

Hector's House: Sir Hector Hetherington and the Academicization of Glasgow Hospital Medicine before the NHS

ANDREW HULL*

On 4 June 1945, Sir Alfred Webb-Johnson, the President of the Royal College of Surgeons of England, came to Glasgow to receive the Honorary Fellowship of the Royal Faculty of Physicians and Surgeons (RFPSG).¹ The Royal Faculty was an ancient medical licensing body whose office bearers and Fellows had traditionally made up the majority of the clinical élite in the two main local teaching hospitals.² By the 1940s, however, the RFPSG was out of touch with the changing educational needs of the profession; both its local and national status were threatened by advances

* Andrew John Hull, BA, MSc, PhD, Wellcome Unit for the History of Medicine, University of Glasgow, 5 University Gardens, Glasgow G12 8QQ. E-mail: ajh@arts.gla.ac.uk.

This article was first given as a paper at the Third Wellcome Trust Regional Forum in Glasgow on 11 October 1997 when the author was a research assistant on the Wellcome Trust funded project on the history of the Royal College of Physicians and Surgeons of Glasgow. I would like to thank the Trust for continuing financial support, Steve Sturdy, Malcolm Nicolson, John Pickstone, Hugh Conway for comments and two anonymous referees for this journal for their detailed and constructive criticisms of earlier drafts. Thanks are also due to James Beaton and Carol Parry of the RCPSG for help, encouragement and for permission to reproduce quotations and photographs from the College Archives; and to the Glasgow University Archives and Business Records Centre (GUABRC) for their help and permission to reproduce material and photographs from their Archives. This article remains, however, a preliminary overview, and forms the starting point for my current Wellcome Research Fellowship on 'Science and specialization before the National Health Service: the academicization of hospital medicine in Glasgow and Liverpool, c. 1900–c. 1948'.

¹ Alfred Edward Webb-Johnson, Baron Webb Johnson of Stoke-on-Trent (1880–1958), was President of the Royal College of Surgeons, 1941–9. See *Dictionary of National Biography 1951–1960* (hereafter *DNB*), Oxford University Press, 1971.

² Founded in 1599, the Faculty of Physicians and Surgeons of Glasgow (from 1909 Royal Faculty and since 1962 Royal College) is one of the three ancient Scottish medical licensing bodies which, like the English Royal Colleges, were legally empowered under the Medical Act of 1858 to grant registrable qualifications which entitled holders to appear on the national Medical Register of *bona fide* medical practitioners held by the General Medical Council. The two main Glasgow teaching hospitals were the Royal Infirmary (built 1794) and the Western Infirmary (1874). For the early history of the RCPSG see Johanna Geyer-Kordesch and Fiona Macdonald, *Physicians and surgeons in Glasgow: the history of the Royal College of Physicians and Surgeons of Glasgow, 1599–1858*, London, Hambledon Press, 1999; and Fiona Macdonald, 'The infirmary of the Glasgow town's hospital, 1733–1800: a case for voluntarism?', *Bull. Hist. Med.*, 1999, 73: 64–105.

in medicine and by the imminent recasting of medical education and practice in Britain.³

A member of the London clinical super-élite, Webb-Johnson was part of the small executive sub-committee of the medical profession's Negotiating Committee, appointed in late 1944 to discuss the nature and scope of a future national health service with the Ministry of Health.⁴ His presence in the city was part of a united front by the clinical élites of the old medical corporations against a perceived imminent and potentially fatal threat to traditional modes of medicine, medical education and clinical practice founded on the rock of clinical experience. Locally, this threat meant the ongoing project of Glasgow University's Principal and Vice-Chancellor (from 1936–61)—Sir Hector Hetherington⁵—to academicize Glasgow hospital medicine. His multifaceted strategy included appointing full-time professors to academic clinical units and charging them with infusing clinical practice with scientific thinking and developing a new culture of clinical research using laboratory methods; attempting to control all undergraduate clinical teaching appointments; and creating an integrated local structure of postgraduate education under the nominal administrative control of the University, but based on the RFPSG as the teaching and examining centre.⁶

Nationally, this perceived threat was crystallized in the Goodenough Report⁷ and in the administrative structure of the impending national health/hospital service which would, quite literally, institutionalize it by imposing, across the board, a more full-time culture, and regional organization based on universities. Packed with academic clinicians and influenced by the pro-regionalization agenda of the Nuffield Provincial Hospitals Trust, the Report stressed the desirability of fostering, in both medical education and practice, an academic model of medicine based on teaching and research, in addition to patient care.⁸ This would be achieved by allowing regional universities to extend their control of medical education from the pre-clinical into the clinical realm.

By the 1940s, basic science subjects were generally taught by university departments, but most clinical teaching was still being performed by local clinical élites (which included the part-time clinical professors) in independent teaching hospitals. Building on the interwar experience of the regional organization of health care provision (which encompassed municipal takeover of the old Poor Law hospitals after the 1929 Local Government Act, the trend towards joint hospitals boards—supported by cash-strapped voluntaries—and which had reached

³ Andrew Hull (with Johanna Geyer-Kordes), *The shaping of the medical profession: the history of the Royal College of Physicians and Surgeons of Glasgow, 1858–1999*, London, Hambledon Press, 1999.

⁴ See Charles Webster, *The health services since the war, I: Problems of health care: the National Health Service before 1957*, London, HMSO, 1988, p. 67.

⁵ Sir Hector James Wright Hetherington (1888–1965), see *DNB, 1961–1970*, Oxford University Press, 1981.

⁶ The last of these is treated fully in Hull, op. cit., note 3 above, chs 3–6.

⁷ Ministry of Health, *Report of the Inter-Departmental Committee on Medical Schools* (Goodenough Report) London, HMSO, 1944.

⁸ See Nigel Oswald, 'A social health service without social doctors', *Soc. Hist. Med.*, 1991, 4: 295–315.

The Academicization of Glasgow Hospital Medicine

its apogee in the Emergency Medical/Hospital Service⁹), there would now be a new local unit of organization in all undergraduate education, the regional “medical teaching centre”. This would consist of a university medical school and a hierarchy of local teaching hospitals and, crucially, “the policy, administration and activities of the constituent parts should be so interrelated that the institutions function as one in the field of medical education and research”.¹⁰ Universities would have representation on the governing bodies of teaching hospitals, would have a say in the appointment of staff, and there would be more full-time clinical professors. Hospitals, as clinical teaching centres, would be suffused with an academic conception of medicine so that a student might glean, “a clear understanding of the constantly developing scientific basis of Medicine”. The Report noted that, “It is more likely to be so if the whole of his training has been carried out in an atmosphere of scientific enquiry, and the majority of his teachers are engaged for part of their time in some sort of research work”.¹¹ Together, these innovations amounted to an integrated system for the academicization of hospital medicine in Britain.¹² This organizational/epistemological programme for remoulding medical education was to be the “essential foundation” of the proposed national health service, which should be permeated by “the spirit of education”.¹³

Webb-Johnson’s acceptance speech for his Honorary Fellowship was a stirring defence of ways of thinking and working in, and a particular social organization of, medicine which, though once dominant in Britain, were already being overtaken by this new academic paradigm, with its changed social and cognitive relations.¹⁴ He identified a traditional emphasis on practical clinical skill in medical education and practice with the medical corporations. An élite metropolitan surgeon, he strongly defended the “incommunicable” clinical art as the essence of medicine and thus, implicitly (as Christopher Lawrence¹⁵ has argued) as the basis of the professional position and social standing of clinicians:

⁹ See Brian Abel-Smith, *The hospitals, 1800–1948*, London, Heinemann, 1964; John Pickstone, *Medicine in industrial society: a history of hospital development in Manchester and its region, 1752–1946*, Manchester University Press, 1985.

¹⁰ Goodenough Report, op. cit. note 7 above, p. 12.

¹¹ *Ibid.*, pp. 43–4.

¹² For a striking historical account of this trend and its importance to the evolution of British medical practice, see Steve Sturdy and Roger Cooter, ‘Science, scientific management, and the transformation of medicine in Britain c. 1870–1950’, *Hist. Sci.*, 1998, **36**: 421–66. See also Christopher Lawrence, ‘Clinical research’, in J Krigé and D Pestre (eds), *Science in the twentieth century*, Amsterdam, Harwood Academic Publishers, 1997, pp. 439–60.

¹³ Goodenough Report, op. cit., note 7 above, p. 15. For an unequivocal (and longer) statement

of the academic threat embodied in the 1944 report see also *ibid.*, p. 46. On the evolution of the National Health Service, see *inter alia*: Webster, op. cit., note 4 above; Frank Honigsbaum, *Health, happiness, and security: the creation of the National Health Service*, London, Routledge, 1989; Michael Foot, *Aneurin Bevan, vol. 2, 1945–1960*, London, Paladin, 1973; on regionalization, see Daniel Fox, *Health policies health politics: the British and American experience, 1911–1965*, Princeton University Press, 1986.

¹⁴ See John V Pickstone, ‘Ways of knowing: towards a historical sociology of science, technology and medicine’, *Brit. J. Hist. Sci.*, 1993, **26**: 433–58.

¹⁵ Christopher Lawrence, ‘Incommunicable knowledge: science, technology and the clinical art in Britain, 1850–1914’, *J. Contemp. Hist.*, 1985, **20**: 503–20.

Those who continually emphasize the need of scientific and theoretical training are inclined to neglect the practical and vocational side and to forget that the practice of medicine is largely an art. The practice of medicine is essentially vocational and not academic and a large proportion of the most useful and successful practitioners in the country have never obtained, and do not desire to obtain, a University degree.¹⁶

He continued by quoting approvingly the purple prose of the “great surgeon and philosopher” Wilfred Trotter:¹⁷

Now that the prestige of science is so high the statement that a great part of medicine still retains the status of an art is often made with a note of apology. Nothing could be less justified by a realistic sense of cultural values. The method of the practical art was the first instrument forged by man for the subjugation of chaos. . . . what the user of a practical art needs is less the strict and limited instrument of scientific method than what may be called a soundly cultivated judgement. The ancient and honourable art of medicine is being increasingly and inevitably pressed on by applied science . . . It remains, however, the backbone of medical practice and indispensable to mankind. There is therefore an especial need today that its *characteristic mode of activity* should be understood, and should not be confused with those of the other elements that make up the complex of medicine.¹⁸

Webb-Johnson was not against science in medicine. Like Trotter he supported it as an adjunct to clinical skill,¹⁹ but he did not want the intellectual and social leadership of the medical profession to pass, finally and irreconcilably, from the part-time élite clinicians whose medical worldview was shaped by loyalties to hospitals, private practice and ancient corporations, to full-time University staff with an academic agenda emphasizing the importance of laboratory thinking in clinical practice, teaching and research.

It was particularly appropriate that Webb-Johnson should rehearse these themes

¹⁶ Sir Alfred Webb-Johnson, ‘The royal medical corporations’, *Glasgow Med. J.*, 1945 (7th Series), 26 (11): 33–8. The text of the speech was also copied out, longhand, into the RFPSPG Minutes, see RCPSG 1/1/1/17, 4 June 1945.

¹⁷ Wilfred Batten Lewis Trotter (1872–1939) made advances in surgery of the brain, spinal cord and malignant disease, and was famed for his diagnostic skill and surgical technique. See *DNB, 1931–1940*, Oxford University Press, 1949. He was a classic interwar medical holist, as characterized by Christopher Lawrence in his ‘Still incommunicable: clinical holists and medical knowledge in interwar Britain’, in C Lawrence and G Weisz (eds), *Greater than the parts: holism in biomedicine, 1920–1950*, New York, Oxford University Press, 1998, pp. 94–113. Trotter valued the contribution that laboratory thinking and clinical work could make to each other, but, in the treatment of patients (if not in the advance of medical knowledge) stressed the primacy of the clinical encounter because, “Disease often tells its secrets in casual parenthesis”. See Trotter, ‘Art and science in medicine’ (1932), in *Collected*

papers, London, Oxford University Press, 1941, pp. 85–101, on p. 98.

¹⁸ Webb-Johnson, op. cit., note 16 above. My emphasis.

¹⁹ On the contrary, he was instrumental in obtaining funds for the endowment of professorships in the basic sciences as Dean of the Middlesex Hospital Medical School. See Z Cope, *The Royal College of Surgeons of England: a history*, London, Anthony Blond, 1959, p. 207. Nor was he against the idea of a national health service. Along with Lord Moran, President of the Royal College of Physicians, he was one of Bevan’s élite consultant allies who came out in public support of the NHS (as long as certain guarantees were given to doctors), and in favour of the BMA negotiating with the Minister of Health, during the most difficult period of 1947. Bevan was seen by many in the BMA as using such allies to divide professional opposition to the NHS. He was also believed to have bought them off with the promise of private beds in NHS hospitals. See Foot, op. cit., note 13 above, especially pp. 162–5.

The Academicization of Glasgow Hospital Medicine

in Glasgow in 1945, since the University Medical School was already in the middle of a “change of direction”.²⁰ Under the direct supervision of Hetherington, the seeds of an academic medical culture had been sown in Glasgow’s hospitals through a series of key full-time professorial appointments to University units. Hetherington’s new men were all specifically charged with generating a culture of clinical research and teaching, and specialization, which stressed the importance of scientific methods in the clinical context. Carefully selected, the new men had strong, though heterogeneous, backgrounds in scientific medicine, and supported the use of science in medicine, but they were also all committed to the centrality of the clinical encounter as the fundamental basis of both practice and research. These attitudes chimed with the existing intellectual tenor of Glasgow medicine and thus made their reform of it easier. This was evolution not revolution. Hetherington’s period of office saw the beginning of the passing of a local medical culture in which university clinical professors and hospital consultants were part-time, did little research, earned their money from private consulting practice, and, even when interested in science in medicine, relied, ultimately, on clinical, not laboratory, knowledge in the treatment of patients. Ultimately, once the National Health Service (NHS) had provided the possibility of more full-time careers in hospital medicine, the older culture was transformed into an academic culture in which teaching and research (using laboratory methods) were core activities of full-time hospital doctors and professional advancement was based on success in these activities. Science was accommodated, not as senior but as a more equal partner with clinical experience in everyday patient care.

Christopher Lawrence has recently noted that, “laboratory sciences were introduced into clinical medicine in myriad ways depending on local circumstances”.²¹ Steve Sturdy has shown in a detailed case-study of Sheffield that the implementation of (inter) national ideals of scientific medicine had a particularly local political economy.²² One important general point to be drawn from this work is that modes of medical education and practice favoured at a national level (in London) were interpreted and implemented differently in different local contexts. In each area, the national imperatives were mediated by, or filtered through, the local political, economic, and medical culture. Thus local varieties of clinical practice, research and teaching emerged that were subtly different both from each other and from the metropolitan template. After outlining the development of contemporary perceptions of what constituted modern medical knowledge, practice and education at a national level, and how these became imperatives to be provincially emulated, this paper will offer some preliminary thoughts on the goals, strategies and outcomes of the academicization of hospital medicine in Glasgow before the NHS.

²⁰ H Conway and R T Hutchesson, ‘The Glasgow Medical Faculty, 1936–39: a change of direction’, *Scot. med. J.*, 1996, 41: 178–9.

²¹ Christopher Lawrence, ‘A tale of two sciences: bedside and bench in twentieth-century Britain’, *Med. Hist.*, 1999, 43: 421–49, on p. 422.

²² Steve Sturdy, ‘The political economy of scientific medicine: science, education and the transformation of medical practice in Sheffield, 1890–1922’, *Med. Hist.*, 1992, 36: 125–59.

**The Evolution of a National Policy for Scientific Medicine:
The Adoption and Promotion of the “University Standard” in Britain**

The imminent academic threat to traditional modes of hospital medicine perceived in 1945 by Webb-Johnson and his Glasgow audience had been gathering momentum since the early part of the century. As T N Bonner has recently argued,²³ it was then that pressure began to be exerted by state modernizers such as George Newman,²⁴ Chief Medical Officer at the Board of Education and (from its foundation in 1919) the Ministry of Health, for the universities, rather than the teaching hospitals, to exert greater control over clinical medical education, as they had already done over the pre-clinical scientific subjects.²⁵ This pressure increased when two of the main university funding bodies, the University Grants Committee (UGC, founded in 1919), with which Newman had strong links, and the Medical Research Committee, later Council (MRC, founded in 1913 and renamed in 1920), joined the campaign. Later, private charitable initiatives also supported this policy. The Rockefeller Foundation and, in Oxford, Lord Nuffield, poured money into schemes to scientize British medicine, which often involved the creation of full-time academic posts.²⁶

Drawing on German and American examples (notably the talismanic Johns Hopkins Medical School), reformers argued that the comprehensive university, rather than the hospital, provided the optimum framework for fusing the increasingly important laboratory medicine with clinical subjects. The German-Hopkins model was introduced into the British debate by Abraham Flexner in his 1911 evidence to the Royal Commission on University Education in London, chaired by R B Haldane, and in his 1912 report on British and European medical education.²⁷ As John Pickstone, Roger Cooter and Caroline Murphy have argued, Flexner articulated a programme in which clinical teaching and research would be used as a means of “introducing the ideals, practices, and controls of university science into what had been the very different world of teaching hospitals”.²⁸ He maintained that clinical teaching should become more “academic and scientific under the leadership of university professors. These men would not be private consultants teaching in their spare time, but would be salaried university teachers and researchers, comparable to those in pre-medical and pre-clinical sciences.”²⁹

²³ T N Bonner, *Becoming a physician: medical education in Great Britain, France, Germany, and the United States, 1750–1945*, New York, Oxford University Press, 1995. See especially pp. 280–308 and pp. 325–45.

²⁴ See *Report of the University Grants Committee*, Cmd. 1163, London, HMSO, 1921; George Newman, *Some notes on medical education in England*, Cd 9124, London, HMSO, 1918.

²⁵ See Stella Butler, ‘Science and medicine in the nineteenth century: changing conceptions of clinical practice’, paper presented at the conference on ‘Science in modern medicine’, Manchester, 19–21 April 1985.

²⁶ See Donald Fisher, ‘The Rockefeller Foundation and the development of scientific

medicine in Great Britain’, *Minerva*, 1978, 16: 20–41; Oswald, op. cit., note 8 above.

²⁷ Royal Commission on University Education in London, *Reports*, 5 vols, London, HMSO, 1910–12; Abraham Flexner, *Medical education in Europe*, New York, Carnegie Foundation for the Advancement of Teaching, Bulletin no. 6, 1912.

²⁸ J V Pickstone, R Cooter, and C Murphy, ‘Exploring “clinical research”: academic medicine and the clinicians in early twentieth century Britain’, paper presented at the conference on ‘Science in modern medicine’, Manchester, 19–21 April 1985: p.1.

²⁹ *Ibid.*, p. 2.

The Academicization of Glasgow Hospital Medicine

The 1913 final report of the Haldane Commission recommended that, in order to foster scientific hospital medicine of a university standard, the medical schools of three London hospitals should be fully incorporated into the University of London, and that full-time clinical professorships in Medicine, Surgery, and Obstetrics and Gynaecology should be established in them.³⁰ After a transitional period, the hospitals would become university hospitals—the university appointing all staff with clinical teaching responsibilities.³¹ The report also defined the academic “hospital unit” along Flexnerian lines as:

[A] professor with control of wards; an outpatient department; assistants nominated by the professor with a view to complementing his own knowledge and affording him the special assistance he requires to carry on research in the direction in which he is interested; and, finally, laboratory accommodation in close proximity to the wards, not only for the service of the wards and the examinations and procedures connected with the diagnosis and treatment of the cases, but also for the purposes of research.³²

After the First World War this modernization strategy was pushed forward by Newman and the UGC (to which Newman was medical assessor), which had taken over the funding of universities from the Board of Education. While the definition of the academic unit remained (at least as an ideal), the Board had dropped the idea of the complete educational and financial takeover of the medical schools by the university in the short term, and the creation of a university hospital in the long term, and instead suggested merely the formation of professorial units in the same clinical departments in four of the big London teaching hospitals. As the Goodenough Report later noted, this more limited and pragmatic version of academicization meant that the academic influence had to operate in a different way:

[A]s the name suggested, the unit was to be in the nature of a separate entity, to be inserted into the framework of the school and hospital, and not of necessity carrying out any such responsibility for general organization of teaching and research throughout each main clinical department as had been envisaged under the [original] scheme of the Haldane Commission.³³

Individual professorial clinical units would now act as nuclei of modern academic medicine in the hospitals, from which good academic practice would radiate to the non-university units. They would be cradles of clinical research where rotating postgraduate staff from other units would come to learn new methods, skills and approaches. They would also be powerbases from which university staff could undertake clinical teaching which inculcated the priorities of academic medicine in undergraduates.³⁴ Such units were successfully established with Board of Education

³⁰ Royal Commission on University Education in London, *Final report*, London, HMSO, 1913, Cd. 6717, p. 131, section 295; p. 132, section 298; p. 134, section 302.

³¹ *Ibid.*, p. 134, sections 302–3.

³² *Ibid.*, p. 121, section 275 (3).

³³ Goodenough Report, *op. cit.*, note 7 above, p. 83, para. 17.

³⁴ On the role of the full-time academic clinical unit, see the Goodenough Report, *op. cit.*, note 7

above, especially ch. 4, ‘Staffing’, section on ‘Teaching staff in clinical departments, including pathology’, pp. 79–91; Fisher, *op. cit.*, note 26 above; George Graham, ‘The formation of the medical and surgical professorial units in the London teaching hospitals’, *Ann. Sci.*, 1970, 26: 1–22.

approval and UGC funds in 1920–1 at St Bartholomew's Hospital Medical School, St Thomas's Hospital Medical School, the London School of Medicine for Women, and at St Mary's Hospital Medical School.³⁵

This (amended) policy of academicization of hospital medicine via university clinical units was also supported by the MRC. In Sheffield, for example, a clinical chair in Pharmacology was created in 1920. Filled by Edward Mellanby, the post was UGC funded but was also financially supported by the Council, which also funded related research staff.³⁶ Another academicization strategy supported by the MRC was the provision of grants to help eminent local clinicians foster clinical research groups in hospitals with links to local universities where, for a variety of local reasons, no university clinical unit with a full-time professor with wards could be established. These were co-ordinated with the similarly intended Rockefeller Fellowships scheme, which was established in 1923 and administered through the MRC.³⁷ Under the MRC scheme, at the Royal Hospital for Sick Children (RHSC) in Glasgow, for instance, Professor Leonard Findlay (holder of the part-time Samson Gemmill Chair of Paediatrics at the University of Glasgow with wards in the RHSC) directed a group of researchers in chemical physiology without a formal university unit being established.³⁸

Chemical physiologists, in Glasgow and in the English civic universities, perceived themselves as providing a service role to clinicians, rather than as pursuing independent pure research. However, as Sturdy has shown, this meant that they, like pathologists, offered an experience of laboratory methods in the hospital setting to clinicians.³⁹ As David Smith and Malcolm Nicolson have argued, Findlay thought that research in chemical physiology was more likely to advance medical knowledge if the academic scientists actively collaborated with clinicians, a model he followed in his own work.⁴⁰ Chemical physiology may thus have been in this period, as haematology was later, a bridge discipline between laboratory and clinic, even if the laboratory was represented as subservient to the clinic. At the Edinburgh Royal Infirmary, there was a similar concentration of researchers partly funded by the MRC, working on similar topics in chemical physiology in the hospital's Biochemical

³⁵ *Report of the Royal Commission on Medical Education*, (the Todd Report), Cmnd. 3569, London, HMSO, 1968, Appendix 14, section 24, p. 300.

³⁶ See Steve Sturdy, *op. cit.*, note 22 above, pp. 149–50, and fn 105. See also David Hamilton, 'Too difficult for doctors—British attitudes to clinical research in the early twentieth century', paper to conference on 'Science in modern medicine', Manchester, 19–21 April 1985.

³⁷ See Fisher, *op. cit.*, note 26 above, p. 34.

³⁸ Here Drs Grace Graham and Muriel Brown were based at the University and worked on ketone levels in children with special attention to the clinical significance and to nitrogen metabolism; Drs Noah Morris and Stanley G Graham worked at the hospital on acid-base balance, on acetonæmia, and fat into sugar

conversion in children; and Dr G B Fleming worked on fever metabolism in infancy. *Report of the Medical Research Council, 1926–7*, London, HMSO, 1928, p. 68.

³⁹ Steve Sturdy, 'Chemical physiology and clinical medicine: academics and the scientisation of medical practice in Britain, 1900–1925', in I. Löwy *et al.* (eds.), *Innovation in medicine: historical and sociological perspectives*, London, John Libbey Eurotext, 1993, pp. 352–74.

⁴⁰ David Smith and Malcolm Nicolson, 'Chemical physiology versus biochemistry, the clinic versus the laboratory: the Glaswegian opposition to Edward Mellanby's theory of rickets', *Proc. R. Coll. Phys. Edinb.*, 1989, **19** (1): 51–60: see especially the quotation from Findlay on p. 53.

The Academicization of Glasgow Hospital Medicine

Laboratory under Jonathan Meakins, the University's (part-time) Christison Professor of Therapeutics. As well as pursuing research, Meakins also utilized the laboratory as a "Trojan horse" to make the chemical analysis of blood a routine part of clinical practice and thus, "Edinburgh clinicians were gradually educated into the procedures and practices of academic medicine". In 1923, Rockefeller money allowed Meakins's chair to be converted to full-time, a new clinical laboratory to be built, and an extra full-time chair to be created in surgery.⁴¹

In 1919, the MRC also established the "Mecca" of clinical researchers, the Department of Clinical Research at University College Hospital (UCH) Medical School, under the cardiologist Thomas Lewis, training the new generation of clinical researchers for the emerging positions all over the country.⁴² However, the dominant note in MRC policy oscillated during the inter-war period. From 1922, the Secretary, Walter Morley Fletcher, began to shift policy towards the support of pure research in the basic medical sciences (particularly in physiology and the other biomedical sciences with the involvement of scientists from London or Oxbridge), although funding (with the UGC) was still provided to the London clinical units. Conversely, when Edward Mellanby succeeded as Secretary in 1933, MRC policy began to re-focus on the encouragement of clinical research using laboratory methods and the promotion of academic units.⁴³ Nevertheless, there were steady developments throughout this period, often involving the close co-operation of public and private funding bodies. For example, clinical units in medicine and surgery at UCH Medical School were supported by Rockefeller funds to operate as beacons of academic medicine. A third unit in obstetrics was added in 1926–7. In 1929, Rockefeller money also paid for the establishment of the first permanent chair of clinical research at UCL (Lewis). In a synchronized funding initiative, the MRC then switched some of its funding from UCH to establish research departments at the National Hospital for Diseases of the Nervous System (Queen Square, London WC1) and Guy's Hospital. The latter became a full-blown Department of Clinical Research under Dr R T Grant in 1934, while, at the former hospital, Rockefeller also gave a massive grant in 1938 to establish a full-time neurological unit under Dr E A Carmichael. Outside

⁴¹ Details and quotation here from, Mike Barfoot, Chris Lawrence and Steve Sturdy, 'The Trojan horse: the biochemical laboratory of the Royal Infirmary of Edinburgh, 1921–1939', *Wellcome Trust Review*, 1999, 8: 58–61. The incumbent of the Chair of Surgery, David Wilkie, however, refused to give up private practice entirely, and the Rockefeller eventually relaxed their rules to accommodate him. It is a mark of the strength of traditional ways of working and of local clinical élites (and also of how difficult it was to recruit for this kind of emergent post) that this was a common experience. Thanks to Steve Sturdy for advice on this point.

⁴² See Arthur Hollman, *Sir Thomas Lewis: pioneer cardiologist and clinical scientist*, London, Springer, 1996. Lewis was also appointed a full

Physician in the hospital and also Physician-in-Charge of the cardiac department.

⁴³ See J Austoker, 'Walter Morley Fletcher and the origins of a basic biomedical research policy', in J Austoker and L Bryder (eds), *Historical perspectives on the role of the MRC*, Oxford University Press, 1989, pp. 23–33, on p. 26. See also, Christopher C Booth, 'Clinical research', in *ibid.*, pp. 205–41, on pp. 218–23; *idem*, 'Clinical research and the Medical Research Council' and 'Clinical science today', in *idem*, *Doctors in science and society: essays of a clinical scientist*, London, British Medical Journal, 1987, pp. 238–62 and pp. 292–318 respectively; Fisher, *op. cit.*, note 26 above, p. 31; Hamilton, *op. cit.*, note 36 above.

London, at the Welsh National School of Medicine, Cardiff, Rockefeller funding provided a teaching laboratory attached to the medical unit in 1924, and in 1931 the Medical Faculty at Aberdeen had reorganized its Regius Chairs to provide more full-time posts with the emphasis on clinical teaching and research.⁴⁴ In 1935, the British Postgraduate School based at Hammersmith Hospital opened and became the national training centre for clinical researchers. Oxford established clinical chairs with Nuffield money, and Cambridge initiated (partly with Rockefeller money) a department of clinical research under the new Regius Professor of Physic, John Ryle.⁴⁵ Meanwhile, in 1936, the MRC itself established postgraduate studentships for training in research methods in clinical medicine and experimental pathology.⁴⁶

Further, in medical schools all over Britain, local, piecemeal initiatives were taken to infiltrate hospitals with the academic conception of medicine by high-ranking university bureaucrats eager to modernize their medical schools and by local clinicians keen to develop key specialisms. Each initiative had its own particular ecology and was attuned to the local political, economic, administrative and medical culture. Before sketching the Glasgow initiatives I want to fill in some of this context.

Glasgow Medicine before 1936: Context and Character of the Local Medical Culture

National imperatives towards academicization were heavily influenced by the desire to draw together university and hospital medical education in England, and especially in London. However, in Scotland, whose medical schools continued to produce a high proportion of British doctors,⁴⁷ the ancient universities had long been involved in medical education; although, in Glasgow, especially before the building of the Western Infirmary (GWI) in 1874, the University had a problematic relationship with the main voluntary teaching hospital—the Glasgow Royal Infirmary (GRI). By the late 1870s, there was one extra-mural school of medicine associated with the hospital, St Mungo's Medical School.⁴⁸ Its students had unrestricted access to the wards since the pre-clinical and clinical staff were the physicians and surgeons of the Infirmary, who were all either office bearers,

⁴⁴ Details here from Fisher, *op. cit.*, note 26 above.

⁴⁵ On this, see Mark Weatherall, 'Scientific medicine and the medical sciences in Cambridge, 1851–1939', PhD thesis, Cambridge University, 1994, pp. 166–215.

⁴⁶ See Booth, 'Clinical research', *op. cit.*, note 43 above.

⁴⁷ See, for example, Goodenough Report, *op. cit.* note 7 above, Appendix C, pp. 263–6.

⁴⁸ There had been two, but Anderson's College Medical School (founded in 1796) had moved westwards to a site near the new University buildings in 1888. St Mungo's, founded in the same year as a response to this move, was

previously known as the Glasgow Royal Infirmary School of Medicine. This was established in 1876 after the University had withdrawn its chairs and from using the hospital for teaching with the opening of the GWI in 1874. Other previous extra-mural schools in Glasgow all had this same strong connection to the local medical corporation. See Jacqueline Jenkinson, Michael Moss and Iain Russell, *The Royal: the history of the Glasgow Royal Infirmary, 1974–1994*, Glasgow, GRI NHS Trust, 1994, especially pp. 124–5; Hull, *op. cit.*, note 3 above, pp. 29–31; Alexander Duncan, *Memorials of the Faculty of Physicians and Surgeons of Glasgow, 1599–1850*, Glasgow, James Maclehose, 1896.

The Academicization of Glasgow Hospital Medicine



Figure 1: The Glasgow Royal Infirmary (GRI), from the Necropolis, in 1940. (RCPSG 28/139).

Fellows or Licentiates, of the Faculty of Physicians and Surgeons (FPSG, later RFPSG). For nearly a hundred years after the GRI's foundation, the Faculty formally controlled medical appointments to the hospital, and made sure that all the physicians and surgeons had Faculty qualifications and were Faculty men.⁴⁹ Later this control was exercised informally through the Faculty members of the hospital's board of management. There was a further connection with the Faculty: like Anderson's College Medical School (after 1888 sited near the GWI), St Mungo's prepared students for the conjoint examinations of the Scottish medical corporations (the Double, and, after 1884, Triple Qualification), rather than the university degree, which were administered locally by the FPSG. Both the GRI and its related extra-mural medical school were, then, permeated by the influence of the FPSG.

Thus Glasgow had, in addition to the University, an independent tradition of a clinician-led culture of medical education and practice. This tradition stressed the centrality of the clinical encounter to patient care, to medical education and to the advance of medical knowledge.⁵⁰ Further, the part-time University professors were also, both intellectually and socially part of this wider clinical élite. Their affiliation to academia was strictly part-time and they orientated their thought and work around the clinical experiences of hospital ward and private consulting practice.

⁴⁹ See Jenkinson, Moss and Russell, *op. cit.*, note 48 above.

⁵⁰ See Hull, *op. cit.*, note 3 above; Geyer-Kordes and Macdonald, *op. cit.*, note 2 above.

Nevertheless, periodically, there was tension between this urban clinical élite and the academics as to who had professional control of medicine in the city. Thus, in the early nineteenth century, when experience of varied clinical material and its correlation with post-mortem findings—the French clinico-pathological method—was perceived as the very essence of a modern, scientific medical education, the University attempted to increase its access to the hospitals and there was a bitter battle over control of clinical teaching at the GRI.⁵¹

These difficulties continued and informed the establishment in 1874 of the Western Infirmary as a purpose-built clinical resource for the University, where four part-time clinical chairs were located.⁵² However by the early 1900s, GWI clinical classes were becoming too large to be effective. The GRI was being rebuilt, but the University had no presence there. University Principal Sir Donald MacAlister, who was medically qualified and had been President of the General Medical Council (GMC) in 1907, set about re-establishing a closer professorial connection between the University and the GRI.⁵³ Four part-time clinical chairs were founded by an agreement between the University Court, the GRI, St Mungo's and the Trustees of the late Dr Henry Muirhead in a University Court Ordinance of 1911.⁵⁴ This move strengthened the University Medical Faculty, which now had strong links with two major teaching hospitals, though extra-mural schools remained attached to both these hospitals until 1948, under the control of the local clinical élite and training students for the FPSG examinations.

In addition, by the 1930s, Glasgow University had strongly developed basic science departments in which full-time University medical scientists provided pre-clinical instruction. Clinical instruction was provided by the clinical professors and the consultants in charge of non-university units in the teaching hospitals. Both types, however, belonged to the local clinical élite who worked part-time

⁵¹ James Coutts, *A history of the University of Glasgow*, Glasgow, James Maclehoose, 1909, pp. 547–54 and 556–61. See also Jenkinson, Moss and Russell, op. cit., note 48 above, pp. 37–43; Geyer-Kordesch and Macdonald, op. cit., note 2, pp. 306–37, *passim*.

⁵² Jenkinson, Moss and Russell, op. cit., note 48 above, pp. 74–8. The University wished to bring clinical instruction at the new infirmary more closely under its control and so, prior to handing it over to the new Managers, the University made four senior clinical appointments. These were re-locations of the two Regius Chairs (Medicine and Surgery) from the GRI and new Clinical Chairs of Medicine and Surgery. See Loudon MacQueen and Archibald B Kerr, *The Western Infirmary, 1874–1974: a century of service to Glasgow*, Glasgow, John Horn, 1974, p. 7. The University paid assistants to the professors who also undertook clinical

teaching, though the Managers were free to allow any of the Visiting Physicians or Surgeons they appointed also to engage in clinical instruction. Coutts, op. cit., note 51 above, p. 587, fn.1.

⁵³ Sir Donald MacAlister (1854–1934), Principal and Vice-Chancellor of the University of Glasgow from 1907–29. For a general discussion of MacAlister's importance and achievements see Michael Moss, J Forbes Monro and Richard H Trainor, *University, city and state: the University of Glasgow since 1870*, Edinburgh University Press, 2000, pp. 110–26. See also Marguerite Dupree, 'The development of medical education, 1870–1940', Glasgow University 2001 History Seminar on Medical Education, February 1996. I am grateful to the authors for copies of this material.

⁵⁴ They were the St Mungo Chair of Surgery, the Muirhead Chair of Medicine, the Muirhead

The Academicization of Glasgow Hospital Medicine

in hospitals but earned their money in private consulting practice.⁵⁵ Thus, even for the University professors, there was little inclination, or professional need, for incorporating group-centred scientific research into this regimen. Men like Ralph Stockman, the Regius Professor of Materia Medica since 1897, and William Macewen's assistant and successor, Archibald Young, from 1924 the Regius Professor of Surgery, both of whom had wards in the GWI, are aptly characterized by Malcolm Nicolson's term "clinician-scientists".⁵⁶ They were deeply interested in scientific developments, incorporated and developed new techniques and methods in their clinical practice informed by their reading of recent scientific literature, and even engaged in lone research, but, for them, the clinical encounter was still the touchstone of medical knowledge. The clinician's authoritative, experienced judgement, and not the methods of the laboratory, were the final arbiter in clinical work, and clinical work was the best way to learn, and to advance, the art of medicine. Thus, they had little interest in encouraging clinical research using scientific methods in their academic units. This is not to say that Glasgow medicine, as taught at the University and in the hospitals, was anti-scientific, but rather that from the pre-clinical science departments to the hospital wards, in teaching and in everyday clinical practice, science was subordinated to clinical judgement and served the priorities of the clinic. As Smith and Nicolson have argued, Diarmid Noel Paton, Regius Professor of Physiology from 1906 to

Chair of Obstetrics and Gynaecology, and the St Mungo (Notman) Chair of Pathology. The last two were new chairs and the first two were the chairs of Clinical Medicine and Surgery established at the GWI in the 1870s, which were conveniently vacant at this point and could thus more easily be transferred to the GRI. See Edith MacAlister, *Sir Donald MacAlister of Tarbert*, London, Macmillan, 1935, pp. 327–30. In addition to increasing the University's links with the GRI, MacAlister also presided over closer links with the RHSC. In 1919 a University Lectureship in Surgery and Orthopaedics in Infancy and Childhood, and one on the Medical Diseases of Infancy and Childhood were founded at the hospital with funds from local benefactors. In 1924, Leonard Findlay's Chair of Medical Paediatrics was founded by a bequest from the late William Gemmell in memory of his brother and former Regius Professor of Medicine, Dr Samson Gemmell. In 1928, a University Lectureship in the Pathological Biochemistry of Diseases of Children was also added in connection with the hospital. This post included the duties of biochemist to the hospital. See *ibid.*, pp. 341–2 and the obituary of Noah Morris, *Br. med. J.*, 1947, i: 866–7.

⁵⁵ There is a growing literature on the peculiarities of the Glasgow Medical School. See Stephen Jacyna, 'The laboratory and the clinic: the impact of pathology on surgical diagnosis in the Glasgow Western Infirmary, 1875–1910', *Bull. Hist. Med.*, 1988, 62: 384–406; Smith and Nicolson, *op. cit.*, note 40 above, and *idem*, 'The "Glasgow School" of Paton, Findlay and Cathcart: conservative thought in chemical physiology, nutrition and public health', *Soc. Stud. Sci.*, 1989, 19: 195–238.

⁵⁶ Malcolm Nicolson and David Smith, 'Science and clinical scepticism: the case of Ralph Stockman and the Glasgow Medical Faculty', paper presented to 'Science and Technology Dynamics Internal Progress' Conference, Amsterdam, 18–19 September 1997. I am grateful to the authors for allowing me sight of this paper. See also Robert Campbell Garry (ed. David Smith), *Life in physiology: memoirs of Glasgow University's Institute Of Physiology during the 1920s and 1930s*, Occasional Publication 3, Glasgow, Wellcome Unit for the History of Medicine, University of Glasgow, 1992, pp. 102–3 and *passim*.

1928, believed that his subject must, “be taught to medical students in such a way as to make what they learned relevant to the clinical situation”.⁵⁷ Excepting his own brand of research, which was attuned to clinical priorities and in which he actively co-operated with clinicians, Paton criticized laboratory scientists and argued that advances in medical knowledge were more likely to come at the bedside from “clinician-scientists”.⁵⁸

In Glasgow, then, science was the handmaiden to the clinic, rather than an equal partner, both among the local clinical élite associated with hospitals and the RFPSG, and in the ancient university medical school.

Academicization and the Hetherington Regime

Such was the national and local background when Hector Hetherington became Principal and Vice-Chancellor of the University of Glasgow in 1936. As Sir Charles Illingworth commented,⁵⁹ Hetherington, on his arrival in Glasgow, faced a medical scene which shared some of the problems of Liverpool. When he had become Vice-Chancellor of Liverpool University in 1927 he faced a traditional culture of part-time university clinical appointments in the hospitals which had:

... enabled the University to secure the services, on the clinical side, of skilful and experienced practitioners who might not otherwise have been available, but it had the disadvantage that few of the part-timers were able to take an active part in University affairs outside their own special field, and few had time or opportunity for fundamental research.⁶⁰

As Vice-Chancellor there he had attempted to reform the Medical Faculty by introducing a full-time culture to the professorial posts, attempting to obtain clinical beds for the incumbents, and encouraging them to develop clinical research programmes. He was also involved in attempts to unify the local hospitals into a Joint Hospitals Board. These experiences served as a template for what he wished to achieve in Glasgow.

While there were considerable local advantages in Glasgow, there were also peculiar local disadvantages. In Liverpool, as Illingworth noted, the “university stood alone as the teaching authority” with a strong connection to the six voluntary hospitals which formed the University Clinical School.⁶¹ In Glasgow, there were also the two independent extra-mural medical schools—which claimed, as Illingworth again put it, “within the hospitals a full equality of privilege”. However, by now the University was firmly entrenched in clinical teaching in both the Royal and Western Infirmaries. Furthermore, the municipal hospitals—since the 1929 Local Government Act under

⁵⁷ Smith and Nicolson, ‘The “Glasgow School”’, op. cit., note 55 above, p. 206.

⁵⁸ D N Paton, ‘The relationship of science and medicine’, *Edinb. med. J.*, 1928, 35: 1–11, p. 10. Cited from Smith and Nicolson, op. cit., note 55 above, p. 206.

⁵⁹ Charles Illingworth, *University statesman: Sir Hector Hetherington*, Glasgow, George Outram, 1971. All unattributed quotations in this section are from this source, pp. 53–4.

⁶⁰ Thomas Kelly, *For advancement of learning: the University of Liverpool, 1881–1981*, Liverpool University Press, 1981, p. 246.

⁶¹ On these university/hospital relations in Liverpool, see Arthur A Gemmell, *The Liverpool Medical School, 1834–1934: a brief record*, Liverpool University Press, 1934, p. 21.



The Bulletin.

Figure 2: Cartoon of Sir Hector Hetherington on his return to Glasgow University as Principal and Vice-Chancellor in 1936. Originally from *The Bulletin*. Reproduced here from ‘The Fleeting Year’, Glasgow University Archives and Business Records Centre, DC119 4/1.

local authority control as general hospitals and no longer stigmatized as Poor Law institutions—were advanced and unified under the control of the progressive administrator, Alexander MacGregor,⁶² the Medical Officer of Health (MOH). He

⁶² MacGregor (1881–1967) graduated MB, ChB from Glasgow in 1904. His MD thesis was on aspects of immunity in cerebrospinal meningitis and focused on opsorins and agglutinins

which were related to Almroth Wright’s work on vaccine therapy. In the early 1900s this offered the prospect of massive therapeutic advance and was a potent justificatory resource for scientific

was keen to mark their transformation by conferring on them the prestige of teaching hospital status.

Hetherington's experiences in Liverpool convinced him that for a university to fulfil its true role as the transmitter of a culture of liberal knowledge, sustained by interlinked teaching and research,⁶³ it must become the central local intellectual powerhouse. This was very much the English conception of the new civic university, first articulated in Britain by R B Haldane. Intellectually founded in T H Green and Idealist philosophy, it found its practical application in Haldane's proposals for the reform of the University of London, and in the English civics established in the Haldaneian educational climate of the turn of the century.⁶⁴ The two central tenets of this vision were that the local university should provide an up-to-date professional education to train the local élite (who endowed the institution with the profits from the local industries it helped to sustain with its training), and that this should be centred around professors who were themselves actively engaged in research and could foster research schools with related programmes of work.⁶⁵

These goals were shared by Hetherington. He was particularly keen to engender a research culture in the departments of the Faculties of Science and Medicine.⁶⁶ Hetherington was a very hands-on Principal and is widely regarded in Glasgow as having achieved so much in revivifying the University partly because he treated it as a personal fiefdom. He reformed the process for appointing professors. Previously the whole University Court was involved in receiving applications for an advertised post, drawing up a shortlist, interviewing and appointing. Now, at his suggestion, the Court appointed a committee for each vacant chair, consisting of the Principal, one or two Court members and members of the Senate with expert knowledge of the field. This committee could then effectively choose the new professor without advertising the post. The Principal would often meet the individual personally and advise the Court that a suitable candidate had been found and should be appointed. The Principal was, in any case, in the accepted absence of the Rector, the *de facto* chairman of the Court.⁶⁷

Illingworth summed up the prospect Hetherington saw before him in the Glasgow medical scene thus:

medicine. See Michael Worboys, 'Vaccine therapy and laboratory medicine in Edwardian Britain', in John Pickstone (ed.), *Medical innovations in historical perspective*, London, Macmillan, 1992, pp. 84–103. See also, *Medical Register*, 1942; *Who was Who, 1961–1970*, London, Adam and Charles Black, 1972.

⁶³ Hetherington expressed this Haldaneian view of the function of a university, for instance in a lecture at Essex Hall in 1953, reprinted as *The social functions of a university*, London, Lindsey Press, 1953. See Illingworth, *op. cit.*, note 59 above pp. 146–7.

⁶⁴ See E Ashby and M Anderson, *Portrait of Haldane at work on education*, London, Macmillan, 1974. See also David R Jones, *The*

origins of the civic universities: Manchester, Leeds and Liverpool, London, Routledge, 1988; and W H G Armytage, *Civic universities: aspects of a British tradition*, London, Benn, 1955.

⁶⁵ *Cd.* 6717, *op. cit.*, note 30 above, p. 26, section 63, and p. 29, section 69.

⁶⁶ For Hetherington's appointments to scientific chairs see, Robert Young Thomson (ed.), *A faculty for science: a unified diversity: a century of science in the University of Glasgow*, University of Glasgow, 1993, *passim*.

⁶⁷ Robert T Hutcheson and Hugh Conway, *The University of Glasgow, 1920–1974: the memoir of Robert T Hutcheson*, Glasgow University Library, 1997, pp. 79–80.

The Academicization of Glasgow Hospital Medicine

Accustomed as he was to the supremacy of the University in everything connected with higher education he could not fail to resent the pretensions of small, effete rival institutions. And accustomed as he was to the tidy administrative structure of a University, with its unified control of clearly defined departments, each with its hierarchy of a Professor with his lecturers, he must have been appalled at the chaotic state of the clinical teaching world, with its multiplicity of independent and contending hospitals, each with its multiple units of diverse purpose under the control of independent physicians for whom the education of students was not the sole or even the primary avocation.⁶⁸

The New Full-Time Chairs: The Western Infirmary, Stobhill Hospital, and the Royal Infirmary⁶⁹

Hetherington took an active part in the academicization of the Medical Faculty even before he officially became Principal. As Principal designate, he was invited to a meeting of the University Court on 13 August 1936 when a letter from the Secretary of State for Scotland about the recently advertised Regius Chair of the Practice of Medicine was read and discussed. The chair had become vacant with the resignation of T K Munro in July. The letter argued that the applicants to date were not likely to advance the interests of the School and that no such applicant could be expected because of the lack of adequate laboratory equipment for clinical research, “which is now to be found in most important Medical Schools”.⁷⁰ The Chairman of Court (D Baird Smith) announced that £10,000 was available for construction of a suitable facility at the GWI, and that MRC funds could probably also be attracted. It was agreed that the successful candidate would be employed on a full-time basis, unlike previous medical professors. After this meeting, and with the authority of the Court, Hetherington approached the eminent London consultant John William McNee and tempted him back to Glasgow with the promise of a new research department and the right to a strictly limited amount of private practice.⁷¹

Hetherington did not work alone in this, however. Sir Robert Muir was keen that McNee return to Glasgow to succeed him as Professor of Pathology.⁷² Unsuccessful in this, Muir was instrumental in obtaining the funding for the *en suite* laboratory facilities attached to the GWI that would entice McNee back to the city. He spoke to Sir Frederick Gardiner, a coastal shipping magnate, about funding an Institute of Medicine. As Assistant Professor of Medicine and lecturer in Pathology at Glasgow University, McNee had been a member of Muir’s staff in the University’s

⁶⁸ Illingworth, *op. cit.*, note 59 above, p. 54.

⁶⁹ This study does not talk about the Regius Chair of Midwifery at the University of Glasgow which was converted to a full-time post in 1943, and combined with the Directorship of the Royal Maternity Hospital. The new professor, James Hendry, retained his position as Gynaecological Surgeon at the GRI. He was the first (part-time) Director of Postgraduate Medical Education in Glasgow, and was a member of the Goodenough Committee. Hetherington’s post-NHS full-time professorial appointments (like Ian Donald) are not discussed here either.

⁷⁰ Quoted in Conway and Hutcheson, *op. cit.*, note 20 above p. 179.

⁷¹ *Ibid.*

⁷² See Peter McKenzie, ‘Professor J W McNee: a personal recollection’, *College Bulletin* [RCPSCG], Sept. 1990, 21 (1): 32–7, p. 34. Other details on McNee in this section are taken from the entry on him by Professor Sir Abraham Goldberg in *DNB, 1981–1985*, Oxford University Press, 1990.

Institute of Pathology at the GWI from 1910 where he had worked with him on immune haemolysis *in vivo* in rabbits.⁷³ McNee had then gone on a two-year research scholarship to the distinguished pathologist Professor L Aschoff in Freiburg. Here he did experiments on haemolytic jaundice in geese, and tried to establish the relationship between the reticulo-endothelial system, recently proposed (1913) by Aschoff, and bile-pigment formation. This work formed the basis for the modern understanding of bile production, and of McNee's MD thesis in 1914. On the strength of his war work (on trench nephritis and gas gangrene with John Shaw Dunn, who succeeded Muir as Professor of Pathology) he was selected for T R Elliott's pioneering, Rockefeller-funded medical academic unit at University College Hospital Medical School.⁷⁴ Richard M Pearce, one of two Rockefeller Foundation officials directing its policy in Britain in the interwar period, and responsible for medical education, thought that Elliott's unit was the only one in the country which approached the American model of academicization in its critical combination of patient care, clinical research and (undergraduate) teaching. This was exactly the style of unit the Rockefeller wished to support; the kind that could help re-shape British hospital practice, by its example and by the personnel it trained who then went on to units in other parts of the country.⁷⁵ In 1924, McNee went on a Rockefeller medical fellowship from Elliott's unit to Johns Hopkins University to work on bile acids.

McNee was the first clinical professor to be employed in Glasgow on a full-time basis. His appointment marked a watershed as the beginning of the reform of the University Medical School along modern lines. In November 1936 a joint committee of the University Court and the Managers of the GWI met under the chairmanship of the new Principal to plan the construction of the Gardiner Institute of Medicine, with an initial £20,000 at their disposal from Sir Frederick and Mr William Gardiner. The new Institute opened in 1938 and was sited between the Pathological and Ophthalmological Departments on Church Street. This gave direct access to wards D3 and D4, which were to be given to the new Professor. It was also agreed that a small number of beds would be provided within the Institute for patients needing special observation, or for those of special scientific interest. The Infirmary was to own the building and the University would foot the bill for equipment, laboratory expenses, technicians and experimental work.⁷⁶ As Loudon MacQueen and Archibald Kerr have argued, this arrangement was unique in the infirmary and, "McNee was the first clinician to have immediate responsibility for patients and, at the same time, direct control of adjacent laboratories in which biochemical and other special investigations could be conducted".⁷⁷

He was not to be the last. This was the modern blueprint that Hetherington

⁷³ See J R Anderson, *Pathology at the Western Infirmary: the first hundred years*, University of Glasgow Pathology Department, 1994, p. 21. I am grateful to the current Professor of Pathology at the University/GWI, Professor Sir Roderick N M MacSween, for a copy of this publication.

⁷⁴ Booth, 'Clinical research', op. cit., note 43 above, p. 212.

⁷⁵ See Fisher, op. cit., note 26 above, pp. 30–1.

⁷⁶ Details here from MacQueen and Kerr, op. cit., note 52 above, pp. 80–1.

⁷⁷ *Ibid.*, p. 126. From 1946 the MRC funded a Clinical Chemotherapy Unit under McNee in the Gardiner Institute. The Director was James Reid, who worked here on drug therapy in rheumatic diseases. McNee occupied the Chair from 1936 to 1953. He was knighted in 1951.

The Academicization of Glasgow Hospital Medicine

wished to reproduce elsewhere in Glasgow hospitals: a full-time university academic with control of wards with integrated laboratory facilities and a remit to establish a clinical research school and undertake clinical teaching to undergraduates. Future generations of Glasgow hospital doctors would be trained in an atmosphere in which the use of laboratory thinking in clinical work and clinical research, and specialization, were encouraged.

However, McNee also displayed a characteristic common to all Hetherington's appointments in Glasgow. While introducing new ways of working and thinking into Glasgow hospital medicine, the new professors were careful not to impose insensitively patterns from elsewhere, but rather to blend the new modes with the existing clinical bias of Glasgow medicine. Partly, this was how the new men themselves viewed the practice of medicine. They were transitional figures between a medicine based largely on clinical imperatives and a medicine which also incorporated scientific ones; as students they had been taught the older conception.⁷⁸ But their *modus operandi* also displayed a sensitivity to the *local* medical culture. McNee was a charismatic chief building a research school influenced by experimental pathology and his laboratory work on the liver. During his time in Glasgow, he became a founder member (with Charles Illingworth, also from Glasgow) of the 1942 Club, a group of influential British clinical professors that campaigned—successfully—to have a statutory commitment to the support of teaching and research in the teaching hospitals included in the NHS Acts, and also campaigned for increased university influence over these hospitals.⁷⁹ But McNee was also respected as a “bedside clinician and his advice in this capacity was highly valued by his colleagues”.⁸⁰ A caring, human presence on his rounds, each day, McNee would hand his button-hole flower to a different patient in his female ward saying, “Sister, who gets my flower this morning?”⁸¹ Even his view of his extensive experimental work on the liver early in his career supports a conservative version of the relationship between the laboratory and the clinic. The work was within chemical physiology (rather than biochemistry) and, while he refined the etiology of disease as taught by Paton, he did not reform the role of the laboratory as the handmaid of clinical work. For example, looking back in 1950, he defended his work of 1923–4—which added two new causes of jaundice (toxic and infective, and haemolytic) to the traditional catch-all of obstructive—as *clinically* useful: “It has also stood the test of time, and seems to be still in regular clinical use. It . . . has been often criticized on quite good grounds . . . but its simplicity for ordinary clinical diagnosis seems to be its merit.”⁸² Professor Sir Abraham Goldberg has written that McNee, “was the *prototype* of the modern professor of medicine. He had a remarkably strong base in experimental pathology

⁷⁸ McNee and Morris had studied medicine at Glasgow University; Illingworth and Davis at Edinburgh.

⁷⁹ See Professor H P Himsworth to Hetherington, 27 Sept. 1946; and Himsworth's memorandum, ‘The National Health Services Bill and Medical Education’, 26 Sept. 1946, and its attachment, ‘The 1942 Club’, which contain details of what was in the club, and what they wanted.

All are in GUABRC, Hetherington Papers (HP), DC8/995.

⁸⁰ MacQueen and Kerr, *op. cit.*, note 52 above, p. 126.

⁸¹ McKenzie, *op. cit.*, note 72 above.

⁸² J W McNee, ‘Diseases of the liver: a retrospect’, presidential address to the Royal Medico-Chirurgical Society of Glasgow, 6 Oct. 1950, *Glasgow Med. J.*, 1950, 31: 371–84, p. 375.

[but] He combined this also with the *charm* of the traditional physician” (emphasis added).⁸³

Hetherington’s next move was to turn the recently vacated Regius Chair of *Materia Medica* into a modern full-time chair with beds at a local hospital.⁸⁴ The previous incumbent, Ralph Stockman, had held the position part-time since 1897, combining it with wards in the GWI and a private consulting practice. What happened to his chair is thus particularly indicative of the reforms that Hetherington brought to Glasgow.

Firstly, Hetherington was keen to use this vacancy to advance the University’s influence in the hospitals. The GWI was unable (or unwilling) to provide the extra beds for the new professor that were necessary for a viable, modern clinical unit. In late 1936, therefore, Hetherington approached other voluntary hospitals, but only the Victoria Infirmary—far distant from the University on the south side of the city—was able to offer suitable clinical facilities. However, Hetherington soon realized that the vacancy was a perfect opportunity to extend University influence into what he described as the “great and growing” municipal hospitals.⁸⁵ This was the only existing medical chair not definitely linked with a hospital, and thus the only one which could be used to effect this new association. Hetherington perhaps also wanted to outflank the voluntary hospitals that had been less than helpful over the provision of beds for this chair. In a period of financial vulnerability for the voluntaries,⁸⁶ Hetherington sought to bring them to heel and encourage them to fall in with his academicization strategy by playing on their fears of being marginalized by the growth of large municipal general hospitals. In addition, municipal hospital staff already worked on a full-time basis. Moreover, Hetherington also had financial reasons for involving the University with the Municipality over this Regius Chair. As he wrote in January 1937 to Sir John Jeffrey at the Scottish Office: “I want also to make it a full-time Chair, which will require a considerable subvention from the Corporation”.⁸⁷ He set about selling this idea to the municipality. In a letter to the Town Clerk outlining his scheme, he wrote that previously the chair had been held part-time with a private consulting practice, but that now:

The University Court desire (a) to make the Chair a full-time appointment, so that the Professor will be able to give his whole energies to medical teaching and research; and (b) to attach to the Chair a number of beds sufficient to provide opportunities for clinical teaching by the Professor. The Court are of the opinion that both these actions are urgently necessary

⁸³ Goldberg, *op. cit.*, note 72 above.

⁸⁴ Very limited accounts of this episode exist in Oliver M Watt, *Stobhill Hospital: the first seventy years*, Glasgow University Press and Robert Maclehose, 1971, pp. 53–6; in Conway and Hutcheson, *op. cit.*, note 20 above, p. 179, in Illingworth, *op. cit.*, note 59 above, pp. 54–5; and in Illingworth’s autobiography, *There is a history in all men’s lives*, Glasgow, Tenovus Scotland, 1988, p. 66.

⁸⁵ ‘File of correspondence on the Chair of *Materia Medica* and its association with a

municipal hospital’, Hetherington to Sir John Jeffrey (Scottish Office, Whitehall), 11 Jan. 1937, HP, DC8/888; see also Hetherington to Sir John Jeffrey, 4 Nov. 1936, *ibid.*

⁸⁶ See, for example, Steven Cherry, ‘Before the National Health Service: financing the voluntary hospitals, 1900–1939’, *Econ. Hist. Rev.*, 1997, 50: 305–26.

⁸⁷ Hetherington to Sir John Jeffrey, 11 Jan. 1937, HP, DC8/888.

The Academicization of Glasgow Hospital Medicine

if the Chair is to play its full part in the progress of medical knowledge and practice, and if the medical resources of the city are to make the largest use of this opportunity.⁸⁸

Hetherington managed to hold off the Scottish Office, which was concerned at the delay, while he persuaded the City Corporation of the scheme. He used the sympathetic MOH, Alexander MacGregor—a personal friend—who had control of the municipal hospitals, to convince his colleagues to accept the University plan. Hetherington admitted that there was also opposition to be overcome from within the Glasgow medical scene, both from those who wished to apply for the chair on a part-time basis and from, “those stalwarts of the voluntary system who want to restrict as much as they can the association of the University with the municipal hospital system”,⁸⁹ but was convinced that with tactful negotiation the arrangement could be established. Hetherington thus worked closely with MacGregor in preparing submissions to the Corporation, and wrote to key individuals on it stressing the benefits to the municipal hospitals to be gained from association with the University, and urging that this should be privately conveyed to doubting colleagues. As he wrote in mid-January to John Scott⁹⁰ who, as a Glasgow Councillor and member of the University Court, was a perfectly placed and suitably cultivated ally:

I imagine there will be little opposition to the suggestion that the Corporation should pay to the new Professor in respect of his services in a Corporation hospital at least as much as is paid to any other visiting physician. But I can see that there may be a question as to why they should pay a good deal more. The answer is, of course, that they are getting the services of a Professor, and that the Professor has behind him not only his own knowledge and skill, but the resources of the University as a whole. If, for instance, some case occurred in that he wanted an opinion other than his own, he can perfectly easily call in McNee who would go very gladly without fee of any kind. Moreover, I think it well worth the Corporation's while to pay on a rather higher scale in order, in this way, to have one of their institutions formally and fully associated with the clinical school of the University. That is a gain in prestige and opens up possibilities of further cooperation which would quite amply justify the Corporation's action: I think they will get very good value for their money; so shall we, and that is the essence of a good bargain.⁹¹

The Corporation soon accepted the arrangement, and Hetherington and MacGregor agreed that the most suitable place for the new clinical unit would be the hospital at Stobhill which, with 1,709 beds and 693 staff, was the largest of the municipal hospitals.⁹² The Professor would be appointed a Visiting Physician at Stobhill subject to the Corporation's approval of his clinical abilities. He would perform the duties of a Visiting Physician, undertaking or supervising the treatment of patients in his wards, and acting as consulting physician in difficult cases. As was

⁸⁸ Hetherington to Town Clerk, 22 Dec. 1936, *ibid.*

⁸⁹ Hetherington to John Jeffrey, 11 Jan. 1937, *ibid.*

⁹⁰ John Charles Scott (b. 1872) graduated with a first class classics MA from Glasgow in 1894; a retired teacher he became a City Councillor in 1932, and was on the University Court in 1936.

See *Scottish Biographies 1938*, London, Thurston, 1938.

⁹¹ Hetherington to J C Scott, 15 Jan. 1937, HP, DC8/888.

⁹² See *Medical Officer of Health for Glasgow, annual report 1930*, Glasgow Corporation, 1930, p. 46. The staff figure included administrative staff.

the usual practice in municipal hospitals, he would be under the administrative control of the Medical Superintendent. The Corporation would contribute approximately £700 to his annual salary (with the University paying the remaining £900). The Professor was not allowed any private practice but was to devote his whole time to the duties of his office, which included, as well as the care of patients and research, clinical and systematic teaching in *Materia Medica* and Therapeutics.⁹³

There remained only the appointment to be agreed, and the potentially tricky matter of the candidate's degree of clinical experience. Hetherington was confident that the value placed on the beginnings of a co-ordination of hospital services in Glasgow around the central focus of the University by the Secretary of State for Scotland would enable him to press through a candidate whose clinical experience was not acceptable to the Corporation.

It is conceivable that the Secretary of State's choice might fall on a man well qualified scientifically, but not clinically. In actual practice, at least in the present case, I don't expect any difficulty will arise. For if the present Secretary thinks we have done well in entering into this association with the municipal hospitals, he will attach proper weight to this matter of clinical experience.⁹⁴

In fact a problem did arise about the candidature of Dr E J Wayne, the Professor of Pharmacology and Therapeutics at the University of Sheffield. Wayne had trained at Leeds University as a chemist/biochemist and had recently (1931–4) been assistant to Thomas Lewis in the Department of Clinical Research, University College Hospital, London.⁹⁵ Wayne had succeeded Edward Mellanby in the Sheffield chair, where, like Mellanby, he had wards at the Sheffield Royal Infirmary.⁹⁶ However, on seeing his letters enquiring about the Glasgow post, MacGregor, had immediate reservations. He wrote to Hetherington (who had sent him the letter as part of his close liaison with the MOH over the post) expressing his doubts "as to Dr Wayne's clinical experience . . . I rather gather from the tenor of his letter to you that he is laying more stress on the scientific laboratory side than on the clinical side of the post in Glasgow".⁹⁷ Wayne was ultimately not even short-listed.⁹⁸ However, the successful candidate, Dr Noah Morris, also had very limited clinical experience. Morris may have been more acceptable to MacGregor as he had been educated at

⁹³ For these terms and conditions, see 'University of Glasgow, Chair of *Materia Medica*', Memorandum by J S Muirhead, Secretary of the University Court, 10 Feb. 1937, HP, DC8/888.

⁹⁴ See Hetherington to Sir John Jeffrey (March or April) 1937, HP, DC8/888.

⁹⁵ See Papers of Sir Edward Johnson Wayne, Archives and Manuscripts, Wellcome Library, London, PP/EJW, 'Biographical summary' by Rita M Gibbs.

⁹⁶ See Sturdy, *op. cit.*, note 22 above, pp. 148–50; MacQueen and Kerr, *op. cit.*, note 52 above, p. 129.

⁹⁷ MacGregor to Hetherington, 10 April 1937, HP, DC8/888. MacGregor refers to Wayne's letter

to Hetherington of 6 April 1937, *ibid.*, in which Wayne appeared uneasy about regular attendance at the hospital and asked about laboratory facilities there.

⁹⁸ Interestingly, Wayne eventually succeeded McNee in 1953 to the Regius Chair of the Practice of Medicine at the GWI. Perhaps the University could afford to appoint a more scientifically-minded man to this post, where it did not have to take note of the clinical bias of the Corporation, or perhaps, by this time, a more receptive attitude towards scientific medicine had been engendered by Hetherington's earlier appointments.

The Academicization of Glasgow Hospital Medicine

Glasgow University, had held a succession of scientific (academic) and clinical appointments in the city and had become a Fellow of the Glasgow Faculty of Physicians and Surgeons in 1921.⁹⁹ As we saw earlier, the Faculty had close links with the Glasgow clinical élite and taking the Fellowship, even if it was not highly thought of as a qualification outside Glasgow in this period, was a way of publicly affirming allegiance to the city's medical culture and its clinical bias, at least symbolically.¹⁰⁰ Furthermore, while Morris was at the RHSC he had attracted MRC funding under Findlay, a factor that may also have counted for something with MacGregor.

But what kind of doctor was Morris? Where did he stand on the relationship between the laboratory and the clinic? David Smith has argued¹⁰¹ that by 1937 in his scientific work on the etiology of rickets, Morris was breaking away from chemical physiology into biochemistry; from the traditions of the Glasgow University Medical School where science served the clinic, into uncharted waters where laboratory science might set clinical and research priorities. Morris's application testimonials, however, were careful to stress his clinical provenance. Clinical experience was listed before his research work and he argued that his experience of general practice in Glasgow (1920–8) had impressed on him the "importance of the patients' social environment and general home conditions in therapeutics".¹⁰² In an address to the Royal Philosophical Society of Glasgow on 13 December 1944 on the history of therapeutics, he stressed similar themes. Whilst defending the careful use of scientific hypotheses as part of an empirical method in medicine, he was, nevertheless, quick to invoke social medicine to make the point that the doctor must know the individual to stand a chance of helping him:

The great practitioners of the healing art have always realized that they do not treat a case of pneumonia but Tom Jones, who is suffering from the ravages of the disease called pneumonia. But Tom Jones is not an isolated specimen of an animal called homo sapiens. He has a body liable to the insults of strain and bacteria, but he has also a mind which plays a not insignificant part in the maintenance of health. He is a member of various communities, his family, his factory, his bowling club and his nation, all of which influence him . . . The doctor who is attending Tom Jones must analyse symptoms and signs and come to the conclusion that his lungs are involved in disease and that a certain line of treatment is

⁹⁹ Morris had a science degree (1913), an MB, ChB (1915), MD (1921) and a DSc (1935—on disturbances of acid-base equilibrium) from Glasgow University. He had been Muirhead Demonstrator in Noel Paton's Physiology Department (1918–20), Professor of Physiology in Anderson's College (1920–8), and from 1921 a member of the clinical staff of the RHSC (first as outpatient physician, and, after 1926, with the charge of a ward under Findlay). In 1928 he had become the first University Lecturer in Pathological Biochemistry (and Biochemist) at the RHSC. See obituaries, *Br. med. J.*, 1947, i:

866–7; *Glasgow Med. J.*, 1947, 28: 194–6; see also, 'University of Glasgow Regius Chair of Materia Medica. Application with testimonials in favour of Noah Morris', HP, DC8/888, pp. 1–2.

¹⁰⁰ See Hull, op. cit., note 3 above, *passim*.

¹⁰¹ David Smith and Malcolm Nicolson, 'The preservation of the traditions of the Glasgow Faculty of Medicine, 1900s–1940s', draft paper, 1999, p. 7. I am grateful to the authors for a copy of this paper and for allowing me to refer to it here.

¹⁰² Morris's testimonials, op. cit., note 99 above, p. 2.



Figure 3: Noah Morris, Regius Professor of Materia Medica in the University of Glasgow, 1937–47 (by kind permission RCPSG).

indicated. This is only the beginning, because from the first he must remember that he is treating not only lungs, not merely a living body, but a man with hopes and fears.¹⁰³

In applying for the post, he stated:

My objective has always been the application of laboratory technique to the elucidation of clinical problems and I still feel that a hospital laboratory should be devoted to this type of work. . . . I am certain that the training in scientific methods of thought which a young graduate receives in the laboratory must be of considerable value in his approach to clinical problems.¹⁰⁴

He stressed that his researches had been largely in experimental pharmacology,

¹⁰³ Noah Morris, 'The history of therapeutics', *Proc. R. Philos. Soc. Glasgow*, 1944–5, 69: 13–34, pp. 28–9.

¹⁰⁴ Morris's testimonials, *op. cit.*, note 99 above, p. 3.

The Academicization of Glasgow Hospital Medicine

“devoted to problems of clinical and experimental medicine and . . . largely concerned with the investigation of the efficiency of various therapeutic measures”.¹⁰⁵ Sturdy has argued that a full-time chair in experimental pharmacology was more acceptable in 1919 to the existing Sheffield clinical élite than one in clinical medicine because it introduced experimental investigation to clinical practice, “in such a way as to complement rather than undermine the status of the existing part-time professors of medicine and surgery”.¹⁰⁶ The testimonials from the part-time professors at the RHSC, Findlay¹⁰⁷ and Geoffrey B Fleming, Professor of Medical Paediatrics¹⁰⁸ paint a picture of Morris as curator of the sacred clinical flame of Glasgow medical culture. Perhaps Morris or his advisers (who may have included Hetherington) were conscious of the Sheffield experience, or of the problems surrounding Wayne’s candidature and had glossed the application accordingly. Or perhaps the “gloss” also reflected Morris’s continuing understanding of the relationship between laboratory and clinic.

For Morris, laboratory knowledge was useful to the solution of clinical problems, and thus clinical research on problems arising in clinical practice was the best way to advance medicine. In his inaugural lecture to the *Materia Medica* class on 11 October 1937¹⁰⁹ over which Hetherington presided, Morris argued that, while the “starting point of the practical problems of medicine”¹¹⁰ and the focus of medical education was bedside training, nevertheless it was worthwhile for students to pay attention also to the functions of the laboratory in the practice of medicine. He summed these up as: assistance in diagnosis; supplying objective quantitative findings with which to judge the patient’s progress (as opposed to subjective clinical impressions); and providing a “weapon of research in the elucidation of intermediate metabolism”—the efforts of the body to cure itself.¹¹¹ He went on to ridicule what he saw as the two most common attitudes to the laboratory: “the unquestioning worship of everything that appertains to the laboratory, with the pseudo-scientific belief that the biochemical report solves the problem”, and the equally blameworthy “reactionary attitude of refusing to make use of new-fangled test-tube methods”. Rather, the clinician must integrate clinical and laboratory approaches. He was the final arbiter of diagnosis and treatment, but the laboratory was part of his essential “equipment”.¹¹²

It was in this spirit that Morris accommodated laboratory methods and approaches into clinical practice and into the culture of clinical research that he fostered, while at the same time respecting the pre-existing and continuing Glasgow medical culture

¹⁰⁵ *Ibid.*

¹⁰⁶ Sturdy, *op. cit.* note 22 above, p. 149.

¹⁰⁷ Findlay described Morris as, “not only an expert biochemist but . . . also a keen clinician . . . [who] has never disassociated himself from the practical care of the sick”. Morris’s testimonials, *op. cit.*, note 99 above, p. 6.

¹⁰⁸ Fleming described Morris’s work at the hospital as “not restricted to the laboratory, for his daily attendance in the wards has given him a wide experience of clinical work”, and his

publications as showing that, “his academic interest is tempered with a *wholesome* appreciation of practical therapeutic problems”. *Ibid.*, p. 8. My emphasis.

¹⁰⁹ Noah Morris, ‘Prolegomena to the study of therapeutics’, *Glasgow Med. J.*, 1937, 7th series, 10 (4): 137–51.

¹¹⁰ *Ibid.*, p. 140.

¹¹¹ *Ibid.*, p. 141.

¹¹² *Ibid.*, pp. 141–2.

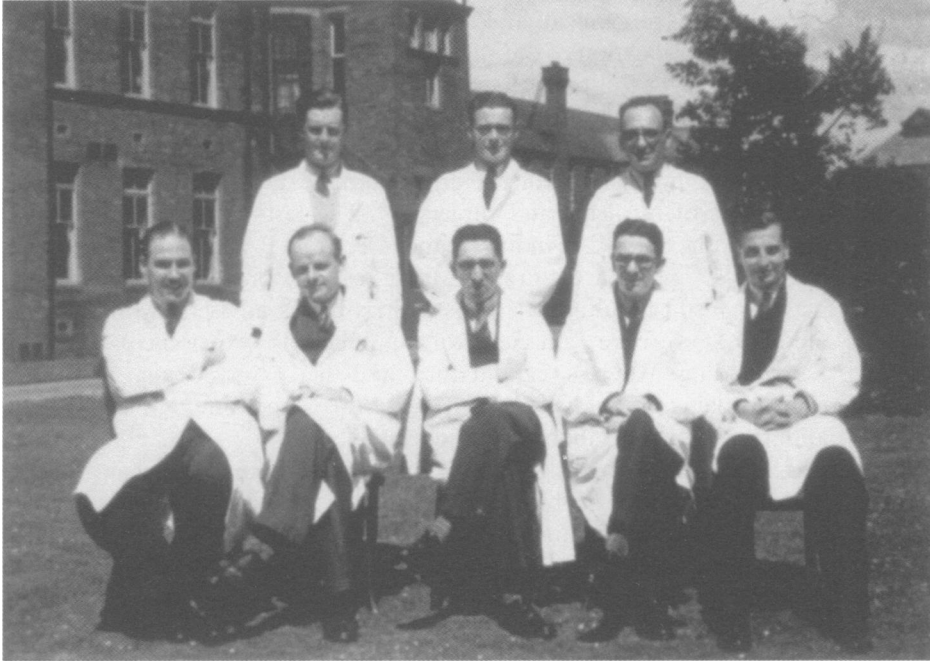


Figure 4: Medical Staff of Professor Noah Morris's Unit, Stobhill Hospital, June 1939 (Dr Patrick McKay McKillop, Dr R E King, Dr Leopold Wertheim, Dr Alex. Slessor, Dr Stanley Alstead, Professor Noah Morris, Dr Alfred Sands Rogen and Dr William Ferguson Anderson). (RCPSG 1/12/12/1).

founded on the primacy of clinical concerns. Like McNee, he was able to modernize Glasgow hospital medicine while preserving its essential clinical focus. This made the project more palatable to the local clinical élite who were concerned at the implications for their jobs and status of the change in ways of working and thinking.

At Stobhill, Morris built up a research school of young clinical researchers, including William Gray and A S Rogen (the cardiologist) who experimented with storing blood for transfusion, and Stanley Alstead, who eventually succeeded Morris as Professor. Morris's appointment had a dramatic effect on the medical culture at Stobhill. Previous Visiting Physicians had also worked at a voluntary hospital, and were able to spend very little time at Stobhill. Stanley Alstead commented that Morris "imposed on his wards a standard of clinical records and of diagnosis and management which . . . had never been seen before in that place. In consequence he electrified the younger members of the staff".¹¹³

Clearly, Morris took very seriously the inculcation of modern clinical methods, as well as stimulating clinical research involving laboratory work. He was careful to honour the clinical responsibilities that his new position entailed, thereby reflecting

¹¹³ Interview with Professor Stanley Alstead by Dr Peter McKenzie, 21 Aug. 1986, RCPSG, 18/1, 20.

the priorities of the old school clinical teachers who had trained him and their continuing influence over Glasgow medicine.¹¹⁴ He had three pairs of wards under his immediate management, and another pair that were looked after by Rogen, but supervised by Morris. Alstead noted that it seemed, “the whole hospital” was under Morris’s control, a “clinical kingdom” that Alstead found “far too much” when he had to take it over.¹¹⁵ But Morris did not neglect the scientific side of his work either. He asked for more laboratory facilities at the hospital, and, in 1940, a Department of Biochemistry, based on Block 15 but altered to Morris’ own design, was opened by Hetherington himself.¹¹⁶

The third chair that became vacant before the outbreak of the Second World War was the Regius Chair of Surgery, based at the GWI. The previous incumbent, Archibald Young, who held it on a part-time basis, died in 1939. Hetherington was again determined to translate it into a full-time post. He personally interviewed Charles Illingworth¹¹⁷ and stressed that the main requirement was for the new professor to devote the majority of his time to teaching and research and to “promoting the interests of the surgical school in its widest sense”.¹¹⁸ Illingworth was to prove a loyal ally to Hetherington in the drive to reform the Glasgow School.

Illingworth was not a productive researcher himself (his reputation rested on two textbooks, one a collaboration¹¹⁹) but was chosen because of his forward-looking vision of surgery. He understood and supported the progress of specialization and the application of the insights of laboratory physiology, and technology, to surgery. In contrast to his predecessors, he believed that surgery was not just about the operative skill of the virtuoso cutter, but should also take heed of the responses of the body to injury.¹²⁰ Illingworth knew that surgery had changed radically, yet the surgeon himself remained centre stage. Like McNee and Morris, Illingworth was receptive to the use of science in medicine, but still believed in the ultimate primacy of clinical acumen.¹²¹ He was thus well suited to fulfil Hetherington’s remit for the professorship and to establish a research school to produce clinicians trained in research methods and ready to apply them to clinical problems to fill future posts in Glasgow and elsewhere.

¹¹⁴ On this see ‘University memory—VIII: Noah Morris’, [Glasgow] *College Courant*, 1951, No. 7, pp. 84–9.

¹¹⁵ Details and quotations here from McKenzie’s interview with Alstead, op. cit., note 113 above, pp. 21–2.

¹¹⁶ See Watt, op. cit., note 84 above, p. 54.

¹¹⁷ Charles (later Sir Charles) Illingworth (1899–1991). For details of his career, see obituary (self-written) *Br. med. J.*, 9 March 1991, p. 302; and Illingworth, *There is a history*, op. cit., note 84 above, *passim*.

¹¹⁸ Illingworth, *There is a history*, op. cit., note 84 above, p. 62.

¹¹⁹ *Textbook of surgical pathology*, London, Churchill, 1932 (with Bruce Dick); and *Short textbook of surgery*, Edinburgh, Churchill, 1938.

¹²⁰ See Sir Andrew Watt Kay, short essay on ‘Sir Charles Illingworth’. I am grateful to the author for sight of this piece. See also Illingworth, ‘Surgery’, in *Fortuna Domus: a series of lectures delivered in Glasgow University in commemoration of the fifth centenary of its foundation*, Glasgow, Macle hose, 1952, pp. 203–18: on p. 218.

¹²¹ Illingworth, *There is a history*, op. cit., note 84 above, p. 99.

Illingworth's research school¹²² mostly followed his own interest in gastro-enterological problems: Ainslie Jamieson surveyed incidences of perforated peptic ulcer; Andrew Watt Kay developed the pioneering and methodologically influential augmented histamine test method of establishing levels of stomach acid (Watt Kay went to the Chair of Surgery at Sheffield and succeeded Illingworth at Glasgow in 1964);¹²³ David Johnston worked on refining the operation of vagotomy; and Herbert (Bert) L Duthie (later also Professor of Surgery at Sheffield) worked on the mechanisms controlling contraction and relaxation of the distal colon. There were also workers in other areas who passed through the Department, often on their way to eminence. These included Arthur Mackey, who later developed cardiac surgery as, from 1953, St Mungo Professor of Surgery at the GRI—the second full-time appointment at the hospital; Pat Forrest who worked on the relationship of the pituitary gland to breast cancer (Illingworth and Hetherington conspired to get him appointed to a Lectureship in the Department), and, in 1970, became Professor of Clinical Surgery in Edinburgh.

As well as being a model clinical research school, Illingworth's unit also transmitted good academic practice—the university standard—to the wider hospital. Illingworth introduced two new forums at which staff from other units and from non-clinical, scientific disciplines could meet and discuss work together. Every week, at Monday lunchtime, a departmental research meeting was held to discuss the content and progress of current and future research projects. Staff from all the other surgical units were invited, much to the initial consternation of the other chiefs. Illingworth also developed a "Saturday Forum" as a teaching corollary to the research meetings. After ward rounds, at eleven o'clock the staff of the unit and those staff from other surgical units who were allowed by their chiefs to attend, went to the major GWI lecture theatre. Recent cases were presented and discussed. It was a form of peer group audit. It also encouraged teamwork; radiologists, pathologists and every other branch of medicine in the hospital were invited to come and have an input.¹²⁴

Illingworth and Hetherington also worked together to appoint Roland Barnes to a University Lectureship in Orthopaedics in 1943 (translated to a full-time chair in 1959). This was a progressive move at a time when the autonomy of orthopaedics from general surgery was in dispute.¹²⁵ The two men also worked closely in the development of other specialisms in Glasgow.¹²⁶ Illingworth was one of the architects

¹²² I use this term in the sense, and with all the connotations described by Jack Morrell in his classic paper, 'The chemist breeders: the research schools of Liebig and Thomas Thomson', *Ambix*, 1972, 19: 1–46.

¹²³ See Sir Andrew Watt Kay, James Beaton and Andrew Hull, 'Interview/Memoir by Sir Andrew Watt Kay' (in preparation), based on 'Interview with Sir Andrew Watt Kay by Andrew Hull in the Lister Room at the RCPSPG, on 28 Feb. 1998' (closed access till 2100), both RCPSPG 1/13/9.

¹²⁴ Details from, 'Interview with Sir Andrew Watt Kay by Andrew Hull', op. cit., note 123

above. Mentioned by the kind permission of Sir Andrew Watt Kay.

¹²⁵ Illingworth, *There is a history*, op. cit., note 84 above, passim. See also, Roger Cooter, *Surgery and society in peace and war: orthopaedics and the organization of modern medicine, 1880–1948*, Basingstoke, Macmillan in association with the Centre for History, Science, Technology and Medicine, University of Manchester, 1993.

¹²⁶ On this see Hull, op. cit., note 3 above, pp. 173–4.

The Academicization of Glasgow Hospital Medicine

of the rebirth of the RFPSG as a postgraduate teaching and examining body. Hetherington supported this fully (and financially); modern, scientific and specialized Glasgow medicine needed a central local focal point around which to build an integrated postgraduate educational system that could produce suitably qualified young doctors for the new-style hospital units.¹²⁷

Hetherington also advanced the academicization of Glasgow medicine at the Royal Infirmary. The key appointment here was that of Leslie Davis as full-time Muirhead Professor of Medicine (with charge of wards) in the university clinical unit from 1945 to 1961. From 1948, Davis expanded laboratory accommodation on the infirmary site in the old buildings of St Mungo's Medical School, just absorbed by the University. He had been trained in laboratory research methods at David Wilkie's laboratories for surgical research in Edinburgh (after graduating from the university in medicine with distinction in clinical surgery in 1924).¹²⁸

In Glasgow, Davis, as Hetherington had planned, built up a thriving research department that specialized in haematological problems. The staff included Stewart Douglas, Arthur Jacobs working on urology and Edward McGirr¹²⁹ who worked on the clinical applications of radioactive isotopes. Davis encouraged this work, although it was outside the haematological research focus of his department. McGirr later observed:

[Davis] was ... good at choosing young people to work and develop in various fields the things he wished developed, and I think he set an example and in my own view he, probably more than anyone else clinically in Glasgow, brought Glasgow medicine really into the ... post-war era and developed clinical science and at the same time managed to ensure that the clinical staff, who were working in the laboratory, were also trained to be sound clinicians.¹³⁰

The academic focus on research in Davis' department influenced the tenor of work done in other parts of the Infirmary, for example, Joe Wright's development of cardiology. Davis introduced "the attitudes and the critique of research into the hospital ... and brought about the recognition ... that specialisation was necessary

¹²⁷ These developments, and the roles of Hetherington and Illingworth in them, are fully explored in *ibid.*, chs 3–6.

¹²⁸ Davis gained a research studentship at the London School of Tropical Medicine in 1926 and from 1927–30 was Assistant Bacteriologist at the Wellcome Tropical Research Laboratories in Khartoum. Here he practised both laboratory and clinical medicine, and obtained his MD (1930) with a thesis on experimental splenectomy in protozoal disease. From 1931 to 1939 he was Professor of Pathology in the University of Hong Kong, and briefly (in 1939) Director of the Medical Laboratories, Bulawayo, Southern Rhodesia, but he returned to Edinburgh in 1940. He worked for a short time at RCPEd's laboratories before becoming temporary physician and Crichton research scholar on

Professor L S P Davidson's staff at the Royal Infirmary. He then worked in two of Edinburgh's municipal hospitals. See obituary, *Br. med. J.*, 29 Nov. 1980, pp. 1502–3.

¹²⁹ Edward McCombie McGirr graduated from the University of Glasgow BSc in 1937 and then MB, ChB in 1940. He held appointments at the GRI after the war, and succeeded Davis in 1961. His research interests were in general (internal) medicine, endocrinology, nuclear medicine, and especially in thyroid disease. See Tom Gibson, *The Royal College of Physicians and Surgeons of Glasgow*, Edinburgh, Macdonald, 1983, pp. 278–80.

¹³⁰ Interview with Professor Edward McGirr by Dr Peter McKenzie, 25 March 1985, RCPSG 18/16, pp. 23–4.

and desirable".¹³¹ In addition Davis started a journal club for the GRI staff, and within his own unit, encouraged teamwork and acceptance of the idea of specialization by calling in other physicians and surgeons to see particular cases on his wards which, as he freely admitted, he knew little about.¹³²

Like all Hetherington's new men, Davis offered a modernizing mixture and introduced academic medicine in a way that was particularly suited to a Glasgow hospital context where there was an enduring, strong tradition of the hegemony of clinical approaches to disease. Whilst his scientific background, lack of clinical experience, and outsider status meant that he encountered initial difficulties with other chiefs (many of whom thought they should have got the post), he developed a second reputation as a clinical haematologist and made this bridge discipline between laboratory and clinic the research focus of his department.¹³³ Davis "showed his staff how to apply the scientific skills he had learnt in the laboratory to clinical practice and research",¹³⁴ and also offered a strong commitment to the importance of clinical experience in the evolution of his students' medical knowledge. He remarked in 1953:

For the most part the practising doctor is concerned with the reactions of individual patients suffering from complaints the precise nature of which may be obscure, and for which no specific treatment may exist. Successful handling of such clinical problems accordingly calls for qualities that *transcend* purely technical knowledge and proficiency. [Emphasis added.]¹³⁵

The NHS and University Control of Clinical Teaching

Whilst the new full-time professors tried to influence the conduct of medicine in the whole of their hospitals, most of the University's clinical teachers were still part-time University staff, or non-University hospital staff whose appointments (and ways of working and thinking) the University had no influence over. These Senior Honorary Physicians and Surgeons were heads of teams or firms within the hospitals,¹³⁶ and, since MacAlister's time, had been accorded the title of Honorary University Lecturers, but they were appointed by the Hospital Managers of the relevant institution.¹³⁷

¹³¹ Wright left the University Department of Medicine, where he had been a part-time Honorary Lecturer, to set up his own non-university unit, which, he vowed to make as academic in its approach as any university unit. *Ibid.*, p. 28.

¹³² See 'Interview with Professor Arthur Kennedy by Andrew Hull, RCPSPG, 30 September 1998', RCPSPG 1/13/9.

¹³³ See 'Interview with Professor Edward McGirr by Dr Peter McKenzie', 25 March 1985, RCPSPG 18/16, pp. 23–4.

¹³⁴ Professor Edward McGirr/Andrew Hull, 'Interview Memoir', RCPSPG 1/13/9.

¹³⁵ L J Davis, 'The profession of medicine', *West African Med. J.*, 1953, new series, 2 (2): 1–12, pp. 2–3. Reprint in HP, DC8/922.

¹³⁶ According to Peter McKenzie and Donald Campbell, this terminology was not used in Glasgow, where juniors would refer to their Chiefs as in charge of certain wards or floors in an institution. See McKenzie's interview with Professor Donald Campbell, Dean of the Medical Faculty at the University of Glasgow, 6 Dec. 1987, RCPSPG 18/5, p. 8.

¹³⁷ See Hetherington's memorandum on the 'Proposed Committee on the Organisation of Medical Schools', HP, DC8/1103. This was a draft document written by Hetherington in February 1942 summarizing the conclusions of a joint meeting of the four Scottish universities in Edinburgh on 31 January 1942. Hetherington hoped that it would form the basis of a joint submission to the Goodenough Committee.

The Academicization of Glasgow Hospital Medicine

Thus the University had very little influence over most of the clinical education of future consultants; the old Glasgow clinical élite was still largely in control of everyday clinical teaching in the wards. Hetherington was keenly aware that University control of clinical teaching was a crucial part of the academicization project.

In late 1941, when both the medical profession and the government were spurred to investigate possible forms for a new national *hospital* service by the favourable professional and public response to the Emergency Medical Service,¹³⁸ the Ministry of Health held discussions with the UGC and the universities about the financing of the voluntary teaching hospitals. The Ministry's line was that after the war the hospital system would be organized by regions "and that at the apex of each regional organisation would be the teaching hospitals which were the very essence of the scheme".¹³⁹ At this stage it was proposed that voluntary hospitals be funded from the Exchequer, but through the local authorities. However, the Ministry (in the form of the Permanent Secretary, Sir John Maude and Sir William Wilson Jameson, the Chief Medical Officer) wished the teaching hospitals to be independent of local authority control and to be centrally funded, "and that the main object should be to get more university control and practice into these institutions".¹⁴⁰ Maude and Jameson initiated negotiations to see if the universities were willing to become the conduit for UGC funding for the educational work of the teaching hospitals. Hetherington represented Glasgow University in these negotiations by being in regular touch with Sir Walter Moberley, President of the UGC from 1935 to 1949. Moberley was a close personal friend who had similar views on the role of universities, and Hetherington would often drop in to see him at the UGC offices for an informal chat when in London for meetings of the Committee of [University] Vice-Chancellors and Principals.¹⁴¹ Hetherington wrote to Moberley at the beginning of September 1941, after Moberley had clearly asked him for his views on the question of universities and clinical teaching:

It is, I think, really important that the responsibility for maintaining (or improving) standards of medical teaching should be laid upon the University and not the Hospital: and that the finance of medical teaching should be as much part of University finance as that of any other branch of University teaching . . . Except in regard to our full-time teachers, we have at present very little real control over methods and standards of clinical teaching. I want to pay for it; and therefore to be able to select—at least more than we do now—the people to do it, and to prescribe duties. Financial control is the key to teaching progress (and also incidentally to medical research): and I don't want it to get mixed up with general hospital business. Hence, so far as teaching is concerned, I want to see the University Grants Commission deal with it, as now, entirely through the Universities.¹⁴²

Hetherington saw that the traditional system of honorary, unremunerated voluntary hospital appointments for clinical chiefs was breaking down, and that a new system

¹³⁸ See Abel-Smith, *op. cit.*, note 9 above, chs 26–28.

¹³⁹ See memorandum on 'Grants to Voluntary Teaching Hospitals. Summary of Interview on 25 September 1941', HP, DC8/1103.

¹⁴⁰ *Ibid.*

¹⁴¹ Illingworth, *op. cit.*, note 59 above, p. 104.

¹⁴² Hetherington to Sir Walter Moberley, 6 Sept. 1941, HP, DC8/1103.

was emerging which needed to be regularized. Already hospitals found it necessary to pay honoraria to secure the (patient care) services of both chiefs and their assistants. On the clinical teaching side, a mixed system operated. University clinical professors received a stipend mostly on a part-time basis. Other clinical teachers received only the fees of students attending their clinics and “small supplementary payments made from general University funds”.¹⁴³ Noah Morris’s appointment at Stobhill (though at a local authority hospital) indicated the Hetherington blueprint for the future organization of hospital appointments and clinical teaching in that part of his salary was paid by the Corporation in return for patient care, and part by the University, in return for clinical teaching and running a clinical research department. If the University could control the funds for paying the clinical teachers for their teaching and research (while the hospitals controlled only the funds which paid that part of the staff’s salaries relating to services, that is patient care) and have more control over more appointments, the teachers would be University men who felt allegiance first to academic medicine and then to the hospital and clinical care. As Hetherington wrote in a draft statement by the Scottish universities to the Goodenough Committee:

The Universities attach great importance to the continued recognition of this differentiation of responsibility. Clinical education and research, though it is and must be continuously associated with the treatment of patients, is a distinct function, and ought to be the special care of the institutions charged with general education of medical as of other students, and with the advancement of all forms of knowledge. In the view of the Universities, therefore, it is essential that in the administration of grants from public funds, the responsibility for disbursing grants for medical services should rest solely upon the Hospitals, and for disbursing educational grants solely upon the Universities. It will then be possible for the University . . . to determine what several types of teaching organization would best serve its purposes . . . No doubt the main lines of the medical teaching establishment will remain much as at present,—except that teachers will be paid for what they do. But there will be a certain freedom of organization, which will probably be welcome on both sides. The Universities will be able . . . to create more substantially full-time teaching (and research) posts: and it may also be contemplated that some chiefs of Hospital units who do not desire to teach . . . may hold their wards without being under an obligation to instruct students.¹⁴⁴

Under Hetherington’s model for clinical teaching, it would either be done by full-time University staff or by staff from non-University units who would be paid for their teaching by the University, which would thus have a strong say in their selection.

However, after the inception of the NHS, the mechanism for achieving effective University control over clinical teaching in the hospitals was not control of UGC funding. Funding for the teaching hospitals now came, in Scotland, directly to their Boards of Management from the Regional Hospital Boards (RHBs)—of which these hospitals were part. There was then a purely nominal exchange of accounts between

¹⁴³ Hetherington, ‘Proposed Committee on the Organisation of Medical Schools’, *op. cit.*, note 137 above, p. 3.

¹⁴⁴ *Ibid.*, pp. 4–5.

The Academicization of Glasgow Hospital Medicine

the Board and the University for services rendered at the end of each financial year.¹⁴⁵ The means of academic control was now University representation on the key committees that advised the RHB.

In the National Health Service (Scotland) Act, which received the Royal Assent on 21 May 1947, the Scottish universities were given more influence than their English equivalents over medical education in their region. This was recognition of the fact that in Scotland undergraduate medical education had historically been largely based around the university medical schools. The absorption of the extra-mural schools meant that medical education was now completely centred on the universities, whereas, in London, this role was fulfilled by the teaching hospitals. It also explains why teaching hospitals, not having the same role or status as they did in England, were incorporated in Scotland under the RHB, and thus under the influence of the university. The specific measures in the Scottish Act that strengthened academic influence were that universities nominated members to Boards of Management of teaching hospitals and that the university was strongly represented on the Medical Education Committee (MEC), which had a special duty to advise the RHB on the provision of clinical teaching facilities. The university had control over professorial appointments and in any appointment involving teaching duties had the right to 50 per cent representation on the Advisory Appointments Committee.¹⁴⁶

These conditions had had to be carefully negotiated by the Scottish university lobby and Hetherington led the way. He had initially been very disturbed that the influence of the RHB over the teaching hospitals was much greater in Scotland than in England. Years of building up university control would have been wasted. In 1946 Hetherington began a campaign with the Principal of Edinburgh University (Sir John Fraser) and with the co-operation of the other Scottish universities to get safeguards to university authority in teaching hospitals built in to the Scottish Health Services Bill as it then stood. The academic ethos of teaching and research had to be confirmed as the guiding principle of the teaching hospitals. A meeting of the Scottish universities at St Andrew's on 11 September 1946 confirmed the determination to obtain certain key safeguards of university influence over the teaching hospitals; the Scottish Act should contain a statutory requirement for the RHB to provide facilities for teaching and research; a quarter of the membership of the RHB should be from the university; and each RHB should be advised on teaching and research by:

... a separate and distinct body charged with the specific duty of furthering teaching and research. This body we suggest should be called the "Medical Education Committee"; its function would be to advise the Regional Board on all matters relating to teaching and research, and to advise the University concerned on the selection of suitable candidates for hospital posts involving teaching. To secure effective operation and also the benefit of expert

¹⁴⁵ Alistair Tough, Glasgow Health Board Archivist, personal communication, August 1997.

¹⁴⁶ National Health Service (Scotland) Act, 1947, *Acts of Parliament, 10,11,12, George VI, 1947, Public (1)*, London, HMSO, section 14.

experienced advice, the membership of this Teaching Committee should be equally divided between a.) the Regional Council and b.) the University concerned.¹⁴⁷

The MEC, unique to the organization of the Scottish service, was thus established at the instigation of the Scottish universities as a vehicle to secure control over clinical teaching. Like the rest of the above concessions, it is important to note that the MEC was obtained and included in the Act because of a process of negotiation in which the universities had successfully pressed their case for influence over the teaching hospitals.

Hetherington's attitude towards the teaching hospitals was very close to that of the 1942 Club. Its Secretary was Harold Himsworth, since 1939 Professor of Medicine at University College Hospital, London. Himsworth wrote to Hetherington in early November 1946 relieved that the Bill had been amended to increase the influence of the university over teaching and research in the teaching hospitals:

I think therefore we have probably got as much as we could have hoped, namely, the recognition that the function of a Teaching Hospital is to teach and do research, and implicit in this the further recognition that the Universities have the right to expect of the Teaching Hospitals the necessary facilities. . . . I would mention again the earnest hope expressed by all the clinical professors in this country, that the Universities will insist on this right, so that eventually the Teaching Hospitals will acquire a University outlook. I think what we all have at the back of our minds was the feeling that was so well expressed by Dr Faxon, the great administrator of the Massachusetts General Hospital—"The function of a Teaching Hospital is to advance knowledge, train future practitioners and specialists, and set an example of medical practice. It is not to cater for the local sick". At the present time this ideal is not realized, or even whole-heartedly accepted in this country. Local needs, in the shape of requirements for local sick, or adjustments to private practice, often have a great, and sometimes a predominant influence.¹⁴⁸

However, in Glasgow, Hetherington was aware that, in order for his academicization project to succeed, attention had to be paid to these local needs.

Conclusion

In 1949, about one and a half years after the establishment of the NHS had made full-time work the norm for hospital doctors in Britain, the RFPSG awarded another eminent man the Honorary Fellowship. As in the earlier case of Webb-Johnson, this was a telling indication of the direction in which the Royal Faculty felt its intellectual and economic interests lay. The recipient in this case was Sir Hector Hetherington. In his acceptance speech he talked of past battles between RFPSG and the University as being over, of the overlapping membership of the two and of their common local civic role. The RFPSG was, by this time receiving £1,000 a year from the University from UGC funds as

¹⁴⁷ 'Memorandum on the Responsibilities of the Universities under the proposed NHS Bill for Scotland', (13 Sept. 1946, by J Ferguson?), HP, DC8/995.

¹⁴⁸ Himsworth to Hetherington, 5 Nov. 1946, HP, DC8/995.

The Academicization of Glasgow Hospital Medicine

part of a joint plan to turn it into the local postgraduate centre to train the local hospital specialists of the future.¹⁴⁹ Academic medicine had become dominant in Glasgow.

This had been achieved by Hetherington's grand strategy. This involved appointing full-time clinical professors with a remit to academicize, University control of clinical teaching and the relaunching of the RFPSG as a postgraduate centre. Well-connected at a national level, Hetherington could see that there was going to be a change in the organization of medicine in Britain and he ensured that Glasgow was pre-prepared. Modern medicine incorporated science in clinical practice and in clinical research. Science meant the University: so the University had to penetrate the hospitals with a new kind of medicine. The clinical units were the "Trojan horses" in the hospitals, and so it was here that the change was focused: they would now act as transmitters of an academic culture of medicine to the Glasgow hospital world. However, Hetherington was also aware that there was a very strong existing Glasgow medical culture which all clinicians participated in and its keynote was clinical experience. It was counterproductive to ignore the strength of this tradition and to try to impose an outside model of work. Instead Hetherington deliberately, and personally, hand-picked new professors who shared many of the attitudes of the clinical élite, but were more scientific and more interested in building clinical research cultures in their units and incorporating laboratory thinking in their clinical practice. McNee, Morris, Illingworth and Davis were all in this mould: all were wholesome scientific clinicians (rather than clinician-scientists). The new men blended science into the existing medical culture and made it modern and academic but in a particularly Glaswegian way. The Glasgow way has proved to be enduring. As Professor Edward McGirr, who succeeded Davis as Muirhead Professor of Medicine at the GRI in 1961, recently commented about the use of computers in diagnosis:

They have a useful role in the laboratory, for example in the control of automated, usually repetitive procedures and perhaps also of some complex investigative procedures, but I suspect that their use as diagnostic aids is likely to remain limited and confined to special circumstances, rather than to become routine in clinical practice. Confrontation with computer hardware is different from and a less satisfying experience for the patient than a one to one relationship with a sympathetic physician!

Expanding on these themes, he spoke of his views on the relative roles of the laboratory and the clinic in medical knowledge and practice:

In my view, the art and science of medicine are complementary requisites in its practice. Each has its role. Neither is dispensable. In the course of his practice, the physician deals with patients as individuals. He makes and implements decisions about their management which affect their prospects not just of health but at times of life itself. It is therefore not surprising that he is less inclined than the laboratory-based scientist to take an entirely materialist view of man. Notwithstanding all that he has learnt about its physical basis, what life is, essentially,

¹⁴⁹ See Hull, *op. cit.*, note 3 above, chs 3–6.

Andrew Hull

remains a mystery to him. At the same time one has to recognise that modern science is not omniscient. . . . There are questions which it does not attempt to, or cannot answer. It has transformed medicine but it has made the physician's role as arbiter of good practice much more demanding.¹⁵⁰

¹⁵⁰ Both quotations here from Professor Edward McGirr/Andrew Hull, *op. cit.*, note 134 above, p. 34.