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The Development of Health Economics and the Role of the University of York

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The Development of Health Economics and the Role of the University of York

The Transcript of a Witness Seminar held at the University of York on 27 October 2017

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References to this witness seminar should be made in the following format:

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Introduction

Economics as applied to health, or health economics, emerged in the United Kingdom (UK) in the 1960s, although the discipline was born a decade earlier in the United States (US). In the UK, groups of economists interested in public policy issues such as health emerged at the University of York and the University of Exeter, to name the most prominent. Issues such as scarcity of resources for health care and the need to allocate these in a cost-effective way, linked with the development of ideas about opportunity costs and valuing life, had an impact on how the government solicited and managed health economics expertise. An Economic Advisers' Office (EAO) was proposed within the Department of Health and Social Security (DHSS) in 1967 (TNA, BN155/4, *NHS Economic Analysis*, Osmond report, 16 May 1967). The first two economists – David Pole and Jeremy Hurst – began working in the EAO in 1970 and 1971 respectively. The practice of secondment, whereby academics were attached to Whitehall departments for a set period, was also important in the development of health economics. Alan Williams (Lecturer, later Professor of Economics at the University of York, 1964-2005) was seconded to the Treasury in 1966-1968. The government also looked to develop direct links with academic departments. Jack Wiseman (Professor and founding Director of ISER at the University of York, 1964-1982) and Tony Culyer (Lecturer at York in 1969; Assistant and Deputy Director of the Institute for Social and Economic Research (ISER), 1971-1979; Professor, 1979-2014) were central figures in the cultivation of this early relationship, liaising with David Pole and other key individuals such as Dr Max Wilson (DHSS Senior Principal Medical Officer 1972-1976), and Dr Richard L. Cohen (DHSS Chief Scientist 1972-1973). The role of health policy think tanks was also critical in enabling academic departments to grow. In 1966, Gordon McLachlan (Secretary of the Nuffield Provincial Hospital Trust (NPHT) 1956-1986) awarded the first major four-year £45,000 grant to the York health economists.

There were a number of factors that led to the University of York emerging as a leading British academic location for health economics. In addition to the entrepreneurial role of key academics as outlined above, York's relative newness as an academic institution was significant. Having been established in 1963 as one of the new 'plate glass' universities, Alan Peacock (Deputy Vice-Chancellor and Founding Chairman of the Department of Economics and Related Studies) and Jack Wiseman, both London School of Economics (LSE) graduates and famous public choice and liberal economics proponents, were given wide liberties in establishing economics as a discipline at York. They chaired the ISER (Wiseman) and the Department of Economics and Related Studies (DERS) (Peacock) which fostered inter-disciplinary research and teaching. They both believed in the necessary interconnectedness between teaching and research, which encouraged a new style of 'applied' scholarship, as seen in the creation of new taught postgraduate qualifications which included placement opportunities with government departments, local authorities and industry. This genealogy and the emphasis in ISER made York a natural breeding ground for health economics and the establishment the first UK Masters degree in Health Economics in 1978.

One of the most significant developments in health economics cultivated at York in the 1960s was the idea of using economic tools and theory to value life, which was pioneered by, firstly, the economist Mike Jones-Lee (1969; 1976).[1] Tony Culyer, Bob Lavers and Alan Williams later researched how health could be measured. One of the earliest indications of this emerging

[1] Jones-Lee, M. (1969), 'Valuation of reduction in probability of death by road accident', *Journal of Transport Economics and Policy*, 3: 37-47; Jones-Lee, M. (1976), *The Value of Life – An Economic Analysis*, London: Martin Robinson.

research focus is seen in the image below (Figure 1) which depicts the relationship between pain and restriction of activity in a schematic format for the first time.

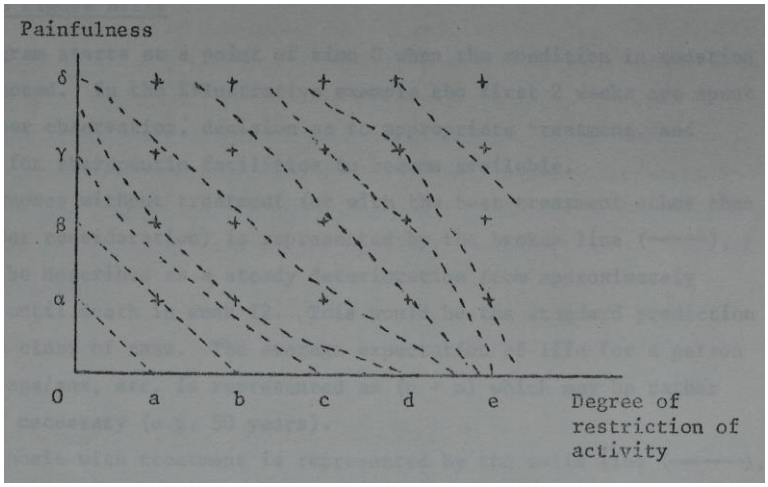

Figure 1: Image of Schema fusing painfulness and restriction of activity into a single dimension (TNA, MH166/927, *Economics of Medical Care*, 'Health Indicators' report submitted by Culyer, A., Lavers, R. and Williams, A. to the DHSS, p. 29, 1971)

This underpinned the development of the Quality-Adjusted Life-Years (QALY) work with Rachel Rosser, Vincent Watts and Paul Kind in the 1970s. This was further developed with the creation in 1987 of a European group dedicated to measuring and valuating health-related quality of life, the EuroQoL group, which developed the EQ5D in 1990 as a standardised measure for health outcome, and which has formed the basis of the evaluation of cost-effectiveness of drugs and treatments by the UK National Institute for Health and Care Excellence [NICE] since 1999, as well as in 170 other countries.

In January 1970, York hosted a conference entitled 'The Economics of Medical Care'. This brought together some of the most influential voices in medical care policy, including medical professionals (Archie Cochrane, Dick Cohen, Max Wilson); and economists (Denis Lees, George Teeling-Smith from the Office of Health Economics (OHE), and Malcolm Levitt from the Treasury). The conference stimulated DHSS funding in 1971 for three projects based at York on waiting lists, social accounting of health and area resource allocation, and teaching hospitals (CHE Archives, Letter from JD Pole to Jack Wiseman, 3 August 1971). In addition to the grant given, this initiated a period of rolling funding by DHSS which permitted the creation of a continuous and stable environment for health economics research at York.

In 1983, the relationship between York and the DHSS was further strengthened through the creation of the Centre for Health Economics (CHE) with an investment of over £400,000 of funding from the Economic and Social Research Council (ESRC)[2] and DHSS. The first director of CHE was Alan Maynard (1944-2018; Lecturer in DERS from 1971, Professor of Health Economics 1983-2018). Other funding was sourced from regional National Health Service (NHS) authorities, the Medical Research Council and other funding bodies. In 1986, York decided to separate out the consultancy function provided by its health economists into a new organisation: the York Health Economics Consortium (YHEC), which was directed by Ron Akehurst.

[2] The name of the Social Science Research Council (SSRC) from 1983.

Health economists who have been associated with the University of York have been instrumental in a number of significant innovations, which include:

- Valuing and measuring health
- Costing hospital activities
- Outcome measurement and QALYs
- The equitable distribution of health services
- Resource allocation formula for regional health service expenditure
- Training of clinicians and NHS managers in health economics
- Advising regional health authorities on economic issues
- The development of health economics in the UK and abroad via the Health Economists' Study Group (HESG)
- The 1991 NHS Internal Market
- Health technology assessment and the creation of NICE
- Incentive structures of the health care system
- The economics of waiting
- The economics of general practice
- The development of health econometrics
- The extension of cost-effectiveness to include equity and financial protection
- Economics of public health
- Global health economics

This witness seminar brought together key individuals in the development of health economics at the University of York, including academics and government economists. The structured discussion covered the origins of health economics, knowledge transfer between academia and government, and the role of the discipline in other settings such as the NHS and the pharmaceutical industry.

Contributors

Convenors

Professor Sally Sheard: Andrew Geddes and John Rankin Professor of Modern History, University of Liverpool

Dr Eleanor MacKillop: Research Associate, University of Liverpool

Chair: Professor Sally Sheard

Witnesses

Professor Ron Akehurst: Inaugural Director of the York Health Economics Consortium (YHEC) (1986-1993); Professor of Health Economics, School of Health and Related Research (ScHARR) (1993-), now Emeritus, University of Sheffield.

Professor Karen Bloor: Research Fellow (1991-1996), Centre for Health Economics, University of York; Research Fellow (1996-2001), Department of Health Sciences and Clinical Evaluation, University of York; Senior Research Fellow (2001-2012) and Professor of Health Economics and Policy (2012-), Department of Health Sciences, University of York; University of York Research Champion for Health and Wellbeing (2015-).

Mr Andrew Burchell: Economist, Department of Health and Social Security (DHSS) (1976-1984); Economic Adviser (1985-1989); Senior Economic Adviser (1989-1990), Department of Health.

Professor Roy Carr-Hill: Senior Research Fellow (1984-1990); Reader (1990-1995); Professor (1996-2016), Centre for Health Economics (CHE), University of York.

Professor Tony Culyer: Lecturer, Senior Lecturer and Reader in Economics (1969-1979); Deputy Director of the Institute of Social and Economic Research (1971-1982); Head of the Department of Economics and Related Studies (1986–2001), University of York.

Mr Keith Derbyshire: Economist (1992-2016); Chief Economist (2012-2015) and Chief Analyst (2015-2016), Department of Health; Honorary Professor, CHE, University of York.

Professor Michael Drummond: Research Fellow (1975-1978); Professor of Health Economics; Director (1995-2005), CHE, University of York.

Professor Brian Ferguson: Research Fellow; Senior Research Fellow; Assistant Director, York Health Economics Consortium (1988-1995); Deputy Director, Centre for Health Economics (1995-1997); Honorary Professor, Department of Health Sciences, University of York (2004-); Chief Economist (2015-), Public Health England.

Professor Maria Goddard: Research Fellow (1988-1992); Senior Research Fellow (1996-1998); Professor of Health Economics (2005-), Director of the Centre for Health Economics (2009-), University of York. (written contribution)

Dr Alan Haycox: Research Fellow (1982-1984), University of York; Reader in Health Economics (1995-), University of Liverpool.

Professor John Hutton: Research Fellow (1979-1983), Institute for Social and Economic Research; Senior Research Fellow (1983-1992), CHE; Professor of Health Economics (2007-2014), Health Sciences, University of York; Director (2009-2012), York Health Economics Consortium (YHEC).

Professor Anne Ludbrook: Research Fellow (1978-1981), University of York; Professor of Health Economics (2006-), University of Aberdeen.

Professor Alan Maynard: Lecturer, Senior Lecturer and Reader in Economics (1971-1983); Director of the Graduate Programme in Health Economics (1977-1983); Professor of Economics and Founding Director of the CHE (1983-1995); Professor of Health Economics (1997-2014), now Emeritus, University of York. *(could not attend in person)*

Mr David Pole: Senior Economic Adviser (1970-1976); Chief Economic Adviser for health (1980-1984), Department of Health and Social Security (DHSS) *(written contribution)*.

Mr Clive Smee: Chief Economic Adviser (1984-1988; 1988-2002), DHSS then Department of Health. *(written contribution)*

Photography and assistance with the event:

Dr Michael Lambert: Research Associate, University of Liverpool

Image 1: (Left to right) Witnesses Professors Roy Carr-Hill, Ron Akehurst, Mike Drummond, Anne Ludbrook and event convenor Professor Sally Sheard

Areas for discussion

1. Origins of UK health economics
    a. The role of US/UK connections
    b. The relative position of health economics at other UK universities
    c. The role of other actors and organisations such as think tanks

2. Health economics in government
    a. How health economics expertise/knowledge has been transferred
    b. How did the relationship between York and DHSS begin? What factors affected its development?
    c. Key achievements and obstacles
    d. Reactions to the growth/use of health economics from other professions/groups such as medical professionals
    e. Evolution of the relationship and impact of competition from other players such as private consultancies

3. Health economics in other contexts
    a. The NHS
    b. The pharmaceutical industry

4. An assessment of the past, current and future contribution of health economics to health care and policy

Witness seminar on the Development of Health Economics and the Role of the University of York

Professor Sally Sheard:

Welcome everybody - this is the witness seminar on the origins of health economics and the role of the York Centre for Health Economics [CHE]. I'm Sally Sheard, I'm a health policy historian – it's probably the easiest way to put it – from the University of Liverpool. This seminar is part of a five-year Wellcome Trust-funded project that I lead, called the Governance of Health: Medical, Economic and Managerial Expertise in Britain since 1948. I would like to thank Maria Goddard who sadly can't be with us today for her kind hosting and hospitality for this event, the Wellcome Trust for enabling and funding it and also Eleanor Mackillop who has been the main person who has put this all together. Eleanor is leading on the Health Economics strand of my project. We have some apologies sadly. Alan Maynard can't be with us today but I understand he is tweeting and I'm hoping that people will also tweet and that Alan might engage with us virtually which would be great. We also have apologies from Adam Wagstaff from the World Bank who was going to join us by Skype but he has been called to a meeting in Uganda. David Pole and Clive Smee, who are two very interesting people who have had a long association with CHE, send apologies.[3] [4] [5] They've also sent for the panel of witnesses, two briefing papers which we will hopefully bring in – Eleanor is going pick up points at which we might bring those in. A lot of you are wondering, what is a witness seminar? We will begin by talking through the process. It's a key methodology for historians as a way of extracting partial history, putting together individual people's views on an episode or a policy that they were involved in developing and creating. This is a slightly different one in that we are taking a longer-time period. We're going to be talking from the 1960s almost up to the present day, so it is an unconventional witness seminar. Seminars are transcribed which is why we asked you all to sign a consent form, if you've not yet signed one if you could see Eleanor or Michael [Lambert], another of my researchers who is here today, and make sure you sign one by the end of the proceedings. Then the transcript is published and we have opportunities for other people to contribute as well. It is a cumulative process, triggering memories by coming together for an afternoon to discuss the topic. We held a witness seminar last November on the 1974 National Health Service (NHS) reorganisation. I was concerned that we actually wouldn't have people there who could talk about 1974 and it was an amazing event, we had David Owen talking from a ministerial point of view, people from the BMA [British Medical Association], we had three McKinsey consultants there who had done that first NHS re-organisation, and who talked very candidly about what went right and what didn't go right.[6] [7] I have circulated four main questions that we are going to address. I'm going to chair and ask people to introduce

[3] David Pole was Senior Economic Adviser on health (1970-1976) working in the newly created DHSS Economic Advisers' Office (EAO) which was inaugurated in 1968 to bring economics into informing health and social security policy. He later became the first Chief Economic Adviser within the DHSS (1980-1983), covering both health (HPSS) and social services.

[4] Clive Smee was Chief Economic Adviser in the DHSS (1984-1988) and then the DH (1988-2002). He is the author of Smee, C. (2005), *Speaking Truth to Power: Two Decades of Analysis in the Department of Health*, Oxford: Nuffield Trust.

[5] See Appendices 2 and 3 for notes written in advance of the witness seminar by David Pole and Clive Smee.

[6] Begley, P., Sheard, S. and Mackillop E. (2017), *The 1974 NHS Reorganisation*, Liverpool: Department of Public Health and Policy, University of Liverpool.

[7] McKinsey & Co. is an international management consultancy firm. It was commissioned by the British government in 1971 to help reorganise the NHS.

themselves and I'm going to call on people at particular points where I think they might best contribute but the rest of the witnesses, please feel free to chip in as and when you would like to. We are going to talk about the origins of health economics in the UK and health economics in government, the transfer of knowledge between health economists and policy-makers, and the relationship between York and the Department of Health and Social Security [DHSS].[8] We will also talk about health economics in other contexts, particularly within the NHS and within the pharmaceutical industry and we will conclude with some broader discussion which hopefully the audience will want to contribute to as well, on the past, present and future contributions of health economics in health policy and health services. I'm going to open the discussion by going back to the 1960s and there are a few people from my witnesses who are going to talk about how we had that first genesis of health economics or economics with a health perspective in the UK. I wonder, Tony [Culyer], would you like to kick us off with some reflections, perhaps personal recollections of how you got into health economics?

Professor Tony Culyer:

Image 2: Tony Culyer

Where does one begin? The question is: when was the beginning? These beginnings are sometimes quite difficult to nail. I think my first interest in health economics was probably round about late 1964 when I was a graduate student and I read a lovely article in the *Journal of Law and Economics* on essentially the nature of the profession of medicine from an economics perspective.[9] That first got me thinking about it. That was while I was in the [United] States [of America].Then I came back to England and joined a department of economics at Exeter where a relatively new member was a chap called Michael Cooper who had a decided interest in health economics – in fact he had published a few things – although I don't think we called it health economics in those days, we just called it economics or social policy.[10] He had a substantive interest in health and health services, which on this side of the Atlantic was relatively unusual. Occasionally, economists had looked at health but they had looked at it from the perspective of an opportunity to apply some economics. They weren't substantively interested in health as a research topic but Cooper was, and he had acquired his interest at Keele [University] under Dennis Lees before Lees went to Nottingham, and I think that probably is the beginning of health economics in England.[11] That

[8] Health was managed at government level by the Ministry of Health (1911-1968), the Department of Health and Social Security (DHSS; 1968-1988), and the Department of Health from 1988.
[9] Kessel, R.A. (1958), 'Price discrimination in medicine', *Journal of Law and Economics*, 1: 20-53.
[10] Michael H. Cooper (1938-2017) was one of the first British economists to work on issues pertaining to health, working as research assistant for Denis Lees. He moved to New Zealand in 1975, founded a health economics course at the University of Otago, and worked as a consultant for health organisations and the New Zealand government. In an obituary he was referred to as the 'New Zealand father of health economics' (*New Zealand Doctor*, 2 August 2017).
[11] Dennis Lees (1924-2008) was lecturer in Economics at Keele University (1951-65), and Professor of Economics at University College, Swansea (1965-67) and University of Nottingham (1968-82). He had a

would date it from about 1959 or 1960 in Keele, not everybody thinks of Keele as the cradle of health economics [laughter] but I think you can make a plausible case that it is. Subsequently, Lees went to Nottingham and continued his work there. So that was for me the beginning of it and you felt very much that it was a beginning because in those days about 4% of GDP [Gross Domestic Product] was being spent on the NHS, certainly less than 4% of economists were interested in the NHS [laughter]. So there was gleam in one's eye, we used to joke that if you coughed, people would want to publish it [laughter].

Professor Ron Akehurst:

Only when you write it Tony [laughter].

Professor Tony Culyer:

So it seemed a nice opportunity. There were so many challenges: the literature was pretty much absent. The Americans, of course, were ahead of us with people like Ken Arrow.[12] But even before Ken Arrow, Selma Mushkin and one or two other people had pioneered it.[13] They weren't necessarily economists' economists, very often, but they were claiming to be economists and they did do some economics, and of course Arrow was every economists' economist so he was okay and many people regard him as the founder and his piece in 1963 in particular as being the foundation stone. But we're not concerned with health economics in the world, are we? We're concerned with health economics in Britain. There was very little. The major work I suppose that was being done at that time was by an American PhD student in Oxford called Martin Feldstein.[14] Aside from that, nearly all of the literature that we were producing came out in – most of you won't know this but in those days all the major banks published quarterly bank reviews and that was a place, along with the pamphlets of the Fabian Society, and the Institute of Economic Affairs [IEA], those were the sorts of media through which quite a lot of health economics got published.[15] [16] But there wasn't a lot of it and it was all quite elementary stuff, I mean all you guys here are incredibly sophisticated now and I'm floundering now but what more do you want? [laughter]. That's how it felt in those days. We were all holding one another's hands. There wasn't a senior patron at all to guide one. I

long association with the Institute of Economic Affairs. He was a member of the Economists Advisory Group - a consulting business. He favoured market solutions in healthcare. See 'Health through choice: An economic study of the British National Health Service', Hobart Paper No 14, London: IEA.

[12] Ken Arrow (1921-2017) was an American Professor of Economics and Operations Research at Stanford University (1979-1991). His most famous HE paper is Arrow, K. (1963) 'Uncertainty and the welfare economics of medical care', *The American Economic Review*, 53(5): 941-973.

[13] Selma Mushkin (1914-1979) was an American economist who pioneered research into health costs. She was a government economist before an academic career at Georgetown University and Johns Hopkins University in the US. Mushkin, S. (1958), 'Towards a definition of health economics', *Public Health Reports*, 73(9): 785-794. .

[14] Martin Feldstein is George F. Baker Professor of Economics at Harvard University, and the president emeritus of the US National Bureau of Economic Research.

[15] The Fabian Society is a left-leaning think-tank founded in 1884. Its members were instrumental in the creation of the London School of Economics (LSE) in 1895.

[16] The Institute of Economic Affairs (IEA) is a free-market think-tank founded in 1957 by Ralph Harris and Arthur Seldon. Closely associated economists have included James Buchanan, Patrick Minford, and William Niskanen. Professors Alan Peacock and Jack Wiseman, two founding members of economics at the University of York, were on the IEA's advisory council.

remember Mike Cooper for example. This is typical of the sort of things that happened in those days. Mike Cooper was quite well in with the Institute of Economic Affairs back in the early 1960s and he got a commission from the editor, Arthur Seldon, a very nice guy, very libertarian, quite right-wing, but despite that he was a nice guy [laughter] and he was a very good editor who actually used a blue pencil [laughter].[17] Blue pencil editing has rather gone out now, I've tried to practice it myself but all I've succeeded in when doing that is making enemies, but he never made an enemy of me. He'd been in hospital and there had been a problem because he couldn't get any blood and so he got interested in blood and this was the time when Richard Titmuss was using blood donating as being the archetypical idea that lies behind the welfare state. He commissioned Mike Cooper to write a piece on why there was a shortage of blood.[18] Mike, being the sort of person he is, didn't reach for his pencil drawing demand and supply. He started doing a survey and he sent around a very poorly designed survey to all the consultant doctors that he could identify in the UK, asking them whether they had experienced any shortages of blood. I say doctors, I mean surgeons, hospital surgeons. And he got back a whole load of un-interpretable replies. There was a very poor response rate. The replies weren't interpretable and that's largely because the questions weren't very well designed. The whole thing was a total disaster. He came to me and asked: 'can you help me?'. So he and I – well I mainly – on my dining room floor – I'd just moved into a flat in 22 Pennsylvania Road in Exeter, and on the floor of my dining room we drew a series of demand and supply and completely analysed the problem, sorted it out, and that eventually appeared as a pamphlet – which annoyed Ron Akehurst and a number of other people at the time it came out.[19]

[17] Arthur Seldon (1916-2005) was a British economist and founding editorial director of the IEA (1957-1988). He was a member of the 1968 British Medical Association Committee on financing in health in the UK. See: Seldon, A. (1968), 'After the NHS', London: IEA.

[18] Richard Titmuss (1907-1973) was Professor of Social Administration at the LSE (1950-73). He was a member of the 1953 Guillebaud Committee into the Cost of the National Health Service. See Abel-Smith, B. and Titmuss, R. (1955), *The Cost of the National Health Service in England and Wales*, Cambridge: CUP. In 1970, he published a provocative book on the ethics of blood donation: Titmuss, R. (1970), *The Gift Relationship: From Human Blood to Social Policy*, London: New Press.

[19] Cooper, M.H. and Culyer, A.J. (1968), *The price of blood: An economic study in the charitable and commercial principle*, London: The Institute of Economic Affairs.

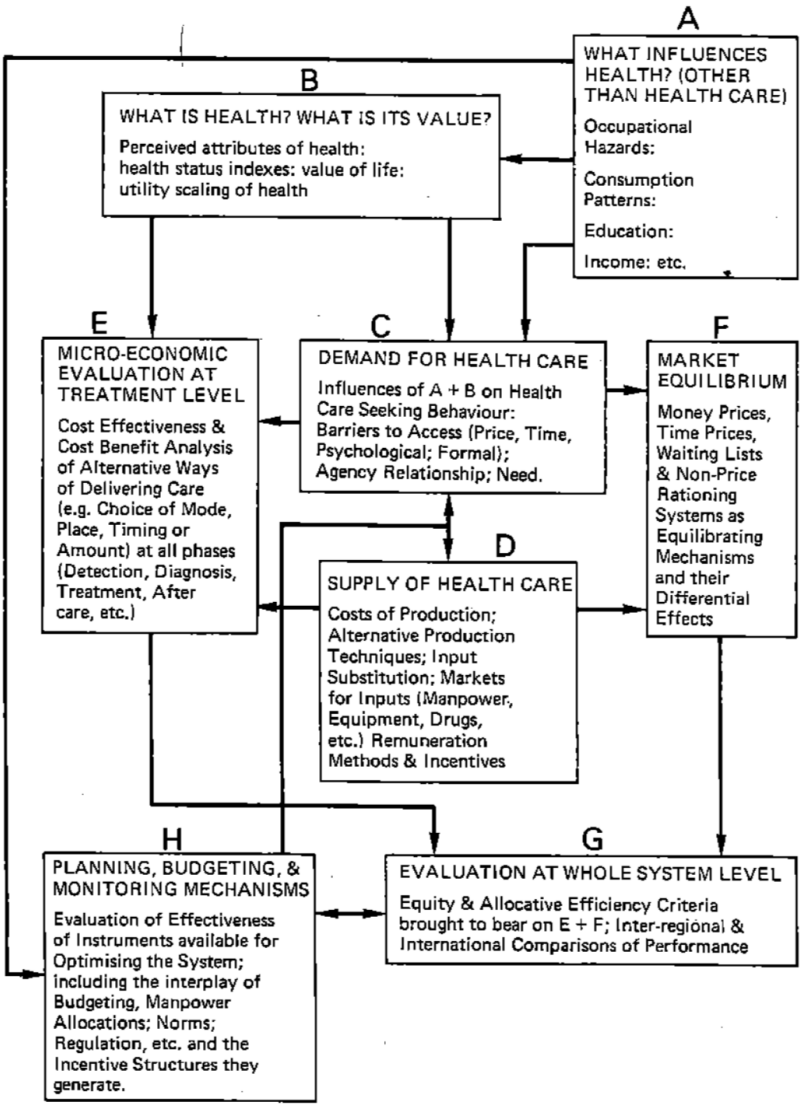

Figure 2: Schematic presentation of the main elements in health economics, Williams, A. (1987), 'Health Economics: The Cheerful Face of the Dismal Science', in Williams, A. (ed) *Health and Economics*, Basingstoke: Macmillan Press; p.3.

Professor Ron Akehurst:

It still does [laughter].

Professor Tony Culyer:

In a way that story explains quite a lot about how ideas got initiated, and, in this case, funded because there was money from the IEA for this – £70 [laughter] – which I took my Mum and my Dad and my fiancée out for a posh dinner in London. So it was all very ill-formed and ad

hoc and we did it as we went along and we had to make it up, everything we had to make up for ourselves.

Professor Sally Sheard:

Thank you, that's a fantastic opening, a brilliant example of the power of recall: you can even remember your address.

Professor Tony Culyer:

Don't expect me to be too precise in other matters. I shall always try to improve on the truth, of course [laughter].

Professor Sally Sheard:

Can I ask Mike [Drummond]? Would you like to add some comments about how you got into health economics?

Professor Mike Drummond:

I'm Mike Drummond, I'm currently a retired Professor at York. I was Director of the Centre [for Health Economics] from 1995 to 2005, something like that, ten years. I came into it quite late because I was an engineer and my background is in metallurgical engineering. The company I was working for got into financial troubles so I went off to University of Birmingham to do a Masters degree in Business Administration and after that I was looking for a PhD but University of Aston were looking for lecturers so I thought why bother doing a PhD if I could be a lecturer straight away. But then I found out that the job was teaching on a health administration course and because I was an engineer they thought my maths was probably okay so they asked me to teach the course on statistics to nurses. Apparently, they couldn't get anyone to teach that. [laughter] So I got into health that way through health administration and then it was around the time Tony produced that book of readings with Mike Cooper – published by Penguin [Ron Akehurst brandishes the book] that's the one [laughter] – 1973. Also, there was a PhD student who was doing work on the economics of occupational health and he'd done a huge literature search so I sort of self-taught myself health economics and started lecturing on that to the nurses. I decided if I was going to study health economics I might as well go to what I thought was the best place at the time so I gave up my tenured lectureship job and came to York on a one-year research contract

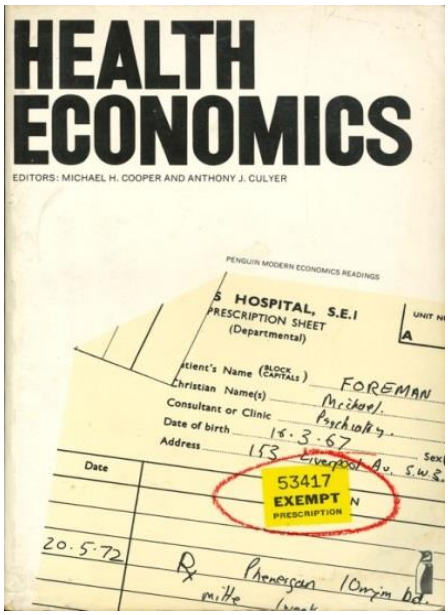

Image 3: Front cover of Culyer, A.J. and Cooper, M.H. (1973), *Health Economics*, Harmondsworth: Penguin Books.

working with Tony on teaching hospital costs. I remember my first meeting with Tony and he said: 'what are you doing here?' and I said: 'well I'm your new researcher' and he said 'okay, well publish' [laughter]. And then I worked with Alan Williams for two years, worked on methodology of economic evaluation which eventually became my main research interest. So it was in about 1975 that I came to York for the first time.

Professor Sally Sheard:

Thank you. Ron, you were making asides earlier while Tony was talking?

Professor Ron Akehurst:

There's a long tradition of that.

Professor Sally Sheard:

I know. Could you just briefly give us some indication how you got into health economics please?

Professor Ron Akehurst:

Well I came initially to York having got a first degree in economics and I came to York to do a doctorate in development economics and I went to one of the first meetings of a collection of people doing that and I thought they and the people teaching it were awful so I looked around for something else to do. There was a social policy course available at the time and that included in it this rather novel module that Tony was responsible for in health economics, though we didn't call it that. What did we call it Tony? I can't remember.

Image 4: Ron Akehurst

Professor Tony Culyer:

I can't remember either.

Professor Ron Akehurst:

I can't remember either but the term health economics wasn't used but essentially it was health economics and I got very interested in that and then Jack Wiseman got approached by the Pneumoconiosis Research Unit at the MRC [Medical Research Council] to see whether or not anybody would be interested in doing some work on the impact of the 1969 asbestos regulations

on the industry that was responsible for making asbestos products.[20] [21] I sort of conceived of it as being more about what the trade-off was between the impact of health versus the impact on the industry so I started working on that. I worked on that until 1972 then I went as a lecturer in economics to the University of Lancaster. I hadn't been there a very long time when there was big recruitment drive at the Department of Health to try to recruit economic advisers and David Pole contacted me as one of the allegedly few people around who knew anything at all about economics in health care, on the grounds of in the court of the blind the one-eyed man is king. He contacted me and that really cemented me into health economics, because going to work at the Department and getting immersed in all that stuff there just cemented me in it.

Professor Sally Sheard:

Thank you, we will come back to that and to the Department later on. Would anyone else like to contribute at this stage on this opening discussion on the origins of health economics? Tony set out quite a historical account which involved Keele, Exeter, Mike Cooper, and his own position.

Professor Brian Ferguson:

There's not many panels where I sit on today where I'm just about the youngest [laughter]. I'm Brian Ferguson and I spent ten years or so in my career at the University – at YHEC [York Health Economics Consortium] working with Ron and Mike and at CHE working with many others.[22] My role now is Chief Economist in Public Health England which we will come back to later.[23] The reason I thought it was worth chipping in now because I want to mention Aberdeen and I'm sure others may want to say something as well. I was very fortunate the way I got into health economics. I started my undergraduate degree in economics in Aberdeen but then in my final year did a special option, which I think was on the Economics of Health and Social Care, and was very fortunate because there were people like Gavin Mooney and John Henderson and Ali McGuire teaching at that time in Aberdeen in the Health Economics

[20] Jack Wiseman (1919-1991) was an economist and founding director of the Institute for Social and Economic Research [ISER] at the University of York.

[21] This unit was established in 1969 by the Scottish doctor and epidemiologist Dr Archie Cochrane (1909-1988) at the University of Cardiff. Cochrane pioneered Evidence Based Medicine [EBM] in the UK, especially the use of Randomised Controlled Trials [RCTs]. See Cochrane, A. (1972), *Effectiveness and Efficiency: Random Reflections on Health Services,* London: Nuffield Provincial Hospitals Trust.

[22] The York Health Economics Consortium [YHEC] is the consultancy arm of the Centre for Health Economics at the University of York. It was founded in 1986 to provide health economics advice to, initially, health authorities in the North of England.

[23] NHS England is an executive agency of the Department of Health. It was founded in 2013 as a result of the 2012 Health and Social Care Act and replaced the NHS Management Executive.

Research Unit.[24] [25] [26] [27] So I got really interested that way and ended up spending my summer between degrees before coming down to York for the MSc working as a research assistant with Ali McGuire. And it's at that time I think that they cooked up the idea to do that book that we now all know as one of the key text books: McGuire, Henderson and Mooney, *Economics of Health and Social Care*. It was a very exciting time because health economics was really big in Aberdeen. So that's how I got into it and I came down to York and Gavin never really quite forgave me for then staying in York and then going further down south and not going back to Aberdeen. My career might have turned out very differently had I gone back to Aberdeen but Aberdeen has had a major role to play in the development of health economics I think.

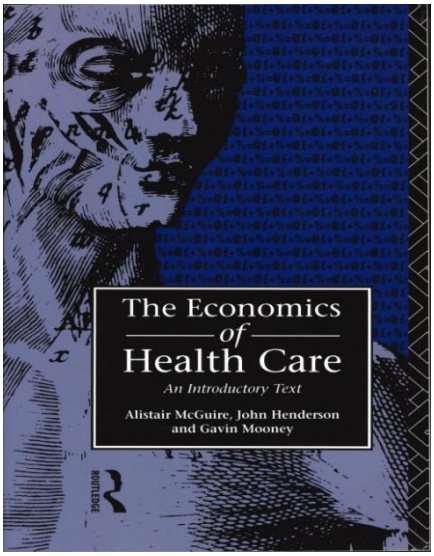

Image 5: Front cover of McGuire, A.; Henderson, J. and Mooney, G. (1988), *The Economics of Health Care*, London: Routledge.

Professor Sally Sheard:

You have perfectly set up Anne [laughter] – we will move to Anne Ludbrook next.

Professor Anne Ludbrook:

I did the MSc in Health Economics in 1978, the first year it ran, and then worked here at York for three years before going up to Aberdeen. I was kind of holding back because the thing said origins rather than development and when we were in the 60s and I was far too young to remember the 60s [laughter]. When I came into health economics, it was very much by accident in a way. I came to York to do a degree in maths and economics and developed an interest in applied economics, public economics and decided I would do a Masters. At that time, there was no masters in health economics and I was applying for other things in public service related areas when the formation of the York MSc started.[28] Alan Maynard contacted me as one of my referees to say: 'we've got this new Masters course, would you be interested?' so serendipity and accident is everything. So at that time, I would not have been aware as an undergraduate of the background of the development and the interest in health economics and how it was formed and it was only then as a masters student that I started to be aware of these things. Brian

[24] Gavin Mooney (1943-2012) was a health economist. He joined the Government Economic Service in 1969 and worked as an economic adviser in the Department of the Environment before joining the Economic Advisers' Office in the DHSS. In 1974, he joined the University of Aberdeen. He was a founding member of the Health Economics Services Programme (1974-1977) alongside Professors Roy Weir and Elizabeth Russell. This programme, which was funded by the Grampian Health Board, led to the creation of the Health Economics Research Unit (HERU) in 1977, with Professor Mooney as a founding director.

[25] John Henderson is Economics Programme Manager in the Department of Health.

[26] Alistair McGuire is Professor of Health Economics at the LSE.

[27] The Health Economics Research Unit was founded in 1977 at the University of Aberdeen with core-funding from the Scottish Home and Health Department. It was the first academic health economics unit in the UK and it continues to work closely with the Scottish government as well as providing consultancy work for other organisations such as the Department of Health.

[28] The Health Economics MSc at the University of York was established in 1978 and was the first such course in the UK. It was funded by the DHSS.

[Ferguson] is certainly right to say that when I moved up to Aberdeen, there was a sizeable and growing group there and in fact their origins really came out of what we would now call public health but in those days was called social medicine and the professor in that department who was involved in running the health service in Grampian [Roy Weir] – he was a board member – was convinced that this was something that was important in improving health services and got the initial funding for a health economics project in Aberdeen which then morphed into the Health Economics Research Unit.[29] And so probably the Aberdeen unit had core funding possibly before there was a core funded element in York.[30]

Professor Sally Sheard:

We will come back to that, I think, but thank you that's a useful perspective

Professor Karen Bloor:

Sorry can I put in a tweet from Alan?

Professor Sally Sheard:

Yes please.

Professor Karen Bloor:

Alan Maynard commented and it reminded me of a conversation we had a couple of weeks ago. He says that 'classical economists from Adam Smith onwards focussed on government revenue raising in terms of their economics addressing public finance'. Alan's view is they were only looking at how taxation was raised. He says that Peacock and Wiseman, who, as many of you know, were creating the Department of Economics at the University of York in the 1960s, wrote pretty much the first book on how that was spent, it was on public expenditure rather than public revenue raising.[31] I think Alan would argue that was part of the creation of health economics. Perhaps Tony can expand on that.

[29] Roy Weir (1927-2014) was Lecturer in Public Health at the University of Aberdeen (1956-69) and Professor of Community Medicine (1969-93). In 1987, he became Scottish Chief Scientist. With Professors Elizabeth Russell and Gavin Mooney, he founded the Aberdeen Health Economics Services Programme in 1974 which applied economics to health service issues in the local Grampian Health Board. This led to the creation of the Health Economics Research Unit (HERU) in 1977.

[30] HERU was core-funded by the Scottish Home and Health Department [SHHD] from 1977. York was not core-funded until 1983 when CHE was established. It did receive intermittent DHSS grants between 1970 and 1983.

[31] Peacock, A. and Wiseman, J. (1961), *Growth of Public Expenditure in the United Kingdom*, Princeton: Princeton University Press. Here, David Pole commented that work such as Peacock and Wiseman's which examined trade-offs between public and private provision, progressively separated from its ideological origins in neoliberal theory and stimulated public and health economics.

Professor Tony Culyer:

I was absolutely going to raise the same point myself that York, the University, was founded in 1963. Its first Deputy Vice Chancellor was Alan Peacock who was brought from the LSE [London School of Economics] where he was professor of public finance and he and Jack Wiseman who was also a professor at the LSE had for several years previously fantasised about what they would do if they could create a university as it were and they decided at that time, if such a thing were ever possible, Alan would run the economics department and Jack would run a research institute closely linked but separate from [it]. Then when York was created and Alan was appointed the head of the economics department and Deputy Vice Chancellor – what an opportunity, denied to most of us, but a wonderful opportunity for them to create a reality of it – so both of them, what became quite large departments within the University, had a public finance interest with the particular twist, that you have rightly pointed to, on the analysis of expenditure. Obviously, the income side was also embraced. York in those days acquired a double reputation, one as being an excellent centre of public finance, academic public economics, and secondly as a fairly – and this was a rather unjust reputation in many ways – as a fairly right-wing libertarian department. That was mainly because of the reputation of both Jack and Alan who were both much bound up with the Institute of Economic Affairs, but it was certainly not at all true of a number of other members of the department. When Alan Williams was recruited to the department shortly after he left Exeter – there was an awful lot of people coming to York from Exeter, it's a peculiar thing – but Alan Williams was another one and when he came, they anticipated quite a lot of trouble, as Jack would have said [laughter]. But nonetheless, it was a measure of their openness of mind that they appointed somebody who certainly didn't fit into that ideological dustbin, as it were. So York was already a very natural place for something like health economics to take off if there were people there with an interest in it and a bit of spirit to create an institution that could happen, get a research centre organised in a fairly coherent way, eventually getting training programmes going and eventually establishing specialised units like CHE and YHEC and the Centre for Reviews and Dissemination.[32] All of those institutions were developed out of the same seed corn.

Professor Sally Sheard:

John, would you like to intervene?

Professor John Hutton:

John Hutton – not the other John Hutton [laughter]. Ever since I first came to York I've been having to say that.[33] I retired not long ago as Director of YHEC and Professor of Health Economics in the Health Sciences department here, having had a varied career prior to that. I came here the same year as Ron on the graduate programme. I came here to do the public finance option largely because of the presence of Alan Williams rather than Jack Wiseman teaching on that course and quite interestingly the other option, Ron, was it not called 'The Economics of Human Resources'?

[32] The Centre for Review and Dissemination at the University of York specialises in evidence synthesis. It conducts wide-ranging systematic reviews in health care.

[33] John P. Hutton is Professor of Economics at the University of York, specialising in tax and applied econometrics.

Professor Ron Akehurst:

Yes, it was.

Image 6: John Hutton

Professor John Hutton:

…which did economics of education, economics of health and social policy analysis. I stuck with my public finance interest which I picked up as a student at the LSE before that and the thing that really gripped me about the whole course was probably one grey Thursday morning in February, Alan Williams put up what in essence was the QALY [Quality-Adjusted Life-Years] diagram on the board in a seminar in the public finance course rather than in the economics of human resources course which he didn't participate in.[34] My main interest was in economic evaluation of supply to the public sector and this really gripped me and stuck with me for the next few years before I finally got into a position to work with Alan and to try to help make it operational which is what a lot of people did before I did. Interestingly, I left York to take up a post briefly at Aberystwyth and then I got a lectureship at Aberdeen before the health economics had started there and I was there when they got the money to finance Gavin Mooney's first project on the economic evaluation of healthcare in Scotland so I got to know Gavin well and some of the other colleagues at that point. Because of somebody already teaching public finance at Aberdeen, I had to be more imaginative and ended up being trained into industrial economics on one side but I also taught a course called Public Expenditure Economics which was the bits of public finance which I had picked up at York which weren't included in the traditional course in Aberdeen. I don't know if it was still going when you were a student there, Brian, after I had left, but I found myself teaching health economics before I really knew anything about it, as a lecturer at Aberdeen. I finally came back to York in 1979 and put the industrial economics and the health economics together to do a study for the Department of Health on the medical equipment industry in the UK out of which developed further projects about MRI scanning, CT scanning and eventually I moved into CHE on a short-term research contract without any tenured position and worked there until 1992.

Professor Sally Sheard:

Thank you. Alan Williams's name has come up a couple of times now. Would anyone like to say anything further about Alan's role in cultivating the team at York?

[34] The Quality-Adjusted Life-Years (QALY) is a concept formulated by economists and operational researchers in the US and UK from the 1970s to measure health and evaluate the benefit accrued, in terms of length of life gained, from a given health intervention. See for a critical approach: Carr-Hill, R.A. (1991), 'Allocating resources to health care: Is the QALY a technical solution to a political problem?', *International Journal of Health Services*, 21:351-363; Williams, A. (1991), 'Is the QALY a technical solution to a political problem? Of course not!', *International Journal of Health Services*, 21: 365-369.

Professor Ron Akehurst:

Inspirational, energising, that would be the sort of description I would apply. His own fascination with the problems around spending money in the health care area more effectively was quite infectious and also he had a great brain. He was great at synthesising and articulating problems and I think he had the knack of firing up enthusiasm in a lot of people by doing that and he had tremendous doggedness as well, so when he had an idea, he just kept on and on and on. I think his mantra was 'no mercy' [laughter] and that was effective in getting things done.

Professor Tony Culyer:

I think my first meeting with… my personal relationship with Alan goes back to 1960 when he was a lecturer at Exeter and he interviewed me for admission as an undergraduate and it was quite an astonishing interview. It was in his room and we started this conversation which went on for nearly two hours and at the end of which he said: 'would you like to come?' and I was so overwhelmed by this guy's relentless logic [laughter]. I think he was wonderful – his thoughts carried in the air. They had a cohesion that I had never encountered before and never been able to emulate myself. I just thought he was fantastic so I immediately accepted so that's why I went there. But unfortunately, he subsequently went off to the States for a couple of years and then was recruited to York, although at that time he was mostly working on local government issues but he had published his famous book on Public Finance and Budgetary Policy.[35] But what Ron says was absolutely true, he had a mesmerising effect on many of us, and as far as health economics is concerned my first sort of concentrated effort on health economics with him was also with Bob Lavers when we did an article on health indicators which was really the precursor of his later thinking after he had been exposed to the cognitive psychologists, of the QALY as a health outcome measure and that was in 1970, I guess, the year after I arrived at York.[36] [37] Bob Lavers was one of the laziest academics I've ever encountered but he was one of these lazy people with a very fine mind and he was a good collaborator in those days. There was also a fourth guy, Robin Shannon, the Shannons have had an important role in York.[38] [39] Unfortunately, he died about 1972 and he was a health economist in that group. Already at that time, there was a critical mass of people with research and teaching skills in the area. So already by about 1972, in the economics department at York, there was a group of people who were intellectually quite strong and committed.

[35] See Williams, A. (1965), *Public Finance and Budgetary Policy*, London: Allen and Unwin.
[36] Bob Lavers was one of the early members of ISER at York. See Culyer, A., Lavers, R. and Williams, A. (1971), 'Social indicators: Health', *Social Trends*, Volume 2: 31-42.
[37] This is probably a reference to Rachel Rosser, a psychologist at Middlesex University and Charing Cross Hospital who, with Vincent Watts, developed 'sanative outputs' from 1976 which sought to measure disability and distress among patients and evaluate whether a hospital stay had actually improved a patient's quality of life. Rosser, R. and Watts, V. (1972), 'The measurement of hospital output', *International Journal of Epidemiology,* 1(4): 361-368.
[38] Robin Shannon (n.d.) was an economist at York who co-authored a number of pamphlets with Alan Peacock published by British banks in the late 1960s.
[39] John Shannon (1918-2010), father of Robin Shannon, was chairman of the York Civic Trust for almost four decades.

Professor Sally Sheard:

Thank you – so by default and personal testimonies, we've brought in Anne's account from Aberdeen, we've talked a little bit, Mike, about Birmingham and Ron, of Lancaster. I'm curious as to why there were no emerging centres or hubs for health economics at the LSE or Oxford or Cambridge. Anybody got any thoughts on those omissions?

Professor Ron Akehurst:

Well I think I can remember when I first started to work in the health field that one or two quite eminent economists asked me why I was wasting my time on this rubbish [laughter] and I think it was very much the position in the long-established power centres for economics that this was a real side show and it took quite a long time for some of them to wake up to the idea that this was something that was actually worth doing.

Professor Sally Sheard:

I've got two other people who want to come in here. John, do you want to come in?

Professor John Hutton:

In my experience as an undergraduate at the LSE in the late 60s, we had some lectures from a lady called Margaret Sharp, and the focus, though it was very much macroeconomics of health care expenditure rather than anything to do with the workings of the health system, or any form of micro evaluation of what the health system was doing and whether it was appropriate.[40] I think the approach was: this is an interesting national accounting problem because health expenditure is counted in the national accounts at face value of expenditure and there is no value-added element including if there is some value-added, we don't really know how to measure it. And that's what was left. And I think Ron's right, that there was a lot of snobbery in conventional academic economic circles about health economics and there's one occasion where Alan Williams gave a presentation at the AUTE [Association of University Teachers in Economics] conference on economic evaluation in healthcare using a QALY approach in one of its early stages and he got into a real storm of criticism and got told he didn't understand welfare economics and so he took his bat and ball home and never went there again because he realised he wasn't going to make any progress in that direction and directed his efforts then on the NHS itself and the policy-maker community of the Department of Health rather than the academic and wider economics community.

Professor Sally Sheard:

Mike, you wanted to come in.

[40] Margaret Sharp, is an economist who worked within Whitehall as well as lecturing at the LSE (1963-72). From the early 1980s until her elevation to the House of Lords she was based at the Science Policy Research Unit at the University of Sussex.

Professor Mike Drummond:

I would agree with what others have said. I think at the time there was a view that it wasn't proper economics which is probably why LSE didn't pick up on it until quite late, much later. I remember when I produced the draft of our text book on economic evaluation and it was submitted to Oxford University Press and they get people to review proposals. They sent it to Amartya Sen only because he was called the Drummond Professor and I wish I had kept his response – you know sometimes you throw things away and you wish you'd kept them – because he wrote 'I really enjoyed reading this but I couldn't spot any economics in it' [laughter]. [41]

Professor Ron Akehurst:

Can I make another observation which is that these other places where there were strong economics departments often had other groups that worked in the health space but they weren't economists and there was actually quite a lot of hostility, I would say, when the economists first started tramping with their muddy boots all over this area from, in particular, medical sociologists and the public health physicians.

Professor Tony Culyer:

I thought you were going to say OR [Operational Research] as well.

Professor Ron Akehurst:

And OR of course as well but they did actually disappear rather quickly [laughter] whereas the others gave much more of a fight.[42] [43] I think that was important as well. So that some of the places that were very strong in social medicine, the view was that the stuff that was worth talking about in health was with them, not with the economists, and I think that probably played a role as well.

Professor Tony Culyer:

I do think you can overplay the snob point. I was quite keen, in trying to develop health economics, to establish it as a subject within economics and I didn't have any great difficulty

[41] Drummond, M.F.; Stoddart, G.L. and Torrance, W. (1987), *Methods for the Economic Evaluation of Health Care Programmes*, Oxford: Oxford University Press.

[42] Peter C. Smith, is Professor of Global Health Economics at University of York and Emeritus Professor of Health Policy at Imperial College, London. He was Director of CHE (2005-2009) and was trained as a mathematician and operational researcher. While first at York he conducted one of the first economic studies to be used by the Department of Health (on teaching hospital costs).

[43] Clive Smee later added: 'As Operational Researchers made up nearly half my staff, I should perhaps put in a word in their defence. Within the Department they were particularly effective in identifying ways of delivering services that involved new technologies. "NHS Direct" was one of their inventions. They were also good at modelling the level of hospital resource use that was compatible with the efficient use of hospital resources, a smooth flow of patients and avoidance of bottlenecks.' (Clive Smee, email, 31 January 2018).

in getting some of my early pieces published in mainstream economics journals. So if that snobby thing had really been a major deterrent or inhibitor, then I think that wouldn't have been possible. Maybe we didn't try hard enough or maybe we just weren't organised well enough, you see, because one of the characteristics of people who called themselves health economists in those days, they were all very isolated. When we had the first meetings that eventually led to the Health Economists Study Group [HESG], that was the overwhelmingly striking thing, that there were occasional economists at a medical research unit and an occasional economist with an interest in health in the economics department but they were isolated – either because they didn't have a substantive interest in health or because they didn't have a substantive background in economics.[44] So you could have an interest in health without being an economist and you could be an economist etc., but the common characteristic that they had was that they were on their own. So there wasn't a critical mass, they didn't have colleagues with whom to discuss and develop their own ideas – which is why the HESG became very important and influential, I think, because it provided a mechanism of togetherness but it also helps to account for the fact that if you're trying to introduce a new subject or a new sub discipline and you're a relatively junior person and on your own, it's kind of tough. And if you add that together with potential hostility from social administration, from public health or social medicine and operations research I think you'd probably get a mix that is fairly hostile. Whereas at York of course, most of those hostilities didn't exist because we didn't have OR, we didn't have public health but we did have public finance and by chance, I guess, initially, a little group of people that could work together.

Professor Sally Sheard:

Anne, would you like to come in?

Professor Anne Ludbrook:

Image 7: Anne Ludbrook

I was going to make a similar point about, essentially, the shock of the new being as important in where health economics perhaps took off because you didn't have these established areas of expertise where new people coming in to a department would naturally fall in line with, rather than set off in perhaps a completely new area. When I was doing the public finance course in York, health economics wasn't included in those lectures. Alan Williams lectured on, I think, the economics of the water industry in the lectures that he gave. I can remember him very carefully introducing both affluence and effluence in the same lecture [laughter], but there was a kind of natural fit between those public-sector interests and I thought it might be useful to give a shout out maybe to absent friends. We don't have anyone here from Brunel.[45] Brunel was the other early centre again where there was the opportunity to start new ideas and

[44] The Health Economists' Study Group (HESG) is the principal member organisation for health economists in Britain. It was founded in 1972 and has over 450 members in the UK and worldwide.

[45] Brunel University is an important centre for health economics research in the UK, where the Health Economics Research Group (HERG) was founded by Martin Buxton in 1981.

develop something again at a relatively new university. So that might be a theme that comes through in terms of where things took off. I can't explain the ancient Aberdeen connection!

Professor Sally Sheard:

I'd like to move us on if we can…

Professor Tony Culyer:

Martin Buxton ought to get a mention though, more than a mention.[46] He really, in many ways, is the joint founder of cost-effectiveness analysis.

Professor Sally Sheard:

Can we move on to talk about the role of other actors and organisations such as think tanks – and we've already come across the IEA – Tony, you've talked about your engagement with the IEA. Mike, I wondered if you could talk about the OHE [Office of Health Economics] briefly?[47]

Professor Mike Drummond:

I think others probably could say a lot about the OHE but it really started as a one-man band with George Teeling Smith.[48] They used to write a lot of fairly benign pamphlets about particular disease areas with a little bit of economics in there but I think it really took off, OHE, when the pharmaceutical industry in various ways realised that health economics was important, either because it was becoming a requirement or they felt that is was possibly another way that they could make arguments for their products. I think OHE went through a bit of a transformation. Of course, George retired and they had a new director and it has grown quite a lot. I think others may have something to say about that period.

Professor Sally Sheard:

Would anyone else like to come in on the 1960s and the role of other organisations?

[46] Martin Buxton is Professor of Health Economics at Brunel University London. He was commissioned in 1981 by the Department of Health to conduct a three-year economic evaluation of the recently developed technique of cardiac transplant, examining the practice at Harefield and Papworth hospitals. The study concluded that the technique was cost-effective when compared to other interventions.

[47] The Office of Health Economics (OHE) is a British think-tank founded in 1962 to provide economic advice on health care matters. It was founded and is funded by the Association of British Pharmaceutical Industry.

[48] George Teeling-Smith (1928-2013) was founding director of the Office of Health Economics.

Professor Tony Culyer:

The early days of health economics, when you say there were bits of economics, there was sort of bits of descriptive economics in those early pamphlets. There was very little analysis or argument or case making. They were little briefing documents and if you wanted to know all about pneumonia and how to treat it, there was a nice pamphlet on it. They were very well produced and George was a very attractive, flamboyant, playboy sort of character. He used to park his Jag' in the middle of Whitehall and thought it was quite cheap parking really [laughter], he didn't mind paying the fine. You know he was sort of a wild guy, he was inspirational in an entirely different way from the way Alan Williams was inspirational. But it [OHE] has developed under Adrian [Towse] as a significant player, and particularly because it stands right at that crossroad between academia, government and industry – and seeks to inform all three and to draw on all three for its resources.[49] By and large, I think, and I'm sure Mike will agree as we've both been in the role of trying to protect its reputation for independence from those three, in particular the pharmaceutical industry, I think it has done a very good job at not being implicitly partisan. The only way the OHE is partisan is in that there are some topics it won't touch because they are offensive to its principles. But now it's a private charity, there's a whole lot of legal stuff that also protects it from bias and there's a tremendous number of good economists there now and they publish in good places.

Professor Ron Akehurst:

Your question though was about their role in getting things started in the early days. My view would be that the OHE wasn't very influential in the early days in getting things started.

Professor Tony Culyer:

I think that's correct.

Professor Ron Akehurst:

I think it's only become something to take some notice of relatively recently and indeed since Adrian took over.

Professor Tony Culyer:

I'd agree with that.

Professor Sally Sheard:

We could talk here…

[49] Adrian Towse, Director of the Office of Health Economics (1994-).

Dr Alan Haycox:

Sally, we are tweeting again.

Professor Karen Bloor:

I've only got a little comment from Alan [Maynard] and this relates to your question earlier about why LSE and Oxbridge. So he pointed out that Wiseman who was LSE met Peacock who was LSE and also Peston who is loosely connected to the OHE, Maurice Peston, Peston Senior, who was also LSE. [50] [in-room debate over whether Peston was at Queen Mary University or LSE]. Peacock came to York via Edinburgh and Wiseman also to York. What's he [Maynard] said about Oxbridge? – Traditional inert curriculum [laughter] which is a very Alan comment isn't it? He also mentions Buchanan and Tullock which are not familiar names to me.[51] [52]

Professor Tony Culyer:

They are the Virginia Blend of economics and public finance – University of Virginia.

Professor Sally Sheard:

Please thank him and ask him to keep tweeting. We are now going to move on and talk about the role of health economics in government and in health policy. I'm particularly keen we talk about how that expertise and knowledge has been transferred, particularly the relationship between York and the DHSS – I know Alan will have some things to say about that. We will also discuss key achievements and obstacles to knowledge transfer from health economics into health policy and into government. I'm going to turn now to Andrew Burchell – maybe you can give us some insight into your perspective on how York has developed that relationship.

Mr Andrew Burchell:

I quickly read the briefing notes from David Pole and Clive Smee.[53] I'm Andrew Burchell. I joined DHSS on graduation from the LSE in 1976. I worked initially on the social security side doing work on the poverty trap and then moved after to the health part where colleagues

[50] Maurice Peston (1931-2016), later Baron of Mile End in Greater London, was Professor of Economics at Queen Mary College, University of London (1965-1988), later Emeritus. He previously lectured at LSE (1957-1965) and was, across his life, an adviser to the Government on various issues.
[51] James M. Buchanan (1919-2013) was Professor of Economics at the University of Virginia (1956-1968) and Virginia Tech (1969-83), then at George Mason University. He was a key proponent of the public choice theory whereby economics concepts became mobilised in political theory, especially regarding voter and bureaucratic behaviours. He was awarded the Nobel Prize for Economics in 1986.
[52] Gordon Tullock (1922-2014) was Professor of Economics at Virginia Tech (1968-83), George Mason University (1983-87) and University of Arizona (1987-99). He was a key proponent of public choice theory, in collaboration with James Buchanan. See Buchanan, J. and Tullock, G. (1962), *The Calculus of Consent: Logical Foundations of Constitutional Democracy*, Indianapolis: Liberty Fund.
[53] See Appendices 1 and 2 for notes written in advance of the witness seminar by Mr Pole and Mr Smee.

included Ron [Akehurst], Norman Glass, and Robert Weeden who came from Reading as an econometrician.[54] [55]

Professor Ron Akehurst:

There was Malcolm Rees who came from York.[56]

Mr Andrew Burchell:

Image 8: Andrew Burchell

And Malcolm Rees who did a lot on AIDS with [Norman] Fowler in the 1980s.[57] David and Clive have set out the formal relationship and funding support and so on. From my perspective, it felt very opportunistic. My first involvement on health economics was looking at burdens of disease, alcohol abuse, smoking and so on with Sally Holtermann.[58] Then after that, it felt that we were creating a requirement to start to apply economics through the way in which you started to introduce requirements on the health service to unlock funding. So for example, the work I did in the early 80s on developing the option appraisal guidance to support CAPRICODE following on from the initial work which Martin Buxton did before he left to work on the economics of heart transplant.[59] Even later all the way through to the White Paper in the late 80s and the introduction of the reforms with GP fundholding, trusts and the internal market, it felt in many ways that we were creating the circumstances which made the application of economic techniques particularly relevant. In terms of the relationship with the academic community in York and elsewhere, I do recall with quite a lot of fondness the six-monthly Health Economists' Study Group meetings, where we acted both as discussants and sometimes also gave papers.[60] I can remember, for example, giving a paper on health inequalities having analysed the General Household Survey. The Group was a good way of exchanging ideas regularly and also working

[54] Norman Glass (1946-2009) was an Economic Adviser (1975-1977) later Senior Economic Adviser (1981-1989) in the DHSS.
[55] Robert Weeden was an Economic Adviser in the DHSS during the 1980s.
[56] Malcolm Rees was an Economic Adviser in the DHSS during the 1980s.
[57] Norman Fowler was Secretary of State for Health and Social Services from 1981 until 1987.
[58] Sally Holtermann was an Economic Adviser in the DHSS during the 1980s.
[59] CAPRICODE, or Capital Programme Code, was based on Ron Akehurst and Martin Buxton's work on option appraisals for capital investment in new hospital builds during the 1980s. The manual allowed appraisal of different options before a new build was agreed (Interview with Andrew Burchell).
[60] Clive Smee later added: 'Learning from international experience was another area where the Department was as active at putting out its own feelers as in relying on UK university economists. Jeremy Hurst, for example spent nearly a year examining the US and Canadian heath systems in 1980/81 and wrote a comparative report which was fed into a DHSS review of NHS financing in 1981. Later he worked for the OECD Health Secretariat for several years. Again, DH economists were in the lead in negotiating with the USA and the Commonwealth Fund of New York the annual conferences on health care quality that became a feature of the 2000s.' (Clive Smee, email, 31 January 2018).

quite closely with some of the researchers up here like Ken Wright who was undertaking work for the Department on social services funding.[61] So at my level in the organisation in the early 1980s, it was very much a combination of identifying opportunities to apply economics, aided by an emerging national policy environment which required people to actually apply some of those techniques. In addition, and I think it was David [Pole] who achieved this – economists from the [Economic Advisers'] Office were attached to all the Research Liaison Groups in the Department. These Groups were responsible for funding various pieces of research around the country. That gave us an opportunity to identify pieces of research where we could graft on an economic dimension, initially very much of the costing variety alongside a clinical trial, but later on, with the application of the QALY methodologies.[62] So it was very much, from where I was in the organisation, that it felt like that blend of top-down pressure and seizing the opportunities as they arose and drawing on that relationship through research funding and involvement with other economists in the Health Economists' Study Group for challenge and cross-fertilisation.

Professor Sally Sheard:

I'd like to bring in here Roy – sitting at the end of the table, please if I may, because certainly RAWP [Resource Allocation Working Party] was a key driver in illuminating to policy makers how you might take a different approach to allocations of funding for health care.[63] Would you like to make some comments on that?

[61] Ken Wright is a health economist who worked at the University of York and was involved with in the foundation of the Centre for Health Economics in 1983. See Appendix 3.

[62] Andrew Burchell worked, for example, with research teams at Manchester and at St. George's Hospital, Tooting, on the cost-effectiveness of treatments for a range of psychiatric disorders.

[63] The Resource Allocation Working Party (RAWP) was appointed in 1975 with the aim of finding more equitable ways of distributing finance to the NHS. David Pole noted that many in the DHSS did not expect RAWP to produce a workable formula. He notes that some civil servants were disappointed when a formula was developed with the help of the economists, especially as it limited administrative discretion in the matter of resource allocation.

Professor Roy Carr-Hill:

I'm Roy Carr-Hill. My career has been totally different to everyone else. I started out doing a degree in mathematics and then one in philosophy, became a social worker for a year. My first two clients committed suicide so I thought it probably wasn't for me then. I did a PhD in penology and went to the University of Sussex to teach elementary statistics. Got thrown out of there, kicked upstairs or thrown out to the OECD [Organisation for Economic Co-Operation

Image 9: (Left to right) Roy Carr-Hill, Ron Akehurst, Mike Drummond and Anne Ludbrook

and Development] to work on the social indicator programme and that was my first connection with health economics because I'm not quite sure how or why but both Tony Culyer and Alan Williams managed to write a paper that we both don't remember in the mid-70s on the social indicators and I think Tony's was on social security and [Alan's] probably on health. But otherwise I had no contact with health economics at all. I got thrown out of the OECD as well. I was accused of delivering weapons by helicopter to Red Army Faction in West Germany [laughter] and then went to house building in France and to Maputo to convince my socialist friends that Marxism wouldn't work. Then meanwhile, of course, jobs are disappearing or tenures are disappearing in England so I ended up getting a job in the MRC Medical Sociology Unit, a crucial rival of health economics, or at least it … I'm not sure it was but it would seem to be, to investigate the pregnancies of 100,000 women, I hasten to add not personally [laughter]. We published a lot on birth weight, preeclampsia, lots of things like that. Then the unit was moving for a combination of reasons to Glasgow from Aberdeen, and I was looking around for jobs and this post came up here. They really wanted an epidemiologist to support QALYs. That's effectively what it was. I'd heard of QALYs by now and I was horrified by the dictatorial and anti-democratic nature of them and still am because they are top-down and not participative at all. So I was actually quite keen really to walk into the jaws of a lion and do something about it and, to their credit, I'm pretty sure they knew what I thought about it and still appointed me. I wrote several papers. I gave up writing papers when they insisted on using that EuroQol silly survey which is probably only completed by those who like crossword puzzles.[64] But what I think you wanted to ask me about was about RAWP. RAWP and resource

[64] EuroQol began in 1987 as an interdisciplinary group of professionals including economists, medical professionals and anthropologists to develop a health-related quality of life index. This group emerged out of the meetings of an earlier British group, the Quality of Life Measurement Group, that brought together

allocation – it wasn't really RAWP that we did. In some ways that's wrong. RAWP was 1974 and was a crude way of allocating resources to health authorities. It wasn't crude in the sense that there was no other data around to make it any more sophisticated. It wasn't until about ten years later that data became available at lower levels where one could start to look at some analytic methods of re-designing formulae and that was probably actually given to Coopers & Lybrand to do.[65] The next time round the review was a tender, an open tender, and a group from LSE wanted to bid against Coopers & Lybrand etc., externally – some of you may have heard of them. We bid and we failed so next time it came up, in 1993, I was here by then, from 1984, and in 1993 we decided to bid. We were against two or three other people, one health economist and several consulting firms, like Coopers & Lybrand. After about a week or so, I happened to know the person in the DHSS and it was taking a long time to hear if we hadn't got it basically, so I rang her up, which I shouldn't do but I did, and she said: 'well actually Roy, yours was the best value for money, it wasn't the cheapest'. She said we were more expensive than the consulting firms, but bearing in mind who was best. I said: 'what's the problem then?' Well she said: 'well her upstairs doesn't like it'. 'What do you mean? What are you talking about?', and it turned out she'd meant [Margaret] Thatcher didn't like the idea of having an anarchist running the resource allocation formula [laughter].[66] And eventually the civil servants, I'm not sure about Andrew Burchell, but some of them said it's far better to have us inside the tent pissing out, than vice versa. So we won that contract and then we carried on doing, at least I and those associated with me, carried on doing resource allocation formulae for England, Scotland and a bit for Wales. Then we started doing social service allocation formulae for children, old people, and that was extremely difficult, the old people one. Anyway, I won't go into it. How do you account for those who are half funded? Some are semi-funded by the council. And then, econometricians became very jealous of me as I'm not an economist at all, I just about know what the supply and demand looks like and so they came in and did much better than I did, than I could do, more sophisticated anyway. But I was given the job of the general practice, the review of the pay formula, in the late 90s. The one problem with general practice in England, at least if you are doing any analysis, was that it was entirely a closed book. It was 10,000 private companies, small private companies but still private companies so they don't release any information to anyone, we still don't know how many consultations the majority of GPs do, which is pretty amazing. There is a restricted data set on about 2,000 of them. I was by this time known as a statistician, a statistical gardener in that I can manufacture numbers from all kinds of places, can make all kinds of arguments so I did get the contract to develop the GP formula and it was a question of whistling data out of the air really because people used to ask me 'how did you complete that?' and I said 'well I thought that was probably the right number' [laughter] and eventually the formula was accepted by the Department. And to my horror really I suppose, but it was kind of funny, one of the general practitioners had a kind of trade magazine called 'GP' and they approached me, they were going to run a series on who wants to be a 'Carr-Hillionnaire' and would I like to comment on it and I thought it best to take it with a grin rather than get angry.

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the teams of Alan Williams, Martin Buxton and Rachel Rosser with EAO economists. See Brooks, R. (2013), *The EuroQol Group After 25 Years*, London: Springer.

[65] The accountancy firm Coopers & Lybrand developed a consultancy business with interests in health in the 1970s. It undertook commissions from the DHSS/DH and local health authorities. It merged with Price Waterhouse in 1998 to form PricewaterhouseCoopers.

[66] Margaret Thatcher (1925-2013) was Prime Minister of the United Kingdom (1979-1990). She oversaw the introduction of general management in the NHS in 1983 and the creation of the NHS internal market in 1991.

Professor Sally Sheard:

I'm going to stop a wonderful reminiscence trail – only because I'm slightly worried about litigation [laughter]. I'd like to bring Keith Derbyshire in here, if I may Keith, if you'd like to introduce yourself?

Mr Keith Derbyshire:

Image 10: Keith Derbyshire

That's good timing as well as I'm one of the people who appraised the tender that you submitted in 1993 and I can kind of spin out the 'her upstairs didn't like it' quite a lot! I joined the Department as an economic adviser in 1992. I think Andrew had left shortly before then so we didn't overlap. I ended my career in 2016 in the Department of Health as the Chief Economist and Chief Analyst so I've been around quite a lot in the Department and quite a bit of my time has been working with York University and other academics getting economics – and health economics – but I think fundamentally economics into decision-making in the Department of Health. I was recruited from the NHS and, like Ron, I was an external economic adviser recruit and I was brought in from the NHS, not so much for the health economics background, but with an NHS background to respond to what were the priorities of the NHS at the time, and what were the priorities when this top-down pressure on getting value for money and the fact that we had the internal market so there was quite a lot going on.[67] And in particular, I had worked in the Yorkshire Regional Health Authority [RHA] on resource allocation formulae and the person who recruited me had done the work that Roy was critical of, the Coopers & Lybrand work, which was a resource allocation formula that 'her upstairs' did interfere with and changed because it took much money out of London and gave it to the North.[68] It was adjusted in a kind of subjective way to leave money down in London, and the more prosperous areas of the country. That caused a lot of distress in the NHS actually because one thing the NHS isn't, it isn't stupid, and it knows when things are being fixed for political reasons and it can see through it and the thing about resource allocation formula, which basically sends the money out to the people who are responsible for looking after health care in either CCGs [Clinical Commissioning Groups], PCTs [Primary Care Trusts] or Regional Health Authorities, is if they think the formula is not equitable, they will react to that and say 'we're not getting enough money, it's not a fair share,

[67] This remark refers to the reforms introduced by the NHS and Community Care Act 1990 following the 1989 *Working for Patients* White Paper. This inaugurated an 'internal market' in the NHS whereby purchasers and providers were 'split', hospitals could apply for the new status of 'trusts' which afforded more independence, and GP fundholding was created.

[68] Fourteen Regional Health Authorities (RHAs) were created by the NHS Reorganisation Act of 1973 with various remits such as strategic planning and allocation of resources. They replaced the fourteen Regional Hospital Boards and were abolished in 1996. *The 1974 NHS Reorganisation: A witness seminar held on 9 November at the University of Liverpool in London* (2017), Liverpool: Department of Public Health and Policy, University of Liverpool.

why should we actually strive hard to achieve our objectives if the money is not equally allocated?'[69] [70] So the Department was aware of that and the Department wanted to commission some research which would generate an equitable formula – it's not an easy thing to do as Roy has alluded to – to allocate the money efficiently and equitably, and the tender that was submitted from York was the best tender. There was some resistance to it, as you [Carr-Hill] had been very critical of the previous work and we weren't sure that we could trust you to do an objective and honest job.

[redacted material]

Mr Keith Derbyshire:

And I like to think – wouldn't we all? – that I was instrumental in actually persuading them to go with you and we came over to York University, met with Peter Smith and several others to talk about the work and you did win the tender and I think you did an excellent job. [71] It's the best resource allocation formula I think there has been in the NHS and I only wish we had stuck with it and not overcomplicated it in the future. It was excellent. It did what it was meant to do, which was allocate the resources to the different regions in the country according to an equitable an efficient system. It was so good that when the internal market was ramped up a level, it was used to allocate money to health authorities. So instead of allocating money to kinds of populations of three million, it was then allocated down to populations of 300,000 people and it was even used to allocate money to those things called 'GP fundholders', which I also think York University was influential in. So that was my first contact with York University – and there's been quite a few since actually – but I would like to ask Ron this question: you said you were recruited because you were a health economist, it's been my experience, and I don't know what Andrew thinks, but it's more about getting economics into decision-making than health economics in the Department.[72]

Mr Andrew Burchell:

I think that's true – certainly when I was there, after Ron had gone back to Lancaster, there were no health economists. Everyone that had come through having done either undergraduate or graduate qualifications. As part of the Government Economic Service [GES], I benefitted from going off and doing a Masters funded by the GES and, from memory, none of us went

[69] Clinical Commissioning Groups (CCGs) are clinically-led NHS statutory bodies responsible for planning and commissioning health care in their local areas. They were created by the Health and Social Care Act 2012 to replace Primary Care Trusts (PCTs). There are now over two hundred CCGs in England.
[70] Primary Care Trusts (PCTs) were NHS statutory bodies in charge of planning and commissioning health care at the local level. They were created in 2001 and numbered 152 in England.
[71] General Practice (GP) fundholding was introduced as part of the 1991 NHS reforms. It was aimed at giving general practitioners greater power by allowing them to hold their own budgets and was thought to encourage GPs to be more efficient in their prescribing and referrals. GP fundholding was reconfigured in 1998. GP fundholding is often considered an afterthought to the quasi-market reforms and is believed to have originated in the work of Alan Maynard at York.
[72] David Pole added here that, at the time he was appointed in 1970, it was about both objectives. The EAO later recruited people with a health background as well as others with a keen interest.

off to York to do the MSc in Economics.[73] We tended to go to UCL [University College London] or LSE, partly because of geography but also it was about getting a higher qualification in economics rather than in health economics. Because one could then apply those principles. Certainly, having been at the LSE and being taught by, say, Layard on cost-benefit analysis - which is why it's sort of curious that the LSE in the sort of 60s and 70s didn't really pick up on some of this – because having been taught by Layard on his cost-benefit course in the early 70s, that's sort of meat and drink for economic evaluation.[74] But the course was largely in the transport field and certainly, when I moved from health to transport at the end of the 80s, I did notice quite a marked difference in the economic literacy of those two departments. It was still fairly nascent even in the late 80s within the Department [of Health] amongst civil servant whereas in [the Department for] Transport there had been that long tradition of applying values of statistical lives, cost-benefit analysis to road schemes and so on. So there was that degree of economic literacy all the way through the Department as part of its DNA which wasn't there, even in the late 80s in the Department of Health.[75]

Professor Sally Sheard:

And, of course, Alan Williams' first secondment to government was into the Treasury and that's where he came across Rachel Rosser and that initial work. It was the arrival of people like David Pole, I think, in the Economic Advisers' Office in DHSS that began to recognise the need for actually having economic expertise within DHSS.

Mr Andrew Burchell:

Yes, it was economic expertise rather than health economics.

Professor Ron Akehurst:

Yes, I mean there was economic expertise within DHSS but it was on the Social Security side.[76]

Mr Andrew Burchell:

Much more on the Social Security side, yes.

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[73] The Government Economic Service (GES) was founded in 1964 by Harold Wilson's government to bring economics expertise into policy information and making. It is a cross-Whitehall body which hires economics graduates and dispatches them to different Departments. It now has over 1000 members. Allan (2008), 'Why have economists done so well in the British civil service', *Oxonomics*, 3: 26-29.

[74] Richard Layard is Professor of Economics at the LSE (2003-). He has been teaching economics in various posts since 1968.

[75] Files at the National Archives, Kew (TNA), illustrate how the Department for Transport was already interested in methods for valuing life regarding road-traffic accidents. For example, in 1971, Gavin Mooney explained that he preferred the 'Jones-Lee methodology' for valuation (TNA, AT82/11, *Economic value of life: examination of methods of evaluating life for cost benefit analysis of road and railway safety projects*, 1 January 1971, p.3).

[76] The EAO was established in 1968 and included economists working mainly on social security issues under the direction of Leonard Nicholson (1916-1990), the Chief Economic Adviser to the DHSS (1968-1976). David Pole added here that Nicholson was a statistician and only worked on redistribution of income issues.

Professor Ron Akehurst:

And so David's [Pole] appointment marked the shift to actually putting some into the Health side of the Department as well. Can I just comment? I think… I do think that David was very important in trying to push the economist agenda generally and I think along the way, some events helped him. One was, I mean RAWP had its origin in a report by a man called John Rickard who was in the Department of the Professor Regius of Medicine in Oxford at the time, which laid out what the differences were in spending per head in different parts of the country.[77] There was an attempt to hush it up and keep it away from the Minister, who was David Owen at the time, and David Pole, through the political adviser to David Owen, whose name I cannot recall, he was an LSE man.[78]

Professor Sally Sheard:

Brian Abel-Smith.[79]

Professor Ron Akehurst:

Brian Abel-Smith, thank you! And so, David Pole passed it to Brian Abel-Smith who drew it to the attention of the Minister and Owen was pretty angry about this and he then effectively empowered the economists to have much more access to him for a while to try to look at some of these problems because he didn't trust the people who had been advising him directly and in fact he had a bit of a purge which resulted in Patrick Nairne being brought across from [the Ministry of] Defence to be the Permanent Secretary replacing the previous Permanent Secretary.[80]

Professor Sally Sheard:

Philip Rogers.

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[77] John Rickard (1940-2013) was a British economist in the Department of the Regius Professor of Medicine, University of Oxford (1972-1974) and economic adviser in the DHSS (1974-1976). David Pole added that John Rickard was previously employed by the Oxford Region, notably working on the distribution of finance among Oxford Region areas. Pole explains that he asked Rickard upon joining EAO to extend his analysis nationally. Although the results were compelling, Pole notes that RAWP was already underway. He believes that RAWP originated in a request made by DHSS officers to Owen as incoming minister in 1974 to sign off a new hospital in Boston. Owen thus asked how the decision had been made and asked Pole and the Head of the Policy Division to investigate the issue.

[78] David Owen was Minister of State for Health (1974-1976).

[79] Brian Abel-Smith (1926-1996) was Professor of Social Administration at the LSE (1965-1991). He also occupied one of the first special advisers' positions in government, to the Secretary of State for Health and Social Services (1968-1970; 1974-1978). Files at TNA demonstrate his important role in supporting the creation of the EAO in 1968. See Sheard, S, (2013), *The Passionate Economist: How Brian Abel-Smith Shaped Global Health and Social Welfare*, Bristol: Policy Press.

[80] Patrick Nairne was Permanent Secretary in the DHSS (1975-81).

Professor Ron Akehurst:

Yes, and so that was an event I think which gave the economists some prominence. A second event was the creation of the Public Accounts Committee [PAC] because the first thing they looked at was why it was that the teaching hospital programme was so far over budget and, in particular, one of the things they looked at was the Liverpool Teaching Hospital. At the [PAC] hearing, Nairne was asked why things were running over [budget] so much, and he was dealing with that, but then he was asked why there was a decision to build a hospital [in Liverpool] at all, and he said 'well of course, there were planning documents that covered all that' and they said 'oh we'd like to see that next time please'. So Nairne went back to the Department and said 'can I have the documents?' and they are all sort of looked at one and other saying 'well there might be something in the region' and eventually, the story is, a document which dated from 1935 was unearthed [laughter]. Nairne said 'I can't possibly go back to the Committee and tell them this without telling them that we have in place a completely new arrangement for making sure this never happens again'.[81] And that led to Option Appraisal because a man called Gerry Grimstone was given the responsibility in a very short period of time to come up with something which could be put to the Committee and he found, gathering dust on the shelves, two reports, one that I'd written just before I left, and one that Martin Buxton had written just before he left about how you might tackle CAPRICODE and the whole capital spending stuff.[82] What Gerry did was to dust this off, edit it together and put his name on it and pass it across. And he coined the phrase I think of 'Option Appraisal' by the way which neither Martin or I had, and I think that's how it came about and I think that was quite important because once that happened, there had to be a training programme in Option Appraisal throughout the whole of the service.

Mr Andrew Burchell:

And that's what I picked up on after Martin left. I worked with a quantity surveyor called Brian Gilbert to draft the manual, the guidance, and on the back of that it was a requirement to apply this manual to every single hospital proposal.

Professor Ron Akehurst:

And Martin and I got the gigs to go and do all the training around the country for it and we ran the training. There were fourteen Regional Health Authorities in those days and we ran the training programmes in ten of them. Sorry to keep going but I think it's really quite important as a strand of development because it then led to some other important things because another thing that was going on at the time was that the government started to develop training programmes for their senior managers and would-be high-flyers in the NHS which included a component of economics. Three of the people who used to run the economics one are sitting at this table, and this is another place in which York had an influence. The person who's missing is Martin Buxton so we were the ABCD of health economics as far as that course was concerned and we taught both a component of general health economics and also the option appraisal course. They were every year either the best attended or second best attended of the

[81] House of Commons, *Ninth Report from the Committee of Public Accounts: Session 1976-1977*, London: HMSO, paragraphs 25-32 and appendix II.
[82] Gerry Grimstone was a DHSS civil servant (1972 to 1986).

courses on the corporate management programmes and got very high ratings all the time and they gave an opportunity to influence people who were going to go on and be senior managers in the NHS with the ideas from economics.

Professor Sally Sheard:

We will come back to the NHS – that's wonderful – but Brian, you wanted to come in at this stage?

Professor Brian Ferguson:

Image 11: Brian Ferguson

Yes, thank you. I wanted to go back to your question about knowledge transfer and where we've had influence and successes, so a few thoughts. One of the things I think we should acknowledge as we go along is Alan's connections. I think Alan [Williams] deserves a lot of credit for the fact that he got in people like Clive Smee to teach on the MSc in York and that exposed people like me from a very early stage into the fact that the Economic Advisers' Office – I think it was called then – existed and the fact that you could go and work in government and I think there were MSc placements in the Department. That sort of two-way flow was terribly important and, as we know, Clive has been a huge figure in the field for many years. And reflecting on Alan Williams' huge contribution, Alan used to use the word 'infiltrate' a lot. He would say 'we need to infiltrate. Where can we have influence?' and that's something that I have spent a lot of my career trying to do is infiltrate into places where sometimes health economics is not as welcome. For example, so my world is public health and prevention, and public health I think in large part has actually moved from being an 'enemy of health economics' to being a very significant friend of health economics.[83] It's not to say that I still don't have daily arguments with public health doctors who talk about global burden of disease and don't recognise that it's the cost effectiveness of interventions that matter. So we have lots of these debates of epidemiology versus economics but, in large part, they are a friend and we have had some significant successes in getting health economics into curricula. It's a massive part of the Faculty of Public Health training. Health economics is even a defined area and specialism within the Faculty of Public Health for non-medics like myself to get on the equivalent to GMC [General Medical Council] registers. The other couple of reflections: one based on the conversation around RAWP and resource allocation. Again, you look at the

[83] David Pole here adds that the pioneers of social medicine such as Archie Cochrane, Jerry Morris, Thomas McKeown, Alwyn Smith and Max Wilson were important allies in getting economic ideas accepted in healthcare policy. Like economics, their interest was in a population level of analysis and evidence-based medicine. However, Pole notes that other public health pioneers such as Richard Doll were actually reticent to the idea of health economics, notably on ethical grounds. Pole adds that an epidemiologist working in the DHSS once told him that decisions about service provision should always be taken purely on medical grounds and, only after that, could the Department consider whether it could afford it.

influence health economics and York have had on that. You know Peter Smith still chairs the ACRA [Advisory Committee on Resource Allocation] board; I now sit on that from PHE. York has had a massive influence on that. The other technical sub-group of ACRA, which always amuses me because god knows what degree of technical stuff gets into there, because I get lost in the stuff that the main board deals with, but that is still an area where York and others are having a huge impact. A lot of people who are involved in that, either are in York or were previously in York. So Matt Sutton is ex-York and has imputed hugely into the public health formula and NICE [National Institute for Health and Care Excellence], I'm sure we'll come back to.[84] [85] But just in a one liner in passing, and Tony and others have much more to contribute on it than me, but look at the impact health economics and York have had on the work of NICE. The last couple of things were NIHR [National Institute for Health Research], and the Department of Health Research funding.[86] It seems that twenty or thirty years ago. We had to fight to get the words 'cost effectiveness' into research proposals. Now it is absolutely expected and I still occasionally come across examples where this needs to happen – a good example this week of PHE commissioning some work around air quality reviews for next year [that I] almost went through with a 'find and replace' every time I saw effectiveness and cost effectiveness. But on the whole actually, most people expect to see, and this is a point I made to PHE colleagues, researchers when they receive the request will absolutely expect to see the words 'cost effectiveness' in there. My final point really was just picking up on a really important point I think Andrew, Keith and others have made, which is that it is about economic thinking, not just health economics thinking. So throughout my career, I've felt that we've got a lot to learn from transport economics and environmental economics.[87] Just last month, there was a great seminar in London that the Department of Health organised with John Henderson and others where Mike Jones-Lee came along – as we know, a famous transport economist who used to teach on the MSc here, taught me here – and talked about the valuation of a QALY and brought all that learning from his research and from transport.[88] And obviously the figure we used to put a pound sign on a QALY still comes from transport. My reflection on having worked in government just for a few years is that there is still a great deal we can still learn from economists in other government departments. Indeed, I am fortunate with this because we recruited economists from other government departments. Having them work alongside health economists is a fantastic two-way learning, so I absolutely support that sharing across health economics and other parts of economics.

[84] Matt Sutton is Professor of Health Economics at the University of Manchester (2008-).

[85] The National Institute for Health and Care Excellence (NICE) was created in 1999 as the National Institute for Clinical Excellence with the aim of reducing inequality in access to treatments and drugs, often referred to as 'postcode lottery'. In 2005, NICE began formulating guidelines to determine whether a drug or treatment is cost-effective in regard to a given health issue. Professor Carr-Hill here added later that when NICE sought research on the impact of community participation on improving life, he and his colleagues Anne Mason and Lindsey Myers (from Leeds and East London respectively) found only a handful of articles mobilising cost-effectiveness data on this issue with no clear conclusion.

[86] The National Institute for Health Research (NIHR) was established in 2006 to fund and co-ordinate clinical research.

[87] David Pole notes that Gavin Mooney and Peter Mancini (another DHSS civil servant working in the EAO) came from the Department of Transport and Department of the Environment respectively.

[88] Michael Jones-Lee is Professor of Economics (now Emeritus) at Newcastle University. His work on valuing life since the late 1960s has focused on monetary values of injuries related to road-traffic accidents and helped inform some of the early work on QALYs. See Jones-Lee, M. (1969), 'Valuation of reduction in probability of death by road accident', *Journal of Transport Economics and Policy*, 3: 37-47.

Mr Andrew Burchell:

Just to pick up on Brian's point about using economists from other areas than health. Certainly, when I was in the Department of Health in the 80s and we were having to put some pound signs around QALYs, I can recall them trawling across government departments, going to Transport, going to the Ministry of Agriculture, Fisheries and Food and their flood defence work and so on and using the value of a statistical life then to start to put some pound signs around that matrix. And also, I can remember we did a research project with Graham Loomes – is he still there?[89]

Professor Brian Ferguson:

He was speaking at the same seminar.

Mr Andrew Burchell:

…in the Department of Health and I subsequently used him again when I was in the Department of Transport as the Chief Economist there, for the same sort of work. So it is about cross fertilisation as well, bringing that other thinking across.

Professor Mike Drummond:

Just a point on this early link between the Department [of Health] and York because before there was a formalised programme of work funded, there were one or two projects.

Professor Sally Sheard:

I was going to bring those up.

Professor Mike Drummond:

There was the teaching hospital costs one which must have come from this conversation about why the teaching hospitals cost so much. I think that delivered something they could actually use. The so-called York adjustments became SIFT [Service Increment For Teaching].[90] It was not actually work I did, I think it was from Peter West's estimations before I joined the project but I remember being so happy…

[89] Graham Loomes is Professor of Economics and Behavioural Science at the University of Warwick. He was previously Director of the Graduate Programme in Health Economics at York (1984-1988).

[90] The Medical Service Increment for Teaching was introduced in 1976 by the Resource Allocation Working Party and estimated at 75 per cent of the median excess cost per student to the hospital authority. See BMA (2007), *Medical Service Increment for Teaching Funding Report*, London: Health Policy and Economic Research Unit, BMA.

Professor Ron Akehurst:

Tony Culyer remembers that as well.

Professor Mike Drummond:

I remember being so happy that it was actually mentioned in the report as being from York until all the flak [laughter] and then I realised, okay so it's the York fault. I think in those early days if you could give them [DHSS] something they could actually use, I think that helps cement the relationship.

Professor Sally Sheard:

I'd like to come back to Tony to just give us a little bit for the record about the importance of that 1970 York conference, which is the forerunner I think to the relationship between York and DHSS.

Professor Tony Culyer:

Which conference is that?

Professor Sally Sheard:

This is the conference at which people came up from London. Eleanor?

Dr Eleanor MacKillop:

The Economics of Health Care, I think it was called. It brought together David Pole, Archie Cochrane, Max Wilson, Richard Cohen, Gill Ford, and was organised here, which led eventually to three projects being funded by the DHSS for York.

Professor Tony Culyer:

My mind's a blank on it – it's not the meeting that was the precursor to the Health Economist Study Group? What date was it?

Professor Sally Sheard:

1970.

Professor Ron Akehurst:

You must have been on the Tetley's that night I think Tony.

Professor Tony Culyer:

It was just within months of me coming to York and I'm sorry I really don't remember.

Professor Sally Sheard:

That's fine – it was a long shot – but the outcome of that.

Professor Tony Culyer:

I can make something up for you [laughter].

Dr Eleanor MacKillop:

Instead of that, [could we discuss] the relationship with the Nuffield Trust and Gordon McLachlan which began before.[91]

Professor Tony Culyer:

That was particularly Alan Maynard's thing but I had a good working relationship with Gordon and for a couple of years I edited a series of sort of popular pieces on behalf of the Trust but I think Alan is the one that could… Alan was very good at cultivating people and I think he cultivated more than was cultivated by. He was very good at cultivating Gordon and Gordon was a very influential guy and I'm not sure quite how our connection with Archie Cochrane was developed.[92] That became quite a strong friendship particularly between Alan Williams and Archie, and Archie became quite a frequent visitor here and in fact he donated a first edition of, I think volume one of *The Wealth of Nations* that he had, to our library.[93]

Professor Mike Drummond:

He brought it on the train from Cardiff and wouldn't dare go to the toilet in case it got stolen [laughter] but that's when we gave him an honorary degree.

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[91] Gordon McLachlan (1918-2007) was the Secretary of the think-tank Nuffield Provincial Hospitals Trust (1956-1986), later renamed the Nuffield Trust. It has published widely on health services research since its creation in 1940.

[92] Cochrane was a friend of the economist Brian Abel-Smith. They first met in 1960 and shared a deep concern with inequality in health and incomes. Abel-Smith had collaborated with Cochrane on the economics/cost-effectiveness perspective before Cochrane met Williams.

[93] Smith, A. (1776), *An Inquiry into the Nature and Causes of the Wealth of Nations*, London: Methuen and Co.

Professor Tony Culyer:

Yes, that was the occasion. I think this is a part of a general pattern of people making quite effective outreaches to other people who mattered in various ways, either because they were great networkers or because they were in positions to make things happen or to infiltrate to use Brian's phrase. Both Alan Williams and Alan Maynard were very effective at doing that sort of thing. They did much more of that than I ever did.

Professor Ron Akehurst:

I think we should mention another initiative of Alan Williams that was, I think, quite important. He became particularly good friends with one of the people in the Chief Medical Officer's, right at the top of the Chief Medical Officer's bit of the Department of Health, a guy called Peter Simpson.[94] Peter Simpson had previously been at Mersey Regional Health Authority where he formed the view that doctors needed to have an awareness of economics and Alan somehow sniffed this out and they put some money up to try to educate, initially consultants, and then senior registrars as well in health economics and this is what brought me back to York from Lancaster. A post was advertised where, basically, it had the shortest job description that you could ever wish for. It more or less said 'brainwash doctors' [laughter] and I remember being interviewed about it and saying: 'you just keep saying the same thing again and again until they give in'. And, of course, Alan absolutely agreed with that. That's what he'd been doing for years! [laughter] and there was a five-year project where, essentially, we were running a whole series of training, going to medical events to try to get ideas over and that kind of thing. When I began, I hadn't the first idea how I was going to do it. I started advertising courses and nobody came. So what I did was to ask… I contacted every hospital in the north of England because my patch was the northernmost regions and I contacted every one of the tutors responsible for the education programme in those hospitals and asked them to give me a slot on their lunchtime seminars and I used to go and just pick a fight. I had a standard talk which basically said: 'you lot are the reason that we are in trouble' and listed all this stuff. I remember I used examples, some of which I updated from Mike Cooper's little book, and there were still some great examples in there and it was great.[95] We used to have some real barnies and in those days the drugs industries were still allowed to get doctors drunk at their lunchtime seminars so it made for a really lively discussion. Of course, the fact there was a free lunch and booze meant people turned up even if it was an economist [laughter] and so they were very good and, after that, the courses were very full and we managed to do quite a lot.

Professor Sally Sheard:

You have pre-empted me. I was going to come to you after the tea break for that. Karen, did you want to make some comments?

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[94] Dr Peter Simpson is a surgeon who trained and taught at St Thomas' Hospital, London. He was Regional Medical Officer for Mersey RHA (1988-93).

[95] Cooper, M.H. (1975), *Rationing Health Care*, London: Croom Helm (Later John Wiley and Sons).

Professor Karen Bloor:

Yes, it was just about coming back on Brian's point.

Professor Brian Ferguson:

Has he [Alan Maynard] mentioned drains doctors yet? [laughter]

Professor Karen Bloor:

Alan has gone a bit quiet so I'm afraid you are relying on my memory which is far less reliable, frankly. But I just wanted to come back to some of the comments about people like Gordon McLachlan, Archie Cochrane and relationships that Alan cultivated with the medical profession. I think that infiltrating the medical profession as well as government has always been very much part of what Alan Maynard does, and as you say, made the most of relationships with people like Cochrane who, as Tony said, was a good friend of Alan Williams. Williams certainly influenced Cochrane as well as vice versa as you will see by Cochrane's book being called *Effectiveness and Efficiency*.[96] And Archie Cochrane and Gordon McLachlan used to come in and teach on the Masters in Health Economics. Before my time sadly, but Anne might remember. The other name I wanted to mention was Brendan Devlin who was a surgeon and created the National Confidential Enquiry into Perioperative Deaths which is a forerunner of a lot of the transparency around surgical outcome measures, like the cardiac surgeons' data that we have now that isn't confidential anymore.[97] We know what the death rates of surgeons are these days but, when Devlin set it up, it was important to do it in a confidential way so that people joined in. So again, Brendan Devlin was someone who came and lectured on the MSc in Health Economics and I think the MSc in Health Economics and the people who have done that and gone on into different areas of public life, not just in the UK but around the world, are quite an important set of seeds of health economics in a York model all over the place.

Professor Sally Sheard:

We're going to take a tea break. Can I ask that we do keep it brief as we do need to finish on time as there's a seminar happening in here at five.

[INTERLUDE]

Professor Sally Sheard:

I've brought up Karen Bloor onto the top table and Roy Carr-Hill has very kindly swopped with her. Another of our witnesses here, but not on the top table, is Alan Haycox who is going

[96] Cochrane, A.L. (1972), *Effectiveness and Efficiency in Medical Care: Random Reflections on Health Services*, Oxford: Nuffield Provincial Hospitals Trust.

[97] Dr Brendan Devlin (1932-1998) was a surgeon who pioneered surgical audit in the UK. In 1982, he set up the Confidential Enquiry into Perioperative Deaths (CEPOD).

to contribute as well in this session. I would just like to come back briefly and bring in Anne Ludbrook again on the Scottish dimension on the relationship between academic health economics and government. Could you give us a short summary of the way in which the relationship worked up in Scotland?

Professor Anne Ludbrook:

I think one of the important things of course in the context of Scotland is that you have a much smaller environment in which to work. You've got a population smaller than some [English] Regional Health Authorities but you have effectively a government department. Even prior to devolution, the health service was run separately in Scotland and so there was probably far more that was based on knowing people. And, of course, Roy Weir who was instrumental in setting up the health economics project was well networked into the department. So we did have quite a lot of interaction. I have to say at that point, when I started in Aberdeen, the Scottish Home and Health Department as it was then, did not have an economic adviser at all.[98] So there were a small number of economic advisers scattered across the Scottish government but nobody specifically in health and I think the first one was appointed possibly around the time that the option appraisal work came in and there was increased need and necessity.[99] So that was quite interesting. All our interactions tended to be with policy or medical people. I guess the experience is just the same though, that there were some areas in which health economics was seen to be helpful and was welcomed with open arms and other areas in which it wasn't seen to be helpful and therefore we weren't to do it! A classic example was we proposed to do some research on medical manpower planning and were told no, that was the doctors job in the government department and we weren't to touch it. So it was interesting that these relationships have to be fostered and developed. And then, of course, you have the dimension which we didn't really mention with the Department of Health, but a sort of political level rather than a civil service level, that if the Minister already has a view on something, it's then very difficult to conduct independent analysis and research. One such example in Scotland was where I'd been asked by a Health Board to do an option appraisal for a new hospital in an area covered by the then Minister for Health for Scotland, and I was told a certain option was not on the table, i.e. taking the hospital out of his constituency and putting it somewhere else. I just had to say: 'well if I'm going to do this work that option might be rejected but it will be rejected at the end of the process not the beginning of the process' and you just have to dig your heels in and say 'that's what we're going to do'. But on the whole, I think there is a sense that you do know people more in the [Scottish] network. It worked in the other direction about how things are influenced in an earlier part of the discussion, but sometimes things were influenced because someone has a personal word with a minister or another politician's ear and that idea becomes part of the manifesto and then it becomes policy and it's never been evaluated and no one ever considered it.

Professor Sally Sheard:

Thank you very much Anne, that's useful.

[98] The Scottish Home and Health Department [SHHD] was part of the Scottish Office, which until devolution in 1999, was the department of the UK government in charge of Scottish affairs.

[99] The first economic adviser working specifically on health in the SHHD (from 1985) was Alasdair Munro. David Pole notes that in the early days (1970s), people also made reference to Mike Heasman as an influential person in health care policy in Scotland.

Professor Roy Carr-Hill:

I never got it published, but I checked about fifteen or twenty years ago on the most likely determinants of capital expenditure over half a million, and the closest factor was the size of the majority at the last Parliamentary election: the smaller it was, the more likely there would be an investment.

Professor Sally Sheard:

Continuing and trying to wrap up perhaps some of this discussion on the use of health economics in government in forming policy – particularly in terms of York and the Centre, what do you think are the main achievements that York has accumulated in this area?

Mr Keith Derbyshire:

Who wants to begin? York has made a big contribution in medical workforce manpower planning for want of a better description, and the remuneration of doctors has always been quite complex. Alan [Maynard] has been particularly influential in how we can think about how we remunerate doctors in the NHS and also getting the right number of doctors and thinking the NHS doesn't run on fixed coefficients, that there might be alternative forms of skill mix solution for the NHS to kind of get more cost-effective care and I know Roy Carr-Hill has been involved in skill mix solutions in primary care that are radically different from GP-led surgeries. It's taken us a very long time to move down that fairly obvious path: that if over half the people can be seen by a nurse, why are only 10 per cent of people currently being seen by a nurse in primary care? So there's a whole set of workforce issues which might not be health economics but they are certainly labour economics tinged with knowledge of health care and the particular issues around the medical profession. So I would certainly flag that and there's more general work on incentives and the organisation of the health care system which I think York has been influential in in the past. Resource allocation, we've mentioned. I'll let other people pick up the gauntlet of where they have been most influential.

Professor Tony Culyer:

Can I ask – have you got a comprehensive list of the formal research contracting relationships that existed between the Department [DHSS] back in the days when they were the Department of Stealth and Total Obscurity [laughter] and today?

Professor Sally Sheard:

No, but Eleanor has been compiling it and she's come across things. Eleanor's been doing a lot of work here [York] in the various archives and filing cabinets that still exist. As far as I know, there is no definitive list of all the projects and contracts that have been held between York and DHSS.

Dr Eleanor MacKillop:

I think there's the annual reports of CHE and the reviews from the DH which would have a list of all the ongoing contracts for instance. Then there's the beginning of the paper trail between DH and York especially in Alan Williams's papers which I accessed through Frances Sharpe where there are the three initial contracts on the projects that were finalised – so I think it's about piecing them together.

Professor Tony Culyer:

The earlier days will be where the record will be a bit thin, I suspect, I mean the recorded record. It's just obviously that doesn't cover all of the more intangible and personal and political things but that is an area in principle that you ought to be able to get a good evidential basis for things.

Professor Karen Bloor:

So we've mentioned RAWP and we've mentioned medical workforce and the work Alan's done on that. I also wanted to pitch in with the productivity work that's probably a little bit more recent - the kind of work that Andy Street and others were doing on measuring the productivity of the NHS which is quite important for government and also NICE and the whole contribution of York to the regulation of pharmaceuticals and the introduction of NICE, which I'm sure we are going to come back to at some point.[100] I think it's important again to bring Alan Maynard back in. Alan hasn't always done all this work but he's been what these days would be a champion of impact, research impact, he's so good at getting research to where it needs to be; so when a decision is being made he's always had a knack of getting a paper that York's written on the right desk at the right time.

Professor John Hutton:

Could I just add something to that? As I remember it, one of the major academic issues in the early days of the health economics debate was the NHS itself and the comparative efficiency of different ways of organising health care systems which, over the years, has gradually lessened in intensity because most systems are now pluralistic in some sense but there was a very strong debate going on in the late 60s and early 70s as to whether the NHS was the appropriate way to organise health services. Clearly there are many other dimensions than the economic one in this which may in fact be dominant in the final decision but the economics was important and a lot of economics at York, as Tony said, which at that time had an unfair reputation for being a right-wing economics department, mainly because of the figureheads, not actually the people doing the work necessarily, with the honourable exception of Alan Williams amongst the leaders. And so the engagement with the Department of Health, particularly in the first two decades, was very much at the national policy level: the work that

[100] Andrew Street is Professor of Health Economics at LSE (2017-). He previously worked at YHEC (1994-1999) and CHE (1999-2017), serving as Director of the Economics of Social and Health Care Research Unit (2011-2017).

Roy did has already been talked about. But Alan Maynard was very important in keeping this debate active, appropriately whenever a new government came in thinking they were going to have a national insurance based system or change the funding system for the NHS, Alan was very… he got papers on the right desks at the right time to point out the fallacies of the arguments that were being put forward for political reasons elsewhere. Particularly in 1979-1980, people at York were quite influential behind the scenes in getting talked out the proposal that Thatcher wanted to bring in about the health service at that point.[101] [102]

Professor Brian Ferguson:

I was going to make a point about NICE but Karen's already made it. Building on what John was saying, it probably is a link to the next section on the NHS, I know you are coming to that but this is still, I think, partly about NHS but also about the wider Department of Health and government. The period I think we should not forget was the period at the end of the 80s when *Working for Patients* came out which was the big set of reforms in the NHS that came from Alain Enthoven's visit to the UK and his paper written in 1986 I think which was entitled 'Reflections on the National Health Service'.[103] That was the thing that suggested the idea of the internal market and the reason I think it's worth mentioning is because it was a period when I think economics probably had the most to contribute to NHS reform. There is a whole occasional series of papers at that time around *Working for Patients* and covering issues like workforce pricing and all sorts of things that I think were hugely influential. Again, it comes back to Alan and others who not only got Alain Enthoven over at that time and indeed a decade later to revisit when he said he didn't really mean it, but [laughter] it sort of happened but we had a whole series of people like Alan Langlands who I think was probably Chief Exec[utive] of the NHS at the time.[104] There were a lot of seminars in York around all the different aspects of reforms. Certainly, I remember it as a time when economics had a huge influence on structural reform in the NHS.

[101] David Pole here noted that civil servants such as Terri Banks were often the first to head off insurgent ministers. Terri Banks was a Principal in the Treasury, (1966-1972). In the DHSS she held posts of Assistant Secretary, (1972-1981), Under Secretary, (1981-85), Director, Health Authority Finance (1985-1986).

[102] This is a reference to 1981 when an inter-departmental working party on alternative means of financing health care was created to consider alternatives to tax-based funding, such as private health care and social insurance. The findings of this working party were not followed up. See Smee, C. (2005), *Speaking Truth to Power: Two Decades of Analysis in the Department of Health*, Oxford: Nuffield Trust. The National Archives (TNA), T 477/45, 46, and 85, *Financing the National Health Service (NHS): Interdepartmental Working Party on Alternative Means of Financing Health Care* (1981-1982); MH 170/351, *National Health Service costs: Report of the Inter-departmental Working Party on Alternative Means of Financing Health Care* (1981-1982).

[103] Alain Enthoven is Marriner S. Eccles Professor of Public and Private Management at Stanford University. His work on health informed the 1970s US reforms which created Health Maintenance Organisations (HMOs). It also informed the 1989-1991 British health reforms. Enthoven, A. (1985), *Reflections on the Management of the National Health Service*, London: NPHT. See Mackillop, E. Sheard, S., Begley, P. and Lambert, M. (2018), *The Introduction of the NHS Internal Market,* Department of Public Health and Policy, University of Liverpool.

[104] Alan Langlands was Chief Executive of the NHS Executive (1994-2000).

Mr Andrew Burchell:

I would agree with that, having been on that *Working for Patients* White Paper team, the actual White Paper itself was fairly high-level in terms of its vision and the building blocks. Actually, it wasn't until you mentioned when stuff started in '92 and beyond, you got a period of about four, five or six years where you are starting to put flesh on those bones. The work of York and others trying to put that detail on to make sure that, if you're going to have this system, like it or loathe it, then it's best to work with the grain of that and make sure that you maximise the benefits and minimise the costs of introducing these sorts of reforms. I think that work of putting detail over that four or five years was quite crucial.

Professor Karen Bloor:

Just to tie in a couple of things in there. I understand Alain Enthoven visited England funded by the Nuffield Provincial Hospitals Trust and Gordon McLachlan but also the bit that Enthoven didn't pay any attention to, perhaps because he was American, was primary care. So there really wasn't anything in, and this is before my time slightly – I was in the DHSS very briefly as an intern in '89 but I was working on the social security side not the health side which is a pity, looking back on it now – but my understanding was that there was very little in the initial *Working for Patients* plan on primary care and on general practice. The addition of GP fundholding at quite a late stage in that process drew on work of Alan Maynard, Denis Pereira Gray and Marshall Marinker and their ideas about bringing a sort of HMO [Health Maintenance Organisation] type model to British primary care.[105] So fundholding drew on that.

Professor Sally Sheard:

We are opening up lots of different avenues here and the challenge for the next bit is really to get the most out of having you lot here to talk to one another about some of these issues. Something I would like to come back to is NICE because that is one of the key things that comes out. I wondered Tony would you like to reflect how much that relied or built upon the earlier achievements that came out of York or, to put it more provocatively, could it have come out of anywhere else?

Professor Tony Culyer:

Well I don't think it's true to say it came out of York really. The way it worked was that I personally had been involved in some discussions in the Department of Health a couple of years before around 1997 in which the issue was basically how ought we to be doing cost-effectiveness analysis around pharmaceutical products and we had a couple of workshops

[105] Denis Pereira Gray was a general practitioner (1962-2000) and Council Chairman of the Royal College of General Practitioners (1987-1990). Marshall Marinker was Foundation Professor of General Practice and Head, Department of Community Health, University of Leicester (1974-1982); Director, MSD Foundation (1982-1992). See Gray, D.P.; Marinker, M. and Maynard, A. (1986), 'The doctor, the patient and their contract – I. The general practitioner's contract: why change it?', *BMJ*, 292 (1986), pp. 1313-1315; and (idem) 'The doctor, the patient and their contract – II. A good practice allowance: is it feasible?', *BMJ*, 292: 1374-1376.

organised by the Department of Health. You, Ron, were there, did you go too John? And they drew on York. They weren't dominated by York economists but I think there were more Yorkists than any other institution there. The product of those meetings was essentially a first draft of what later became the methodological guidance that NICE issued so in a way York's influence on NICE began before NICE itself existed. I don't think that particularly had an influence on the creation of NICE because I think it would have been developed anyway had clinical governance not come along and therefore the need for an evidence-base to support clinical governance. When it did come, obviously as the vice chair, I was able to develop further the ideas we had in those two seminars which my principal role was to make sure that the economics that NICE was going to use and depend upon was as credible and as respectable as we could possibly make it. So it had to be convincing to the economists, not all of whom were 'health economists' and who may be judging it from an entirely different perspective, perhaps nearer classical welfare economics. It had to be credible, or at least reasonably resistant to assault from potential enemies in the pharmaceutical industry, hostility from the professions and so on and so forth. And the way that we did this, some of them wholly political which had nothing to do with economics and they didn't have much to do with me, but the way we really did it was to develop a really good relationship with the research community as a whole. That included the Royal [medical] Colleges as well as the universities so it became clear that whatever we did had to be impeccable but it also had to be sufficiently attractive to encourage people to volunteer to participate in the whole process, which was absolutely essential or it wasn't going to work. Because in those days, I think people still managed to get first-class travel tickets.

Image 12: (From left to right): Roy Carr-Hill, Ron Akehurst, Mike Drummond, Anne Ludbrook, Sally Sheard, Tony Culyer, Keith Derbyshire, Andrew Burchell, Brian Ferguson and John Hutton

Professor Ron Akehurst:

They still do old boy [laughter].

Professor Tony Culyer:

Well I don't think everybody does Ron, so I wouldn't shout too loudly if I were you [laughter].

Professor John Hutton:

Only if you have a senior persons' rail card [laughter].

Professor Ron Akehurst:

Well we'd all qualify for that John! [laughter].

Professor Tony Culyer:

So then what naturally developed was this network of collaborating centres of one kind or another to develop clinical guidelines and the various stages of the technology appraisal side, whatever the kinds of technologies they were. And the great thing about that was that York could have, I suppose, seized that and monopolised the whole thing and expanded hugely and no doubt got money to do it all. But we didn't, we shared it out amongst the world, relatively minor places like Sheffield [laughter] got their little slice of the cake and so on, Southampton.

Professor Ron Akehurst:

It's rather bigger than yours actually.

Professor Tony Culyer:

I don't know anything [laughter]. So that, as far as health economics and the impact of health economics on policy, that is the single most important event for health economics in the United Kingdom since everything began. It's highly biased to doing a particular kind of health economics but it's been phenomenally successful I think, and it's become something of a model for others to copy if they can. York in a sense took a lead there. The leading thought provokers were people like Ron and Karl Claxton, to mention a couple, and Mike [Drummond] as well and maybe others but people at York.[106] I think the intellectual leadership by and large has come from York on the economics side, not on the epidemiological side. But it has fostered growth in lots of other places so there's now a whole industry and a lot of people identify health

[106] Karl Claxton is Professor in the Department of Economics and Related Studies and Senior Research Fellow in CHE, University of York.

economics unfortunately with health technology appraisal which is a bit unfortunate. Perhaps that's what Andrew's alluded to when he talks about economics and health economics because to me the economics in health economics is economics, period. And the training should reflect that. I think there are some issues about who calls themselves a health economist these days. The idea that a Masters degree in Pharmacology coupled with a three-month course in health economics turns you into a health economist is… well people undoubtedly do sell themselves as health economists on that sort of basis and that is very unfortunate and runs the risk of bringing the whole thing into disrepute. It's a tricky one.

Professor Ron Akehurst:

I just want to add to what Tony has said. I agree with him that a lot of threads came together which led to the creation of NICE and for it to have the form that it had, including the sort of regional efforts that were already going on to do NICE-type things. But where I think York did have a big influence was actually because of Tony, because the methods that were to be adopted were hammered out in a ten-man committee where the economists that were there apart from yourself were Karl Claxton, Martin Buxton and myself so that meant there was a disproportionate representation from York and so we had an opportunity to have our say. Having said all that, we didn't get all our own way about everything. Well it took them three years in the first review to realise that we were right and then change it. So I think that's where the disproportionate influence came from possibly in that initial setting-up. I would also give an honourable mention to Mike here because he had done so much work in systematising a lot of the work that had been done around economic evaluation that his checklist and so on got built into the process. So again, that was another way in which there was a lot of influence.

Professor Mike Drummond:

We were talking about what York did for NICE and I just wanted to reflect on what NICE did for York because I was Director at the time. Before NICE came along, people in CHE worked on the so-called DH programme and were doing policy-relevant work all the time and then other people who were doing individually financed research studies which may or may not have an impact, they'd get published but may not influence decision-making. All of a sudden, the other half of York who were doing economic evaluations suddenly found themselves in this world where they were incredibly policy relevant in what they were doing. So it actually shifted the balance I think within CHE a little bit to find that everybody had the chance to do some really policy-relevant work that you would actually read about in the newspapers or on the TV because a decision was made based on the work you had done. It kind of changed the dynamic within CHE a little bit.

Professor Sally Sheard:

John, do you want to come back on that?

Professor John Hutton:

We all remember things slightly differently about events going on around that time. I was party to the two meetings Tony chaired on behalf of the Department, which appeared to me, at the time, to be an awakening too late by the economists in the Department of Health that they were losing half their business because NICE was going to be created and take away all the technology appraisal, but it started too late and got swept up in the NICE bandwagon.[107] Tony surfed the tide very well and ended up at the top table at NICE which was good for all concerned. The work that was done in those two workshops, I agree, formed the basis of the group which produced the first NICE evaluation guidelines. They didn't really alter it much, largely because it was the same people around the table. I forget for how many years, but about a dozen people, people like Alastair Gray, Martin Buxton from other places than York, were all there.[108] We had two or three meetings before Rod Taylor, who was the head of appraisals initially at NICE, and myself finally drafted the document that went into the guidelines in the end. What interests me is that, although they have gone through several revisions, I think the basic principles that we established at that time still hold good. The sophistication and degree of precision of the evidence required at different points has sharpened up considerably since 1999 but I don't think there is a major difference in the approach that was taken where we had to start off by saying 'we would like to see QALYs if possible' because if we'd gone straight out and said: 'we want QALYs', nobody would have delivered it and the whole thing would have been embarrassing all-around. With successive revisions, it has now got to the point where you've really got to have a very good reason if you don't produce QALYs and it's likely to be thrown out anyway, but that's how decision-making in political environments works.[109] It's not academics who say: 'that's wrong' and 'that's right' and everything changes at the flick of a switch. But the other thing I remember about those meetings, particularly those chaired by Tony, was that the economists who came from the Department of Health were very keen that social opportunity cost should be the basis of costing in everything in the appraisal. People like Ron and Martin Buxton gently pointed out that in the case of pharmaceuticals that wasn't going to work very well because the bulk of the costs of pharmaceuticals is not the opportunity cost

[107] On the origins of cost-effectiveness and the creation of NICE, Clive Smee later added the following comment: 'David Pole started publishing articles on cost effectiveness of certain health care procedures as an academic economist in the 1960s - before York had even got started - and he transferred that knowledge and his reputation into the Department in 1970. Consequently, EAO gradually developed a line in conducting HTAs [Health Technology Assessments] from the early/mid 1970s. Admittedly, some were contracted out (on grounds of making them more authoritative and independent?) – e.g. to Buxton at Brunel and Ludbrook at Aberdeen – from an early date. This EAO/EOR programme continued right up to the founding of NICE. Here Tony Culyer clearly did play a major role but EOR papers proposing the establishment of something like NICE were circulating in DH for some months before the invitation to Tony to chair a new Expert Workshop. See Timmins, N., Rawlins, M. and Appleby, J., 2016, *A Terrible Beauty: A Short History of NICE*, Nonthaburi, Thailand: HITAP, p. 33. Again, academics clearly promoted the concept and importance of comparing cost-effectiveness but it was a DH Chief Medical Officer, Sir Kenneth Calman, who persuaded his medical colleagues that interventions should only be described as being clinically effective if they could also be shown to be "cost -effective". Arguably in relation to another area, recognising the importance of, and developing efficient methods of capturing, the patient's perspective, university economists have been no more successful than anyone else.' (Clive Smee, email, 31 January 2018).

[108] Alastair Gray is Professor of Health Economics and Director of the Health Economics Research Centre, Nuffield Department of Population Health, University of Oxford.

[109] Professor Carr-Hill noted later that a review he did for NICE on community participation did not use QALYs. See Mason, A.; Carr-Hill, R.; Myers, L. and Street, A. (2008), 'Establishing the economics of engaging communities in health promotion: What is desirable, what is feasible?', *Critical Public Health*, 18(3): 285-159.

of producing it, which, if you'd followed the strict neoclassical approach, would have been what you would have costed the pharmaceuticals at, so basically everything would have been cost effective because you would have written off all the fixed costs behind the development of the drugs. So right from the get go, the so-called economics in NICE appraisals was departing from the neoclassical model as Tony said, and it took on a life of its own. There was a danger that because of things like that, if you associate health economics just with NICE, you get a false impression actually of what health economics is about.

Professor Sally Sheard:

Tony, you wanted to come back?

Professor Tony Culyer:

Yes, I just wanted to make a couple of points. One of the very significant things that NICE was able to do for health economists was to offer them membership of decision-making committees, particularly the appraisal committee, which actually made policy. It isn't having an influence on policy: those people made decisions that actually were policy and that is something that is so rare an opportunity for academics to have that I think it's been a very special thing, an energising thing for health economists. The other thing is one of the most important ways in which York and indeed other health economics centres, one of the ways in which they have their influence is through the membership of bodies of one sort or another, advisory committees, not just in NICE but in all sorts of areas. I don't know whether you are doing research into that, but if you took almost an arbitrary number of the most commonly cited health economists in the UK for example, and just got them to write down over their lifetime the committee memberships they have had that have anything whatsoever to do with public policy, I think you'd find quite an extraordinary amount of influence of York but also lots of others. I think you can tell a story whereby it's not just York health economists but health economics' ability to have an impact on policy and policy-making and the decision-making structures through which these decisions are taken has been… I wouldn't be surprised if it wasn't greater than in almost any other area, including transport economics. I'm generalising in a rather weak way from the knowledge that all the health economists I know are members of all sorts of external committees of policy to a much greater extent than anybody else in any economics department that I know. That's a distinguishing characteristic of health economists perhaps, rather than health economics, that they have infiltrated [laughter].

Professor Sally Sheard:

And in a way, what they are doing, and I don't think consciously, they are mimicking the way in which senior medical professionals use committees and committee membership to infiltrate policy worlds. That's something I've been looking at, and Eleanor we can pick up on that. I was going to come to Ron and talk about DECs [Development and Evaluation Committees].

Professor Ron Akehurst:

Yes, Development and Evaluation Committees. The first one was down in the South West [Regional Health Authority] and Andrew Stevens was the person who got things going down in Wessex originally where a group of the health authorities [were] trying to make decisions on what technologies, in the widest sense, to invest in in their patch.[110] They realised that A, they were all trying to do the same thing and B, they were hopelessly underpowered to be able to do it. So they created an organisation to start to do some of that together. Slightly later, in the Trent region, the District Medical Officers came as a body to see me in Sheffield to ask if, initially, I would chair a group of them to co-ordinate them in terms of sharing out the work. But I very quickly became a critic of what they were doing, and by quickly I mean the first thing I saw [laughter]. So their response to that was to start asking us to start to do some of the evaluations for them and what you've got was these two groups starting to do quite a lot of evaluations. Andrew and I got together to make sure we didn't duplicate if we could help it and also we set up a group to try to look at methods that we were using so that we had some consistency in the way we were approaching it. Then this came to the attention of the Department of Health because the drugs industry was concerned that these people who had no status whatsoever were making recommendations on what drugs should be paid for in localities. The Department, to its credit, responded not by saying 'we shouldn't have these things' but by saying 'let's get a measure of control'. They set up a committee structure and Kent Woods was made chair of the committee that oversaw our work in the Trent region.[111] The DECs continued and when Andrew Stevens moved from the South West to Birmingham, there was one created in the West Midlands as well. These continued until NICE came along but actually when the first announcement was made about NICE, the only thing with any certainty that was said in it was that DECs were going to be abolished because there was a school of thought which blamed the DECs for creating postcode prescribing, saying they are not always making the same decisions and that's why we're getting differences in different areas. Absolute rubbish of course, but nevertheless there was a bit of that in the newspapers. But what happened of course was that when NICE got going, the experience of the people that had been supporting the DECs was simply harnessed as evaluation groups to support the developments in NICE.

[110] Andrew Stevens is Professor of Public Health at the University of Birmingham. He was Vice Chair and Chair of one of NICE's Appraisal Committees.

[111] Professor Kent Woods was the Chief Executive of the Medicines and Healthcare Products Regulation Agency (2004-2013) and Chairman of the Management Board of the European Medicines Agency (2011-).

Professor Karen Bloor:

Image 13: Karen Bloor (right) and Alan Haycox (left)

Can I just add one final point on one of these threads that creates something like NICE and again it's an example of Alan [Maynard] getting the right piece of research onto the right desk at the right time. In about '97, I'm not really sure about the timescale of all this – I feel like I need a chronology of all these meetings – so in 1997 when the New Labour government was elected, Alan was asked to discuss with the Minister how the pharmaceutical industry should be regulated. He took me with him because I'd done an international review on what other countries do in this area a little bit earlier. We visited the Health Minister at the time who was Margaret Jay and put some ideas to her which, of course, focused on the work of Mike, of Ron, of Claxton and Buxton and all of those ideas and of course the experience of places like Canada, Ontario particularly, and Australia.[112] So we just highlighted all of these ideas around the fourth hurdle as one of the inputs into that creation of that organisation.[113] I can tell you it was 1997 because it was in between the election of the government and when we published what we said to her in a BMJ [British Medical Journal] editorial.[114] It was one of those threads of getting York and UK health economics onto the desk of somebody who's interested at the right time.

Professor Sally Sheard:

I'm going to move us on because I'm conscious of time and I would really like to have some reflection on the role of health economists through other organisations, particularly through consultancies and a little bit about YHEC and the evolution and genesis of that and I know some of you also worked as independent consultants. Perhaps you might like to contribute on what you think that has enabled you to do what you might not have done in an academic position. Would somebody like to speak about YHEC?

Professor John Hutton:

Perhaps I ought to introduce it because the credit largely, though not exclusively, goes to Ron. At the time, we used to refer to it as the nationalisation of Akehurst enterprises [laughter]. It wasn't quite like Spain and Catalonia. The work that Ron's described in earlier discussions that he'd done gave him this fantastic network across the whole of the North of England NHS. He

[112] Margaret Jay was Minister of State in the Department of Health (1997-1998).
[113] The 'fourth hurdle' refers to the conditions pharmaceutical products and other products must satisfy to gain market access and reimbursement in the NHS: safety, efficacy, cost and clinical effectiveness.
[114] Maynard A. and Bloor K. (1997) Regulating the pharmaceutical industry. *British Medical Journal*; 315: 200-1.

was getting so many commissions as an independent consultant that he couldn't do his day job as well and the group of wise men in health economics at York which met unofficially on a regular basis to talk about issues of joint concern and strategy eventually decided that a separate organisation needed to be created. There was another push from the CHE side because the Department of Health were continually on the phone asking Alan and other people in CHE to do, effectively, free short-term consultancy on issues that were pressing the Department and they wanted a quick answer on it. So in the end it was decided to create this organisation which could respond on a short-term basis. Ron developed the mechanism by which it could be financed on a stable basis so that we could recruit people and offer them proper job conditions and attract the right sort of people. It wasn't dependent on very short term contacting from the start but at the same time there was a flexible financing model which allowed it to undertake short-term work as policy-makers of various sorts required. In the early years, driven by the option appraisal workload in the NHS, it got off to a really flying start. The funding mechanism was a guarantee of so much per year from each of the northern Regional Health Authorities and the work was ticked off against that until that was exhausted and then it was billed after that if the northern regions needed more than their quota. So that's essentially why it was started and how it was organised and over the years it evolved as the work changed. When the option appraisal work ran out, different things were possible in the NHS but there was quite a dip in the interest in health economics in the NHS when it was no longer required, as you would expect. Gradually YHEC got into other areas of work, in the public health field and then with technology appraisal with a pick-up in activity in that area through NICE. YHEC has latterly made a significant income out of working with medical device and pharmaceutical industries but also working with NICE and other agencies as well.

Professor Ron Akehurst:

I've nothing to add to that really because John has had a longer acquaintance with what YHEC's done than I did. I was just involved in the first seven years, but he's right, I was dead lucky: I started it at a time when there was a great opportunity.

Image 14: Mike Drummond

Professor Mike Drummond:

I was just going to say that one of the impacts of consultancy was that it expanded the range of employment opportunities because it wasn't constrained by government spending in higher education so it gave a lot more opportunities for health economists either working full time for a consultancy or doing some consultancy alongside their other work. I think what I find quite interesting about the UK situation, compared to other countries, is that you'll have people who will act as consultants both to the government and to the industry whereas in many countries, like in Australia, you are either a consultant for industry or a consultant for government, you never mix, and it's somewhat the same in Canada. So it's interesting the way it's developed in the UK.

Professor Sally Sheard:

Do other people want to reflect on why it's developed in that way? Brian?

Professor Brian Ferguson:

It's possibly slightly a different point but it's picking up the point about YHEC and the sorts of work and reach that that type of work has. A couple of thoughts, one of which may be slightly more controversial, but I think that the work that YHEC has done over the years – I was seven years at YHEC and loved my time there – we had a lot of influence on the local NHS. In my current role, I have commissioned YHEC to produce return on investment tools, so they produced a really good tool recently on dental health and work that doesn't just span the NHS but local government sector as well which is important. The bit where I think, and I agree 100 per cent with what Tony said about the reach and I've said it myself I think today about the huge national impact in all sorts of ways, the bit where I think we collectively have less influence is on local decision-making. There might be lots of good reasons for that, but I have worked *in* the NHS rather than just *with* the NHS and it is extraordinarily difficult to get economic thinking into the NHS. Tony, you were chair or vice chair of a Health Authority with many reorganisations governing our work there. We tried to get clinical effectiveness, cost-effectiveness into decision-making and what you find, even with the best evidence that CRD [Centre for Reviews and Dissemination] produced on effective health care, they used to flag it all the time, is that you still find that clinical practice, of course, trumped a lot of what the evidence was saying, often for not good reasons. So there's something about that national level, it's a huge influence. At local level, it isn't the case that people have got cost per QALY league tables and start to commission using ICERs [Incremental Cost Effectiveness Ratios] or whatever. It's just not like that, and so there is something about the political and wider decision-making environment in the NHS that I think – you have a final category about 'what next' – and maybe there is something there about trying to get closer to how the NHS makes its decisions. There have been some successes using tools like program budgeting, people around this table have done that, but I would argue that the impact we've had in local decisions is a lot lower.

Professor Tony Culyer:

The impact we have had as health economists. I mean I don't doubt that the impact Alan Maynard had as chair of the local hospital trust for example, would have been very considerable, independently of whether or not he was a health economist, and that may also be true of a number of other economists. These people do acquire skills that are more than just health economics.

Professor Anne Ludbrook:

If I could briefly comment on this because when I first went to Aberdeen to work for the NHS, I think I was the first health economist appointed to the NHS and of course I tried to work with the NHS over the years from a research base. I think one of the things we have to recognise is that there was a vested interest in the decision-making in the NHS. Actually, what we do, we come in and make the thing more transparent, we try to make it more rational and everybody

runs away, because they actually prefer the rather murky decision-making that maybe gives them the opportunity to exert more influence, rather than wanting to necessarily get a more rational outcome. I think that's the point you have to start from and reflect on and maybe we need to learn much more about behavioural science of decision-making in order to influence those situations.

Professor John Hutton:

I'd just like to pick up on Anne's point. The other major debate that used to go on at HESG meetings in the early days when arguing about market systems or the NHS, was about managerialism. There's a guy called Gordon Best, a hospital manager in Canada, and he was constantly berating the academics saying: 'you guys are great at identifying the optimal solution but you haven't a clue how to achieve it and you're wasting your time and the NHS's time peddling your ideas unless you've got some managerial skills and idea how you have to work around people in order to get anything to change in an organisation like the NHS'.[115] Like the rest of the young guns at the time, we all poo pooed this as negative thinking but I have to come back forty years later and say that he was right and I say that as having spent ten years as chair, vice chair and board member of various NHS Trusts. I think Brian is right in what he said, but I don't think we shall ever, directly, introduce a system where health economics is used for local decision-making in the health service because if you've got to that level of decision-making and economics hasn't made any impact yet, it's way beyond the point. When I first got on the [health authority] board at York, in spite of Alan's efforts over many years already, we still couldn't find out whether they were using NICE guidelines. We used to ask at every board meeting 'where are we with NICE guideline such and such' because one of us had been on the committee that had made the decision before [laughter], nobody had a clue. There was some junior clerk who was supposed to update everybody about NICE guidelines in the organisation, and the doctors clearly just ignored anybody and went their merry way. Obviously, things are better now in a lot of places but that's something that really has to come top-down. Economists, even Alan Williams would often say this, it's all very well infiltrating but you've got to choose your battles and you've been wasting precious time and skills trying to influence at that level if you've failed higher up the organisation.

Professor Brian Ferguson:

I agree with that. Economics is not going to drive all the decisions but what it does do is what Anne was describing, is that it makes those decisions more transparent and it's possibly the best we can achieve. You're sat as a non-exec[utive] and chair. Getting some structured economic thinking of what are you trying to achieve, what outcomes you're trying to achieve is a start and that's probably the best we can hope to achieve. There's no way rational economics is going to influence the NHS.

[115] Gordon Best also worked for the King's Fund in London.

Professor Karen Bloor:

And that's where the medical mavericks that Alan [Maynard] would describe – Cochrane, Chalmers, Devlin – were on the same page.[116] They wanted more transparent clinical decision-making and that's why they got on with the health economists.

Professor Sally Sheard:

I'm going to bring in Alan [Haycox] here because I would like to have some discussion about health economists working in the NHS and you had one of those early roles.

Dr Alan Haycox:

Image 15: Alan Haycox and Roy Carr-Hill

Everything Anne says: fear, trepidation, everything John says: choose your battles. But more importantly, choose your collaborators because in the North West Regional Health Authority there were probably about five hundred people that were working there and I think I found five people who were willing to work with the health economists. Public Health has been mentioned, they were actually incredibly welcoming. They came to me and said: 'we have population foci and this is what we want to work on' so within that Jo Wolsworth-Bell who was a specialist in public health was somebody who would listen and who would work with you. In health promotion, Tim Theaker was the regional health promotion manager. He was desperate to break the medical model and to try and move forward with some cost-effective interventions, so again, somebody I could work with. Finally, Vic Standing, the regional pharmaceutical manager: too much, too many drugs, too little money, too many people coming to sell him drugs he didn't know anything about. So I think how you survived in the early stages [as a health economist] was to be proactive. If you were reactive, you did nothing because nobody would come to you. You had to choose who you were going to work with and you had to choose those that had some form of receptivity to an economic argument. I think I found three people in an organisation of five hundred, I think I was fortunate to find three good collaborators, and I think we did some good work but the vast majority of people, as Anne says, you talk to them about health economics and they don't want to know it, it makes life more difficult, it makes life more confusing: 'we've always done it this way so don't change'. So in the early stages it was a matter that they didn't know what to do with you, they didn't necessarily want you there, you'd been imposed upon them. I was in the finance department, they didn't know what to do with me so I wandered off, I found my battles, I found my collaborators, and in that way, I hope I made an impact.

[116] Iain Chalmers is a British health service researcher and founding director of the UK Cochrane Centre (1992 -2002), which inspired the International Cochrane Collaboration.

Professor Sally Sheard:

Thank you. Ron, you've already spoken about trying to train doctors in health economics, would anybody else like to reflect on how the medical profession have seen health economists?

Professor Karen Bloor:

They tried to get Alan [Maynard] sacked a few times as chair of the hospital trust [laughter].

Professor Roy Carr-Hill:

On a slightly different tack, the general problem of converting research into practice has been examined by quite a few psychologists and clinicians. There's an argument that whilst you can train doctors eventually to do the right thing because they are repeating themselves, it's the same patient in front of them every day and it's the same drug they are going to use and eventually they understand what they are doing, and it might take them a hundred patients to get ninety of them cured but eventually they will get it right. If you are trying to change the practice of decision-making at a local or a national level, national level is easier I agree, but local level you've got a different context, different set of circumstances, different people and it's a one-off event. You are never going to be able to very easily convert research into practice in a one-off event, which is what the situation is. The issue of local versus national influence is more important than has been so far recognised because primary care is run by 10,000 private companies which, within quite broad constraints, can do what they like.

Professor Mike Drummond:

I think one positive thing is the collaboration between health economists and medical researchers, people at the research end of medicine. The relationship with them has been great over the years, practicing doctors are a different kettle of fish.

Professor Anne Ludbrook:

But quite a few things have improved over the last forty years because of this evidence-based medicine movement and the way in which doctors will now be trained. I can remember going on visits up to North Tees. Brendan Devlin used to put on shows for the students and things like that and he would bring on some of his backwards-looking colleagues. They were doing clinical practice the way they'd been trained to do clinical practice and that was the right way to do it whatever it was they were doing. It didn't matter that someone was doing it differently and getting better results, they knew what they were doing was the right thing and they couldn't be shifted because that was the mind-set in which they had been trained and grown up. Hopefully that has changed to some extent.

Professor Ron Akehurst:

First of all, I'd reinforce what Anne has just said that there's been an enormous change. Actually, it's easy to forget just how far we have come. I mean my first twenty years as health economist I liken to banging my head against a brick wall, until one day a brick fell out. [laughter] The message absolutely wouldn't come over. The first time I ever lectured to a combined group of doctors and nurses some people walked out on the ground that what I was saying was unethical. We have come so far from that and, in fact, in many of my conversations with doctors these days, I'm trying to talk about outcomes and they are trying to talk about money [laughter]. And I think we have one of the most economically literate medical professions in the world in this country if not the most. So I think we have made a lot of progress but there are some inherent issues which mean that we will always be across the medical profession a bit, and quite rightly so because you want doctors so be worried about the patient where we are inherently coming along wanting to talk about populations. There's a tension there that you can never get away from so there's always going to be that kind of problem we are going to have to deal with. But, actually, if somebody had told me forty years ago that we'd be in this sort of positions and having the kind of conversations we regularly have now, I would have said they were kidding themselves. I couldn't see it happening in my lifetime.

Professor Brian Ferguson:

Just briefly to add to that, and I completely agree, and again it's about getting to a younger generation of doctors. It's all about getting it into the training, I talked earlier about public health but when I was at the University of Leeds, I used to teach the second-year medical undergraduates and I always expected discipline problems, no one paid attention as it was a soft option sort of thing. But, actually, they were fascinated by health economics and clinical governance at the time and really loved the material and you could see that they actually genuinely thought it was important for them and their training, so I think we've seen a step change across the generations.

Professor Sally Sheard:

I'm conscious we are in the final minutes and we're already beginning to make those longer-term reflections, I wonder whether Andrew, do you want to reflect on the pharmaceutical industry and its reception of health economists?

Mr Andrew Burchell:

I wasn't that much involved during the 80s but I do recall that under the Pharmaceutical Price Regulation Scheme [PPRS] there was an asymmetry because the Department didn't have the analytical firepower the pharmaceutical industry had in terms of being able to counter their arguments.[117] But certainly, in the 80s, it seemed to have very much an accounting perspective as opposed to an economic perspective. It was all about rates of return for R&D [Research and

[117] The Pharmaceutical Price Regulation Scheme [PPRS] is an agreement between the British government and the pharmaceutical industry which was first set up in 1957 [as the Voluntary Pharmaceutical Price Regulation Scheme: VPRS]. Its goal is to guarantee the NHS has access to good quality drugs at cost-effective prices.

Development] investment and the pharmaceutical industry would employ bevvies of accountants to argue that their rates of return were consistent with whatever rate of return the Department was willing to prescribe. The Department had perhaps one accountant who was doing all the work at our end. I don't think it was, in terms of the role of economists in the Department of Health, we didn't have much influence on that PPRS regime. I suppose it's not really until you had the cost-effectiveness analysis started to be applied to individual drug level with different type of intervention that it started to have an impact. Certainly in the 80s, it was more an aggregate analysis looking at the profitability of pharmaceutical R&D and what was an acceptable cost and what was an appropriate rate of return. So it wasn't so much an economic perspective, it was more an accounting perspective.

Professor Sally Sheard:

Keith, would you be able to reflect on whether you think the economists still have the same degree of influence in the Department now?

Mr Keith Derbyshire:

Compared to?

Professor Sally Sheard:

Well at some point, I think, Brian referred to the heyday of the 1980s.

Mr Keith Derbyshire:

I think the heydays were in the 90s actually. Obviously, I was only there from 1992 to 2016 and I think the economist who exerted the most influence, and again personalities are always very important, and the organisation of economists kind of give them the biggest oomph when they were all led by a very senior Clive Smee who was a Director and had direct access to the Secretary of State. So I think the influence of economists, as opposed to analysts, I think the peak period was 1992 to 2000 when money was short in that period, when the internal market was taking off and the internal market was seen as the vehicle to extract as much value for money from the health service as possible. After 2000, when more money went in, rather unusually but perhaps that's the way bureaucracies behave, the economists had less influence with the money being more widely available and it was more political and less evidence-based I think, from the Department's point of view.

Professor Sally Sheard:

Andrew's nodding there.

Mr Andrew Burchell:

I think I'd set the time frame slightly earlier, I think Clive [Smee]'s intervention in the late 80s at the time of pulling together the White Paper team and making sure that economists in the Office were members of that White Paper team started to set the journey, a direction of travel. The White Paper produced in 1988, *Working for Patients,* set the scene which then gave traction for economists to get more heavily involved. The whole dynamic within the health service changed on the back of that. Therefore, the need for more economic analysis to make sure that you were putting in place appropriate structures and appropriate incentives actually gave economists much more traction because necessity is the mother of invention. It actually gave us the demand that wasn't there before. Before, we were, like Ron said, bashing away but actually *Working for Patients* did signal a sea change in the dynamic which actually changed the demand for health economics.

Professor Tony Culyer:

Just a quickie, I think NICE had a huge impact on the presence and importance of economists in the pharmaceutical industry. I remember in the very earliest days, on a couple of occasions, there was one particular team, I think from SmithKline, I think it was still called SmithKline, came to see us to try to understand what sort of evidence we would find acceptable.[118] They were a relatively young bunch of people and some of them were in tears. The stress they were under was just enormous, because they'd been told they had to deliver stuff that was going to pass the NICE test and that happened a couple of times. That was a huge wake-up call for the industry and they started employing reputable and recognisable economists. I don't know what the count is now, but my guess is, I think we had the three main health economists in the industry on our two Department of Health workshops. We had all three of them and there must be three hundred now!

Professor John Hutton:

That's going back to your problem before about the definition of a health economist. There are three hundred people calling themselves health economists. Particularly on the [North] American side, there are pharmacologists who've done a little bit of economics but there are key people now who really understand things in senior positions in the major companies and, as you say, NICE has had a lot to do with that but, in my experience, it's an interesting contrast between the NHS and the industry and how much easier it is to get things done in a private company than in the NHS. When the big companies decide 'okay we've got to accept health economics as part of the environment, our people need to understand it, we will train them'. Contract research companies like the one that I worked for and Mike, I know, has done a lot of this sort of work as well, we trained hundreds of people from R&D right through to marketing in big pharmaceutical companies in basic economics and economic evaluation over a five-year period from 1999 onwards.

[118] SmithKline Beecham was an American pharmaceutical company created in 1982, the result of the merger of several other companies. It merged with Glaxo Wellcome in 2000 to form GlaxoSmithKline [GSK].

Professor Tony Culyer:

Does York dominate that training industry?

Professor John Hutton:

York does summer programmes.

Professor Mike Drummond:

It's been twenty-five years now, training a hundred people a year so it's quite a few.

Professor John Hutton:

You get a contract to do five hundred people in six months and the beauty of it was you had a mixed audience within the groups within the company and they are training people smart enough to recognise that if everybody did it, they could all talk to each other about it. It just doubled the value of the programme because you didn't pick out key individuals, he needs to know about health economics and send him on a six-month course somewhere. They did two days for everybody and took it from there.

Professor Ron Akehurst:

I'm just going to comment that I think there are many varieties of training around now and so a lot of the biggest companies have their own, they actually call it 'internal university' where the training is all through VLE [Virtual Learning Environment]. Actually, what they do is they employ people to put the materials up, the lectures are available all the time and this kind of thing and so there's a huge amount of resource available for people to use within the company, available to them. So It's a different, it's a sign again of a way of, not just of York, but the way in which health economics as a sub-discipline has grown phenomenally and you find its presence. So if you go to, for example, Novartis or Johnson & Johnson, then they have hours and hours of, hundreds of hours of health economics on their VLE that staff can just access.

Professor Mike Drummond:

I see my slides all the time [laughter].

Professor Sally Sheard:

We've moved on and are almost anticipating the future but I want to spend just a couple of minutes. Would anyone like to be brave enough to make some forecasts about where health economics is going from here?

Professor Anne Ludbrook:

I'm not sure it's a forecast but it's a challenge I'd quite like to discuss while we are all here, which is whether the progress we have made so far has become somewhat institutionalised, things like the cost-effectiveness techniques and the use of QALYs. Have we stopped being the insurgency movement with regards to some of these decision-making areas and if we don't have as much influence in the future, do we have to revisit that mind set?

Professor Mike Drummond:

I think you are right about the UK but if you look at other countries, there's still plenty of chance to be insurgent in the US for example [laughter].

Professor Brian Ferguson:

Two thoughts quickly. When we were having that conversation about local systems, I was reflecting on what I find on a day-to-day basis which is that the demand for health economics and health economics thinking is huge. The market opportunity is just massive. And I think Keith's point about, you are absolutely right, that the need is greater in times of austerity, evidence becomes really important and it's why at the moment health economics is so important. And if I've got any problem in my life, it's that people see health economics as the answer to everything, and of course you have to tell them it's not, but it can help. But the demand for health economics in local government and NHS at the moment is huge, people want a piece of it.

Professor Sally Sheard:

On that happy note, can I thank Mike Drummond who is having to depart. It's been great to have you here.

Professor Tony Culyer:

It's a pity Adam [Wagstaff] isn't here as it would have been nice to have a World Bank perception here.[119] I think one of the great areas that's opening up, where effective demand is only beginning to emerge, but once it does emerge I think it will be enormous, and that's in low and middle-income countries and particularly with the WHO [World Health Organisation] drive for universal health coverage. That is dependent upon our economic ways of thinking in the face of pathetic data of course in most cases, but just absolutely fascinating opportunities there. York has been playing a role, belatedly, in global health. I think they are happy to be slightly behind the curve and clambering on to it. But I think for health economics as such there is tremendous scope there and I would be absolutely amazed if that hadn't become, that health economics hadn't become a truly global one over the next ten to twenty years.

[119] Adam Wagstaff was Research Fellow (1985-1986), University of York and is Research Manager (since 2009) in the Human Development and Public Services team, Development Research Group, at the World Bank.

Professor Ron Akehurst:

To Anne's point and the fact that we are all getting a bit comfortable, I think the danger comes from the fact that so much of health economics has become about economic evaluation of technologies, and, in many ways, that's a bit like it's a first-world problem. It's about which of the white wines do you want when actually for much of the world, the problems are much more fundamental and making economics effective and useful in those circumstances is at least as much about all the other things we have been talking about: understanding how you operate in organisations, how you work out influence.

Professor Tony Culyer:

How you design an insurance system.

Professor Ron Akehurst:

Exactly. I think actually, certainly the risk in the UK, is that a lot of the opportunities and the funding come from a fairly narrow part of health economics, and I think it's really quite important for the profession that it makes sure it invests in those other parts because that's actually where it's going to go.

Professor Sally Sheard:

I know you want a final word Karen.

Professor Karen Bloor:

I was going to make a similar point in that okay yes we've made huge progress here haven't we in health economics and the kind of transformation that we have in terms of the response that we get and demand for health economics that's out there is huge. But there's really a lot left to do and a lot that needs doing regularly. We need to not think that this is a battle that has been won, at all, because it's really easy to go backward. It's great to see younger members of the Centre for Health Economics here today. So global health economics and the contribution that York is going to make in the future to global health economics is really encouraging but we've still got things like the Cancer Drugs Fund, prices and the reimbursement that we have for cancer drugs, these are areas where industry would very much like that health economics would have much less to say. We need to keep reminding them why this stuff matters and we also have a government that would probably like a much bigger role for private insurance. Again, we need to remind them of some of the health economics of why that would be a fairly catastrophic idea. So loads left for you guys to do, and to remind them of, in the future.

Professor Sally Sheard:

I'm conscious we need to vacate the room as there's a seminar happening and CHE have also very kindly provided some wine for some final drinks so please stay, have a soft drink or glass of wine and it's a chance to have an informal chat. Can I thank everybody please, particularly the witnesses that we invited to participate? It's been an incredibly interesting afternoon and its raised lots of issues that probably haven't had this type of discussion before, so I hope you also found it interesting to participate and to listen to. Thank you.

[Applauses and End]

Appendix 1: Note for the York seminar on health economics – Maria Goddard

Just like many health economists, I did the MSc in Health Economics at York. This was back in 1985-1986 when the numbers on that course were very small (just five other health economists in my year, I think); so we were still quite rare beasts, even though it was much more established as a "real" sub-discipline of economics than it was in the very early days mentioned by other colleagues. To be frank, the grant support from the Department of Health (DoH) was a major reason for my choice of post-graduate degree. I was interested in pursuing a strand of public sector economics, but I could easily have gone into the economics of education, had I not needed financial support! At that time, the health economics course was taught partly by "guest speakers" from previous cohorts, so I recall Karin Lowson's lecture to us, for example. The course director at the time was Graham Loomes. It is true to say that even then, there was no real sense of what career options there were for health economists – I recall someone telling me that most went on to be "information and data officers" – which doesn't actually seem to be true at all…. It was an interesting year on the MSc course given the small numbers and the fact that some of our learning was based on watching Panorama videos about the NHS and visiting hospitals where we "observed" an acute hospital ward. It is fair to say that whilst we may not have appreciated it at the time, we at least did learn what the inside of a hospital looked like, which may not always be true of some health economics academics today! It was also an unusual year as Jon Sussex (formerly OHE and now Rand, Cambridge) and I were the only UK students to remain in the health economics field. There was one overseas student who I think is still in health related work in Italy.

Personally, I went on to be a career researcher in health economics/social care economics (PSSRU [Personal Social Services Research Unit] at the University of Kent, CHE at the University of York), interspersed with a brief foray into the NHS (not as an information officer though!) and a stint of just over 3 years as a civil servant (from 1993), the latter as an Economic Adviser in what was then the NHS Executive (DoH), working in the Economics and Operational Research dept ("EOR" [which replaced the EAO mentioned by other witnesses]) when Jeremy Hurst and Clive Smee were in charge. I have been Director of CHE since 2009. Having experienced "both sides" of the relationship between research and policy making, I agree with others that a major factor in nurturing this relationship rests with the influence of individuals who were determined that evidence should be created and used for the benefit of society. In my early days, these were people like Alan Maynard, Alan Williams and Christine Godfrey who were pushing on the door from the research "side"; and Jeremy Hurst and Clive Smee who were opening the doors on the policy "side". I think there was a great deal of useful exchange of ideas and an openness, forged in part by the common discipline of economics. It seemed slightly more difficult for researchers to establish and maintain links with the policy staff at DoH because there seemed to be a regular turnover of staff and also because of the lack of a common "language". Whereas the economists in the DoH seemed to have a loyalty to health, stayed around for longer and were at ease speaking with other economists even though they were from "outside" the DoH. These days, the key question of how best to ensure research addresses key policy needs and is used by the DoH, endures, despite the increasing focus on knowledge transfer. Indeed, this is something on which we spend a great deal of time as part of CHE's current research agenda supported by the DoH - and there is no easy answer. My baptism of fire in understanding the needs of policy colleagues arose in my first assignment on joining the NHS Executive as an economic adviser. I was asked to write a report about the evidence on economies of scale and scope in hospital care and was delighted to be given what

seemed to be quite an "academic" piece of work. However, I was disabused of this idea when told that I only had two weeks to complete it, the paper should be no more than four sides long and written not as a narrative but in bullet point form. I duly met the requirements and presented it to Clive Smee who said great, but please now take out all the caveats and the references, make it even shorter and end with a recommendation for the NHS Executive. Clive was a hugely skilled influencer of policy and adept at persuading even the most obstinate of ministers to listen to evidence, so it was a good lesson for me in how to get a research message across. The economists in DoH acted as a "bridge" from researchers and their evidence to the world of ministers and (sometimes) political whim. I think we are still struggling with how best to influence and support policy and as research becomes more complex and the timelines for policy decisions become ever shorter, we will continue to have to work hard to bridge the gap and to work with our economist colleagues in DoH to do so. If research and policy folk together can identify the questions to which answers will be needed in the future – as opposed to next week/month – we have a better chance of achieving evidence-informed policy-making.

I concur with the points made by colleagues about York's impact in the early days in areas such as resource allocation, manpower, NHS reforms; as well as the underpinnings of NICE. On the latter, I agree this was not solely a "York" achievement, it was clearly more multi-faceted than that and many contributions can be identified. However, I would argue that in terms of the methods of evaluation that NICE developed to underpin its work, CHE economists have been very influential. Indeed, as part of the evidence for our successful application for a Queens Anniversary Prize (for the influence of health economics on society), Professor Sir Michael Rawlins, Chairman of NICE, wrote: "The Centre has made extraordinary contributions both nationally and internationally to the development of health economics. It has done so from both a theoretical and practical standpoint. In particular, its contributions to the work of NICE have been so very important that I doubt if we would have achieved anything without the rigour and expertise provided by the Centre and many of its staff."

More recently, I think some of the research that has been influential in policy circles tends to fly more "under the radar" (for various reasons) than was the case in the early days of health economics. So there has been (and still is) a big contribution from York around areas such as the structure and regulation of healthcare markets; measurement of performance; incentives; contracts; organisation and workforce in primary care; productivity. Some of these areas have been noted by Clive Smee in his book "Speaking Truth to Power", e.g. that a long series of studies from CHE provided "'the hardest information available on the effects, including the distortions, of various performance tools".

A brief word on the comments made at the event. I think York is a major force in training of health economists, although of course many others play a big role as well. Around 300 people a year come to CHE from all over the world for the continuous professional development courses that we run and many of these have been running for almost 25 years. In addition, the MSc programme and the Distance Learning programme in health economics have trained several hundreds, if not thousands of students. The contribution to capacity building in health economics is something of which York is proud and is a fitting legacy of those who established these programmes in the early days.

The global health context mentioned by others is indeed an area where the contribution of health economics is yet to be fully exploited and it offers exciting opportunities not only for new research topics and methods, but for more fully embedding policy priorities in the research agenda. The other two areas where I see health economics will/should make greater

contributions in the future are (a) options for sustainable financing of health and social care; (b) the organisation, regulation and incentives relevant to the integration of the health and social care sectors.

Professor Maria Goddard, Director of the Centre for Health Economics since 2009, Note received on 23 February 2018

Appendix 2: Note for the York seminar on health economics – David Pole

Alan Peacock and Jack Wiseman were a familiar, energetic double-act at LSE in the years after the war, publishing jointly across a fairly wide range of public sector economics. It was a coup to get them to York to set up an economics department and take a prominent part in setting up the university. I was prejudiced against them because of their association with the Institute of Economic Affairs, the vehicle for non-political Tory propaganda set up by Ralph Harris. I had had an early inoculation against neoclassical ideology, because Harris had been my supervisor in my first year at Cambridge university, while he was still employed by Conservative Central Office. The late John Vaizey, a contemporary, described him in that supervisory capacity as a carpetbagger. The LSE was the main centre of opposition. Among the senior LSE economists, Arnold Plant was Harris's mentor and Lionel Robbins and Frank Paish were sympathisers. Against the background of the Cold War, the Viennese school was a strong libertarian influence. Hayek had gone to America, but Karl Popper was still influential at LSE.

Because we have had a tax-financed, administered system of health care in the UK since 1948, many of the issues that preoccupied health economists elsewhere, and that I had discussed in the social economics course I taught at Cardiff university, were of little practical interest here, except to a minority of people such as Alan and Jack and Harris, who were already conspiring to overturn the post-war settlement. I was not persuaded and, more importantly, nor were any UK governments, actual or potential, at that time, but there was something of a live issue in academic economics. Denis Lees had written an IEA pamphlet about it and he and Jack tried unsuccessfully to hijack the 1970 York conference so as to propagate their ideas.

Institutional differences could produce interesting clashes of culture. At the International Economic Association conference on health economics in Tokyo in 1973, one of the leading American health economists publicly denounced me for the lust for power that was the only reason he could conceive why a British health economist would accept government employment and so become complicit in imposing socialised medicine on the British public. I was deprived without notice of the discussant spot the organisers had given me, perhaps for fear of my infecting others.

As the lists of people who attended the 1970 York conference and the things they discussed there indicate, there was not very much going on in health economics by that time. Only half the participants were economists and half of those were working at York, not necessarily on health. Some of the rest were foreigners. The idea of a conference on health economics probably arose from contact between Alan Williams and Dick Cohen (later first Chief Scientist) of DHSS research management. It became a practical possibility when DHSS finance division, who had the money, had to find a way of dealing with program budgeting, and agreed to support the conference as a means of finding an economist they could take on to help them with it. They sent an Assistant Secretary named Salter to explore the exiguous field.

I may have been unique among the 1970 conference participants in having worked on a real medical problem that had a significant economic aspect. Dr Cohen and his deputy, Max Wilson, knew quite a bit about me by that time, from their association with the Nuffield Provincial Hospital Trust (NPHT) working group I had been on. Archie Cochrane, who had also been a member of the group, ran a notably multidisciplinary Medical Research Council (MRC) unit at Cardiff, studying pneumoconiosis in the South Wales coalfield. He was a chest physician by specialty but had got interested in epidemiology while he was a POW [Prisoner of War], caring with hardly any medicines for thousands of other POWs. He later became an enthusiast

for Fisher's statistical methods. He had been deputed by the NPHT group to ask my boss, the professor of economics at Cardiff, to produce an economist to help them. My main interest was always in helping to promote efficiency within the existing health care system and I guess I got my chance at DHSS in 1970, following the York conference, partly because of that attitude.

Taking the King's shilling makes a difference to the way you work. You spend much of your time trying to bring an unfamiliar economic perspective to bear on problems of varying economic interest as they cross your desk. When academic economists chose issues to which to apply their economic analysis, the results were not always convincing, but we could be fairly confident the problems we were dealing with were for real. We worked on them in whatever depth was necessary, but prioritised advice on situations as they arose over more autonomous, research-type work. Alan Walters, Chief Economic Adviser to Margaret Thatcher from 1981 to 1983, criticised us for not doing more research, but I felt it was more important to go on doing what we were doing.

In the course of the 1970s, we assembled a group of health economists in EAO that was probably larger than any that existed elsewhere in the UK, except perhaps at York, and we had no teaching duties or pressure to publish to distract us. We were generally self-reliant. The people we took on were always technically highly competent: three of them became professors after they left the service, namely Ron Akehurst, Norman Glass and Gavin Mooney. A number of independent research organisations tried hard to sell us their services but I just thought our people were better than their people. The Economist Research Unit was the most persistent and perhaps the best.

We kept in touch with the economists in some of the DHSS-sponsored multidisciplinary units, at Newcastle, Exeter and the [London] School of Hygiene, who were working on collaborative projects of interest to the Department, and we heard occasionally about developments in Scotland.

Macroeconomics has some claim to be a science but the epistemological status of micro is more contested. It is often short on verifiability/falsifiability. Nevertheless, if one sets aside ideology and treats it heuristically, microeconomics constitutes a powerful, highly versatile box of analytical tricks. It had become much more interesting and its range of application much broader as a consequence of technical developments, mainly in America in the 1950s, such as the theory of human capital and cost-benefit analysis. The new techniques turned out to be particularly useful in analysing problems of health care. As I had discovered in my collaboration with the doctors, there was a good fit between economics and epidemiology, which became more important as classical epidemiology evolved into social medicine, where a practical concern for public health is an essential part of the practitioners' conception of their subject.

We monitored academic research for developments that were potentially useful to the Department, but academic health economics was largely conducted at a higher level of generality and, I would say, a lower level of practicality, than our work. Perhaps for that reason, I don't think there was much direct transfer of expertise from academic health economics into policy-making at that time; but, in the course of the 1970s, health economists at York and elsewhere laid the intellectual foundations for the sub-discipline and, by combining theoretical and applied work, they subsequently had more influence on policy.

As far as I am qualified to judge, I would say the York academic standards were impeccable. I think one of their main contributions was in educating practitioners to meet the demand for health economists as it rapidly developed. The HESG [Health Economists Study Group], one of Tony Culyer's initiatives, has been very useful in giving health economists, especially those outposted in multidisciplinary research units, a sense of belonging to a professional fraternity/sorority as well as by helping to keep us all up to date with technical developments. Tony ran it in a way that admirably combined democracy with efficiency. We were always on very friendly terms with him and Jack and other members of the York group. Tony's sustained energy and dedication to the subject have been a major factor in the remarkable flourishing of health economics in the UK.

The first collaboration in research that I remember between EAO and York came about as a consequence of RAWP [Resource Allocation Working Party]. The Department needed a sufficiently accurate estimate of the amount of money health authorities should be allowed for financing clinical medical education and we were glad York were able to do the work. A much closer research relationship was created at the very end of my time, when the DHSS Chief Scientist and the chairman of ESRC decided to pool their health economics research budgets to finance a new research unit at York. I had reservations because it meant the Department would in future have to negotiate its research requirements with both the ESRC and York, whose priorities might be different, and the change greatly improved York's bargaining position, because the money was already committed to them; but I was no longer there to discover how well the system worked in practice.

David Pole, Senior Economic Adviser on health [1970-1976] and Chief Economic Adviser, DHSS [1980-1983]
September 2017

Appendix 3: Note for the York seminar on health economics – extracted from interviews with Clive Smee

When I joined the GES [Government Economic Service] in early 1969 there were only three government departments with influential economics units: the Treasury, ODM/ODA [respectively, the Ministry of Overseas Development and the Overseas Development Administration] (subsequently DFID [Department for International Development]) and Transport. In retrospect, I was lucky enough to start at one of them, ODM/ODA, where I was offered the position of 'Head of the Manpower Planning Unit' which advised on the distribution of British funded personnel (e.g. teachers, engineers and agriculturalists) across our former colonies and involved much international travel. Six years later on entering DHSS in 1975, my first impression was how marginal was the role of analysis including economics in relation to both social security and much health policy making and how relatively limited were the contacts between 'analysts' and policy leads. I knew from practical experience that it should be possible to change both these ways of working. These priors had a strong influence on my behaviour in my early years in DHSS and were probably strengthened by a two years secondment from 1982 to 1984, first to the Central Policy Review Staff (CPRS) in the Cabinet Office, and then to the Treasury. Of the three chief economists before me, David Pole was the most effective at getting economics into the critical health issues as well as the marginal ones. I applied for and was appointed as the Chief Economic Adviser in 1984. Although I had experience of social security (DH was still part of DHSS) l had no health background. I probably came in with a whole lot of prejudices, the most important of which was that economics should be playing a larger role across the Department than it had been, and it could build on what David Pole had helped to set up with the RAWP, looking at the distribution of health resources across the health service. When I started, Alan Williams was a guide and mentor because as soon as he heard that I was to become Chief Economic Adviser he arranged a programme of visits for me around the health authorities and the hospitals in his part of North East England. I have still got the notes of that tour. That was the only formal kind of training in health economics that I was given though over the years I had much informal training from colleagues like Jeremy Hurst and Michael Parsonage.

Informal contacts with York were frequent but my formal contact would be every few years when I would go up with the Chief Scientist to carry out a review of the Department's funding of research at the Centre for Health Economics. Like my economist colleagues I recognise the value of having York provide us with new techniques, new evidence and new arguments. We went from a world where very few issues would be looked at from an economic perspective to one where virtually every major resource issue was being looked at from such perspective. With DHSS, it started with relatively mundane stuff like the appraisal of new capital projects for hospitals (which I do not remember particularly interesting York). But then it moved to appraisal of new technologies and new services and to looking at whole disease areas and how to define priorities between and within them. In a lot of these new areas new concepts like Quality Adjusted Life Year and techniques like cost per QALY, became very useful tools. Economics by then [mid-1980s] was beginning to be a word that you saw fairly frequently applied to health, including in the general press. The breakthroughs were in relation to heart transplants in 1985 and breast cancer screening in 1986.

Within the Department of Health, some senior medical professionals were also becoming supportive of the discipline. Of the CMOs [Chief Medical Officers] Donald Acheson is the first one I remember being very supportive. He always seemed to be sympathetic to what economists were trying to do to maximise 'bang for the buck'. He also persuaded William

Waldegrave to commission the Department's economists to review the evidence on the effects of cigarette advertising on smoking behaviour. Subsequently Professor Sir Kenneth Calman was also very supportive. He redefined 'clinical effectiveness' to mean 'clinical and cost effectiveness'. He asked me to present a paper to a committee he was chairing making the case for this change. I think there was less enthusiasm from some of his colleagues but they weren't going to oppose the CMO. He then set up a national screening committee to try and assess screening priorities using, inter alia, cost per QALY type calculations.

So far as I am aware EAO didn't play a significant role in the establishment of health economics at York. But they subsequently got quite close to it in many ways; for example, as noted earlier I was always part of the team that did the five yearly reviews. As I understand it the idea for the Centre had come from the SSRC [Social Science Research Council] not from the Department. But once it was established and populated with many of the biggest names in health economics the Department did get more and more involved. We always regarded them as a kind of critical friend. Maynard in particular didn't fear his comments upsetting anybody. Later on, it was designated a joint ESRC-DHSS centre. We provided quite a lot of funding on the resource allocation formula. Ken Wright was always important and seemed to potter in and out of the Department. Tony Culyer was an *eminence grise*. And I think everybody respected Williams. Roy Carr-Hill too was important. All these men were doing research that was of interest to the Department. But whether they initiated this work or we did, I cannot remember clearly. I suspect that they initiated most of it. There was also some movement of staff between the Centre and DH: the current Centre Director was a DH Economic Adviser (Maria Goddard). There were times when we would identify a new policy coming up and we would have to think who we needed to do some work on it. My impression is that before Peter Smith came in as the director of CHE, York was sometimes seen as rather slow. If they wanted to do something, it could take several years. And of course, ministers usually wanted the answer by tomorrow or certainly next month. I remember Peter Smith's innovation was to propose quick reviews of the literature on all sort of subjects. These were very useful for putting around to administrators who didn't want to read 80 pages of health research reports but did want two-pages summaries.

On all accounts York played a very major role on the resource allocation formula work which had begun before I arrived. The list of the working papers that York produced over the years cover a huge range of topics. Some were very influential: for example, one paper produced by Ken Wright on ambulance use went straight into a Departmental policy. I suspect that York made a lot of their contributions under the radar by contributing to the general advance in the government's understanding of how to improve resource allocation. Until the 1970s, DHSS was not clearly defining the objectives for any of its policies on health or on social security and it was not consistently measuring either outputs or outcomes. We had to look into resource allocation very early on because we had to have some defence of saying, e.g. Liverpool is going to get X and London is going to get Y. Another key contribution of health economics was to raise questions about why we were doing what we were doing. In addition, there was subsequently the development of the QALY concept which gave economists a central role in health planning, particularly in prioritising measured interventions and comparing patient groups in terms of who should benefit from the next pound of expenditure. I was surprised when I became CEA at how quickly the Department (and Ministers) accepted the concept of cost per QALY.

Reviewed and approved on 4.10.2017 by Clive Smee, Chief Economic Adviser in the DHSS/DH (1984-2002).

Appendix 4: The role of Ken Wright in the creation of CHE – Dr Alan Haycox

It requires a rare combination of skills to coalesce in time and place in order to establish an internationally recognised institution such as CHE. It requires people who share a common vision but whose skills and role perfectly complement each other. In this manner, Ken Wright was the perfect (and equal) partner to Alan Maynard in the development of health economics in the UK. Whilst the vision, strategic skills and political 'networking' (the ability to be in the right place at the right time with the right document!) undoubtedly came from Alan Maynard, the day to day development and management of CHE was in the hands of Ken Wright. In this regard, if Alan is correctly perceived as being the architect planning the development of health economics in the UK, Ken Wright was largely responsible for its day to day construction and maintenance!

Alan Maynard called Ken 'The rock on which CHE was built' and certainly, from my perspective as a junior research fellow during the creation of CHE, 'Uncle Ken' became the dominant figure in the day to day operation of CHE. In common with many other junior researchers at the time, I benefitted enormously through my contact with Ken – all was OK as long as Ken Wright was in residence to support us both personally and professionally. Ken's kindness and compassion was essential in persuading the disparate group of personalities that coalesced in the early days of CHE to remain in the new and largely untested discipline of health economics. In this regard, many of the future leaders who have contributed so much to the development of health economics within the UK owe an immeasurable debt to Ken for his wise and principled leadership during the early (and doubtless also the later) stages in the development of CHE.

Ken is a very modest man who has never sought recognition for his fundamental role in the establishment of CHE and who was never awarded the personal chair that his academic and supportive achievements at CHE certainly warranted. Unfortunately, he was unable to contribute to the 'oral history' seminar at CHE as a consequence of chronic ill health. As such, it falls to others to ensure that his invaluable contribution to the development of health economics in the UK is not overlooked. In this respect, I would humbly submit that 'Uncle Ken' (whether he would care to claim it or not!) has played a central and most crucial role in the development of health economics in the UK.

Submitted by Dr Alan Haycox, 8 February 2018

Appendix 4: List of participants at York Conference on the Economics of Medical Care, University of York, 6-9 January 1970 (CHE Archives)

Department of Health
and Social Security

University of York

YORK CONFERENCE ON THE ECONOMICS OF MEDICAL CARE

6 - 9 JANUARY 1970

List of Participants

BARR, Dr. A.	Oxford Regional Hospital Board, Oxford.
BERESFORD, J. C.	London School of Hygiene and Tropical Medicine, London.
BEVAN, J. M.	The University, Canterbury, Kent.
BURBRIDGE, Dr. D.	Medical Division, Department of Health and Social Security, London.
CARSTAIRS, Mrs. V.	Research and Intelligence Unit, Scottish Home and Health Department, Edinburgh.
COCHRANE, Professor A. L.	Director, Epidemiological Research Unit (South Wales), Medical Research Council, Cardiff.
COHEN, Dr. R. H. L.	Deputy Chief Medical Officer, Department of Health and Social Security, London.
COOPER, M. H.	University of Exeter, Exeter.
CROMBIE, Dr. D. L.	Director, General Practice Research Unit, The Royal College of General Practitioners, Birmingham.
CULYER, A. J.	University of York, York.
CURNOW, Professor R. N.	University of Reading, Reading.
DRAPER, Dr. P.	Guy's Hospital Medical School, London.
FORD, Dr. G. R.	Medical Division, Department of Health and Social Security, London.
GRAY, Dr. D. K.	Hospital Planning Section, Department of Health and Social Security, London.

HAUSER, Dr. M.	Institute of Social and Economic Research, University of York, York.
HEASMAN, Dr. M. A.	Research and Intelligence Unit, Scottish Home and Health Department, Edinburgh.
JEFFERS, Professor J.	University of Iowa, Iowa, U.S.A.
LAING, W.	Office of Health Economics, London.
LAVERS, R. J.	Institute of Social and Economic Research, University of York, York.
LEES, Professor D. S.	University of Nottingham, Nottingham
LEVITT, M. S.	H.M. Treasury, London.
LEVY, Professor E.	Ministère des Affaires Sociales, Paris.
LUCK, J. M.	Institute of Operational Research, Coventry.
McLACHLAN, G.	The Nuffield Provincial Hospitals Trust, London.
MILNE, R. G.	University of Glasgow, Glasgow.
MORLEY, R.	University of Durham, Durham.
NEWELL, Professor D. J.	University of Newcastle Upon Tyne, Newcastle upon Tyne.
NICHOLSON, J. L.	Economic Adviser, Department of Health and Social Security, London.
PIACHAUD, D.	Economic Assistant, Department of Health and Social Security, London.
POLE, J. D.	University College of South Wales and Monmouthshire, Cardiff.
RUDOE, W.	Statistics and Research, Department of Health and Social Security, London.
SALTER, M. C.	Deputy Accountant-General (Health), Department of Health and Social Security, London.
SHANNON, J. R.	University of York, York.
SPEK, Dr. J. E.	University of Gothenburg, Sweden.
SUTCLIFFE, Mrs. E. M.	Institute of Social and Economic Research, University of York, York.
WILLIAMS, Professor A.	University of York, York.
WILSON, Dr. J. M. G.	Medical Division, Department of Health and Social Security, London.
WISEMAN, Professor J.	Director, Institute of Social and Economic Research, University of York, York.