]. Then a Ministry for Science was created [1964, as part of the new Department of Education and Science] under which the Research Councils fell. All this was long before Rothschild, but it made John Gray's position very different from that of his predecessor at the MRC. It has been, if not downhill, a process of distancing of the MRC from centre ever since, to its present position in the framework for the government support of science through the Department of Trade and Industry [funded through the Science Budget by the DTI via the Office of Science and Technology].' Letter to Dr Tilli Tansey, 23 June 1999.

work of Sir Harold Himsworth[3] and those who followed him, and, of course, the influence of the Cohen Report, published in 1953, which had a seminal effect upon the development of medical research.[4]

Perhaps at the outset I should remind you that in 1920 the Medical Research Council was given a duty to promote medical research, and this included clinical research which required access to patients and to clinical facilities. In 1926 an informal agreement was reached between the MRC and the Health Departments,[5] but local arrangements depended upon agreements between boards of governors and hospital management committees and other bodies, on the one hand, and researchers on the other. The 1946 National Health Service Act made the Health Departments responsible for all clinical facilities in a unified service after 1948 and gave the Minister of Health powers to do research and to help others to do so; in 1947 similar powers were given to the Secretary of State for Scotland. But in 1951, to avoid confusion and conflicting interests, a joint subcommittee was set up between the MRC and the Standing Medical Advisory Committee of the Ministry, and this also had Scottish representation to make it acceptable to both Health Departments. Lord Cohen of Birkenhead was the Chairman and the terms of reference were to devise a scheme to use existing resources in a way that would be acceptable to all parties, and to use those resources in the most effective way.

But, as I have already mentioned, it was the Cohen Report of 1953 which really set the ball rolling as it took on board clinical research in the widest sense, including epidemiology, social medicine, psychiatry and many other disciplines, as well as general practice. It recommended that there should be central organization for promoting research at a national level; careers in research that should be equated with those in the NHS with free interchange between the two; and that a decentralized research scheme should be established to encourage the spirit of research in the periphery. Out of that report then arose the locally operated clinical research scheme, which took some time to get under way. And the report stated (interestingly, *plus ça change*) that nothing is more destructive to the morale of a research service than discontent. Further recommendations were that a Clinical Research Board (CRB)

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[3] Sir Harold Himsworth KCB FRCP FRS (1905–1993), a distinguished clinical scientist, was Secretary of the MRC from 1949 to 1968. As MRC Secretary he was not a member of Council until 1957 and there were other changes arising from the Trend Report. He was appointed Professor of Medicine and Director of the Medical Unit at University College Hospital (UCH), London, in 1939. His major project, the Clinical Research Centre, has been described as a dream inspired by Sir Thomas Lewis. See Gray J, Booth C. (1994) Sir Harold Himsworth. *Munk's Roll* 9: 238–241.

[4] Medical Research Council, Ministry of Health, Department of Health for Scotland, Central Health Services Council, Advisory Committee on Medical Research in Scotland. (1953) *Clinical Research in Relation to the National Health Service*. London: HMSO. Sir Henry Cohen (Lord Cohen of Birkenhead from 1956), of the Standing Medical Advisory Committee of Central Health Services Council, was elected Chairman. See Anonymous. (1953) Clinical research in the National Health Service. *British Medical Journal* ii: 140–141. This editorial describes the report as a White Paper.

[5] The Health Departments refer to the Ministry of Health, later the Department for Health and Social Security, which covers England and Wales, and the Department of Health for Scotland.

should be established, which would be under the MRC as the central supervisory body for research programmes and research staff. Half the members would be MRC-nominated, the other half would be chosen from Health Department nominees. Research staff should, it was agreed, have the same status, with honorary clinical contracts, salary, superannuation and eligibility for distinction awards, as the NHS staff at that time. These were the main features of the Cohen Report; it was eventually accepted in 1957, after four years, by the MRC and the Health Departments, both in England and Wales, and in Scotland and Northern Ireland. That was really one of the most important developments. What I now propose to do is to ask one or two people who have agreed to do so to make preliminary comments about what they saw as being major developments and problems which arose within that 1950–1970 period, and then to continue with open discussion from the floor. So may I turn to Sir Douglas Black and ask you, Douglas, if you would be good enough to comment upon your perception of what you saw as the major benefits and problems of that period.

Sir Douglas Black:[6] Thank you, Chairman. I can never resist the lure of an unanswerable question, so let me put the one implied in our title, 'What is clinical research?' If it simply means learning something from patients, that goes back to the beginnings of medicine, if not before. But clinical research in a more formal sense was given a tremendous boost early in this century, when it was realized, from the examples of diabetes and pernicious anaemia, that physiological knowledge could be applied to the cure, or perhaps more accurately palliation, of common diseases. That gave people hope and interest in seeing what they could learn and apply in clinical medicine. Much clinical research was done before it became a full-time career, something which depended on the development of appropriate training. The year 1936 saw not only the start of the Wellcome Trust,[7] but also the start of MRC studentships and fellowships, which have enabled many – including myself – to make a start in clinical research. Another milestone was the establishment by the MRC of the Clinical Research Board in 1953, soon after Sir Harold Himsworth became Secretary. Himsworth was not only an established clinician, but a man of wide perspectives, ranging from molecular biology to psychogeriatrics.

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[6] Professor Sir Douglas Black Kt FRCP FRCPath FRCPsych FRCGP (b. 1913) qualified at St Andrews University in 1936 and held clinical and research posts in Dundee, Oxford and Cambridge before entering the Royal Army Medical Corps from 1942 to 1946. He was appointed to the Department of Medicine at Manchester University in 1946, becoming Professor of Medicine from 1959 to 1977, later Emeritus. He was Chief Scientist at the Department of Health and Social Security from 1973 to 1977, a member of the MRC from 1966 to 1970 and 1971 to 1977; Chairman of the MRC Clinical Research Board from 1971 to 1973, Chairman of the Research Working Group on Inequalities in Health from 1977 to 1980 and President of the Royal College of Physicians from 1977 to 1983. He was an MRC Research Fellow from 1938 to 1940 and a Beit Memorial Research Fellow from 1940 to 1942. See *Inequalities in Health: Report of a research working group*. London: DHSS, 1980. The report became more widely available when published by Penguin in 1982 with an introduction by Peter Townsend and Nick Davidson.

[7] Sir Henry Wellcome (1853–1936) created the Wellcome Trust in his will dated 29 February 1932. It endowed two research charities, one to support the history of medicine and the other to support research in medical sciences. For details of the original will and subsequent developments, see Hall A R, Bembridge B A. (1986) *Physic and Philanthropy: A history of the Wellcome Trust, 1936–1986*. Cambridge: Cambridge University Press.

Now I would like to end with another question. I was the last Chairman of the Clinical Research Board and was a party to the replacement of 'horizontal' boards [Biological Research Board (BRB) and Clinical Research Board (CRB)] by three 'vertical' boards, designed to bring together people from different disciplines, but working in the same field.[8] This was a good initiative, in the sense that it allowed the meeting of different disciplines to foster the development of interdisciplinary research. However, it also ended the earmarking of funds specifically for clinical research. The question I raise is, 'What impact the end of 'ring-fencing' may have had on clinical research?'

Walton: Thank you very much, Douglas, for that preliminary introduction. May I just add you will have before you a list of the definitions which have been suggested by many people for clinical research, which you may find of some interest. [See box on 'Clinical Research']

I can't forbear mentioning at this point, the little message that we've had from one of those who sent his apologies, Roy Calne, who said that he was desperately sorry that he couldn't be with us. He said that when Sir Harold Himsworth went to visit him at the Westminster at the beginning of his research career, he said to Roy, 'Well, this work looks quite interesting, we'll give you a few thousand pounds to help you.' No forms to fill in, no animal rights people; research was much easier in those days, even though money was tight. How things have changed.

Next, I wish to ask Sir Raymond Hoffenberg. If you don't mind, I think we can make this very informal. Bill, when you came to this country in 1968, you must then have been looking upon the clinical research scene in the UK as a kind of interested, but in some respects an outside, observer.

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[8] From 1 September 1974 three new research boards were introduced into the MRC's administrative structure: Neurobiology (later Neurosciences) and Mental Health Board; Cell Biology and Disorders Board, and Physiological Systems and Disorders Board, each with one or two grants committees. In addition were the Environmental Medicine (Research Policy) Committee and the Tropical Medicine Research Board. House of Commons. (1974) *Medical Research Council Annual Report, April 1973 – March 1974.* HoC224. London: HMSO, 156.

[9] Descriptions of 'Clinical Research' on page 7 were compiled by Dr Tilli Tansey and circulated at the Witness Seminar, 9 June 1998.

Clinical Research

'I feel sure that Clinical Science has as good a claim to the name and rights and self-subsistence of a science as any other department of biology; and that in it are the safest and best means of increasing the knowledge of diseases and their treatment.'

J Paget (1870) quoted in T. Lewis (1935).See note 104.

'This science in its widest outlook seeks first by observation and otherwise to discriminate between diseases as these occur in man:it attempts to understand these diseases and their manifestations;it seeks the cause of disease and studies its natural history;it attempts to cure or prevent disease; when it cannot cure it endeavours to alleviate suffering. These are the objects of the science;the manner of its work may be stated differently.'

T Lewis (1934) *Clinical Science:Illustrated by Personal Experience*.London:Shaw.

'Throughout the report we use the term "clinical research" to imply research into the mechanisms and causation of disease, including its prevention and cure.Thus,in the sense in which we use the term,it covers not simply work on patients in hospital but also field studies in epidemiology and social medicine and observations in general practice.'

The Cohen Report (1953) See note 4.

'Doctors in university clinical departments are applied scientists who bring to bear the traditional disciplines of physics, chemistry, biology, anatomy, physiology and biochemistry into the clinical research arena.This results in the conventional situation of biological mechanisms in health and disease being studied in traditional scientific laboratories.'

A Guz (1976) The place of research.See note 145.

'Clinical science – I have taken as my subject the study of the functional (physiological, biochemical, etc.) disorders observed in sick people. Clinical science often also requires the study of structural, genetic and other matters and its pursuit may well require studies of normal people and of animals.'

E J M Campbell (1976) Clinical science. In *Research and Medial Practice:Their interaction*.Ciba Foundation Symposium 44 (new series),Amsterdam:Elsevier, 41–52,quote on page 41.

'Clinical science today includes a wide range of subjects ranging from epidemiology to studies of individual patients in depth and the laboratory analysis of specimens or tissues. It also involves the study of experimental models of physiology and disease in animals where necessary.'

C C Booth (1987) Clinical research today. *Transactions of the Medical Society of London* **102**: 24–41,quote on page 25.

'Patient-oriented research (POR) is an integrative discipline. It copes with the complexity that is characteristic of whole organisms in order to understand the components of that complexity. Basic POR is the study of human beings (either patients or healthy volunteers) for the purpose of characterizing disease processes more precisely, and for gaining new insights into human responses to disturbances in chemical and behavioural makeup and to assaults by external factors.Thus, basic POR is involved in management-of-disease questions, asking what is best, safest, and most useful among the drugs, vaccines, and procedures under test.'

E H Ahrens (1992) *The Crisis in Clinical Research:Overcoming institutional obstacles*.New York:Oxford University Press.

Sir Raymond Hoffenberg:[10] Thank you, John. Although I migrated to Britain in 1968, I had spent some time in London in the early 1950s when I came to sit for the Membership [the MRCP] examination and gain postgraduate experience. I was at the [Royal] Postgraduate Medical School for a while, and it was an absolute eye-opener, because very little research was being done in South Africa at that time and I was impressed by the widespread research activity I encountered there. Facilities for research were far from sophisticated. There was no automatic washing of glassware, it all had to be done by hand; there were no calculators, one used a slide-rule; in my own field of endocrinology, there was no hormone one could measure directly, most assays were tedious, time-consuming and imprecise. Despite this, there was intense and competitive research activity, which impressed me greatly and initiated my own endeavours when I returned to South Africa.

I came back to England in 1968, thanks to the MRC, particularly to Sir Harold Himsworth, and worked at the National Institute of Medical Research [NIMR] at Mill Hill,[11] where my initial impression was that people seemed to spend very little time at the bench. They came in late, took long lunch breaks, went home early. It was only when I found it necessary to come in late at night to bleed some animals that I realized they had a different pattern of work, and at midnight and in the early hours the place was buzzing.

By 1968 the research picture had changed greatly. It was no longer limited to recognized research centres, but was evident in all the clinical institutions. Excellent facilities were provided both at the NIMR and the Clinical Research Centre (CRC) to which I moved when it opened in 1970. I found the same impetus to do research when I went to Birmingham as Professor of Medicine in 1972. In those days of relative affluence and governmental generosity, the MRC positively assisted one to get an application right so as to improve the chances of getting a grant. They were particularly helpful towards young people embarking on research for the first time.

Walton: Thank you very much. I well recall that when John Gray wrote to me in 1966, asking me to become a member of one of the grants committees, I was very flattered; on my very first day at the MRC, I walked into those hallowed portals with a deep sense of awe, feeling that I should walk rather quietly and that I was in the presence of the great scientific minds of the country. I must say that I developed a great affection for the Council over the next 12 years and felt that the mechanisms which it used for the assessment of research grant applications were extraordinarily effective. The 0–6 grading system that was introduced during that period has, I think, stood the test of

[10] Sir Raymond Hoffenberg KBE FRCP FRCPsych (b. 1923) emigrated to the UK in 1968, having been banned by the South African government in 1967. He joined the MRC's National Institute of Medical Research as Senior Scientist in 1968, moving to the Clinical Research Centre, Northwick Park, Harrow, in 1970, until he was appointed the William Withering Professor of Medicine at the University of Birmingham in 1972. He became President of the Royal College of Physicians in 1983 to 1989, and of Wolfson College, Oxford, from 1985 until 1993, and was Professor of Medical Ethics at the University of Queensland from 1993 to 1995.

[11] Mill Hill refers to the National Institute of Medical Research, which relocated there from Hampstead, London, in 1949.

time. How nice it was to think when one was on a grants committee then that grants that were scoring 2.9, 3.0, 3.1, were getting through. How different that was from what I have learned in more recent years. One person who knows a great deal about this era and the research scene is Sheila Howarth and I hope that you will be willing to share some of your experiences with us. Sheila, would you like to tell us how you saw the interrelationship between the MRC at that time and the Health Departments and the operation of the NHS Act and anything else you consider relevant?

Dr Sheila Howarth:[12] Well, I was actually asked to comment initially on the first period, from 1950 to 1963, which is when I went to the MRC's headquarters office. I remember my first encounter with Sir Harold Himsworth, who looked over his half-moons at me and said 'Ha, poacher turned gamekeeper'. So really this first period was my poacher period and from that I retired in 1955 into domesticity for a while, and came in later to the MRC. In 1950 I was working as a Senior Research Fellow in the Institute of Cardiology, which was one of the institutes of the British Postgraduate Medical Federation of the University of London. This was part of an important organization set up by a master of clinical research organization, namely Sir Francis Fraser,[13] who was one of the major people responsible for the establishment of the British Postgraduate Medical School as it was then. In 1946 he formally resigned responsibility for the Chair and he moved to the British Postgraduate Medical Federation and from there he persuaded the university to finance a whole series of institutes in the University of London.

Let us not underestimate the role of the universities in this discussion. I haven't heard them mentioned very much so far. The Institutes were attached to the specialist hospitals in London and by 1951 there were 13 of them and that in basic sciences was added later;[14] and although their primary function was perhaps postgraduate medical education, nevertheless there was the hope, even the expectation I think, that they would develop as centres of excellence in research, because the best people in the fields were in fact on the staff of the specialist hospitals in their specialty and a number of

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[12] Dr Sheila Howarth FRCP (1920–2000) joined the staff of the headquarters office of the MRC in 1964. She retired as Principal Medical Officer in 1980, having held responsibilities at office level for much of the MRC clinical research programme, including the Clinical Research Centre. She had previously (1943–1945) been engaged in research, mainly on the cardiovascular system, at the British Postgraduate Medical School, University College London, and the Institute of Cardiology.

[13] Sir Francis Fraser Kt FRCP (1885–1964) succeeded Sir Archibald Garrod to the Chair at St Bartholomew's Hospital in 1920 and was appointed the first Professor of Medicine of the British Postgraduate Medical School, Hammersmith Hospital, London, in 1934. He became Director of the British Postgraduate Medical Federation from 1946 to 1960. See Anonymous. (1968) Sir Francis Richard Fraser. *Munk's Roll* 5: 141–142.

[14] Morrow S E, Grahn M F. *A History of the British Postgraduate Medical Federation (University of London)*. This history (currently in preparation) was commissioned by BPMF Board of Governors at their final meeting prior to disbandment, following which overall responsibility for the project was passed to Senate House, University of London. See also Morrow S E. (1998) *Research Strategy in UK Academic Medicine: Four case studies in the University of London*. Unpublished DPhil thesis, University of Sussex. The Institutes which provided these case studies were the Institute of Dental Surgery (later the Eastman Dental Institute), the Institute of Child Health, the Institute of Ophthalmology, and the Institute of Neurology, all of which have now become constituent parts of University College London.

appointments there were university appointments. There were professors, readers, and people like myself as a senior research fellow, paid for by the university. They also gave an opportunity for the development of 'Cinderella' subjects – clinical research, for instance, in dermatology, and orthopaedics, dentistry, psychiatry, and even otology and laryngology; and in this amalgam, the star in the crown was, of course, the British Postgraduate Medical School,[15] which later got its autonomy from the Federation. And there was influence by the Federation in the periphery. Postgraduate medical centres set up in the regions were linked to university medical schools and people were encouraged to do research there – not very successfully. There were some good centres, like Exeter for instance. But I don't think the role of the universities should be omitted in this discussion.

If you look at it from the point of view of the worker, I think the research workers of those days were really rather a happy crew. And it didn't only apply to Hammersmith. We weren't looking over our shoulders all the time and worrying about our career structure. We weren't in posts which were inspected and constrained by programmes which had to be approved and to which we had to conform. The emphasis in clinical research was on people not on posts.

The Health Departments at that stage were all for clinical research. They hadn't got around to manpower planning. Research posts as defined in the Cohen Report, and that famous document HM(57)36,[16] were supernumerary to the establishment of the host institution, and clinical research programmes were, if necessary, supported by NHS junior staff. A crew was provided, quite willingly, I don't say on demand, but on argument. This, of course, had a great effect on the research work of the Postgraduate Medical School, and initially on the CRC at Northwick Park, where we fought desperately to have this agreement with the Health Departments implemented. I must say that the Royal Colleges didn't do much about research at that stage – saving the presence here of two of their illustrious presidents – but they didn't constrain it. There were no rigid training programmes, there was no general professional training, no JCHMT [Joint Committee on Higher Medical Training] issuing programmes which had to be conformed to. And another factor which we were spared in those days was the chronic ethical discussion and consideration. The ethics of clinical investigation at that stage was considered as a personal matter between the investigator and the patient, and it wasn't until 1962/63 when the MRC were driven to produce their document on responsibility for research in human subjects in their annual report that things really started to move and the College [Royal College of Physicians] came into its ethical committees

[15] Booth C C. (1985) Medical science and technology at the Royal Postgraduate Medical School: The first 50 years. *British Medical Journal* 291: 1771–1779.

[16] Ministry of Health. (1957) *National Health Service: Clinical Research*, HM(57)36. Ministry of Health Memorandum to Regional Hospital Boards, Hospital Management Committees and Board of Governors, summarizing arrangements for coordinating and financing clinical research in the Health Service and outlining the powers and duties of the central research organization, the MRC's Clinical Research Board, dated 30 April 1957. A similar document [SHM(57)60] was circulated in Scotland.

role.[17] In other words, the clinical research workers at the beginning of this period under discussion still had a freedom which I think the basic scientists still enjoy. As Bill Hoffenberg said, I've no doubt NIMR staff still enjoy that late breakfast to which they think they have become entitled.

Walton: Thank you so much for the very important points that have been raised. Those were, of course, some of the halcyon days where there were a few incontrovertible principles that were accepted, as you rightly said: one was the dual support system[18] in the universities, whereby the universities were required by the University Grants Committee to provide the environment and infrastructure and the facilities in which research could be carried out; while organizations, such as the MRC and the charities, simply paid the direct costs and no overheads. Those were important principles, as indeed was the principle of honorary clinical contracts for those employed on research grants in clinical departments. That has all changed in recent years.

I wonder if I should mention two other things. No one has yet talked about the growth of charitable funding for medical research. The Wellcome Trust, after all, was founded in 1936[19] and it would be interesting to know when it and the charities began to have a significant impact on the funding of research. Training fellowships in methods of research in clinical medicine were introduced by the MRC as long ago as 1936. Clinical Research Fellowships came in 1950[20] and Senior Clinical Fellowships were introduced by the Wellcome Trust in 1962. It will be interesting to have comments from anyone in the audience upon the impact of these developments and of course upon the role of the charities. So, Chris Booth, over to you.

Sir Christopher Booth:[21] I wonder if I might make just three factual points. I entirely

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[17] Medical Research Council. (1964) Responsibility in investigations on human subjects: Statement by Medical Research Council. *British Medical Journal* ii: 178–180. The statement from the MRC's *Annual Report for 1962–63* (Cmnd 2382, London: HMSO) was reported in full and distinguished between procedures for the benefit of the individual patient and those conducted to contribute to medical knowledge. Guidelines were given on clinical trials, withdrawal of patients from a collective controlled trial, freely given consent versus written consent, and rights of minors or mentally handicapped, as well as a code of professional discipline beyond the minimum specified in law. The statement was preceded by the Declaration of Helsinki, a code of ethics of the World Medical Association, accepted in June 1964.

[18] The MRC's *Annual Report for 1969–70* describes the dual support system as one where 'public funds are made available in a non-selective manner through the University Grants Committee to provide a basic unit of support for the research of all university teachers. At the same time a selective provision of public funds is made through the Research Councils.' (page 2)

[19] See note 7.

[20] The MRC Clinical Research Fellowships were first awarded in 1951. Committee of Privy Council for Medical Research. (1952) *Report of the Medical Research Council for the Year 1950–51*. Cmnd 8584. London: HMSO. See the central topic of discussion, 'The Training of Research Workers', 4–7. The other two forms of support were the postgraduate scholarships and travelling scholarships.

[21] Sir Christopher Booth Kt FRCP (b. 1924) trained as a gastroenterologist and was the first Convenor of the Wellcome Trust's History of Twentieth Century Medicine Group, from 1990 to 1996 and Harveian Librarian at the Royal College of Physicians from 1989 to 1997. He was Professor of Medicine, Royal Postgraduate Medical School, Hammersmith Hospital, London, from 1966 to 1977 and Director of the MRC's Clinical Research Centre, Northwick Park Hospital, Harrow, from 1978 to 1988.

agree with your point about the Clinical Research Fellowships of 1936. As Sir Douglas Black has pointed out, he was one of the first holders. Another whom we all remember now was Sir John Dacie,[22] who started his research career with one of those MRC fellowships in 1936. The second point is that the first chairman of the Clinical Research Board was in fact the Manchester neurosurgeon, Sir Geoffrey Jefferson,[23] who was very highly regarded by Sir Harold Himsworth and who made a real impact on developing clinical research through the Board. The third point is Sir Harold's own position *vis-à-vis* the Department of Health and I think here we have to go back before the foundation of the National Health Service. When Nye Bevan put up his Bill to Parliament, there were a number of defects in it, and Sir Harold and two of his colleagues in the '42 Club'[24] noted that in the Bill there was no allowance within the new health service for teaching and research and they made a row about that and tried to persuade Bevan to change it. Bevan, according to Himsworth, hit the roof and said he'd had nothing but trouble with the doctors all the way through and he was damned if he was going to have any amendments to his Bill at this stage. Fortunately Pickering[25] had a link with Sir Christopher Addison, by then Lord Addison in the House of Lords,[26] and through him they were able to get an interview with the Chancellor, who was then Lord Sankey, and it was he who agreed that there would have to be an amendment in the Lords to the National Health Service Bill, making sure that the Minister had a responsibility not only for health care but also for the supporting education and research. That meant that when Himsworth became Secretary of the MRC in 1949 he was in a strong position, knowing that that had happened, to say to the Department, 'Look, you have a responsibility for research';

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[22] Professor Sir John Dacie Kt FRCP FRS (b. 1912) was Professor of Haematology at the Royal Postgraduate Medical School, Hammersmith Hospital, London, from 1957 to 1977, now Emeritus.

[23] Sir Geoffrey Jefferson CBE Kt FRCS FRS (1886–1961), was Professor of Neurosurgery at the University of Manchester from 1939 until his retirement in 1951. A consultant neurosurgical adviser to the Ministries of Health and of Pensions during the Second World War, he joined the MRC in 1951 and was Chairman of the Clinical Research Board from 1957 until his death. See Walshe F M R. (1961) Geoffrey Jefferson. *Biographical Memoirs of Fellows of the Royal Society* 7: 127–135.

[24] Booth C. (1993) Friends and influence: The history of the '42 Club'. *Journal of the Royal College of Physicians of London* 27: 187–191.

[25] Sir George Pickering Kt FRCP FRS (1904–1980) was an assistant for eight years in Sir Thomas Lewis's Department of Clinical Research at University College Hospital, London, moving to St Mary's Hospital Medical School, London, to head the Medical Unit in 1939. The MRC established a Group for Research on Body Temperature Regulation (later the Body Temperature Research Unit) under his direction in 1954. He went to Oxford as Regius Professor of Medicine in 1956 to a new department of Clinical Research until his retirement in 1969. He was a member of the University Grants Committee from 1944 to 1954, and of the MRC and Clinical Research Board from 1954 to 1958. A collection of his papers, CMAC/PP/GWP, is held in the Contemporary Medical Archives Centre of the Wellcome Library.

[26] Lord Addison KG PC FRCS (1869–1951) was Lord President of the Council in 1951 and Chairman of the MRC from 1948 to 1951. He chaired a special MRC committee on phthisis (pulmonary tuberculosis) in relation to occupations in 1914 when Parliamentary Secretary to the Board of Education. Before standing for Parliament in 1910, he had been Hunterian Professor in 1901, Professor of Anatomy at University College, Sheffield, and Examiner in Anatomy at the Universities of Cambridge and London. A copy of his 1918 memorandum on 'Future organization of medical research' is reproduced in MRC (1952), note 20, 4–7.

and in my view I think Himsworth made it quite clear that that was the background to his ability to get the Health Department on board at that time.

Walton: Thank you very much for that important historical comment.

Dr Peter Williams:[27] May I say a little bit about that earlier period of the Clinical Research Board? I became a Medical Officer on the Headquarters staff of the MRC in the mid-1950s. I was responsible for processing all grants considered by its two Boards, the Clinical Research Board and the Appointments and Grants [A&G] Committee. In this capacity I presented the applications to these committees and therefore got to know the individual members quite well. I was a member of the division of the MRC run by Frank Herrald,[28] who was the Secretary of the Clinical Research Board. In those days it would be quite common to have a casual chat with Himsworth on the stairs, and Herrald's division had coffee together most mornings. I therefore saw the Clinical Research Board in action in what must have been about its second year. Geoffrey Jefferson was in the chair. It was exactly like the A&G Committee, the other Board of the Council. It dealt with what its members believed was clinical research. I think its principal job, in the first place, was to assess the various research units around the country that had been taken over by the Health Service and to decide whether it believed they were worthy of recognition according to the MRC's standards of research.

I would like now to touch on another aspect, since the matter of training has come up. If you were medically qualified and wanted to do research, you had to get an income from somewhere. The research fellowships available were paid very poorly. There appeared to be an attitude that if you wished to do research you were indulging a private whim and should be treated like an artist in a Paris garret.

Walton: Thank you very much, Peter, for that comment. It's interesting if you look at MRC expenditure on clinical research. There was an extraordinary disparity in the funding.

Approved expenditure on clinical research in 1952/53

18 research units	£374 500
Special grant-aided projects	5 800
Clinical research grants	33 000
Clinical research fellowships	7 500
Clinical research scholarships	2 200
Clinical travelling fellowships	8 500
Total	£431 500

MRC, Ministry of Health, Department of Health for Scotland, Central Health Services Council, Advisory Committee on Medical Research in Scotland (1953) *Clinical Research in Relation to the National Health Service*. London: HMSO. The Cohen Report. Figures from Appendix on page 23.

[27] Dr Peter Williams CBE FRCP (b. 1925) was a Medical Officer on the headquarters staff of the MRC from 1955 to 1960. He joined the Wellcome Trust in 1960 and was its Director from 1965 to 1991 and Director of the Wellcome Institute for the History of Medicine from 1981 to 1983.

[28] Dr Frank Herrald CBE FRCPE was a member of the MRC headquarters staff from 1938, becoming a Senior Medical Officer in 1949 and Principal Medical Officer from 1955 to 1970.

Just to answer your question about the Clinical Research Board, and the people who were on it at that time when it was founded in 1957 were Geoffrey Jefferson, Chairman, Dugald Baird,[29] Henry Cohen,[30] Charles Dodds,[31] Charles Illingworth,[32] Denis Hill,[33] George Pickering,[34] Robert Platt,[35] Herbert Seddon,[36] Wilfrid Sheldon[37] and Brian Windeyer.[38] All of them were very notable figures at the time. David Gordon, I think you wanted to come in?

Dr David Gordon:[39] Just one comment or question, if I may, to people who may know the answer to this. The list that John Walton has read out of the money available shows that of the total of £431 500 in 1952, there was a huge amount – £374 500 – in research units. If you go back and read the very early reports of the Medical Research Committee, later the Medical Research Council, there was an atmosphere

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[29] Sir Dugald Baird Kt FRCOG (1899–1986), gynaecologist and early exponent of abortion, was Regius Professor of Midwifery at the University of Aberdeen from 1937 until 1965. He directed the MRC's Obstetric Medicine Research Unit there from 1955 until his retirement. See Thomson A L. (1975) *Half a Century of Medical Research*, vol. 2. The programme of the Medical Research Council (UK). London: MRC, 93–94.

[30] Lord Cohen of Birkenhead CH Kt FRCP (1900–1977) was Professor of Medicine at the University of Liverpool from 1934 to 1965 and chaired many committees including the Central Health Services Council from 1957 to 1963 and the Ministry of Health's Standing Medical Advisory Committee from 1948 to 1963.

[31] Sir Charles Dodds Bt FRS (1899–1973) was Courtauld Professor of Biochemistry and Director of the Courtauld Institute of Biochemistry at the Middlesex Hospital Medical School from 1927 to 1965, later Emeritus. He was President of the Royal College of Physicians from 1962 to 1966; a member of the National Research Development Corporation from 1949 to 1968; and one of the first members of the Clinical Research Board. See Dickens F. (1975) Edward Charles Dodds. *Biographical Memoirs of Fellows of the Royal Society* 21: 227–267.

[32] Sir Charles Illingworth CBE Kt FRCS (1899–1991) was Regius Professor of Surgery at the University of Glasgow from 1939 to 1964, later Emeritus.

[33] Sir Denis Hill Kt FRCP FRCPsych (1913–1982) was Professor of Psychiatry in the University of London at the Institute of Psychiatry from 1966 to 1979, then Emeritus. He was a member of the MRC from 1956 to 1960.

[34] For biographical note, see note 25.

[35] Sir Robert Platt (Lord Platt of Grindleford from 1967) Bt FRCP (1900–1978) was Professor of Medicine at the University of Manchester from 1945 to 1965 and a member of the Royal Commission on Medical Education from 1965 to 1968. He was President of the Royal College of Physicians from 1957 to 1962. See his autobiography, *Private and Controversial* (London: Cassell, 1972).

[36] Sir Herbert Seddon Kt CMG FRCS (1903–1977) was Honorary Consulting Surgeon to the Royal National Orthopaedic Hospital, Stanmore, Middlesex, and Professor of Orthopaedics at the University of London from 1965 to 1967. He was a member of the MRC from 1956 to 1959, and of the Clinical Research Board, the Colonial Advisory Medical Committee and the Tropical Medicine Research Board.

[37] Sir Wilfrid Sheldon CVO KCVO FRCP (1901–1983), was Physician-Paediatrician to the Queen from 1952 to 1971 and Consulting Paediatrician to King's College Hospital and Consulting Physician to the Hospital for Sick Children, Great Ormond Street. He was an Adviser in Child Health to the Ministry of Health. See Stroud C E. (1984) Sir Wilfrid (Percy Henry) Sheldon. *Munk's Roll* 7: 531–532.

[38] Professor Sir Brian Windeyer Kt FRCP FRCS (1904–1994) was Professor of Radiology (Therapeutic) in the University of London from 1942 to 1969. He served two terms as a member of the Council of the MRC and was a member, later Chairman, of the Clinical Research Board from 1954 to 1962.

[39] Dr David Gordon FRCP FMedSci (b. 1947), co-organizer of this Seminar, was seconded to The Wellcome Trust from St Mary's Hospital Medical School in 1983, joining the staff of the Trust in 1985 as Assistant Director and later Programme Director, with particular responsibility for the support of clinical research. He became Professor of Medicine and Dean of the Faculty of Medicine, Dentistry and Nursing at the University of Manchester in 1999.

there that we were going to do medical research, and we were going to build an institute to do it in, and the universities that Sheila Howarth mentioned were almost put on one side. Indeed I believe there was pressure in the early days on Almroth Wright,[40] and such like people, to step outside of their university posts and become full time in this institute [the National Institute for Medical Research (NIMR)]. What caused the shift from a budget that was to be very much based in largish units into the more diffuse budget for university-based research that we actually recognize in the later days of the MRC? What actually made that move?

Walton: In your time, John Gray, there was a formula, was there not, that a certain percentage of MRC expenditure should be spent on the units and that there should be a certain percentage set aside for programme grants and for project grants. Do you remember what that percentage was?

Sir John Gray:[41] I don't remember that there was a particular laid-down percentage. What was certainly true was at the time I became Secretary and before that, we were trying to increase the proportion of monies spent on grants as against our own staff. But you have to remember one or two things about this, if you are looking at the figures. The first is that when you employ a member of your own staff, you are employing him completely, you are paying his salary, his pension, as well as all the necessary things to allow him to work. If you gave a grant to somebody in the university, when I was Secretary you didn't have to pay the investigator's salary, you didn't have to pay for his accommodation, you didn't have to pay for his telephone or his electricity. So that the amount of research the MRC got per pound of grant, was probably something like three times as much as if you employed your own staff. So those things were very different.

The other thing that I specifically found when I took over from Harry [Himsworth], was that while we were trying to increase the percentage of our budget going into universities, we had the Clinical Research Centre coming on line. The formal opening of the Clinical Research Centre was a year after I took over. Now, of course, this cost money, and meant that as far as our accounts were concerned the proportion of the MRC budget that was going on our own establishments actually started to go up

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[40] Sir Almroth Wright KBE Kt FRS (1861–1947), bacteriologist, was Professor of Pathology at St Mary's Hospital, London, from 1902 to 1946. He was mentioned as 'the only man satisfying the requirements' for the first Chief Director of the National Institute for Medical Research in 1913, but the offer was never made. As Director of Bacteriology, he had equal status with the three other directors of scientific departments of the NIMR, which was run collectively. He remained at St Mary's after the department moved to Hampstead in 1920, with a special grant to support 25 research beds. See Thomson A L. (1973) *Half a Century of Medical Research*, vol. 1. Origins and policy of the Medical Research Council (UK). London: MRC, 112, 115–116. Colebrook L. (1948–49) *Obituary Notices of Fellows of the Royal Society* 6: 297–314, especially 304. See also Colebrook L. (1953) Almroth Wright: Pioneer in immunology. *British Medical Journal* ii: 635–640.

[41] Sir John Gray Kt FRS (b. 1918) was Professor of Physiology at University College London from 1959 to 1966 before joining the MRC as Second Secretary in 1966. He was Secretary from 1968 until 1977. On his retirement he became a member of the external scientific staff of the MRC from 1977 to 1983 and at the Marine Biological Association Laboratory at Plymouth from 1977 to 1993.

again, rather than that to the universities. But in a sense that was a blip against the policy trend.

Going back to something that Chris [Booth] said a moment ago, in 1939–1940 Harry [Himsworth] was one of a small group put together by Sir Wilson Jameson, then a professor at the School of Hygiene, before he became Chief Medical Officer at the Ministry of Health.[42] This group was put together to design a national health service, so that when Wilson Jameson became Chief Medical Officer, and the Labour Government came in, there were draft plans, if you like, ready in his mind, which Harry had had a significant hand in.

Professor Guy Scadding:[43] On the question of cooperation between universities and the MRC, I haven't yet heard mention of the Research Group scheme which was introduced, I think, in the middle 1950s. At that time, I was Dean of the Institute of Diseases of the Chest at the Brompton Hospital. We were anxious to develop research facilities in clinical immunology, for the University was unable to provide financial support. Jack Pepys[44] (whose son, Mark, has followed him into the field of immunology) was providing clinical expertise, working part time as my clinical assistant, but had no laboratory facilities. I went to talk to Harry Himsworth, who arranged in 1960 that the MRC would fund a Research Group in clinical immunology at our institute. As I understand it, the idea of these groups was that the MRC would support a group for five years, and if at the end of the time it had proved to be successful, the university undertook to continue it. The scheme certainly worked according to plan in this instance, because it both initiated an active and productive research department and ensured Jack Pepys's distinguished career. I don't know what happened to this scheme. It was a good example of cooperation between university and the MRC.

Walton: Speaking as a former Dean, I think one of the reasons why that process which was so admirable eventually fell by the wayside was because the universities no longer found it possible to take over the actual appointments.

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[42] Sir Wilson Jameson GBE KCB FRCP FRCOG (1885–1962) was Chief Medical Officer to the Ministry of Health during the planning and implementation of the National Health Service. He had been Dean and Professor of Public Health at the London School of Hygiene and Tropical Medicine from 1929 to 1940, joining the Civil Service as Medical Adviser to the Colonial Office in 1940, becoming Chief Medical Officer to the Ministry of Health from November 1940 until 1950. He served as a member of the MRC from 1940 to 1944.

[43] Professor Guy Scadding FRCP (1907–1999) was Professor of Medicine in the University of London at the Institute of Diseases of the Chest from 1962 to 1972, later Emeritus, and Honorary Consulting Physician at the Brompton and Hammersmith Hospitals, London. He was Dean of the Brompton Hospital Medical School (later the Institute of Diseases of the Chest) from 1946 to 1960, and a member of the Clinical Research Board from 1960 to 1965. He was involved with the MRC's first controlled trial of streptomycin in 1947 and was author of the 1968 report on the future of respiratory health services.

[44] Professor Jack Pepys FRCP FRCPath (1914–1996) came to the UK from South Africa in 1947 to sit for the MRCP. He worked in clinical immunology at the Brompton Hospital, London, setting up an allergy clinic at the Institute of Diseases of the Chest, and in 1967 was appointed Professor and head of the first academic Department of Clinical Immunology in the UK. The MRC funded his Clinical Immunology Research Group from 1960 to 1967 when financial responsibility was taken over by the Institute of Diseases of the Chest.

Scadding: Exactly. I am fully aware of the great financial difficulty we had in taking it over at the end of the five years, but we succeeded.

Walton: And at that time, too, the Nuffield Foundation used to establish chairs for five years with the agreement that the university should take them over after a five-year period. That was another scheme that fell by the wayside because of that particular problem. Could I just ask you, arising out of what you said, John [Gray], in which year was the Clinical Research Centre opened?

Gray: The formal opening must have been in 1970.

Walton: But the development, of course, was being planned for some time before that?

Gray: The development was almost certainly over by the time I first attended Council, which was 1968.

Walton: Can I ask you, and any other member of the audience, whether the so-called policy of the Wilson government relating to the white heat[45] of technology had any influence on the establishment of the Clinical Research Centre or whether it had any influence at all on clinical research?

Gray: No!

Dr David Tyrrell:[46] I'd like to mention a conversation that I still recall with Sir Harold Himsworth, which bears on one or two of the points that have been made. This was in about 1960 and I was barely settling into the Common Cold Unit,[47] but there was obviously a move afoot by Harold Himsworth to find suitable people to put into the Clinical Research Centre and to start the planning work. He called me to his office to talk about it. He explained the idea of having a Clinical Research Centre, and one of the reasons he gave was that Sir Geoffrey Jefferson had been reviewing the sort of clinical science that had been going on in the medical schools and found that it lacked some of the things he thought the Medical Research Council should be engaged in. He mentioned particularly work on common diseases and said they thought the best way of doing this was to set up a research institute in close association with a district general hospital. He asked whether I would be willing to go along and get involved in setting it up? I said, 'Yes, but of course'. But as we have been hearing, it took a very long time before bricks and mortar were there and people were actually in posts. This

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[45] On 1 October 1963 Harold Wilson told the Labour Party Conference 'we are redefining and we are restating our socialism in terms of the scientific revolution...The Britain that is going to be forged in the white heat of this revolution will be no place for restrictive practices or outdated methods on either side of industry.' See Wilkie T. (1991) *British Science and Politics since 1945*. Oxford: Blackwell, 39.

[46] Dr David Tyrrell CBE FRCP FRCPath FRS (b. 1925), physician, virologist, previously Director of the MRC Common Cold Unit, Salisbury, from 1982 to 1990 and Deputy Director of the Clinical Research Centre, Harrow. He served as a Trustee of the Nuffield Foundation from 1977 to 1992 and on committees concerned with clinical research ethics, genetic manipulation and use of dangerous pathogens.

was something which I think was being developed as a result of the conceptions forming in the Clinical Research Board which you have just discussed.[48]

Walton: Yes, thank you. We are not, of course, going to come to the period when the Clinical Research Centre was disbanded, but may I ask those who were involved in consultations at that time to say whether they think that the concept was the right one; whether it was based upon the idea of the US National Institutes of Health (NIH) with association between NIH institutes and hospitals; whether the concept of putting it at a district general hospital without a clear university association was the right decision? What do you feel?

Howarth: On a historical note can I just point out that the MRC, in 1919 in its annual report, expanding on the decision not to develop a research hospital at Mount Vernon, gave as its reasons not only the cost, but they said it was undesirable on every ground to divorce research work from higher teaching.[49]

Booth: If I may, I might be permitted to quote from a personal conversation with Sir Harold Himsworth on this particular point. When Sir Harold became Secretary of the MRC in 1949, he was reasonably happy with the set up of units around and about, and one has to remember that many of those units were in fact headed by honorary directors, not full-time directors employed by the MRC, and many of them were university professors, like George Pickering at St Mary's, Dugald Baird in Aberdeen, and in fact when Eric Bywaters's chair came up at Hammersmith (and he is with us today), there was a big argument. Sir John McMichael[50] wanted to go on funding his

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[47] See Tansey E M, Reynolds L A. (eds) (1998) The MRC Common Cold Unit. In Tansey E M, Christie D C, Reynolds L A. (eds) *Wellcome Witnesses to Twentieth Century Medicine*, vol. 2. London: Wellcome Trust, 209–268.

[48] Dr Brandon Lush wrote: 'Sir Harold Himsworth asked me to act as secretary to a meeting he convened in his office at Old Queen Street in 1953 to discuss the setting up of a clinical research centre. If I remember rightly, with Sir Harold in the Chair, the others present were Sir George Pickering, Sir Robert Platt, Sir Edward Wayne (who merits a mention in the main text), Sir Charles Illingworth, Sir Brian Windeyer and Sir Dugald Baird. My memory may be at fault, but the MRC Head Office should still have a record of the meeting. I have a firm recollection of saying to Sir Graham Bull, when he told me that the Queen was to open the CRC that it was 17 years since Sir Harold had raised the matter.' Letter to Mrs Lois Reynolds 29 March 2000. Sir Edward Wayne Kt FRCP (1902–1990) was Regius Professor of Practice of Medicine at the University of Glasgow from 1954 to 1967 and Honorary Physician to the Queen in Scotland from 1954 to 1967. He had been a member of the Scottish Secretary of State's Advisory Committee on Medical Research from 1958 to 1967, of the MRC from 1958 to 1972, and Chairman of the Clinical Research Board from 1960 to 1964.

[49] Mount Vernon Hospital in Hampstead was purchased by the Medical Research Committee (later the Medical Research Council) in 1913 and converted to house the National Institute for Medical Research, which after wartime disruption, opened in 1920. For details of the decision not to include a research hospital, see Booth C. (1989) Clinical research, in Austoker J, Bryder L. (eds) *Historical Perspectives on the Role of the MRC: Essays in the history of the Medical Research Council of the United Kingdom and its predecessor, the Medical Research Committee, 1913–1953*. Oxford: Oxford University Press, 205–241, especially 208.

[50] Professor Sir John McMichael Kt FRCP FRS (1904–1993) was Professor and Director of the Department of Medicine at the Postgraduate Medical School at the Hammersmith Hospital, London, from 1946 to 1966, then Director of the British Postgraduate Medical Federation from 1966 to 1971. His research interests were predominantly in the field of cardiology and he was the first (with E P Sharpey-Schafer) in Britain to apply the technique of cardiac catherization. He was a Beit Memorial Fellow from 1932 to 1934, a member of the MRC from 1949 to 1953, and a Trustee of the Wellcome Trust from 1960 to 1977 and was founder of the Senior Clinical Research Fellowships in 1962. See Dollery C. (1995) Sir John McMichael. *Biographical Memoirs of Fellows of the Royal Society* 41: 283–296.

salary from university sources and, I believe, that is in fact what happened. Himsworth told me that he couldn't understand that, when he was personally prepared to pay the salary himself as an MRC unit. But, turning to Himsworth's position over the unit. What he felt was that, after looking around, many of the units were too small and did not have the effective basic science associated with them to be able to make an effective dent in the research that they were doing and he quoted, for example: 'That some units were having to make do with a PhD postdoc as a biochemist, to do all the biochemistry that was needed for their research'. He therefore asked Geoffrey Jefferson to go round and look at the various units and consult widely and see whether there was a need for something better.[51] It was that survey that came up with the idea that there should be a central organization where you could get the basic science and other people working together.

Remember too that Harold Himsworth was deeply distressed when Mill Hill[52] was set up in the late 1940s, when Henry Dale moved out to that site. He took the view that it should never have been developed as an isolated site, but should have been on a hospital base, and he took that view throughout. When he was involved in developing the Clinical Research Centre concept one must remember too that a basic tenet of that proposal was that Mill Hill [NIMR] would move to the Northwick Park site. All the time that I was at Northwick Park, we had a lease on land there for rebuilding Mill Hill, so it was looked upon as a major development for the whole of the MRC's activity, not just a clinical research programme.

Gordon: A comment, that this seems to be a recurring event. When the Postgraduate Medical School was proposed, it was initially suggested that this should be in association with a teaching hospital fairly central in London, but there was nowhere that would take it, and it went out of central London to the Hammersmith Hospital in Du Cane Road. There seems to be a resistance, a conservatism, to placing a research institute in proximity to an existing academic hospital.

Hoffenberg: There are several here who were founder members of the Clinical Research Centre. Looking back, one wonders whether it was such a good idea to try to create a community research hospital at Northwick Park. I say this because there was concern locally, amongst the community at large as well as the general practitioners, that it would become an experimental hospital. The MRC, and the CRC Director, Graham Bull,[53] had to make concessions to reassure them that this was not the case and that proper care would be provided. As a result, specialization was discouraged and this impaired the recruitment of trainees who felt it necessary to

[51] See note 49, Booth (1989), especially note 114 on page 238.

[52] The National Institute for Medical Research (NIMR) moved to Mill Hill from Hampstead in 1949.

[53] Sir Graham Bull Kt FRCP (1918–1987) was Director of the Clinical Research Centre at Northwick Park Hospital, Harrow, from 1966 until his retirement in 1978. He had been Professor of Medicine at the Queen's University, Belfast, from 1952 to 1966 and a member of the MRC from 1962 to 1966.

acquire specialist skills for their future careers. It also led to the dominance of the NHS consultants, most of whom were part time; some of these were excellent and entered into the spirit of the place by active research; others were hardly ever there, set bad examples to junior staff and impeded progress in their specialties.

Walton: I was for a time chairman of a committee that John Gray established, called the NIMR/CRC Committee and we soon learned that that was one of the problems that was clearly arising. Another problem was the lack of a formal association with a university which made it difficult for people to register PhD students as they would have wished; and the recruitment of surgeons with an academic interest was difficult to such an extent that at one time the Director of the Division of Surgery was Sir Peter Medawar,[54] because no academic surgeon could be found to run the surgical division. John Gray, I think that is true isn't it of that particular time?

Gray: I can't remember.

Booth: I promised that I wouldn't get involved in this discussion after 1970, so I think I would rather not comment on a period in which I was not involved.

Professor Peter Lachmann:[55] I would just like to make a comment on this. The MRC recruited Eugene Lance as Director of the surgical department at Northwick Park, who was indeed an academic surgeon.[56] But the local regional board would not establish a second transplantation unit at Northwick [Park] since there was already one at Hammersmith, and so Gene Lance went off to Hawaii.

Professor Richard Himsworth:[57] Speaking as one who was at the CRC, I would like to pick up on David Tyrrell's comment that it was to concentrate on common diseases, because certainly talking with my father that was one of the things that he was very

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[54] Sir Peter Medawar FRS (1915–1987) was Jodrell Professor of Zoology and Comparative Anatomy at University College London from 1951 to 1962. He shared the 1960 Nobel Prize in Physiology or Medicine with Macfarlane Burnet for the discovery of immunological tolerance. Between 1962 and 1971 he was Director of the National Institute for Medical Research at Mill Hill, London, remaining on the scientific staff until 1984. See Mitchison N A. (1990) Peter Medawar. *Biographical Memoirs of the Fellows of the Royal Society* 35: 283–301.

[55] Professor Peter Lachmann FRCP FRCPath FMedSci FRS (b. 1931) was Sheila Joan Smith Professor of Immunology at the University of Cambridge from 1977 until 1999, now Emeritus, and Honorary Director of the MRC Molecular Immunopathology Unit (formerly MRC Mechanisms in Tumour Immunity Unit) from 1980. He has been President of the Academy of Medical Sciences since 1998, of the Royal College of Pathologists from 1990 to 1993 and has served as Biological Secretary and Vice-President of the Royal Society from 1993 to 1998.

[56] Professor Eugene Lance was Professor of Surgery at Cornell University and Assistant Surgeon at the Hospital for Special Surgery in New York on his appointment to the Clinical Research Centre in 1969–1970.

[57] Professor Richard Himsworth FRCP (b. 1937) has been Professor of Health Research and Development at Cambridge University and Director of Research and Development in the East Anglian Regional Health Authority since 1993. He was a member of the MRC's Scientific Staff at the Clinical Research Centre from 1971 to 1985, Assistant Director from 1978 to 1982, Head of the Endocrinology Research Group from 1979 to 1985 and Consultant Physician at Northwick Park Hospital from 1972 to 1985. He was Regius Professor of Medicine at the University of Aberdeen and Hon Consultant Physician at the Aberdeen Royal Infirmary from 1985 to 1993.

keen on. He said that you should bring good science together with common diseases and he did not think that any of the existing teaching hospitals, including the Hammersmith, which was looked at as a site for the CRC, could do that because they already had established tertiary referral patterns that were distorting the kinds of patients which came there. I think he was quite conscious of that. If I could also go on to the point which was made about the difficulties with the universities and being able to supervise PhDs, which I remember vividly: some of you will know that Peter Medawar was told he could no longer supervise PhDs when he was at Mill Hill by the University of London, because he didn't have a university position, and so the CRC had, I think, in Keith Kirkham, to work very much through the Council for National Academic Awards (CNAA) for higher degrees.[58]

Professor Abe Guz:[59] Two points. First of all I can confirm what Sir Raymond [Hoffenberg] has said about the desire to have a lot of 'ordinary' doctors there for the sake of the population, as I had a personal conversation with Graham Bull. I had a superb person at the time who I was putting forward for a post and he actually said to me, 'He is far too good for what I am planning'. I remember that distinctly, because quite frankly, I was shocked.

I also want to say that we haven't discussed much about the universities' reaction to the research funds that were available, in terms of accepting and being interested in research. I seem to remember the time when there were an awful lot of medical schools, certainly in London and some outside, that were really not interested (with some exceptions) in having some of their money coming to them from elsewhere. In my own medical school it's widely known that my boss, Hugh de Wardener,[60] actually spent time trying to get the Dean of the day, a very powerful figure, who refused to sign an application form for a grant that the National Institutes of Health (NIH), Bethesda, Maryland, wanted to give him. This was said at the Academic Board – I wasn't on it, but I was told – because, it was said, that would remove the power from where it should be. I am sure that my own medical school was an awful school at the time from this point of view, but there were others, and I had heard this sort of thing before! That was a rather grotesque example, but I wonder how common it was in the ordinary medical schools, the undergraduate medical schools?

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[58] Dr Keith Kirkham OBE (b. 1929) was Administrative Director of the MRC's Clinical Research Centre, Northwick Park, Harrow, from 1988 to 1994. He was a member of the scientific staff of the MRC Clinical Endocrinology Research Unit from 1960 to 1973 and Assistant Director (Administration) of the CRC from 1973 to 1988. The Council for National Academic Awards awarded degrees and higher degrees from 1964 until it was abolished in 1989.

[59] Professor Abe Guz FRCP (b. 1929) has been Professor of Medicine at (the then) Charing Cross and Westminster Medical School from 1981 until his retirement in 1994. He qualified at Charing Cross, and was a Research Fellow at Harvard Medical School and the Cardiovascular Research Institute, University of California, returning to Charing Cross in 1961 as Lecturer, later Senior Lecturer and Reader.

[60] Professor Hugh de Wardener CBE FRCP (b. 1915) held the Chair of Medicine at Charing Cross Hospital, London, from 1960 to 1981, later Emeritus.

Walton: I can only speak for the North-East, my own native city and the University of Newcastle upon Tyne, where they would grab any money that was coming from anywhere. We didn't ever have that problem in the 1950s to 1970s, it only emerged as a difficulty in the 1980s.

Dr Brandon Lush:[61] Can I just say something about common diseases? I joined the MRC head office staff at the beginning of 1951 and Harry Himsworth had just asked the late Sir Wilson Jameson if he would chair a new committee on social and environmental health. I well remember Jameson sitting in a chair in my office, looking over his half-moon glasses at me and saying: 'Well, Lush, what ought we to do?' and we discussed a number of things, one of which was research in general practice. Jameson felt very strongly that there was a vast amount of knowledge in general practice which wasn't being adequately gathered and researched upon, so we set up a working party under the Chairmanship of the late Sir James Spence,[62] who unfortunately died within a year, and Sir Robert Platt,[63] as he then was, succeeded him. We got together a group of very good general practitioners and published quite a lot of work, which is one of the factors which I think that helped in the setting up of the College of General Practitioners, later the Royal College of General Practitioners,[64] so Harry Himsworth's influence in getting common diseases and problems tackled, extended through Jameson to the wider field of general practice.

Professor Alan Glynn:[65] Two points. One, sometime in the 1960s I was on a research grant committee of the Northwest Thames Regional Board and we used to get a lot of applications from junior staff at Northwick Park. We didn't have much money and we always used to say, 'Why can't you get some money from the MRC?' And the answer was that if you were in the NHS-half of the Clinical Research Centre, you couldn't. I have always felt, although I never knew the details, that there was some confusion in the organization there, which was a pity. The other thing I would just like to put on record was that I was a student at University College Hospital when

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[61] Dr Brandon Lush FRCP (b. 1920) was a member of the MRC staff from 1951 and Principal Medical Officer at the MRC from 1961 to 1972. He was Secretary of the Tropical Medicine Research Board from its creation in 1960. He then became a Consultant Physician at the Frenchay and Manor Park Hospitals, Bristol, from 1973 to 1985. He was Chairman of the Mason Medical Research Foundation from 1972 to 1982 and President of the Cossham Medical Society from 1992 to 1993.

[62] Sir James Spence Kt FRCP (1892–1954) was the first holder of the Nuffield Chair of Child Health, the first of its kind in England and Wales, at the University of Durham from 1942 until his early death. He was a member of the University Grants Committee and of the MRC from 1944 to 1948 and from 1952. See Miller F J W. (1997) Sir James Spence, Professor of Child Health. *Journal of Medical Biography* 5: 1–7.

[63] For biographical details, see note 35.

[64] See Reynolds L A, Tansey E M. (eds) (1998) Research in General Practice. In Tansey E M, Christie D A, Reynolds L A. (eds) *Wellcome Witnesses to Twentieth Century Medicine*, vol. 2. London: Wellcome Trust, 75–132.

[65] Professor Alan Glynn FRCP FRCPath (b. 1923) practised clinical medicine at St Mary's Hospital, London, from 1956 to 1958. He took up bacteriology at St Mary's, was appointed Professor in 1971 and Head of Department of Bacteriology in 1974. In 1980 he became Director of the Central Public Health Laboratory at Colindale until his retirement in 1988.

Harry Himsworth went to the MRC. I had been on his firm and there was complete dismay at UCH, among the students at any rate, at the thought of losing this tremendous teacher.

Walton: Yes, thank you very much. Can I go back to the point that Abe Guz made. Was this phenomenon of resistance on the part of the universities to accepting research grants nationwide? Can anyone answer and was it the case in the 1950s to 1970s? I recognized it coming much, much later, but at that time I thought that anyone was happy to accept such grants.

Howarth: I wanted to say that at this period there were some very rich hospitals. St Thomas' Hospital medical unit, for instance, ran its research programme entirely at this stage on the interest from the endowment funds of the hospital, so they didn't need to apply elsewhere. I can remember the first chap who did apply for an outside grant was looked on as a very strange sort of animal. I think the same situation probably applied at Bart's and Guy's, but these again were the rich hospitals.

Walton: And another point was that there were certain clinical institutions at that time which were very suspicious about the influence of the universities. I worked as a visiting fellow in Carmichael's neurological research unit at Queen Square for a year from 1954 onwards, and it was an article of faith on the part of the consultant staff at Queen Square that they had nothing whatever to do with the university. It was an extraordinary attitude and Carmichael's unit was looked upon very much as an odd parasite in the middle of a clinical hospital.[66]

Professor Sir Stanley Peart:[67] I think one has got to recognize the atmosphere in the London teaching hospitals. If I look back to when I was appointed in 1956 to succeed George Pickering as Professor of Medicine and before that, the hospital I was in, St Mary's, which really was so like so many of the other teaching hospitals, the staff were actually undoubtedly enemies of clinical research. You had to really work very hard to get the confidence of your clinical colleagues as consultants and that was the atmosphere, I think, right through Britain. In fact, as I looked at what was going on, I could only see one establishment in which the approach to clinical research was given its due regard, and that happened to be the Hammersmith Hospital, because it was the only place where they were encouraged to do research, certainly on the medical side. On the surgical side perhaps less so, but you have got to remember also that when I was appointed in 1956, in London only half the hospitals had a professor

[66] The second clinical research unit, the Neurological Research Unit, was created by the MRC in 1933 under the direction of Dr E A Carmichael CBE FRCP at the National Hospital for Nervous Diseases, Queen Square, London, at the invitation of the hospital and continued until Carmichael's retirement in 1961. See Thomson A L. (1975) note 29, 19, 353.

[67] Professor Sir Stanley Peart FRCP FMedSci FRS (b. 1922) was Professor of Medicine, University of London, at St Mary's Hospital Medical School, from 1957 to 1987, later Emeritus. He was a Trustee of the Wellcome Trust from 1975, and Deputy Chairman from 1991 until 1994.

of medicine at all. I call your attention to Guy's in particular. You may remember that one of your [to Lord Walton] noble colleagues was appointed as the Professor of Experimental Medicine.[68]

Walton: It may be an apocryphal story, but medical students during the war in London were alleged to carry placards round their necks saying that, 'If I am a casualty, don't send me to Hammersmith'. They all thought they would have cardiac catheters passed; certainly there was a 'them and us' attitude between the so-called practising clinicians and the clinical scientists. How long did it take for that to be overcome?

Peter Williams: I think I have a bit of factual evidence. In the period between about 1958 and 1965 the Wellcome Trust spent the bulk of its income on providing buildings for medical research, rather than providing fellowships and expenses. I have looked at the list of these grants and selected from it those that were for clinical departments. The list gives an indication of which were the active places. Those receiving support were Belfast, Birmingham, Dundee, Edinburgh, Leeds, Manchester, Newcastle, Oxford, Charing Cross, King's College Hospital, St Mary's, Westminster and the Institute of Orthopaedics. Considering the number of medical schools in London, they received surprisingly few. There is, I think, no doubt at this stage that the provincial universities were much more active than London in research. One result was that the Clinical fellowships were held in these places. I have not included the Hammersmith in this list, because it was in a different category. It received a lot of support.

Booth: This is purely a factual account of university, supposedly university-based, schools resisting MRC money. R T Grant,[69] of course, was always regarded by people as the bar to Tom Lewis's FRS[70] and he left University College to go to Guy's. He retired in 1957 and at that time Himsworth was very concerned they should try and get a successor to Grant to run the clinical research unit on the Tom Lewis pattern at Guy's Hospital, and if you read the correspondence about that there is little doubt that Guy's was intensely suspicious of the MRC. One of the comments in the correspondence attributed to the Dean of Guy's: 'Interviewed: the Secretary of the MRC'.[71] That was

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[68] Lord Butterfield of Stechford Bt Kt FRCP (1920–2000) was Professor of Experimental Medicine at Guy's Hospital, London, from 1958 to 1963 and the Professor of Medicine at Guy's Hospital Medical School from 1963 to 1971.

[69] Ronald Thomson Grant OBE FRCP FRS (1892–1989), a former member of Sir Thomas Lewis's department at University College Hospital, was Director of the MRC Clinical Research Unit at Guy's Hospital, London, from its creation in 1934 until his retirement in 1957 when the unit was discontinued.

[70] Sir Thomas Lewis Kt CBE FRCP FRS (1881–1945), Welsh cardiologist and clinical scientist, directed the first of the MRC's research units, the Department of Clinical Research, established at University College Hospital Medical School, London, from 1919 until his retirement in 1945. He was awarded one of the first Beit Fellowships in 1910. See Lewis T. (1932) The relation of clinical medicine to physiology from the standpoint of research. *British Medical Journal* ii: 1046–1049. For further details of his appointment to UCL, see Himsworth H. (1982) Thomas Lewis and the development of support for clinical research. *The Pharos of Alpha Omega Alpha* 45: 15–19. Drury A N, Grant R T. (1945–48) Sir Thomas Lewis. *Obituary Notices of Fellows of the Royal Society* 5: 179–202. A collection of his papers, CMAC/PP/LEW, is held in the Contemporary Medical Archives Centre of the Wellcome Library.

[71] Booth C C. (1987) *Doctors in Science and Society: Essays of a clinical scientist*. London: British Medical Journal.

an attitude that existed, as Stan Peart pointed out in the London schools at that time. It is interesting too, that the Dean of that school wrote a letter to Harry Himsworth, which I have read, saying that it was virtually impossible to get a new director employed by the MRC. Robert Platt, then a close adviser to Sir Harold [Himsworth], had tried to find a successor, suggested two of his young men. The Dean replied, 'One has too much personality, the other too little'. I won't tell you who those two young men are, but one of them is sitting two seats to the right of me right now [Sir Douglas Black]. [Much laughter] The other side of this relates to Stan Peart's appointment as Professor at Mary's, because the Dean at Guy's said it had been very difficult to find a successor to George Pickering at St Mary's, and they had finished up appointing a mere pharmacologist. [Much laughter] There was throughout London a very serious resistance to academic medicine. I don't think it changed until after the 1970s.

Professor Eric Bywaters:[72] I might just confess that while I was at Hammersmith (and I had chosen Hammersmith because there was no other place on coming back from the MGH [Massachusetts General Hospital] before the war), I put in for the Chair of Medicine at Middlesex Hospital. It was very interesting, because when I enquired I found that all I was allowed was a desk in Sister's office, no labs, because they were already provided, of course, by the Courtauld (Dodds),[73] and the Bland Sutton Institute (Whitby)[74] and so on. I didn't go further than that.

Walton: Thank you. That's a very important point, because as you say it took a very long time for many of the medical schools to get around to appointing full-time chairs; indeed, in the medical school [King's College, University of Durham] where I was trained, there were laboratories for all the pre clinical disciplines, and for pathology and microbiology, but there were no laboratories for any of the clinical disciplines in a medical school building opened in 1938. That was the kind of atmosphere that existed at that time.

Guz: Very briefly. I wanted to get back to this issue of the University and Northwick Park. The University didn't feature at Northwick Park (and we have spoken about

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[72] Professor Eric Bywaters CBE FRCP (b. 1910) was Professor of Rheumatology at the Royal Postgraduate Medical School, Hammersmith Hospital, London, from 1958 to 1975, later Emeritus, and Consultant Physician at the Hammersmith Hospital, London, and Wexham Park Hospital, Slough, Bucks. He was Director of the MRC Rheumatism Research Unit, Taplow, from 1958 to 1975. He wrote: 'I would like to add a statement about the aid given by the MRC and others to an independent Research Unit at Taplow (Canadian Red Cross Memorial Hospital). This [hospital] was presented to the nation at the end of the war by the Canadian Government for the study and treatment of juvenile rheumatism in 1947. This was supported by the NHS in 1948 and by numerous charities. The MRC supported two posts and then in 1958, took over the whole of the Special Research Unit as well as building an animal house, library, lecture room and workshop. This support continued from 1958 until its gradual closure from 1975 onwards. It led child research firstly on rheumatic fever research and later on juvenile chronic arthritis.' Letter to Dr Tilli Tansey, 19 April 1999.

[73] See Note 31.

[74] Sir Lionel Whitby MC Kt CVO FRCP (1895–1956) was Regius Professor of Physic at Cambridge University from 1945 until his death. He headed the Army Blood Transfusion Service from 1939 to 1945. His research at the Bland Sutton Institute, London, focused on pathology, bacteriology and haematology and included collaborative work that led to the development and successful production sulphapyridine (M&B693). See Whitby L E H, Dodds E C. (1931) *The Laboratory in Surgical Practice.* London: Constable and Company Ltd. See Anonymous. (1968) Sir Lionel Ernest Howard Whitby, *Munk's Roll* 5: 444–445. For Dodds' biographical note, see note 31.

that). I wonder whether this was an active policy? I haven't heard the genesis of this stand offishness, but I do know one thing about the site of Northwick Park. I believe the MRC bought the site from Charing Cross who had already bought the site. Anyway Charing Cross was supposed to be there, all the plans were there. But the University of London in the 1950s made a declaration that we couldn't have a university institution, a medical school, as far as that from Senate House, because the site was a few hundred yards outside a geographical ring which was incorporated, or defined, in the statutes of the University of London.[75] And Charing Cross then, immediately, had to get out and ended up where it did, between a lot of other hungry hospitals. So I am just wondering whether there was some legalistic thing like that. It's absolutely extraordinary if you think about it now. Look how far St George's is from Senate House, and when you think that even at that time there was the direct line from Northwick Park to Baker Street, so it was an absolutely extraordinary decision, but I remember it well and what I am saying is absolutely correct.

Walton: Can anyone answer that question? No? May I, as an aside, ask whether my recollection is at fault? Wasn't there a suggestion at one stage that Charles Clore would buy the marshalling yards next to Hammersmith and would erect a major centre to incorporate all of the postgraduate institutes and hospitals in London in return for their sites in central London? Can anyone remember when that was mooted?

Sir David Innes Williams:[76] Well, it's certainly correct. I can't put a date on it, but I do remember that amongst all the frustrated plans that we had concocted over the 1950s and 1960s that never got anywhere at all, that was one of them.

While I am speaking I would just like to say how glad I was that Sheila [Howarth] mentioned the postgraduate institutes, because in them a good deal of clinical research went on. Peter Williams just mentioned orthopaedics. Herbert Seddon[77] throughout that period was very interested in clinical research. As far as the Royal Colleges are concerned there was the Royal College of Surgeons' Institute of Basic Medical

[75] Charing Cross Hospital, a voluntary institution, bought the 46-acre site at Northwick Park in 1944 with the help of the University Grants Committee and planned an 800-bed hospital. After 1948 and the creation of the National Health Service, the Ministry of Health took over the hospital and government restrictions on building were imposed owing to shortage of hard currency and building materials, later loosened to include the project in stages after 1955. The following year the University Grants Committee applied a previously overlooked clause in their charter which required all Schools of the University be within the administrative boundary of the County of London. Although Northwick Park was said to be 20 minutes by underground from Piccadilly Circus, it was just outside the London County Council boundaries. The Ministry of Health took over Northwick Park and Charing Cross was offered a site in Fulham. See Minney R J. (1967) *The Two Pillars of Charing Cross: The story of a famous hospital*. London: Cassell for the Board of Governors of Charing Cross Hospital, 204–208. See also Anonymous. (1956) New academic year: Charing Cross Hospital, Future Site of Medical School. *British Medical Journal* ii: 821–822.

[76] Sir David Innes Williams FRCS (b. 1919) was Urological Surgeon at St Peter's Hospital, London, from 1950 to 1978 and at the Hospital for Sick Children, Great Ormond Street, from 1952 to 1968. He was Director of the British Postgraduate Medical Federation from 1978 to 1986, Chairman of the Council of the Imperial Cancer Research Fund, and President of the British Medical Association from 1988 to 1989 and of the Royal Society of Medicine from 1990 to 1992.

[77] See note 36.

Sciences, in which Bill Paton and [Eleanor] Zaimis did their first work, followed by John Vane,[78] who made a considerable contribution. I think there's no doubt that the Colleges were remiss over the years in failing to promote research.

The Imperial Cancer Research Fund (ICRF), of course, was set up by the two Colleges in 1902, originally with the idea that it would do clinical research. It went straight over into laboratory work. In the 1920s, the British Empire Cancer Campaign, led by Lockhart-Mummery,[79] split off in order to make the research clinical. Cuthbert Dukes' work at St Mark's[80] was supported by the British Empire Cancer Campaign over a long while. It did very good work. ICRF of itself remained laboratory based until quite late on, substantially into the 1970s and 1980s.[81]

Professor John Dickinson:[82] It seems to me we are being awfully coy about money, because unfortunately money and prestige seem to go together. I recall very clearly my surgical chief, Julian Taylor, who was the immediate disciple of Wilfred Trotter,[83] saying to me in reference to a certain professor of medicine and professor of surgery, 'Well, of course, he was appointed when professors of medicine were second-class and professors of surgery fourth-class.' And I think we haven't really mentioned the absolute total dominance of Harley Street which I remember, even at UCH, which was supposed in the 1950s to be a rather academic sort of hospital,[84] and the scorn in which academics of all sorts were held by the rest of the staff. I think one of the reasons why the provincial medical schools did much better in academic standing at that time was the fact that they didn't have Harley Street next door.

Walton: I am sure that was a factor, and yet at the same time even in some of the provincial medical schools there was a problem about what was meant by clinical research. I recall clearly that when I became involved in the early years of establishing a charity for the Muscular Dystrophy Group and we were at that time collecting

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[78] Sir William Paton Kt CBE FRCP FRS (1917–1993) was Professor of Pharmacology at the University of Oxford from 1959 until his retirement in 1983, having been on the staff of the NIMR from 1944 to 1952. He was a member of the MRC from 1963 to 1967 and a Trustee of the Wellcome Trust from 1978 to 1987. Professor Eleanor Zaimis (1915–1982) was Professor of Pharmacology in the University of London at the Royal Free Hospital School of Medicine from 1958 to 1980, later Emeritus. Sir John Vane (b. 1927), pharmacologist, discovered the role of prostaglandins in the human body in response to illness and stress. He shared the 1982 Nobel Prize for Physiology or Medicine with Sune Bergström and Bengt Samuelsson.

[79] Mr John Percy Lockhart-Mummery FRCS FACS (1875–1957) was Consultant Surgeon to St Mark's Hospital for Diseases of the Rectum from 1903 to 1935, later Vice-President of the Hospital from 1940 to the introduction of the NHS in 1948. He was a founder of the British Empire Cancer Campaign and the first Secretary of the British Proctological Society in 1913. See also Granshaw L. (1985) *St Mark's Hospital, London: A social history of a specialist hospital*. London: Oxford University Press.

[80] Cuthbert Dukes OBE FRCS FRCPath (1890–1977) was the first pathologist to St Mark's Hospital, London, in 1922 and to St Peter's Hospital in 1929. His achievements include a polyposis register and a classification of bladder tumours. See Brunning D A, Dukes C E. (1965) The origin and early history of the Institute of Cancer Research of the Royal Cancer Hospital: Read at a meeting of the Section of the History of Medicine held on 7 October 1964. *Proceedings of the Royal Society of Medicine Section of the History of Medicine* 58: 33–36. See note 79.

[81] See note 148.

money and were looking for people to do research in neuromuscular disease. Among those who were on our research advisory committee was a very distinguished provincial professor of medicine, who was a member of the Clinical Research Board. He was asked whether he was interested in embarking upon or in getting one of his members of staff to embark upon a programme of research. He wrote back to say that he had a member of staff who was writing up a family of patients with peroneal muscular atrophy and if he had any difficulty in getting funds to buy his reprints he would come back to us. It took a long time even to educate some of the clinical professors who had been brought up in the kind of clinical background you are talking about.

Can I go back to a point that was raised by Sheila Howarth? We all recognize that in those days, up to the 1970s, if you got a research grant from whatever source, you had no difficulty in recruiting bright young people of registrar status to undertake programmes of clinical research because you could then get them honorary clinical registrarships with no trouble and it made no difference to their ultimate career. When did the problem begin to arise relating to the work of the JCHMT [Joint Committee on Higher Medical Training] and all of the other problems of manpower planning that made this so difficult? I know that the whole question of registrar numbers, training numbers, is only very recent, but when did people begin to feel that there was a difficulty in getting that honorary status for people who were doing research? That was not in the 1970s was it?

Innes Williams: Much later, after the Department's paper, 'Achieving a Balance'.[85]

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[82] Professor John Dickinson FRCP (b. 1927) was trained at Oxford and University College Hospital, London, and appointed Physician at UCH in 1964, then Professor of Medicine at St Bartholomew's Hospital Medical College, London, from 1974 to 1992. He is now Emeritus Visiting Professor at the Wolfson Institute of Preventive Medicine. He has been a member of the MRC, Chairman of the British Medical Research Society, Secretary of the European Society for Clinical Investigation. He retains a strong interest in clinical research and in the aetiology of diseases.

[83] Professor Wilfred Trotter FRCS FRS (1872–1939) was Director of the Surgical Unit at University College Hospital, London, with the title of Professor of Surgery from 1935 to 1938 and a Fellow of University College. He was a member of the MRC from 1929 to 1933. He was Serjeant-Surgeon from 1932 until 1939, having served King George V, King Edward VIII and King George VI. Trotter was also interested in the physiopsychological aspects of pain.

[84] Dr Derek Bangham wrote: 'Staff at UCH were indeed active in research. Before the war there were, I think, at least three professors. While I was there during the 1940s and 1950s there were about eight FRS: Sir Thomas Lewis, Sir Gordon Cameron, Sir Charles Harington, Sir Francis Walshe, Sir Ashley Miles, CE Dent, Claude Rimington, Wilson Smith. E E Pochin (later Sir Edward) succeeded Lewis, bringing to UCH some of the first users of radioisotopes (I^{131}) for clinical research. Sir Harold Himsworth and Lord Rosenheim and several others on the staff were, later, made FRS.' Letter to Mrs Lois Reynolds, 20 April 1999.

[85] Department of Health and Social Security. (1986) *Hospital Medical Staffing: Achieving a balance: A consultative document*, July 1986, and its follow up (Newton T. (1987) *Hospital Medical Staffing: Achieving a balance – plan for action*, Steering group for implementation. London: HMSO) introduced the concept of a 'safety net', a minimum safe level of staffing, of junior doctors in the acute specialities. Sir David Innes Williams wrote: 'In essence it set the pattern for a restriction in the numbers of approved training registrar and senior registrar posts to bring them into line with expected consultant vacancies. It thus curtailed the ability of clinical academic units to recruit research-oriented staff while at the same time it failed to address the plight of large numbers of doctors in the Senior House Officer grade who could not progress upwards.' Letter to Mrs Lois Reynolds, 4 April 2000.

Walton: 'Achieving a Balance' was the thing that did it. In the mid-1980s really.

Tyrrell: I'd like to go back to the point when you raised 'white-hot technology',[86] because I think it comes as a contrast to what we have been hearing about the attitudes to funding and support in hospitals. I remember a similar conversation with Sir Harold Himsworth, in which he said that when the Labour Government was in power he was much more warmly received when he came to ask for extra money for additional projects which the MRC had in mind. There may have been a contrast in his experience in that respect, which is worth including as a minor point.

Walton: Thank you. I recall that Shirley Williams came to talk to the Medical Research Council, I think it was in Jim Gowans' time.[87] Afterwards, because the members of Council were so polite she went to the Chairman, then the Duke of Northumberland, and said, 'I don't think much of that Council.' It seems that she thought we were too polite and not sufficiently abrasive in our attitude to government policies.

Lachmann: If I may make three points. The first goes back to Northwick Park. I was never a member of Northwick Park staff, but I might have been, had John Squire not died.[88] I noticed that in all this discussion of Northwick Park John Squire's name has not yet been mentioned and he was formulating the programmes when unfortunately he dropped dead, at a rather critical moment. I think that the way Northwick Park developed was more affected by John Squire's death than is often realized. And the second, returning to the point that Bill Hoffenberg made about Northwick Park, is Maurice Pappworth, another who has not been mentioned. It was, of course, just about the time that Northwick Park was being founded that Maurice Pappworth wrote his book, *Human Guinea Pigs*, which got enormous press coverage at the time.[89] I think again there is no doubt that that played a considerable part in the reluctance of the non-MRC staff at Northwick Park to recruit those who might be regarded in Pappworth terms as 'human experimenters'.

Can I make a third point, on the question of how to define clinical research.[90] As a pathologist I get the impression that clinical research is given a slightly more restrictive

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[86] See note 45.

[87] Sir James Gowans Kt CBE FRCP FMedSci FRS (b. 1924) was Secretary of the MRC from 1977 to 1987, having been a member of the Council from 1965 to 1969. He had previously been the first Honorary Director of the MRC Cellular Immunology Unit at the Sir William Dunn School of Pathology of the University of Oxford from 1963 to 1977. From 1989 to 1993 he was Secretary General of the Human Frontier Science Programme in Strasbourg.

[88] Professor John Squire FRCP (1915–1966) was Director-Designate of the Clinical Research Centre at Northwick Park Hospital, Harrow, during the planning period from its announcement in July 1960 to his sudden death in 1966. He had directed two other MRC Units in Birmingham: the Industrial Medicine Research Unit from 1946 to 1952 and the Unit for Research on the Experimental Pathology of the Skin from 1952 to 1962. See Arnott W M. (1984) John Rupert Squire. *Munk's Roll* 7: 412–413.

[89] Pappworth M H. (1967) *Human Guinea Pigs: Experimentation on man.* London: Routledge & Kegan Paul. See Booth C. (1994) M H Pappworth, MD, FRCP. *British Medical Journal* 309: 1577.

[90] See box on page 7.

definition here than the one I would use. I have used the definition in the past that 'clinical research is research that uses patients as a resource'. I think pathologists who do research on bits of patients are just as much doing clinical research as people who are working by the bedside, and that there was quite a lot of clinical research going on even in places which didn't have much frankly patient-directed research even as early as the 1950s. I was a student when John Dickinson was RMO (Resident Medical Officer) at UCH and my view of the attitude there to academic research in the 1950s was much more positive. I was Charles Dent's houseman,[91] and certainly in the heart of the medical unit at UCH there was an extremely positive atmosphere for doing clinical research.

Walton: I think that's a very important point; one must recognize the tremendous inspirational influence of teachers and research workers upon the career development of individuals. One of my great teachers was James Spence, whose name has already been mentioned. I remember him saying, and I have always quoted it, 'You never know anything about a disease until you look at it'. You really have got to look at it in depth, and investigate it before you understand its mechanisms.

Scadding: To add to what Peter Lachmann has said about the range of clinical research, I should extend it to include clinically applicable research on populations. Some of the most important projects on common diseases that the MRC has supported have been based on populations. As examples, I would mention the Doll[92] and Hill[93] studies of the effects of tobacco smoking,[94] starting from a concern with the rising incidence of lung cancer and resulting in the demonstration that smoking is not only the principal cause of this, but also an important factor in some other common respiratory and cardiac diseases. Also the work of the Pneumoconiosis Unit in South Wales, under Charles Fletcher[95] and John Gilson, which elucidated the complicated relationship between coal-dust exposure and the incidence and progression of coal miners'

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[91] Watson L. (1984) Charles Dent (1911–1976). *Munk's Roll* 7: 148–149. See also note 84.

[92] Professor Sir Richard Doll Kt CH OBE FRCP FMedSci FRS (b. 1912) was Regius Professor of Medicine at the University of Oxford from 1969 to 1979, later Emeritus. He was Chairman of the Adverse Reaction Subcommittee, Committee on Safety of Medicines, from 1970 to 1977 and has been Honorary Consultant to the Imperial Cancer Research Fund Cancer Studies Unit, Radcliffe Infirmary, Oxford, since 1983.

[93] Sir Austin Bradford Hill CBE Kt FRS (1897–1991) was Professor of Medical Statistics at the London School of Hygiene and Tropical Medicine from 1945 until 1961. Doll R. (1994) Austin Bradford Hill. *Biographical Memoirs of Fellows of the Royal Society* 40: 128–140.

[94] Doll R, Hill A B. (1950) Smoking and carcinoma of the lung: Preliminary report. *British Medical Journal* ii: 739–748. See also Doll R. (1998) The first reports on smoking and lung cancer, in Lock S, Reynolds L A, Tansey E M (eds) (1998) *Ashes to Ashes: The history of smoking and health*. Amsterdam: Editions Rodopi BV, 130–142.

[95] Professor Charles Fletcher CBE FRCP (1911–1995) was Professor of Clinical Epidemiology at the Royal Postgraduate Medical School, Hammersmith Hospital, London, from 1973 to 1976, later Emeritus, and Physician to Hammersmith Hospital from 1952 to 1976. He directed the MRC Pneumoconiosis Research Unit from 1945 to 1952 and was Secretary of the MRC Committee on Bronchial Research from 1954 to 1976. He was a member of the Council of the Royal College of Physicians from 1959 to 1963 and Secretary to their Committee on Smoking and Health from 1961 to 1967. See Fletcher C. (1998) The story of the Reports on Smoking and Health by the Royal College of Physicians, in Lock S, Reynolds L A, Tansey E M. (eds), op. cit. note 94, 202–206. See also a videotape interview with Professor Charles Fletcher by Max Blythe, held at the Royal College of Physicians of London.

pneumoconiosis.[96] I would also mention Charles Fletcher's long-term prospective study of respiratory symptoms in a defined working population which provided valuable insights into the pathogenesis and progression of the common condition, which used to be labeled chronic bronchitis and emphysema, but is now more appropriately called chronic obstructive pulmonary disease.

Multicentre controlled therapeutic trials have become an important feature of medical research in the period we are considering. In the development of these, the trials of streptomycin in tuberculosis,[97] followed by linked comparative trials with combinations of anti-mycobacterial drugs, coordinated by Philip D'Arcy Hart's Tuberculosis Research Unit, blazed the trail.[98] And this Unit's nationwide study of the effectiveness of the BCG vaccination was the best-designed and most informative investigation of this complex problem.[99]

If I may refer back to Stanley Peart's comment; I think he must have been a little unlucky at St Mary's, because not all teaching hospital consultants were unhelpful. I had the responsibility from 1946 onwards of trying to develop an academic institute at the Brompton Hospital, renowned at that time only for its clinical expertise. I found a wide range of willingness to cooperate among my clinical colleagues, from some who understood what it was all about and were very helpful, to others who regarded the new academic institute as a nuisance which stopped them running their own hospital in the manner to which they had become accustomed and did their best to ignore it. I think it was much the same in other hospitals.

Walton: Thank you.

Peter Williams: I would like to refer to John McMichael and link him to the point you made about the support of people in medical research by the Wellcome Trust.[100] McMichael became a Wellcome Trustee in 1960 as successor to Sir Henry Dale. He steered the Trust towards clinical research and on his initiative we started the Senior Research Fellowships in Clinical Science scheme.[101] I believe that scheme was seminal,

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[96] See D'Arcy Hart P, edited and annotated by E M Tansey. (1998) Chronic pulmonary disease in South Wales coalmines: An eye-witness account of the MRC surveys (1937–1942). *Social History of Medicine* 11: 459–468. A Witness Seminar on 'The MRC Epidemiology Unit (South Wales)' was held at the Wellcome Building on 23 March 1999 and is being prepared for publication, enhanced by additional interviews with key witnesses.

[97] See also Tansey E M, Reynolds L A. (eds) (2000) Post Penicillin Antibiotics: From acceptance to resistance? *Wellcome Witnesses to Twentieth Century Medicine*, vol. 6. London: Wellcome Trust.

[98] Dr Philip D'Arcy Hart CBE FRCP FMedSci (b. 1900) trained in medicine at University College Hospital, London, where he became a Consultant Physician. He was Director of the MRC Tuberculosis Research Unit from 1948 until his retirement in 1965.

[99] See Bryder L. (1989) Tuberculosis and the MRC, in Austoker J, Bryder L. (eds) op. cit. note 49, 1–21, especially 14–17. See also Medical Research Council, Committee on the Standardization of Freeze-dried BCG Vaccine. (1960) Freeze-dried BCG vaccine: Stability of the vaccine under different conditions of storage and persistence of tuberculin sensitivity in schoolchildren after vaccination. Second Report. *British Medical Journal* ii: 979–986.

[100] See note 7. For Sir John McMichael's biographical footnote, see note 50.

[101] For the origin of the Senior Research Fellowships in Clinical Science that started in 1962, see note 7, 102–103.

if you look at what happened to these Fellows. We also did a lot for the basic sciences, but I think that our interest in clinical research meant that a new source of funding had become available and the part played by the Trust was therefore very important.

Walton: Was it within this era, 1950 to 1970, that the research funding agencies, in which I include the MRC and the Wellcome Trust and other bodies, began to prioritize areas of research? Or did that come later? Was it a period in which, for example, the MRC decided that it would wish to further research in dentistry and osteoarthritis and some other topics, where they felt that there was under-provision or even a lack of research workers? I think it began in the period 1960–1970 didn't it? (From the audience: No, much earlier.) So there was a difference of opinion, but such prioritization was an important factor. It even allowed the MRC grants committees a little latitude in being able to give grants at a lower mark in some of those high-priority fields compared with some of those in low-priority fields. Is that right, John Gray?

Gray: Yes. There had been some form of prioritization going back before I ever was on the scene. The thing that rather formalized this was – I can't remember the date – when we changed the board structure, as has already been mentioned.[102] And when we changed the board structure, and had grants committees related to those boards, this was rather formalized. The theory, not always kept in practice, was that the committees marked the research on purely scientific grounds, and it was up to the boards to modify this if they wished on the grounds of priority.

Walton: That came in about 1968, because I recall that was when I was first appointed to Clinical Research Board Grants Committee No. 2. It then became the Neurosciences Board Grants Committee later.[103]

Booth: Can we just answer your question about the MRC and directed research because right from the start the MRC was involved in specific research problems. Thomas Lewis's work on soldier's heart during the First World War is a very good example of a directed piece of research.[104] The second one is very obviously the foundation of the Pneumoconiosis Unit in Cardiff which was a response to public anxiety from the trade unions, the ministry, and others, and they got the MRC to set that up.[105] And the third one obviously is Bradford Hill and Doll's work which was the result of a Department of Health committee which was examining why there was an increasing prevalence of cancer of the lung.[106] So the MRC has always taken directed research into account.

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[102] See note 8.

[103] See note 8.

[104] Soldier's heart was the disordered action of the heart due to neurosis, not organic abnormality. See Booth (1989), note 49, 207. See also Lewis T. (1935) The Huxley lecture on clinical science within the university. *British Medical Journal* i: 631–636.

[105] See note 96.

[106] See note 94.

Walton: And the Tuberculosis Units as well.[107]

Hoffenberg: One of my early impressions when I came here in 1968 concerned the professor of medicine. In Cape Town he (it was always a 'he' in those days) was a god-like figure, who had great power and dominated the hospital and the medical school. When I arrived here and first experienced the internal workings of a major teaching hospital in London I was astounded at the relatively small influence wielded by the professor, who was simply one of a large number of consultants who made up the clinical division. Whereas academic medicine was dominant in all specialties in Cape Town, here other interests took priority.

The other point concerns the Clinical Research Centre. Between the time it was planned and its opening a distinct change had taken place in the nature of research. For instance, there were observation wards throughout the research wing, the purpose of which was to allow patients to be observed and studied. And there were metabolic wards for long-term collection of excreta, etc. Neither of these facilities was much used because, by the time the CRC opened, new methods of clinical research had been introduced that depended less on direct patient study and more on sophisticated laboratory investigation. Peter Lachmann is right in attributing this change partly to the Pappworth effect,[108] but I believe there was a fundamental change in the way research was carried out as measurement technology developed.

Walton: Thank you. The point that you made at the beginning is of course very relevant; many years ago I remember at Queen Square on a ward round with a fine clinician, Charles Symonds,[109] with whom it was possible to have a very fierce, and at times immensely enjoyable, discussion about diagnosis and management. On the ward round there was a young lady doctor from Hungary, who listened to the arguments with increasing interest and extraordinary concern; she said, 'We never have arguments like this in our country. Don't you have a professor?'

Himsworth: Can I pick up on one thing which Peter Lachmann said about John Squire and the concept of clinical research which was, I think, underpinning the Clinical Research Centre. Just to remind you that after John Squire died, Graham Bull[110] was appointed director, but his deputy director was Richard Doll and there was a very definite feeling that epidemiology was a large dimension in what should be done there.

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[107] See Fox W, Ellard G A, Mitchison D A. (1999) Studies on the treatment of tuberculosis undertaken by the British MRC Tuberculosis Units, 1946–1986, with relevant subsequent publications. *International Journal of Tuberculosis and Lung Disease* 3: S231–S279.

[108] See note 89.

[109] Sir Charles Symonds KBE CB FRCP (1890–1978) was at Guy's Hospital, London, from 1920, later as Consultant Physician for Nervous Diseases, and on the staff of the National Hospital, Queen Square, London (later the National Hospital for Nervous Diseases) as Consultant in Neurology from 1926 and until his retirement. He assisted Sir Hugh Cairns in organizing the hospital for head injuries at St Hugh's College Oxford during the Second World War. See Wolstenholme G, Luniewska V. (1984) Sir Charles Putnam Symonds. *Munk's Roll* 7: 563–565.

[110] See note 53.

Professor Leslie Collier:[111] Before we break for tea I should like to hear something about the establishment of the MRC Laboratories in West Africa. I see that two of the people concerned are here – Peter Williams and Brandon Lush. My own involvement was as Honorary Director of the Medical Research Council's Trachoma Unit, which was attached to the MRC station in The Gambia for 12 years from 1956 to 1972. I should like to hear something of the story of how that station was set up and particularly its relationship with the Wellcome Trust, which made important financial contributions.

Walton: Yes, what led to the establishment of these overseas MRC Laboratories and how were they set up? What led also to the fact that the Wellcome Trust gave priority to tropical medicine among its other programmes? So who would like to comment?

Lush: I think I am right in saying that it was the late B S Platt's[112] feeling that there should be a field station for research on human nutrition that really led the Council to consider setting up a station in the tropics, and so Ian McGregor was appointed as Director[113] and Leslie Collier, as he said, for the Trachoma Research Unit, which was in the same grounds as the field station.[114]

Scadding: An obvious reason for locating a research group overseas is that that is where the disease is. But this is not the only reason. The series of MRC studies which established optimal regimens of treatment for tuberculosis illustrates this. As this disease started to come under control in this country, it became difficult to run

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[111] Professor Leslie Collier FRCP FRCPath (b. 1921) was Professor of Virology, University of London, from 1966 to 1986, later Emeritus, and has been Consulting Pathologist at the Royal London Hospital (formerly the London Hospital) since 1987. He joined the Lister Institute of Preventive Medicine in 1948, where he was Head of the Department of Virology from 1955 to 1974, Deputy Director, later Director of the Vaccines and Sera Laboratories from 1974 to 1978 and Honorary Director of the MRC Trachoma Unit from 1957 to 1973. He was joint Editor with M T Parker of the 8th edn of *Topley and Wilson's Principles of Bacteriology, Virology and Immunity* (London: Edward Arnold, 1990) and Editor in Chief of the 9th edn now *Topley and Wilsons' Microbes and Microbial Infections* (London: Arnold, 1998).

[112] Professor Benjamin Platt CMG (1903–1969) was Professor of Nutrition and head of the Department of Human Nutrition at the London School of Hygiene and Tropical Medicine. He joined the MRC staff in 1938 becoming Director of the Human Nutrition Unit at the School in 1944. He was instrumental in setting up the Unit's field research station, which became the MRC Laboratories in The Gambia. He was a member of the Tropical Medicine Research Board. See Platt B S. (1962) Tables of representative values of foods commonly used in tropical countries. *MRC Special Report Series* 302: 1–46.

[113] Sir Ian McGregor Kt CBE FRS (b. 1922) was Director of the MRC Laboratories in The Gambia from 1954 to 1974, and 1978 to 1980 and Visiting Professor at the Department of Tropical Medicine at the Liverpool School of Tropical Medicine from 1981 to 1994. He had been a member of the scientific staff of the Human Nutrition Research Unit in The Gambia from 1949 until 1953. He returned to the National Institute for Medical Research in 1974 as Head of the Laboratory of Tropical Community Studies until 1977. He was a member of the MRC Tropical Medical Research Board from 1975 to 1977 and from 1981 to 1983.

[114] The MRC Laboratories, The Gambia, was the new name of the Human Nutrition Research Unit at Fajara, with a field station in Keneba, following a report of a subcommittee of Major-General Sir John Taylor, Brigadier J S K (later Sir John) Boyd and A L (later Sir Landsborough) Thomson sent by MRC in 1952. Dr J Newsome was Director, followed by Dr I A McGregor in 1954, and the Laboratories dealt with questions on malaria, including entomological studies. A small section of the Trachoma Unit was attached to the Laboratories from 1958 but directed from the unit's headquarters at the Lister Institute. See Thomson (1975), note 29, 217–219.

controlled trials here; so the latter part of this important series of linked studies was conducted in India, Africa and Hong Kong. An important advantage of these locations was that the procedures studied were selected with some regard to the social and economic circumstances of the affected populations.[115] I would mention especially the Madras Tuberculosis Chemotherapy Research Unit directed by Wallace Fox,[116] which made a special contribution by training Indian counterpart workers, who eventually took over its direction.

Peter Williams: When I worked at the MRC between 1956 and 1959 I was asked by Harry Himsworth to understudy him in tropical medicine. Sir Harold was Chairman of the Colonial Medical Research Committee of the Colonial Office and Dr Raymond Lewthwaite[117] was the Secretary. So all the tropical research of the Colonial Office and the MRC came across my desk. Himsworth came to the conclusion that the Colonial Office structure was not suitable to be responsible for medical research in the colonies. He took a broader view of the opportunities than those concerned with the classical tropical diseases. He went on to define his view as medicine in the tropics, rather than tropical medicine.

The story behind the trachoma research is a very fascinating one.[118] Inclusion bodies had been found in patients with trachoma and a man named T'ang in China had cultured these. Professor E T C Spooner,[119] Dean of the London School of Tropical Medicine had brought a culture back from China. It became obvious that there was an important opportunity available to develop knowledge of this important eye

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[115] A Witness Seminar, 'British Contributions to Medicine in Africa after the Second World War', was held at the Wellcome Building on 3 June 1999 and is being prepared for publication.

[116] Professor Wallace Fox CMG FRCP (b. 1920) was a member of the scientific staff of the MRC Tuberculosis and Chest Diseases Unit at the Brompton Hospital, London, from 1952 until 1956 and from 1961 to 1965, becoming Director of the MRC Tuberculosis and Chest Diseases Unit and Honorary Consultant Physician from 1965 to 1986. While seconded to the WHO he established and directed the Tuberculosis Chemotherapy Centre in Madras from 1956 to 1961.

[117] Dr Raymond Lewthwaite CMG OBE FRCP (1894–1972) was Medical Research Adviser at the Ministry of Overseas Development from 1964 to 1968. He had been a pathologist in Malaya in 1926, and field director of the MRC's Scrub-typhus Commission, South East Asia Command, from 1944 to 1945. He was appointed Director of Colonial Medical Research at the Colonial Office from 1949 and acted as assessor to the MRC's Tropical Medicine Research Board.

[118] Professor Leslie Collier later amended the above account: 'The trachoma agent was first isolated in 1957 by T'ang in China. Teddy Spooner from the London School of Hygiene was visiting there in 1958 and at my request brought home a sample, which the latter successfully propagated at the Lister Institute. Further isolations were then made by Josef Sowa in The Gambia, where the Trachoma Research Group (later Unit) had recently relocated from the Middle East because of the unsettled situation there. By now, I had assumed the directorship of the Trachoma Group, (hitherto held by Sir Stewart Duke-Elder). My colleagues and I proved the aetiological role of the isolates in trachoma and developed these findings into a major research programme on the microbiology, clinical features and epidemiology of trachoma and allied infections.' Revised draft sent to Mrs Lois Reynolds, 8 May 1999.

[119] Professor E T C Spooner FRCP (1904–1995) was Professor of Bacteriology and Immunology at the London School of Hygiene and Tropical Medicine from 1947 to 1960 and Dean from 1960 to 1970. He was Director of the Emergency Public Health Laboratory in Cambridge from 1943 to 1944, later Chairman of the Public Health Laboratory Service Board from 1963 to 1972, Editor of the *Journal of Hygiene* from 1949 to 1955 and a member of the MRC from 1953 to 1957.

disease. A laboratory for trachoma research existed in the Middle East but the political situation made it unsuitable for work at that time. So somewhere else was sought. The MRC Laboratories in The Gambia was a real possibility and so a visiting group went there to see if it was suitable. I believe Dr Collier was a member of that visiting team. They found the inclusion bodies and were able to culture the virus, using T'ang's methods, and this led on to the work of the Sowas on trachoma in The Gambia.[120] The Wellcome Trust provided the funds to build the laboratory for the trachoma unit.

The broader story of the MRC's involvement in the tropics is best exemplified by the nutrition units in Jamaica and Kampala, Uganda. These were really a result of Himsworth becoming interested in the conditions he saw in East and West Africa, and the West Indies. His initiative led to the setting up of Regional Research Councils (Committees) in those parts of the world. As a result the MRC became much more involved in research in the tropics and brought a rather different approach to bear than the Colonial Office classical tropical medicine.

Walton: Yes, of course, and in addition Montgomery and Cruickshank in the University of the West Indies[121] not only looked at nutrition, but developed a major interest in other things like tropical spastic paraplegia and a number of other topics which really came out of that particular programme.

Gordon: Can I just say two things. One is just to answer a question posed earlier: for those who don't know the will of Henry Wellcome, the answer to why the Trust has been involved in tropical medicine from the very early days is that the Will enjoins the Trust to support research relating to the health of mankind in the tropics and elsewhere and 'in the tropics' comes first rather than the 'elsewhere'. The second is that we are talking about who was responsible for research, and I think there is a lot of evidence that many bodies were concerned about how this side of clinical research was supported. We have in the Trust's files – not even yet in the archives, I believe it is still in an active grant file – the minutes of a meeting chaired by Henry Dale in 1944, which was to look at the postwar needs of the medical services of the empire. The vision that this meeting created was of a centre which would deal with the medical needs of the empire and research relating to it, based around this part of London, with a reconstructed Hospital for Tropical Diseases, the London School of Hygiene and indeed this building [the Wellcome Building], being some of the laboratories and suchlike to support this activity. In the end, the Trust did something else, but there were a lot of people contemplating such a centre for tropical medicine and research. The list of names of people who were at that meeting is worth looking at – it was long.

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[120] Sowa S, Sowa J, Collier L H, Blyth W. (1965) Trachoma and allied infections in a Gambian village. *MRC Special Report Series* 308: 1–88.

[121] Montgomery R D, Cruickshank E K, Robertson W D, McMenemey W H. (1964) Clinical and pathological observations on Jamaican neuropathy: A report on 206 cases. *Brain* 87: 425–462.

Booth: Just to say I would like to support very strongly Peter Lachmann's definition of clinical research. I too have the broad view of it that it should span the molecule, on the one hand, with the community on the other, and spread across the whole. And Leslie Collier is a very good example of a man who made a very major contribution to clinical research and clinical activity, working in a laboratory at the Lister Institute. It was he who discovered the method of freeze-drying smallpox vaccine[122] for performing vaccinations, and of course that was the absolute basis of the eradication programme, because before we had freeze-dried vaccine you couldn't do that programme.

Walton: Thank you, and as you will see in the circulated paper on clinical research,[123] you are in fact quoted as saying 'clinical science today includes a wide range of subjects, ranging from epidemiology to studies of individual patients in depth, and the laboratory analysis of specimens or tissues'. So it's there.

Gray: Just one word about why medicine in the tropics developed so much at that time. It was purely an administrative one. After Harry [Himsworth] became Secretary of the MRC, he automatically became Chairman of the Colonial Medical Research Committee of the Colonial Office, run by what became the Ministry of Overseas Development. He very rapidly developed its work and after negotiations a Tropical Medicine Research Board (TMRB) was set up, managed by the MRC, with Harry as chairman, with 50 per cent of the membership nominated by the MRC, and 50 per cent by the Ministry of Overseas Development.[124] Harry drove it.

Black: I would like to issue a warning against the taxonomy of research. The Rothschild report agonized over the difference between 'basic' and 'applied' research and Fred Dainton added the concept of 'strategic' research.[125] This made for confusion, and did not help the promotion of research. I agree with Peter Lachmann, that what matters is the validity of research, not the type of methodology used. Presented with information, Napoleon is said to have asked two questions: 'Is it true?' and 'Is it useful?' Research should be judged by these criteria, not by the type of methodology.[126] End of gnomic statement.

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[122] Collier L H. (1955) The development of a stable smallpox vaccine. *Journal of Hygiene* 53: 76–101.

[123] See box on page 7.

[124] The Tropical Medicine Research Board was set up on 15 July 1960 by the MRC to advise the Secretary of State for the Colonies on all medical research funded from Colonial Development and Welfare Funds (amended in 1964 to include funds from the newly created Ministry of Overseas Development and the Colonial Office, which merged with the Commonwealth Relations Office a year later), from the Exchequer or from MRC funds. The Chairman was Sir Harold Himsworth with Professor A C Frazer as Vice-Chairman and Dr Brandon Lush as Secretary.

[125] Sir Frederick Dainton (Lord Dainton of Hallam Moors from 1986) Kt FRS (1914–1997) was Dr Lee's Professor of Chemistry at Oxford University from 1970 to 1973 and Chairman of the University Grants Committee from 1973 to 1978. He was Chancellor of Sheffield University from 1978 until his death. His report on 'The Future of the Research Council System' was published along with Lord Rothschild's report on 'The organisation and management of Government R&D', and prefaced by a memorandum by the Government. The Lord Privy Seal. (1971) *A Framework for Government Research and Development*. Cmnd 4814. London: HMSO.

[126] See Comroe J H Jr, Dripps R D. (1976) Scientific basis for the support of biomedical science. *Science* 192: 105–111.

Dr Gordon Cook:[127] I hadn't realized that Sir Harold Himsworth had differentiated between the formal discipline of tropical medicine, and medicine in the tropics, which was pointed out by Peter Williams. I think this is very, very pertinent indeed, and we do have to think of these as two very separate areas.[128] My contact with the MRC in the tropics was of course Kampala with the Infantile Malnutrition Research Unit, which was at that time run by R A McCance,[129] from whom I learnt an enormous amount.

Peter Williams: I must come back to the setting up of the TMRB, because in my last year with the MRC in 1959 I was very involved with the negotiations that Himsworth was having with the Colonial Office to incorporate the Colonial Medicine Research Committee (CMRC) into the Council, as an additional board. As I said earlier, Himsworth had become dissatisfied, because of the strong orientation towards insects and parasites. He could see the clinical opportunity for a broader view from the new universities in the tropics with good clinicians going out to work in them. He had a tremendous battle with the Treasury and the Colonial Office, but eventually he won and the Tropical Medicine Research Board was set up in the 1960s, after I left to join the Wellcome Trust. The TMRB had a broader membership, which included people who were not classical tropical doctors.[130]

Walton: Thank you so much. In the last hour and three-quarters, we have ranged extremely widely over many of the developments that took place and many of the problems that arose in the era between 1950 and 1980; after tea we will look at the major difficulties and, of course, the enormous expansion that occurred between 1970 and 1980.

Dr Derek Bangham:[131] Just to add to your list of MRC-directed research, some of it laboratory, but much of it influencing clinical research, should one mention the

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[127] Dr Gordon Cook FRCP (b. 1932) has been a member of the History of Twentieth Century Medicine Group since 1997. He was Senior Lecturer in Clinical Sciences at the London School of Hygiene and Tropical Medicine and Honorary Consultant Physician at the Hospital for Tropical Diseases, London, from 1976 to 1997. He had been Lecturer at Makerere University College, Uganda from 1963 to 1969, Professor of Medicine at the Universities of Zambia from 1969 to 1974, of Riyadh from 1974 to 1975 and of Papua New Guinea from 1978 to 1981. He was a Senior Medical Officer at the headquarters of the MRC from 1974 to 1975. He was President of the Royal Society of Tropical Medicine and Hygiene from 1993 to 1995.

[128] See Cook G C (proposer), Warrell D A, Bryceson A D M (opposers). (1997) Debate on 'Tropical medicine as a formal discipline is dead and should be buried' at the Royal Society of Tropical Medicine and Hygiene meeting at Manson House, London, 17 October 1996. *Transactions of the Royal Society of Tropical Medicine and Hygiene* 91: 372–375.

[129] Professor R A McCance CBE FRS (1898–1993) was Professor of Experimental Medicine at the University of Cambridge from 1945 to 1966, later Emeritus. He directed the MRC's Unit at Wuppertal in Germany from 1946 to 1949 and the MRC Infantile Malnutrition Research Unit at Mulago Hospital, Kampala, Uganda, from 1966 to 1968. See Widdowson E M. (1995) Robert Alexander McCance. *Biographical Memoirs of the Fellows of the Royal Society* 41: 263–280.

[130] See note 124.

[131] Dr Derek Bangham FRCP (b. 1924) was Head of the Division of Biological Standards at the NIMR from 1961 to 1972. He was later Head of the Hormones Division of the National Institute for Biological Standards and Control (NIBSC) from 1972 to 1987.

Radiobiological Research Unit, the origins of the PHLS, the origins of the Transfusion Service and the origins of the MRC's contribution to biological standardization throughout the world for some 50 years?

Walton: Indeed, and some of them, those initial MRC initiatives, eventually led to free-standing organizations which have subsequently had an independent existence as National Boards.[132]

Howarth: And also the input of the MRC into the Services research. The personnel research committees for the Army and the Navy and their subcommittees I think still go on.

Walton: Sheila Howarth pointed out to me [during the tea break] that we have said little about the seminal influence of that great physiologist, Sir Thomas Lewis. I think it is important to recognize that his approach using clinical physiology and pathophysiology to investigate disease processes was something which had a very great influence upon research in the UK and it is right that we should pay tribute to him.

And may I take the opportunity, Sheila, in thanking you for making available to me a copy of the Cohen Report and the Memorandum HM(57)36 on clinical research in the NHS.[133] Now we come to the second session, 1970–1980. For the moment we will defer looking at the Rothschild Report, and I am going to begin by asking Sir Stanley Peart to comment upon his conception of the way in which research developed during this decade and what were the problems that emerged.

Peart: The points I want to make really revolve around a number of issues. The first: you have heard me comment about the atmosphere in the medical schools in London and that very much bears upon what actually happened to the Clinical Research Centre. Because if I look at my own career, if I may use it, it has touched upon a number of these issues. I was supported first by the MRC, hence my high regard for the MRC, as a student in the department of pharmacology in Edinburgh with Gaddum.[134] At that time they were one of the few bodies which really offered support. However, there were other bodies in existence of importance for clinical research, and I would use a wide definition of clinical research. You can hardly escape noting the

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[132] Statutory boards took over the MRC's administrative responsibility towards the Public Health Laboratory Service (the Public Health Laboratory Service Act 1960), for the Radiological Protection Service (the Radiological Protection Act 1970), and for the Biological Standards Board (the Biological Standards Act 1975) which operates through the National Institute for Biological Standards and Control. Although the Blood Transfusion Service was administered by the MRC during the Second World War, responsibility passed to the Ministry of Health with the National Health Service Act 1946.

[133] See note 16.

[134] Sir John Gaddum Kt FRS (1900–1965) was Professor of Pharmacology at University College London from 1935 to 1938. In 1942 he accepted the Chair of Materia Medica in the University of Edinburgh until 1958, when he became the Director of the Institute of Animal Physiology in Babraham, Cambridge, until 1965. He was a member of the MRC from 1948 to 1951. See Feldberg W. (1967) John Henry Gaddum. *Biographical Memoirs of the Fellows of the Royal Society* 13: 57–77.

Beit Trust.[135] The first name on the Beit Trust Fellowship list in 1910 was Sir Thomas Lewis and he was then studying irregularities of the heart rhythm. You will see that the Beit Fellowship from about 1910 to 1960 has got a reasonable smattering of people who were engaged in clinical medicine as well as clinical research and research applied to clinical outcomes. Here and there were some very prestigious names. The first Professor of Medicine at University College, T R Elliott,[136] was first responsible, of course, for the concept of adrenaline being released from sympathetic nerve endings, and many others after that, including Fred Sanger[137] and others, whose applications to clinical medicine, of course, are greater than most physicians. From 1970 onwards, the number of people with medical qualifications supported by the Beit Trust dwindles to just about zero. Obviously, the Beit Trust doesn't have the money to support clinical salaries, so that's a natural conclusion.

Next, I was supported by the MRC to work in Mill Hill [NIMR], and the enthusiasm gained by working in such an establishment which was based on the scientific breadth of the people there, and their influence on clinical matters, is still there today. I think of the outstanding people that were there. There was Archer Martin[138] who introduced amino-acid chromatography to the wide world, Rodney Porter[139] working in the same laboratory, responsible for the analysis of gammaglobulin. Wherever you looked there were people whose contribution was without question, and how lucky was I to be

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[135] Sir Otto Beit KCMG FRS (1865–1930), British financier and philanthropist, was a Director of the British South Africa Company and of Rhodesia Railways Ltd and a Trustee of the Rhodes Trust and of the Beit Railway Trust for Rhodesia. He founded the Beit Memorial Fellowships for Medical Research in memory of his brother, Alfred (1853–1906), the first of whom were appointed in 1909. See Tansey E M. (1994) The funding of medical research before the MRC. *Journal of the Royal Society of Medicine* 87: 546–548. See also a collection of papers, the Beit Memorial Fellowship, which is held as SA/BMF in the Contemporary Medical Archives Centre of the Wellcome Library.

[136] Professor T R Elliott CBE FRS (1877–1961) began at University College Hospital as Assistant Physician in 1910, the same year as he was awarded a Beit Fellowship. He was appointed to the first full-time MRC-supported Chair of Clinical Medicine and Head of the Medical Unit at UCH in 1919, which he held until his retirement in 1939. He was a member of the MRC for three terms from 1920 to 1926 and 1939 to 1943. In 1936 he became one of the original five Trustees of the will of Sir Henry Wellcome, which created the Wellcome Trust, and held that office until 1955.

[137] Dr Frederick Sanger OM CH CBE FMedSci FRS (b. 1918) was the first scientist to win two Nobel Prizes in Chemistry. A member of the external scientific staff of the MRC in Cambridge in 1951, he joined the Unit for Research on the Molecular Structure of Biological Systems (later the Molecular Biology Research Unit and from 1968 the MRC Laboratory of Molecular Biology), Cavendish Laboratory, University of Cambridge, and head of a division from 1961 to 1983. He held a Beit Memorial Fellowship for Medical Research from 1944 to 1952. He was awarded the Nobel Prize for Chemistry in 1958 for the structure of protein in insulin, and in 1980 for his work on the structure of nucleic acids in DNA and RNA, which he shared with Paul Berg and Walter Gilbert.

[138] Professor Archer Martin CBE FRS (b. 1910), biochemist, was a member of the scientific staff of the Medical Research Council from 1948 to 1952, working at the Lister Institute of Preventive Medicine, then becoming Head of the Physical Chemistry Division at the National Institute for Medical Research from 1952 to 1956. He became Director of the Abbotsbury Laboratory, Consultant to the Wellcome Research Laboratories, at the University of Sussex and Invited Professor of Chemistry at the Ecole Polytechnique at Lausanne, Switzerland. He shared the 1952 Nobel Prize for Chemistry with Richard Synge for their work on paper chromatography in 1944.

[139] Professor Rodney Porter FRS (1917–1985) was Whitley Professor of Biochemistry at Oxford University and chairman of the department from 1967 until his death. Porter shared the Nobel Prize in Physiology or Medicine in 1972 with Gerald M Edelman for their research on the chemical structure of antibodies.

there, and how lucky were other people like me who were exposed in that sort of way. That convinced me, of course, that the right thing to do with any promising young person was to make sure that they got into the right atmosphere. It doesn't matter whether it's related immediately to the clinical work, what matters is the research of the highest order.

Now I would pause on Northwick Park. You may think that I have had nothing to do with Northwick Park at all. Well, I knew John Squire, who suggested to me that I might like to go to Northwick Park and run one of the divisions of medicine. This contributed, I'm afraid, to his early demise, because he dropped dead soon after that, as befits a chain-smoker. But my interest in Northwick Park was considerable although the flaws, compared with the medical school I happened to be in, as I saw it, were considerable. Because even at that early stage I thought the plan of having that type of hospital, that interaction, between the clinical services and the research services didn't seem to me as good as the medical school that I was in at the time. Now you may find that odd, when I have complained about the atmosphere of London medical schools. I think I am right to complain about the attitude of London medical schools, because they did not encourage by their atmosphere the application of clinical research. You had to fight very, very hard to pursue it.

The first medical professorial appointment, soon after the First World War, to any school was made at University College [London]. That was the first of the three which were chosen.[140] I have to introduce the name of Moran here,[141] because he was a remarkably far-seeing person. He fought very hard to have established at St Mary's a medical and a surgical unit in which research would be carried out. He had just emerged from the trenches as a Regimental Medical Officer, and that's a remarkable achievement to think so widely from that background. He continued as Dean, which is why George Pickering was appointed to the Chair at St Mary's in 1939.

Lewis had enormous influence on the development of clinical research. Not just by his personal achievements, but by attracting the people who would develop medical research in the rest of the country. Among other things that I would like to draw your attention to is the career support of people.

We haven't mentioned here the dual-support system. When I was at St Mary's, early on as a lecturer on the medical unit, I was aware that George Pickering used to go away with three or four of his cronies on a visitation for the University Grants Committee (UGC). They used to visit the universities and decide how the money

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[140] See Booth C C. (1993) Clinical research, in Bynum W F and Porter R. (eds) *Companion Encyclopaedia of the History of Medicine*, vol. 1. London: Routledge, 205–229.

[141] Charles McMoran Wilson (first Baron Moran of Manton from 1943) MC Kt FRCP (1882–1977) was Consulting Physician, St Mary's Hospital and Dean of St Mary's Hospital Medical School from 1920 to 1945, and President of the Royal College of Physicians from 1941 to 1950. See Lovell R. (1992) *Churchill's Doctor: A biography of Lord Moran*. London: Royal Society of Medicine Services. See also his autobiography, Moran C M W. (1984) *The Anatomy of Courage*. London: Keynes Press for the British Medical Association. First published in 1945 by Constable and Company Ltd.

would be distributed. It was done on a very *ad hoc* basis as I heard about it and it was really remarkably imprecise. Like the relationships in medical schools between the people running them and the source of money. It was very imprecise. We were all used to a 'knock for knock' arrangement between the hospital and medical school finances, which of course is banished now completely. The dual-support system, which is disappearing, was one of the ways in which we could get away with running medical units and clinical research in the medical schools. There was no problem, it seemed to me, about being able to pick out people, get them supported one way or another, without any thoughts about having to count the heads. One of the problems for running a medical unit which one ought to concentrate on, is how can you teach the medical students, run a good clinical service, and do research of high order. Nowadays you do not advise people to do that, it's quite ridiculous to try and get them to do all that, even if you have a unit of a very large size. I have always thought that the MRC units are models of how research can be conducted in the right sort of place. The unit system I think has still got a lot to teach us about how to bring together the basic science and the clinical application in the right atmosphere. I still believe it is one of the highlights of the MRC's contribution to medical research.

Now the other body with which, of course, I have been associated since 1975 has been the Wellcome Trust, and that has given me a very privileged position indeed, because as the Wellcome Trust has grown it has become active in promoting areas that have been neglected as far as we have seen, just as the MRC did. One of the tasks I was given when I joined the Medical Research Council was to look at the possibility of developing a centre for reproductive biology, in Britain. Our working party managed to create that in Edinburgh[142] with Baird, and Short (from Cambridge), and there you had a very active role of the MRC which was not unique then, it was what they were used to doing. Now the Wellcome Trust reacted in a similar way – in dermatology, in mental health – bringing together the real excellence of neuroscience and psychiatry; in ophthalmology, where the undoubted leading position of this country in visual physiology was not matched by research in these and many other areas.[143] I return again to the way in which clinical research should prosper, which is by supporting bright young people in the best possible way and there's no doubt that the contribution by the Wellcome Trust is the best thing that has happened for me and for all the other members of the Trust. But it enabled the Trust to do a great deal to ensure that clinical research could prosper by this career support. It saddens me however as I reflect upon what's happened over the last few years, because I have seen how difficult it has become to pursue clinical research in the atmosphere of medical schools. Why? The pressure of the National Health Service on beds, on positions,

[142] MRC Unit on Reproductive Biology, University of Edinburgh, established in 1972 and directed by R V Short.

[143] For details of additional support for neglected subjects, see note 100, 169–173, 276–304. See also Williams P O. (1993) *Extracts from the Annual Reports of the Wellcome Trust, 1960–1991, and Contemporary Lectures*. 3 vols. Wellcome Library.

anything where you have to apply the lessons you learned from research to the care of patients and their prospering, is blocked by the way in which the National Health Service has regressed. Last year it was my privilege again to go round as an observer for the Trust with the working party which looked at the possibility of providing clinical research facilities in various of our university medical centres. For me the wheel had turned full circle; from being able easily to run a medical unit previously, in the heart of a medical school in London, we were now having to go and look at the facilities which were desperately needed, I would have said, in practically all our major teaching hospitals. They just were not there. And the Wellcome Trust was able to provide facilities, buildings and equipment, to five centres.[144] As far as I was concerned, you could have made a strong case, and a strong case was made, for another dozen. Now that is where clinical research has arrived at over the last 20 years, which seems to me a great shame. There is no shortage of people as one looks at the quality of those coming through both the MRC and the Wellcome Trust and all the other research bodies, but we are at risk of not being able to provide them with the right places in which they can pursue that clinical research.

Walton: Thank you very much, Stan, for that very interesting commentary. One of the problems that we have always had in medical research has been to persuade people working in the hospital service of the doctrine, or rather the aphorism, which is so easy to prove, that today's discovery in basic medical science brings tomorrow's practical development in patient care. And that's not a message that many managers in our health service are willing to accept.

There are a number of points that I want to bring out relating to this decade of 1970 to 1980. One of them that I would like to look at in a moment is the question of the change in the MRC board structure that took place from the Clinical Research Board, on the one hand, to the vertical structure on the other, and the effect that that may have had – good, or the reverse – upon clinical research. Then I want to look at the issue of the Rothschild Report and its implementation and a number of other issues. Perhaps I would just say in passing that in this decade it was not only evident to those of us working in universities (for much of this decade, I was the Dean of a medical school), that the MRC and the Wellcome Trust were making an increasing contribution, but so too were the other charities and foundations.

The point that Stan Peart made about clinical support and the dual-support system, which I had mentioned earlier, was a very crucial one, because one could at that stage obtain from charities and even from private sources funds to endow chairs; when those chairs were taken on to the University Grants Committee establishment, and when

[144] The Wellcome Trust made five Millennial Awards for Clinical Research Facilities to medical schools in Birmingham, Cambridge, Edinburgh, Manchester and Southampton in December 1997. The grants of £16 million covered construction costs for dedicated centres devoted to clinical research in collaboration with the medical school and the area Hospital Trust. These awards coincided with the reforms to NHS funding proposed by Professor Tony Culyer's task force, whereby the centres would receive an agreed proportion of the earmarked NHS funds to support recurrent clinical costs of research.

salary increases were subsequently approved, those salaries were centrally supplemented to the medical school of the university. That is something that disappeared a long time ago. In the early 1980s the dual-support system began to crumble for a variety of reasons. However, may I now turn to Abe Guz? I believe that you were going to make a contribution at this stage?

Guz: I really just wanted to draw attention to an event, a very moving event of 1975. The Ciba Foundation had a meeting, a symposium, on *Health Care in a Changing Setting: The UK experience*,[145] and for reasons not entirely clear to me I was chosen to represent academic wisdom at the time and I remember at that time I was beginning to feel the 'winds of change'. Harold Macmillan had used that phrase on his visit to South Africa during the 1960s, but it did seem to me that there was a chill appearing in this whole thing. And I found that the most interesting thing was how I was attacked in the nicest possible way by my colleagues for wanting to do what interested me, rather than what the community thought was important. Now, I had the highest respect for them, and they certainly put this view very clearly, but it was new to me. For instance, I remember there were three major accusations at that time: that we were neglecting vast areas such as clinical strategy, the strategy of screening, the risks of diagnostic technology; that we were neglecting health services research; and finally, that we were neglecting health policy, a relationship with ethics, medicine and law.

Now it was absolutely true that in the academic medical units which I had anything to do with, these subjects were never even discussed, and that's as recently as 1975. It's absolutely true. But of course I thought this was the inevitable result of the fact that academic units were sort of small nidi implanted within the fairly big scene of the National Health Service and you couldn't do everything. So I did accept these criticisms, but I was astonished at their intensity. So what I really wanted to say was that at that time not only was specialism coming in in a very big way, but there were these huge areas which cover vast fields, which academic units did not discuss.

Walton: Of course that was one of the points that led Rothschild to make the recommendation that he did (Guz: I thought it was *the* most important point.) to the effect that the Health Departments priorities, as defined by them, were not being properly fulfilled in his view by the medical research structure as it then existed. So we will come to that in a moment. But before we do, I wonder if John Gray would like to comment upon what he saw as being the reasons for restructuring of the boards at the MRC? What was the principal objective? Then we can ask people what they saw as being the benefits and perhaps dis-benefits of that arrangement.

Gray: Well, I suppose like so many changes, it's something entirely practical and domestic which starts the whole operation going. Theory, and how it succeeded, was something that followed later. The problem was that, with the increased number of

[145] Guz A. (1976) The place of research, in Ciba Foundation, *Health Care in a Changing Setting: The UK experience*, Ciba Foundation Symposium 43 (new series). Amsterdam: Elsevier, 129–141.

applications, and the increased number of units to look after, etc., two boards couldn't handle the work. We had to have more boards. There was an easy and obvious division in the old days between clinical and biological, but we had to start thinking again if we were going to have three boards. There were suggestions about what a third board might be when horizontally cut, but it made us think about it and some of us thought that there would be real advantages in trying at the board level to bring together the clinical work, with the sort of laboratory studies that underpin it. We have already heard quite a bit about this today, about the advantages of having units, academic units in medical schools, or MRC units where you've got the clinical people working alongside biochemists or other people relevant to the work. It did seem to us, at least in theory, that it would be good to have grants committees and boards organized on what is often called the vertical system. You would have clinicians sitting round the table with laboratory scientists. The clinicians would be able to say what the problems are, and some of the things they come across, and listen to the things that were interesting to physiologists and biochemists. You might get cross-fertilization and you'd get cross-opinions in judging each case. So that is what we decided to do. We went for the vertical, hoping this might increase the support for clinical research, but this of course was a risk strategy, because by doing this it was always possible for the boards to give too much weight to laboratory work. That was the basis.

Walton: Thank you. This was an era when, perhaps for the first time, clinical academic units in the medical schools and universities began to exploit the advantage of having whole-time basic scientists working, even on short-term research contracts, within clinical departments. This was a very important development which was, perhaps, helped by that particular policy.

Gordon: If I can follow on from that. The discussion whether you look after research best by having boards in a horizontal structure or a vertical one is one we've been through at the Trust as well and I can claim, in part, to being responsible for a change at a slightly later era. When I joined the Trust there were a couple of committees, notably one for tropical medicine, and the mental health panel that Stan [Peart] was involved with setting up. The latter ran vertically, and the aim was to support research in mental disorders. There were members going from social psychiatry, right through to very basic neurobiology, sitting together. And that panel really seemed to work very well. At the time that the Trust started to grow in the mid-1980s we introduced some more panels and these ran horizontally, so we had the slightly uncomfortable position of whether an application was in psychiatry or a closely related clinical subject, or was it a biological neuroscience: such an application might go to one of three different panels. And after some discussion in the late 1980s, we adjusted the panel structure to an all-'vertical' one. The arguments were in part based on my own observation that the vertically structured panels we had at that time seemed to work better than the horizontal ones, because they didn't get into quite such narrow conversations. Before I wrote the paper proposing all-'vertical' panels, I did enquire within the MRC and I found the last senior member of staff who could remember the old Clinical Research

Board. I asked for his opinion, from the point of view of those within the MRC who were handling the grants coming through, whether the loss of the Clinical Research Board seemed to be an improvement or a disadvantage, and he felt that it probably had been an improvement, because of the type of discussion at the Board that Sir John Gray has alluded to. I would be fascinated to have other views on whether or not this change was a good or a bad thing. If you all think it is a bad thing to have vertical panels, I'll retire gracefully.

Walton: Well, who would like to comment on the effects of the change in the board structure and this, of course, was at a time, when quite apart from, as I said, the Wellcome Trust, many of the disease-specific charities were beginning to have an increasing influence in promoting research in the fields of interest related to their particular diseases. So that was another things that influenced the position.

Tyrrell: Yes, I would like to comment on the disease-specific charities, because I do think that they do have a particular role. One of the most important roles that I have seen is the recognition that there is a real problem to be tackled. I saw it in relation to sudden infant death syndrome [SIDS]. A wealthy businessman lost his child and as a practical man in addition to grieving, he and his family decided to start a foundation.[146] In starting the foundation, they said they would spend half their money dealing with the bereft parents and the other half would go into research, because they believed it was a real problem. At that time, many parents were dealt with as criminals and there was a lot of argument as to whether there really was a syndrome, or whether it was child neglect. They needed to put a small research group together themselves, because they couldn't find any of the research bodies, the big research bodies, who were prepared to take any interest. They started a small group and I was privileged to be part of it and its work. For example, some epidemiology was done, documenting cases that were occurring in places like Sheffield and in other parts of the country. The point that impinged on our present topic was that they thought it would be a good idea to go to the MRC and say they had these data, that there are real problems and that they might be due to infection, to respiratory disturbances, or immaturity at a physiological level, would the MRC be interested to work on this? We had an informal meeting with members of the board who said that the MRC did not work on nonexistent diseases. They had decided that this wasn't a real problem. It was therefore very good that the charity went back to their office to find more funds to support more research. It was, I think, a sign that no human judgement is perfect. I don't say the response was necessarily a part of the board structure, but I think if the board structure had been all there was, then nothing would have gone further. However because there was a charity of concerned people who knew there was a problem, in spite of what other experts said, they went ahead. Thus the research to define the problem was actually done, in spite of the flaws in the organization.

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[146] The Foundation for the Study of Infant Deaths.

Walton: There are a number of other examples of situations in various specialities, not least in my own field of neurology, where the existence of disease-specific charities has made a major contribution to research.

Professor Donald Munro:[147] I would like to make some points relating to the allocation of space for research in medical schools. Between 1950 and 1980 many hospitals playing a major role in clinical teaching lacked any provision for their academic staff and there was a particular shortage of laboratory space, even though staff were required to be involved in clinical research. As the intake of medical undergraduates has increased there were eventually agreed protocols recommended to universities with clinical medical schools, which could be applied to the planning of new academic buildings and thus ensure that proper opportunities were available to both the academic staff, as well as make provision for those NHS staff who wished to be involved in research.

In spite of the difficulties already discussed about the problems of traditionally established routes for tertiary referrals, where such facilities were available, some progress could be made in attracting staff who were able to exploit their earlier research experience and continue to encourage their junior staff to be involved.

Innes Williams: Could I make a point about the disease-specific charities? The Imperial Cancer Research Fund in the late 1970s was overflowing with funds and we started to spend it on clinical units, in order to try to maintain some contact between clinicians and the laboratory scientists in Lincoln's Inn Fields.[148] We endowed chairs at Bart's, at Guy's, at Edinburgh and at Oxford, and a number of other units, but it was actually quite difficult to maintain a relationship between the clinicians and the laboratories. It seemed to break down again and again. We tried to supplement the endowment, which was usually considerable, by a regular grant in order that we should have some control over what went on in the units, much to the dismay of other units in the medical school, and we continued to support the junior staff in those units. However they were frequently diverted by the pressures from the clinicians to provide clinical services and, as the NHS funding was reduced, we found ourselves paying for regular clinical treatment and not for research at all.

Walton: Thank you. That was certainly a major problem. The other thing that struck me very powerfully was that in my own medical school [Newcastle], during the time

[147] Professor Donald Munro MD FRCP (b. 1925) qualified at Aberdeen University in 1947. After house officer posts he was Assistant Lecturer in Materia Medica in Aberdeen before serving as a junior specialist in medicine in the Royal Army Medical Corps in Malaya between 1949 and 1951. After a further period in Aberdeen he became Lecturer in Therapeutics in Sheffield in 1953, spent a year as Research Fellow in the Department of Medicine at Tufts Medical School, Boston, MA, and after promotion to Senior Lecturer at the University of Sheffield, was awarded a personal Chair in Endocrinology from 1967. When the Northern General Hospital became a recognized teaching hospital in 1973, he was appointed Sir Arthur Hall Professor of Medicine with responsibilities for planning the clinical sciences centre to accommodate the new academic departments. He has been Emeritus Professor of Medicine since 1990.

[148] Austoker J. (1988) *A History of the Imperial Cancer Research Fund 1902–1986.* Oxford: Oxford University Press.

that I was Dean, through individuals who were very wealthy and charitably disposed, we were able to endow a certain number of chairs and readerships, often in what I would call the tertiary, not the mainline, specialities. But we quickly learnt the lesson that to endow a so-called 'naked chair' without supporting staff was a mistake, because the individual had then to go out and seek funding from other sources to employ the supporting staff. But one thing which I thought was very important was that we raised money at that time to endow what we called lectureships in clinical science. These were lectureships established to employ scientists within clinical departments; they were competed for throughout the entire faculty, so that departments had to decide who was going to put up the best case for having such a lectureship. I think that policy is something that perhaps has not been followed up as well as it might; you all know of the problems of the short-term research grant employing scientists on successive three-year appointments, in clinical departments where there is no really good career structure, as has been clearly indicated on many occasions. Very little has been said about the board structure. Would anyone wish to discuss that further, before we go on to Rothschild?

If not, may I remind you that in 1971 two Government Green Papers were produced on the organization and management of government R&D, one the Rothschild Report on the future of the Research Council system, another the Dainton Report. It was in 1972 that a White Paper introduced the customer–contractor principle,[149] the Rothschild Report, which as you know created the appointment of a Chief Scientist at the Department of Health and Social Security (DHSS), the first appointee being Dr Dick Cohen.[150] Then, Sir Douglas, you followed in 1973, and Arthur Buller followed in 1978. May we then ask Sir John Gray again to comment upon the background to the introduction of the Rothschild mechanisms in the MRC?

Gray: The date of the Green Paper, 1971, marks the end of a long period. When I became Secretary of the MRC in 1968 it was already clear that not only was there a feeling in the Health Departments that they wanted more influence on the research that the Council did, but much more widely it was clear that within the Government as a whole the Research Council system was not entirely popular and was not along their lines of thinking. I don't want to go into the things that happened meanwhile, but the first attack was on the Natural Environment Research Council (NERC) and there were various other things. Inevitably we had all along a certain amount of

[149] Lord Privy Seal. (1972) *Framework for Government Research and Development*. Cmnd 5046. London: HMSO. The White Paper recommended the customer–contractor principle, embodied in the transfer of about one-third of the research funds from three Research Councils – the Agricultural Research Council, the MRC and the Natural Environment Research Council – to their customer departments; the appointment of a departmental Chief Scientist with a supporting organisation, who would be a full member of the Research Councils; an improved career structure for scientists within the Civil Service; and the reconstitution of the Council for Scientific Policy (which later became the Advisory Board for the Research Councils).

[150] Dr R H L Cohen CB MRCS (1907–1998) was on the staff of the MRC from 1948, serving as Deputy Chief Medical Officer from 1957 to 1962, when he was seconded to the Ministry of Health as Principal Medical Officer from 1962, Deputy Chief Medical Officer to Sir George Godber from 1967, and finally as the first Chief Scientist to the Department from August 1972 until his retirement on 1 April 1973. See Wilson J M G. (1998) Richard Cohen: First Chief Scientist at the DHSS. *Journal of the Royal Society of Medicine* 91: 222–224.

rumour information about what the feelings were in various parts of the system. Harold Wilson, at the end of his government, had set up an inquiry in the Department of Agriculture, about the Agricultural Research Council (ARC), which was thought to be a vulnerable case. A committee was set up under the chairmanship of Paul Osmond.[151] That report was completed towards the end of October 1970 (I think I am getting my dates about right), and we knew that the recommendation was going to be that the ARC should be abolished and all the work should be taken over by the Ministry of Agriculture, Fisheries and Food (MAFF).

There was a dramatic moment in all this, which I think I should relate. One morning in that month I had a telephone call, and so did the other chief executives of Research Councils and the Chairman of what was then called the Council for Scientific Policy (CSP), (From the floor: 'The CSP - that was a predecessor of what is now the Advisory Board for the Research Councils (ABRC), or which later became the ABRC; it doesn't exist now, but theoretically it had more powers; it is now the Office of Science and Technology and is in the Department of Trade and Industry) to go immediately to the Department of Education and Science. It was the CSP which used to distribute the grants between the Research Councils and Fred Dainton was at that time the chairman. We were summoned to this meeting, and the reason we were summoned was that the issue was coming to Cabinet the next day and Margaret Thatcher, then our Secretary of State, wanted to be briefed as to what she should do about this. We had a discussion: we had all of us known the background over the last few years, that there was by and large a plan (plot – whatever you like to say) that they were going to pick off the Research Councils one by one as being the easiest thing. We discussed this and had to decide then and there; of course there was no way we could ask the views of our Councils about this. We made the decision to ask her to say to the Cabinet, 'All or none', and that we would fight the battle with all of the Research Councils standing together rather than risk first of all the ARC, then the NERC, which was already under attack, and we certainly had fair warning that we [the MRC] were going to go within about a year's time. We took the decision then and there to say, 'All or none'. Margaret Thatcher accepted this and fought this at Cabinet the next day and Cabinet agreed not to decide on the Osmond Report, but to allow Fred Dainton, as the Chairman of the CSP, to consult and produce a report from his point of view. It was on the condition that there would be a final report following the Dainton report, from some independent person who would take all this into account. This, of course, turned out to be Rothschild.[152]

Fred Dainton's committee met throughout that winter. At first there were two-day weekend meetings, at which the chief executives of the Research Councils were

[151] Sir Paul Osmond Kt CB (1917–1998) joined the home Civil Service in 1939, in which he served until his retirement in 1975. He was Deputy Secretary in the Civil Service Department at the time of the Fulton Report on *The Civil Service* (1968) to 1970, moving to the Office of the Lord Chancellor from 1970 to 1972 and the Department of Health and Social Services from 1972 until 1975.

[152] The official version is related by Margaret Thatcher in her evidence on 3 May 1971 to the Select Committee on Science and Technology. See House of Commons, Select Committee on Science and Technology. (1971) *Second Report*, Session 1970–1971, *Research Councils.* HoC 9. London: HMSO, para. 16, page 16.

present. Then the rest of the committee, which didn't include us, met to put a report together. That went to Rothschild and then Rothschild published his report in the same volume as that of the Dainton committee. After that, it was a case of carrying out the strategy of all standing together. We attended each other's council meetings and things of this kind. When we met various government bodies in general we all met collectively together before and spoke for the Research Councils as a whole. I know there were some people who didn't approve of this tactic. They thought that the MRC was above the research council system and we would have done better to stand on our own. I never believed for a moment that that was true, and I don't think there were many people who took that view. I do know that there were some. But for obvious reasons, and this is perhaps one of the lessons about how Research Councils work, there are moments such as that described where a chief executive has to speak for the council on the spot without being able to do anything about it. There are people in this room I know who were members of the Council at that time. Now, after all these years, what do you think? Are you going to tell me that I made a terrible mistake? If so, you may say so.

Walton: But in effect, it is right is it not, the result of the Rothschild Report, which the Government accepted, was that major parts of the MRC's funds were transferred to Health Departments, but the Health Departments in most instances used those funds to commission work already being done through the MRC. For instance, I know that my own programme grant, which was in a clinical field, was immediately transferred to the DHSS.

Gray: Perhaps I could just say one or two words. I think the aftermath is something I might comment on. I ought to finish off by saying that once the Rothschild Report was out, a major battle still went on for another six months or so and the Research Councils did manage to get a number of, what to me were crucial, amendments. One of the crucial issues was what was applied research and that is when we came up with this word 'strategic', because one side wanted to say that, for example, the work on molecular biology was fundamental and the other side was wanting to say, 'Ah, but this is all cancer research' or whatever it was. So we introduced the concept of strategic research which we did not think should be transferred to the Health Department.

Walton: Now before I come to Douglas Black, may I turn to Sir Patrick Nairne. You were at that time Permanent Secretary in the Department?

Sir Patrick Nairne:[153] I became Permanent Secretary in November 1975, three years after the Rothschild Report's implementation began, so let me take it from there. First, I ought to say that I haven't, as they say in the law courts, been able to refresh my

[153] The Rt Hon Sir Patrick Nairne GCB MC (b. 1921) had a Civil Service career from 1947 to 1981 serving in the Admiralty, the Ministry of Defence and the Cabinet Office. He was Permanent Secretary of the Department of Health and Social Security from 1975 until 1981. He was Master of St Catherine's College, Oxford, from 1981 to 1988 and Chancellor of Essex University from 1983 to 1997.

memory, beyond managing to find a report of a Public Accounts Committee (PAC) of 1979[154] when Arthur Buller and I were together, along with Jim Gowans,[155] giving evidence on how effective in relation to the DHSS the Rothschild Report had been. When I arrived at the Department of Health and Social Security in 1975 it was quickly made clear to me that we were in the process of exploring whether there could be better ways of implementing Rothschild's recommendations. I was led to believe at the time that the MRC had always advised against it, while the Government had taken the line that the MRC was bound to be opposed, and it had gone ahead with implementation. I think I am right in saying that the total funds were of the order of at least £2–3 million.

The Department initially undertook a review of the whole of the MRC programme and identified those features of it which were of special priority to the NHS. It very soon became evident that this was a very burdensome procedure indeed, because the next stage was an attempt on the Department's part – and I found this going on when I arrived – to relate the amount of money that had been transferred to us to different carefully identified parts of the MRC programme, a rather artificial process. I think I should add that there was a little bit of direct commissioning of research as well. I am reminded, from looking at the Public Accounts Committee report, that we commissioned the MRC on ultra-clean air, on influenza vaccines and on a study relating to drugs for whooping cough. But this commissioned work was very small compared with the main bulk of the transferred funds. In this situation, first Sir John Gray, and then Sir James Gowans, when he arrived in 1977, made clear that we ought to see whether we could together work out quickly a less burdensome arrangement. Sir James Gowans also made clear that he wanted the transferred money back and that he was very determined to get it. The formulation of a less burdensome arrangement was much assisted by an exercise which I recall was initiated by Douglas Black – he can probably recall, and speak about it, in a minute – where he and one of the Department's economists worked out a scheme they entitled 'the burden of disease'.[156] This was based on giving a degree of priority to diseases in terms of morbidity, sickness, health benefit, and any other relevant factors at that time.

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[154] House of Commons, Public Accounts Committee. (1979) *First Report*, Session 1979–80, *The Ministry of Agriculture, Fisheries and Food, Department of Industry, Scottish Economic Planning Department, Welsh Office, Department of Education and Science, Medical Research Council, Scottish Home and Health Department, Agricultural Research Council, Department of Agriculture and Fisheries for Scotland*. HoC173. London: HMSO. The Committee particularly looked at the research and development work commissioned from Research Councils as a result of the 1971 Rothschild Report and the 1972 White Paper (Cmnd 5046). Gowans, Nairne and Buller gave their evidence in March 1979. The PAC noted that the DHSS originally took £10 million or 25 per cent of the MRC budget in 1975–1976 for direct commissioning, declining slightly over the five-year period to 21 per cent, and concluded that due to the MRC's method of controlling research, there was little point in the Government continuing the commissioning arrangements. The new Conservative Government agreed and the funds were returned to the MRC from 1 April 1981. See Anonymous. (1980) Notes and News: Goodbye Lord Rothschild. *Lancet* ii: 986. Buller A, Gowans J L. (1981) Medical research and the funding of the MRC. *British Medical Journal* 282: 820.

[155] See note 87.

[156] Black D A K, Pole J D. (1975) Priorities in biomedical research: Indices of burden. *British Journal of Preventive and Social Medicine* 29: 222–227. Sir Patrick Nairne described the value to the DHSS of the resulting index or rating of the burden of disease in evaluation of the distribution of funds being spent on different parts of the MRC programme. See note 154, para. 1295, 87.

The outcome of this work enabled the Department to produce broad annual statements about research priorities affecting the NHS, as seen by the Department. On the basis of those broad statements we had meetings – not more than one or two a year – with the Secretary of the MRC and his colleagues and that proved to be a valuable interaction. I should emphasize that it became evident that, without the Rothschild Report (for all its defects), I don't believe that the kind of valuable interrelationship with the MRC that we gradually developed would have emerged. Douglas Black can speak, and if necessary correct me, about this. When he retired from the DHSS, Arthur Buller, who will speak himself in a minute, became Chief Scientist. He then became, or perhaps was already, a member of all the MRC Boards and, I think, of the MRC itself. So, to sum up, the arrangements that we developed together with Sir James Gowans, through refining Departmental statements as a basis for interactive discussion each year, led to a better understanding between ourselves and the MRC, which was reinforced by the way in which the Chief Scientist had a foot in both camps, the MRC camp and the Departmental camp.[157]

But Sir James Gowans hadn't yet got his money back, and it then turned out that the Comptroller and Auditor General decided to examine what had actually been happening to the transferred funds in the MRC–DHSS field, and also in the Ministry of Agriculture, Fisheries and Food (MAFF) and the Agricultural Research Council (ARC) field. This led to his report to the Public Accounts Committee and to the Department and MRC being summoned to an exacting session of the Public Accounts Committee in March 1979. It is that PAC report I have been able to read again. Sir James Gowans opened up with a brilliant statement of the MRC's position and policy, and there was a good deal of 'Yes, Sir James' and 'No, Sir James' from the Committee which was quickly and deeply impressed by all he had to tell them about the way the MRC saw matters. The Committee then turned to the Permanent Secretaries of the three Health Departments and the tone became, 'Look here, Sir Patrick' about the issues being discussed. But in general the spirit, as Arthur Buller will confirm, became pretty friendly fairly soon once we had explained the interreactive arrangements that we had developed. There is more that Professor Buller may wish to add to this; I would only wish to add that the Comptroller and Auditor General then reviewed all the evidence and prepared a report for the Public Accounts Committee. In this he said in effect: 'Isn't all this commissioning process – that is, the relating of the transferred MRC money to certain Departmental priorities – a very artificial, burdensome and bureaucratic process? Do we really need it?' In due course there was even stronger pressure that the money should be returned to the MRC, and some of it was returned. But, as I think Arthur Buller can fill out, because he knows the papers better than me, some of it was kept by the Department. Then in 1981 I retired from the Department.

[157] The Advisory Board for the Research Councils identified problems with the partnership of the MRC and the Health Departments and described the change in responsibility of the Chief Scientist after August 1978 as from one who 'solely acted in an advisory capacity in respect of the Departments' projects' to one who had 'executive responsibility for biomedical, health, personal social services and social security research while retaining an advisory role in relation to other areas of the Department's research.' Department of Education and Science. (1979) *Third Report of the Advisory Board for the Research Councils 1976–1978*. Cmnd 7467. London: HMSO, para. 33, 10.

Walton: Douglas Black, you were Chief Scientist from 1973 to 1977, so it would be fascinating to hear your experiences of that period.

Black: Yes, I come into this gap between 1972 and 1977. Could I say one or two rather separate things? First of all, I am always charmed to be able to pay a tribute to Margaret Thatcher, because as suggested she was extremely supportive of the anti-Rothschild position and was quite distressed when things went (as I think John [Gray] and I would agree) the wrong way round.

Then the next thing is that Pat Nairne mentioned ultra-clean air. This wasn't actually an early example of environmentalism, it was ultra-clean air in surgical theatres. Then I have often, I am sure, been subconsciously out of my depth, but the occasion when this rose to the threshold and above the threshold of consciousness, was of course during the period when I was in the Department of Health, because I was there to implement a process in which I had no fundamental belief. I mean Brian Windeyer and I have had a joint letter to *The Times*,[158] which was as unavailing as everything else at the time in trying to defeat Rothschild. Then I was put into the position of implementing Rothschild. The last defence of the confirmed villain is to say, 'I have tried hard'. But I did try hard and I think we were very lucky in that because of the commissioning process, a bureaucratic process of the utmost complexity was built up in which we had committees which were far too large for their purpose. This was partly because of that troublesome country Scotland, because every English member of the UK committee had to be matched with someone from Scotland. It didn't quite extend to Northern Ireland, perhaps for good reasons! Anyway and there was the appalling commissioning process which meant that poor John [Gray] had to do triple accountancy on every transaction which involved the Department. It had to be divided into MRC proper expenditure, commission-fund expenditure, and then within that what was supposed to be of departmental interest, etc. I think that I received the ultimate accolade from that honest and very influential parent of evidence-based medicine, Archie Cochrane, because he's on record as saying that in that post as Chief Scientist, I was hopelessly miscast. [159]

Walton: Well, that may have been his view, but I cannot help but recall very well at the time that Nixon had decided he was going to throw a lot of money at cancer in the United States to cure it within five years, I remember your comment, Douglas, in your Rock Carling lecture when you said that 'lavish finance is impotent in the face of unripe time';[160]

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[158] Professor Douglas Black and Professor Sir Brian Windeyer. (1972) Letters to the Editor: The division of governmental responsibility for research. *The Times* (11 January 1972), 13. Letter written as past and present Chairman of the MRC Clinical Research Board.

[159] Cochrane A L with Blythe M. (1989) *One Man's Medicine: An autobiography of Professor Archie Cochrane*. London: British Medical Journal, 245. See also Maynard A, Chalmers I. (eds) (1997) *Non-random Reflections on Health Services Research: On the 25th anniversary of Archie Cochrane's Effectiveness and Efficiency*. London: British Medical Journal Publishing Group.

[160] Black D A K. (1984) *An Anthology of False Antitheses.* The Rock Carling Fellowship 1984. London: Nuffield Provincial Hospitals Trust, 12. See also Department of Health and Social Security. (1982) *The Support of Health and Personal Social Services Research*. London: DHSS.

and that is a quote that I have used on a number of occasions since. Thank you for sharing that perception with us. Before I come to Arthur Buller who succeeded you in 1978, which was the year that I came off Council, just as the whole impetus for the return of the transferred funds was gaining pace in the scientific community, I wonder if any members of the audience who were involved in the work of the Council at that time would like to share their views upon what they saw as the effects of the Rothschild mechanism?

Booth: I was the successor to Stan Peart on the Advisory Board for the Research Councils (ABRC) and this body, after Rothschild, had to divide up the money between the different Research Councils. This happened at one meeting at which all officials were banished leaving only the independent members, of which I was one, who had to argue the case for whatever subject they were interested in. I remember it was extremely chancy as to what the MRC got in terms of its overall budget. I remember one time when a presentation was made by the MRC, and I forget which board it was, but at the discussion afterwards when the MRC's budget was being discussed, a very important man indeed, now no longer with us, Fred Dainton, got up, I remember, and said he'd listened to the MRC and he couldn't think that it really mattered whether the budget for the MRC went up 5 per cent or down 5 per cent and he reckoned it should go down by 5 per cent, and that was the sort of argument that went on in that body. I found it absolutely, paralytically horrifying and I remember discussing it with John Gray when I joined the ABRC and I said, 'I presume it's all worked out by officials beforehand' and he said, 'Not a bit of it, you are on your own, boy'. And, by George, you were at that body. And I can remember on that occasion we finished up with +0.8 per cent or something like that at the end of the discussion. But I didn't think that it was a very satisfactory way of discussing how you should allocate resources with people like Sam Edwards,[161] representing the Science and Engineering Research Council, with tears streaming down his face, I mean literally, making an argument for telescopes in Hawaii or something like that, or is it the Canary Islands? (From the floor – Both.)

Walton: I am mildly surprised that Fred Dainton took that view, because of course he subsequently became Chairman of the Postgraduate Medical School at Hammersmith, and was active in the House of Lords until he sadly died a few months ago.[162] He was immensely supportive of medicine and of the Medical Research Council. Now, any other views about the effects of the Rothschild Report upon the support of research?

Lachmann: From my worm's eye view of this matter, I just wish to pay a tribute to Sir Douglas Black. At the relevant period I was at the Hammersmith and had one of the

[161] Professor Sir Sam Edwards Kt FRS (b. 1928) was Professor of Theoretical Physics at the University of Manchester from 1963 to 1972, the John Humphrey Plummer Professor of Physics from 1972 to 1984, and the Cavendish Professor of Physics from 1984 to 1995 at the University of Cambridge. He was Chairman of the Science Research Council (later the Science and Engineering Research Council) from 1973 to 1977.

[162] For Dainton's biographical details, see note 125.

Medical Research Council research groups which have already been mentioned.[163] This covered a fairly broad spectrum of immunology, but a relatively small proportion of it was devoted to work on the measles virus and the various diseases that it caused. I was immensely impressed when I saw our accounts one year to notice that Douglas had been able to attribute to the Department of Health under the Rothschild arrangements the whole of the group's funding in connection with the work on measles, and I thought, 'Here is a man who can make even the worst system work'.

Walton: Just for the record and to get the situation straight. Douglas, as Chief Scientist, you were an observer on Council, were you not? Were you an observer on the Boards as well?

Black: There's taxonomy trouble in that there was great dispute about whether one should be an observer (or a member). I was actually a member of all those things.

Walton: You were? Of Council as well?

Black: Everything. No committee existed without my participation. [Laughter]

Walton: But there was also, John Gray, an interesting arrangement, if you recall, where you took members of certain boards and invited them to be the spies upon other boards. I was actually nominated from the Neuroscience Board to be a spy on the Systems Board. It was an interesting experience.

Gray: I would like to make one comment about the application. Everything we have been talking about here quite properly has been concerned with the transfer of funds from the MRC to the Department of Health. We also transferred a small amount of funds to the Health and Safety Executive, and that was an absolute disaster. As far as I know, the sum was small, and whether we had actually given up trying to get any of this money back when I retired, or whether it happened afterwards, I really can't remember, but that was a complete disaster.[164]

Peter Williams: I just wanted to ask Douglas if today he feels he might be accused of 'conflict of interests'?

Black: I am reminded of something that happened at Sir Philip Rogers's retirement party. He said that in the palmy days of the Civil Service, you were allowed to send back a letter which said, 'I am directed by the Secretary of State to inform you that your question is not among those selected for a reply'. [Laughter]

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[163] For Black's biographical details, see note 6.

[164] The Review noted that the programme undertaken by the MRC for the Department of Employment (three-quarters of the original funds for Employment was later transferred to the Health and Safety Executive) was 'too academic in orientation and narrow in scope to contribute substantially to the main policy interests although it was clearly focused on employment issues of general concern to the Department.' The Lord Privy Seal. (1979) *Review of the Framework for Government Research and Development (Cmnd 5046)*. Cmnd 7499. London: HMSO, 44.

Walton: On that note, I think we should go on to hear Arthur Buller talking about his experiences and the period during which it became apparent that the right thing to do was to re-transfer the funds. However, Arthur, I would like to just clarify one point. I think that Rothschild did lead to a few important developments in the MRC relating to the support of health services research and operational research in the NHS; if you would like to comment upon how that was seen from the Health Department's view, it would be helpful.

Professor Arthur Buller:[165] The first thing I should like to recall is that Douglas Black was elected President of the Royal College of Physicians on 4 April 1977. I attended the College that day to take part in the election, and I voted for Douglas. Had I known at that time of the implications for myself of Douglas's election, I might have cast my vote differently!

Before David Ennals appointed me Chief Scientist, Pat Nairne invited me out to lunch. He first wrong-footed me by inviting me to choose the wine – something I declined to do – and then explained to me something of the implications of the Rothschild requirements at the DHSS from the civil servant's point of view.

Before attempting to convey my interpretation of Pat Nairne's observations it is pertinent to remind you of some relevant facts. Douglas Black was Chief Scientist at the DHSS from 1973 to 1977. Whilst I am a great admirer of Douglas I think it was stretching a point to say that he implemented Rothschild. I think he 'avoided' Rothschild in a masterly way, but it did make for some difficulties. Pat Nairne was appointed Permanent Secretary at the DHSS in 1975. At that time Henry Yellowlees was Chief Medical Officer and Douglas Black, Chief Scientist. Pat [Nairne] had spent an appreciable part of his civil service career in the Ministry of Defence, a government department with a large and competent scientific component.

Over lunch, Pat explained to a naive Arthur Buller that as Permanent Secretary he was the Accounting Officer for the funds the department spent with the MRC on commissioned research. In line with the concordat negotiated by John Gray this money had to be spent on biomedical topics. As Sir Patrick has already said, even after the introduction in 1977 of the revised procedure for commissioning based on Black and Pole's 'Burden of disease',[166] the laborious exercise was '...a rather artificial process'. Rightly or wrongly I interpreted our conversation over lunch as indicating some unease on Pat's part as Accounting Officer and a wish to explore alternative models of the Department's involvement in research, especially with the MRC.

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[165] Professor Arthur Buller FRCP (b. 1923) was Professor of Physiology at the University of Bristol from 1965 to 1982, later Emeritus, and Dean of the Faculty of Medicine from 1976 to 1978. He was seconded to the DHSS as Chief Scientist from 1978 to 1981. He was Chairman of the MRC Neurosciences Board from 1976 to 1978 and of the DHSS Working Party on Clinical Accountability, Service Planning and Evaluation from 1981 to 1986.

[166] See note 156. From 1978–1979 the simplified arrangements involved the Health Departments providing the MRC with an annual statement of health problems and priorities analysed by the burden of diseases under 27 broad headings.

Certainly Pat was very conscious of Jim Gowans's wish to see the Rothschild money returned to the MRC (Gowans became Secretary to the MRC in 1977).

My first year in the Department, some of which was part time, was very much spent in 'learning the ropes' and assuming an administrative role that Douglas had declined to accept. It was soon apparent that if the department was truly to attempt to implement Rothschild there was a need for a considerable increase in scientific manpower. If this proved to be impossible a closer, but less formal, association with the Research Councils, SSRC as well as MRC, was in my view the only alternative.

During 1978 Sir Kenneth Berrill[167] and John Ashworth[168] of the Cabinet Office were conducting a review of the Rothschild arrangements. The report, published in 1979, mentioned the shortage of research managers and the lack of positive research planning at the DHSS.[169]

To my mind the die was cast on 3 May 1979, when the Conservatives won the election and moved into government. It was immediately apparent that financial retrenchment was the order of the day and the possibility of building up a fully competent Chief Scientist office in the DHSS was, at that time, a non-starter. Indeed, reductions in staffing were called for. I believe that it was at this time that Sir Patrick became fully convinced that the only way forward was to attempt to negotiate a new concordat with the MRC and return all, or at least most, of the transferred funds.

Pat Nairne has already referred to our meeting before the Public Accounts Committee with Jim Gowans. I agree that Jim spoke in a typically forceful and convincing manner in support of the return of the Rothschild funds, but I think that I should add that Pat played a very low-key game! I have heard Patrick Nairne in other places, and at other times debate much more astutely on equally weak cases. I believe that he was already convinced that, for the Department, the way forward was to obtain the best possible deal with the MRC for the return of the transferred funds.

Apropos Rothschild, the remainder of my time at the Department was spent in detailed negotiations with Jim Gowans concerning the new concordat. The new concordat was agreed by the MRC in October 1980 and implemented in 1981. The major part of the transferred funds, but not all, was returned to the MRC, the Department retaining

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[167] Sir Kenneth Berrill GBE KCB (b. 1920), economist, was Head of the Central Policy Review Staff at the Cabinet Office from 1974 to 1980, having served as Special Adviser on public expenditure to the Treasury from 1967 to 1969, Chairman of the University Grants Committee from 1969 to 1973 and Head of the Government Economic Service and Chief Economic Adviser to the Treasury from 1973 to 1974. He was a member of the Council for Scientific Policy from 1969 to 1972, the Advisory Board for Research Councils from 1972 to 1977, and the Advisory Council for Applied Research and Development from 1977 to 1980.

[168] Professor John Ashworth FIBiol (b. 1938) was seconded to the Cabinet Office from a chair of biology at the University of Essex from 1974 to 1979 where he was Chief Scientist to the Central Policy Review Staff from 1976 to 1981. He was Vice-Chancellor of the University of Salford from 1981 to 1990 and Director of the London School of Economics from 1990 to 1996. He has been Chairman of the British Library Board since 1996.

[169] See note 164, 7.

some money for possible commissioning as well as its own Health and Personal Social Services research budget.[170]

That, in very brief summary, is the story as I remember it. I think it approximates to what actually took place.

Walton: Thank you. It led, did it not, to the development of the Health Services Board?[171]

Buller: That's right. That was part of the deal with Jim [Gowans]. However, it seemed to me that, *de facto*, the Health Services Board turned out to be a rather poor relative of the three main boards.

Walton: Henry Yellowlees,[172] by the way, has sent his apologies, he couldn't be with us today. Was it the case that he was unhappy about the return of those transferred funds?

Buller: I think Sir Patrick would have been as conscious as I was that the Department did not want to see the money go back to the MRC. Perhaps Henry Yellowlees was the primary spokesman for this view. He believed that retaining direct control over the money gave the Department more clout. My problem was that I could not see how that clout could usefully be employed. In the end, as I have said, the Department did retain a small part of the transferred funds for future commissioning.

Nairne: If I could very briefly add a point, stimulated by Arthur's account, which I think is broadly accurate. I don't think that, as Permanent Secretary and Accounting Officer, I was unduly fussed about the accounting aspect, at least not to begin with. The recommendations of the Rothschild Report, as you yourself have said, had been accepted by the Cabinet and they had to be given a fair run; and it had been agreed from the start that they should be reviewed after several years. In general, as you yourself will know, it is rather difficult to get ministers closely interested in research. It is long term, it is uncertain, and there are very few votes, if any, in it. But actually we did have a Minister in Dr David Owen (now Lord Owen), who did take quite a close interest, and he was very much in favour of banging that rather well-known drum to the effect that millions of working hours are lost through, for example, back pain and the MRC won't give any research priority to back pain. That was certainly a cry I heard from Dr Owen; and it is a fairly frequent example of the way the Department, including Ministers, does not always understand the way research has to

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[170] See note 154.

[171] The 1979 Royal Commission on the National Health Service suggested a health services research board. See 'Concordat with the Health Department', *Medical Research Council Annual Report 1980–1981*, 4–5; 'Co-operation with the Health Departments', *Annual Report 1981–1982*, 6–7, for details of implementation.

[172] Sir Henry Yellowlees KCB FRCS (b. 1919) was Chief Medical Officer at the Department of Health and Social Security, the Department of Education and Science and the Home Office from 1973 to 1983. He had been at the North West Metropolitan Regional Hospital Board from 1959, when seconded to the Ministry of Health as Principal Medical Officer in 1963, when appointed Deputy Chief Medical Officer to Sir George Godber in 1967, and second Chief Medical Officer in 1972 until Godber's retirement in 1973.

be conducted. So when the Public Accounts Committee review had been completed, it had to go back to Ministers. That reflected the somewhat stately and bureaucratic process that you are well aware of yourself and many people in this room are aware of, and which had then to take place. But, in my judgement, in the end there were the constructive outcomes affecting the MRC and the NHS that you were seeking to emphasize yourself. Could I just add on a more flippant note? Why did I ask Professor Arthur Buller to choose the wine? It was because we had been reassured to find, on his appointment as Chief Scientist, that the word 'claret' was included among his recreations in *Who's Who*.

Walton: Tony Dornhorst, you and I served together on the MRC, just before this period. Do you have any comments that you wish to make upon the effects of the Rothschild changes on clinical research?

Professor Tony Dornhorst:[173] The effect was nil. It's as simple as that. When it was introduced there was a great fluttering in the dovecotes. As Sheila [Howarth] can confirm, we thought all sorts of nasty things would happen. In the event of course, as regards the day-to-day work and so on, nothing happened. The Department of Employment[174] did in fact succeed in commissioning a project and it was a very good idea. They wanted a portable device which could be used in the field to diagnose disease of the small airways. An excellent idea. As you will almost certainly know, we could still use such a device, but it doesn't exist. So that wasn't a great success, although they showed willing. Until we both left, the Department of Health hadn't produced any commissions at all, so the whole thing was really a non-event.

Walton: Thank you. Douglas, I think one of your concerns, am I right in saying, was that whereas the MRC from the date of its establishment had created a substantial, effective, and skilled infrastructure of scientists and others who were accustomed to looking at research, you found it difficult to identify a similar infrastructure in the Department which had not primarily been concerned with developing research programmes? Was that a factor?

Black: Yes, there was a lack of appropriate research-oriented infrastructure within the DHSS, as compared with the MRC; not surprisingly, since the MRC was able to concentrate on the administration of research, whereas the Department had many other responsibilities. Also, in the units supported by the DHSS, there was a shortage of 'middle management', leaving the head of the unit supported only by rotating junior staff, like a 'naked professor'. Short-term contracts did not give encouraging tenure to senior workers; and the alternative of becoming established civil servants was apparently unattractive.

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[173] Professor Tony Dornhorst FRCP (b. 1915), was Professor of Medicine at St George's Hospital Medical School, London, from 1959 until his retirement in 1980 and a member of the MRC from 1973 to 1977.

[174] See note 164.

Walton: In the recent past, of course, there has been a significant change, with the development of the Department's R&D structure, which of course is a new scenario entirely, but is outside the decades with which we are dealing. Are there any other comments then about this whole issue of Rothschild and the developments which followed? If not, can I ask what people began to perceive as the decade, 1970–1980, moved on, of the effects that began to emerge of the University Grants Committee cuts on the universities. Certainly in the last few years that I was Dean (1971–1981) in Newcastle, we began to find that those cuts were making it extremely difficult to provide the infrastructure and the support that was needed by research workers, even those who were capable of bringing in very substantial research grants. Would anyone wish to comment?

Buller: Could I say a word there, because I returned to my university department from the old DHSS in 1981, which was just when those cuts were coming in, and it took me a full fortnight to realize why my ex-colleagues were looking at me in a strange way. I then learned that the department had been asked to find two redundancies, and in their eyes there was the message, 'Arthur, we have done without you for three years and therefore your absence won't matter'. So the effect on me was early retirement.

Munro: I think I would like to endorse the comment that you made yourself, Mr Chairman, namely that one saw, first of all, a disappearance of the funds which used to be made available within departments to start people off, to show them that they had it in them to do independent work. And secondly, there was an increasing tendency for the MRC report on research grants to come back with 'high grades but not funded'. I remember Lord Dainton used to come round frequently and ask how often this had happened. I don't think anything happened as a result of his enquiries, but clearly he was aware of the fact that the constraints on funds were certainly limiting lots of promising projects. There was another factor at the time. When we were all asked to audit our clinical activities, there were funds set aside by the Trent region to fund audit work.[175] At one stage they put as much as £300 000 aside to fund this work, which was in fact only 0.03 per cent of their annual budget. It was a very large region. And there was a great tendency for the board dealing with those audit requests to say, 'This isn't audit, this is research', and for the local research committees to say the same thing in the opposite way.

Hoffenberg: I was head of a large department of medicine for most of that decade. Certainly we felt the impact of funding cuts, but on the whole we managed to find a way through the system and get the money we needed, often through alternative new sources. The big problem was the effect it had on recruitment. Young people sensed

[175] Professor Donald Munro wrote: 'The Trent Regional Health Authority was not alone in providing funds for audit work when regular data on performance first began to be sought from hospitals. It was an obstacle to persuading such authorities to fund any other research work on more fundamental aspects of clinical research and two committees – one for "audit" and one for research frequently passed applications for funding to one, over to the other – as they were both stretched financially.' Letter to Mrs Lois Reynolds, 9 April 2000.

that academic medicine would not be well funded and would not provide the security of the NHS and many bright prospects were lost.

Walton: Ian McDonald, did you wish to come in on this problem?

Professor Ian McDonald:[176] Yes, really to reiterate what Bill Hoffenberg has said. This was a period in which I was very actively involved in building up a group of people, and I have to say that in neurological research it was not as difficult as I understand it was in some other disciplines, but it became quite striking by the end of the 1970s, when it was becoming difficult to get manifestly very able people, committed to a research career.

Gordon: When the Trust was setting up a committee last year to look at the Trust's Clinical Facilities scheme, because all the big players in the UK were applicants, the committee came almost entirely from the United States. Stan Peart earlier on alluded to his membership of it as an elder statesman. One of the people we recruited was John Marshall,[177] who is now at the University of Virginia, and he had actually been in Bill Hoffenberg's department at the time he has just described. Even though John Marshall was well-funded as a Wellcome Trust Senior Research Fellow, he actually was driven away by the poor morale. He commented a number of times as we did site visits to several universities last year, at the way in which it had taken a very long time for morale to come back and for people to start to see the possibilities. So a downward turn at that time had very long-term effects to an outside observer.

Peter Williams: In 1979 the Wellcome Trust created Senior Lectureships and, a year or two later, Lectureships. This was a response to the UGC cuts. There were some 300 applicants for Senior Lectureships and about 35 were appointed. So there would have been 270 that didn't get them, but who clearly thought that their jobs were in jeopardy, that's why they were applying. The fact was though that when it came to the Trust looking at these Senior Lectureships, although they were Senior Lectureships, I think the selection process was almost identical to the Senior Clinical Fellows. That was the type of assessment that we used. And the outcome was that out of these 35 appointees, about half of those were clinical, so some 15 or so people were rescued for clinical research by this Trust scheme. The Trust thought it had got all that it was desirable to support, especially in research terms. It did not, in my view, limit the number because it didn't have the money, it was very flush at that time.

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[176] Professor Ian McDonald FRCP FMedSci (b. 1933) was Professor of Clinical Neurology at the Institute of Neurology, London, from 1974 to 1998. He has been Harveian Librarian at the Royal College of Physicians of London since 1997.

[177] Professor John C Marshall held a Wellcome Trust Senior Research Fellowship in Clinical Science at the Universities of Birmingham and Michigan from 1974 to 1979. He was appointed Professor of Internal Medicine at the University of Michigan in 1979, and Chief of the Division of Endocrinology and Metabolism from 1987 to 1990. In 1991 be became Arthur and Margaret Ebbert Professor of Medical Science at the University of Virginia, and is now Director of their Center for Research in Reproduction.

Walton: Could I ask whether the [Wellcome] Trust did or has done any kind of follow-up of the subsequent career patterns of individuals who held such appointments? The reason I ask that is because in my department I had seven Wellcome Senior Fellowships in Clinical Science at different times; of those, two have subsequently become professors, one in the States and one in Australia, while others have become consultants in the NHS, with an interest in research. Many have been so driven by the major burden of clinical responsibility that they have done very little research since they were given those appointments. One of them has. So I think that about a 50 per cent outcome is not too bad. But what has happened to the Wellcome Senior Lecturers?

Williams: David [Gordon] is the man to ask.

Gordon: We have looked at where people go and what they do. Where they go is relatively easy to find; certainly with medical people you can find out where they have gone through the *Medical Directory* and so on. Scientists still publish and leave footprints all over the scientific literature. It is easier to find the job that people are in, and it's a much higher success rate overall than 50 per cent.[178] Former Senior Fellows and Wellcome Senior Lecturers end up in very good and very worthwhile and important appointments. What we haven't done in the same detail, but we are starting to do, is to look at what they actually do, what they are publishing. It is all very well to be professor of something, somewhere, but if you are not actually publishing anything very much or haven't encouraged other people, then it may not have been worthwhile. I think it does lead me to comment that if you are really going to do something, if you are responsible for clinical research, to set up a unit is fine, to build buildings is fine, but in the end if you haven't got the people, then it will get nowhere. Despite all the pushing and shoving and where the money is shifted to and from, if there hasn't actually been someone in there saying, 'Who are we going to identify to make sure clinical research will go forward in the future?', then it is just not going to happen.

Booth: I think this question of people is absolutely crucial and the fundamental problem here is whether you can identify people in the clinical field who are genuinely interested in a research career. I can only say from my experience with the MRC that that has proved extremely difficult to identify. The MRC in this period set up a new scheme in which it wanted to identify brilliant young clinical scientists who could be given MRC Professorships within the universities,[179] and this was set up in, I think,

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[178] Of 84 Wellcome Trust Medical Graduate Fellows after 1985, seven moved directly to senior lectureships (one later to a chair); 20 to lectureships (7 later moved on to senior lectureships); two to senior fellowships, 15 to become registrars (of which one to a senior lectureship and four to senior registrar) and 24 to senior registrar (one later went on to a senior fellowship and four became consultants). See Gordon D. (1994) Building bridges: Research opportunities for clinicians. *TRP3: Research and Funding News from the Wellcome Trust* 1: 10–11.

[179] Dr J M Newsom-Davis was awarded the first MRC Clinical Research Professorship as MRC Clinical Research Professor of Neurology by the University of London at the Royal Free Hospital and the Institute of Neurology. Senior Award Schemes began in 1978–1979 to support established research workers, who were 'expected to devote their whole working time to research in medical schools, undertaking such patient care as is necessary for this research but not taking part in routine university teaching or administration ...to retirement age.' House of Commons. (1980) *Medical Research Council Annual Report April 1978 – March 1979*. HoC219. London: HMSO, 69.

about 1978 or so – and I was a member of several of those committees. In all that time, and certainly in the decade that followed, I think we only identified four throughout the country, one of whom has taken on a university chair since then, another of whom I notice is candidate for the post of Chief Medical Officer, which was hardly what we had in mind, I may say, when we set up the professorship for the MRC. But it has proved in Britain extraordinarily difficult to find people who want to give up that happy amalgam, if you like – George Whipple's triple chair,[180] where clinical work, research, and teaching are combined – and the number of people who want solely to do research, as opposed to doing teaching and clinical work, is remarkably few.

Dickinson: I think potential researchers who are hovering between an academic career and one in the National Health Service need some reassurance about the possibilities of moving in both directions. Just after I was appointed to Bart's, I had a long car journey with John Lennard-Jones, who was subsequently appointed to the London Hospital and became Professor of Gastroenterology. He told me of his experiences when he became an NHS Consultant at UCH. He had been a protégé of the late Max Rosenheim's and assumed that when he was appointed to UCH, Max would welcome him with open arms and give him laboratory facilities to continue his gastroenterological research. No such thing happened. As soon as he was appointed, he went to Max asking for laboratory accommodation and Max said, 'You are an NHS Consultant, you are nothing to do with the medical unit, you fight your own battles'. The first thing I did when I got to Bart's was as far as possible to dissolve the medical unit completely and make no distinction whatsoever between the NHS Consultants in any part of the medical school and the hospital and those on the medical unit. The academic units were intended to fertilize research within medical schools. They weren't meant to be little empires on their own. It's quite extraordinary that there was one of those operating at UCH, where the first Rockefeller Professors were appointed.

Howarth: I think that we should remember that not only were the UGC funds being cut back, but that in the middle of the 1970s there were cutbacks in real terms in the MRC budget, and each of the boards was instructed by Council to set up what were known as 'hatchet committees'. Tony Dornhorst will no doubt recollect, as a board chairman, that he and I spent a whole day going through a printout of all the work which was supported by one of the boards, trying to identify work which might be axed come the day. But it also created a situation which caused a certain amount of anxiety I think in university circles, where of course the long-term commitments to MRC units, institutes, and personnel had to be continued, so that, relatively, the university portion of the MRC budget was liable to be diminished in order to maintain the MRC's own research effort.

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[180] Professor George Whipple (1878–1976) was Professor of Pathology at the University of Rochester School of Medicine and Dentistry from 1921 to 1955, and shared the Nobel Prize in Physiology or Medicine in 1934 with George Richards Minot and William Parry Murphy for his work on studies of the liver, the bile pigments, the formation and reconstitution of haemoglobin and the metabolism of iron. See Corner G W. (1963) *George Hoyt Whipple and his Friends: The life-story of a Nobel Prize Pathologist*. Philadelphia, PA: J B Lippincott Company, 155–176.

Gray: One of the real problems behind all this was the lack of career structure, security. This goes back a long time. You will remember when I was Secretary and you [Walton] were on the Council, we had great discussions about career structures and we produced a scheme to try and get some more career posts into the universities instead of short-term grants. I went and visited every vice-chancellor and tried to sell this project. In the end the whole thing flopped. The universities suspected it was going to cost them money.

Walton: Not only that. My Vice-Chancellor at that particular time, the late, lamented Henry Miller, said that this was a mechanism for the MRC off-loading some of its clapped-out scientists on to the universities. And that was the attitude of several Vice-Chancellors at that time.

Gray: That was what we found, despite what I thought were our very good intentions.

Walton: Quite. I remember it well. Well now, I think we ought to bring the meeting to a close.

Booth: If you are going to bring the meeting to a close, can I just give you a statistic, in the presence of the Professor of Medical History at Johns Hopkins Hospital, Professor Gert Brieger? I analysed the Nobel Prizes for this century and it's interesting that the United States, where clinical research has had a much more favourable wind within the universities, and within that very independent scene that is America, they have achieved something in excess of ten Nobel Laureates amongst those who are hands-on clinicians who actually walk wards. The number in Britain, to the surprise of many people who discussed it with me, is in fact zero.[181]

Walton: Yes. And the problems that began to escalate in the 1980s or in the late 1970s and increased in the 1980s, in some respects pale into insignificance with the problems that we are now facing. As some of you may know, I chaired a House of Lords Select Committee enquiry which reported two years ago on clinical research in the NHS in the light of the government reforms. We had high hopes of the Culyer mechanism,[182] which was one of the things we recommended; we hoped that that particular R&D programme would result in considerable improvement in research in the NHS. But in the meantime clinical academic medicine is in a parlous state. We identified 57 vacant clinical chairs in the UK for lack of suitable applicants. We identified the fact that clinical academic careers, as Bill Hoffenberg commented, are now even less attractive than they were because of the unremitting pressure from managers in the NHS upon clinical academics who, they believe, many of them, to be just as much responsible for the work of the NHS as the NHS consultants. They are

[181] See note 140, 214–215.

[182] Department of Health. (1994) *Supporting Research and Development in the NHS: A report to the Minister for Health by a Research and Development Task Force chaired by Professor Anthony Culyer.* London: HMSO. The report was accompanied by Press Release 94/406, 14 September 1994.

applying increasing pressure upon them to see more and more patients and to reduce waiting lists to the detriment of teaching and research. And the terms and conditions of service of the clinical academics are still in many respects less attractive than those in the NHS. One could go on, but the Richards Report,[183] which arose out of our enquiry into research in the NHS, has made a number of important recommendations relating to the future of clinical academic medicine. The Vice-Chancellors are still sitting on that report, very reasonably, because to implement its recommendations will cost money which the universities at the present time don't have. I don't want to be too gloomy. I believe that the future of academic medicine in the UK is still bright, but it is going to need enormous energy and dedication from people in the field to try to draw in the funding that is going to be so crucial to the future of British medical research. I have been fascinated to hear all that has been said today and I really believe, Tilli, that we shall have a very readable document at the end of the day. Thank you for inviting me to chair the meeting.

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[183] An extended account of Lord Walton's statement is given in *Hansard*, 8 December 1999, col. 1329.

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