The distinctiveness of Belfast medicine and its Medical School

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Peter Froggatt

PROLOGUE

On 8 October 1835, exactly 150 years ago, the 'Board of the Faculty of the Medical Department' of the Royal Belfast Academical Institution (hereinafter Inst) met for the first time — the first faculty board meeting of the first medical school in Ireland outside Dublin. Five 'professors' constituted the Board — John L. Drummond MD (anatomy and physiology, and botany), Thomas Andrews MD (chemistry), J.D. Marshall MD (materia media and pharmacy), Robert Little MD (midwifery and diseases of women and children), and John McDonnell (surgery). They had much in common: sharing an Ulster commercial, professional or farming background they shared also a confidence in the enterprise though prudently tempered with the hope that the persistence which had sustained their ambitions through the disappointments of the past two decades had been worthwhile and that a healthy and virile child had now been born which under their care would grow to robust manhood. Today's Faculty of Medicine at Queen's is the direct descendant of that precarious yet optimistic board: optimistic, in the almost arrogant confidence of its members; precarious, in that in four short years it lost John McDonnell and his successor (Surgeon Ferrar), saw Robert Little quit Belfast under a cloud albeit a feathery one, and gained only three (out of an optimistically proposed twelve) new members, one being a replacement — Robert Coffey MD (surgery), William Mateer MD (botany, from the overburdened Drummond), and Henry MacCormac MD (theory and practice of physic).

The Board stamped on the school from its very beginning certain distinctive features which microcosmed the circumstances and structure of the broader Ulster society which spawned and succoured it, and these can be traced to the present day. It seems appropriate that, on the Faculty's sesquicentennial anniversary, certain fundamentals of its foundation and development should be recalled and its distinctive features identified.

Many distinguished predecessors and colleagues too numerous to list have written of our medical school, its institutions and its personalities, and in recent years I have been privileged to join them.¹-⁷ This paper intends to complement, not rival nor duplicate, those that have gone before. Being mainly synoptic it must eschew much detail; readers seeking fuller accounts are referred to the more specialist sources, some of which are listed in the bibliography.

As primarily a university man, I may have presented interpretations which some readers will consider too favourable to the college at the expense of the hospital role and perceptions. Correctives abound in the exemplary and familiar works of Strain, Allison, Fraser, Craig, Calwell, Marshall, Hunter and Simms, among others.

Sir Peter Froggatt, MA, MD, LLD (Hon), DSc (Hon), PhD, DPH, FRCP, FFCM, FRCPI, FFOMI, MRIA, Vice-Chancellor, the Queen's University of Belfast.

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THE FIRST PERIOD: 1835-1849

Foundation

Our medical school developed earlier than those of Cork, Galway, and what is now University College Dublin, and for two main reasons: the rapid industrialisation and accompanying dynamic growth of Belfast — 13,000 in 1782 became some 50,000 in 1831 and incredibly some 100,000 in 1851; and the religion of the majority of its citizens (Presbyterianism). Presbyterians, though a bare overall majority, dominated commercial life — only four of the 60 or so founder members of the Belfast Chamber of Commerce in 1784 were of other persuasions.8 Outside Belfast they constituted an extensive reticulum of rural tenants, agrarian suppliers, general tradesmen, small independent farmers, and an important because literate smattering of doctors, notaries and clergy. They wished their sons to 'improve' themselves beyond field and counting-house but were denied many traditional avenues of patronage: medicine, the law, and the church were the 'professional' exceptions. Access to college education however was limited. Maynooth was (mainly) a Catholic theological seminary. Trinity College Dublin and Oxbridge disadvantaged them. The Scottish universities and the Royal College of Surgeons in Ireland (hereinafter RCSI) did not. Dublin — the natural choice as the metropolis — was culturally and geographically remote, expensive, and considered morally dangerous. Most therefore chose Glasgow or Edinburgh — no closer, cheaper, or even morally safer, but at least peopled by co-religionists which apparently made extortion, temptation, and vice more acceptable! A local university without religious test was sorely needed in Ulster.

Primate Robinson (Baron Rokeby) planned one for Armagh and left some handsome buildings and £5,000 in his will in 1796 to endow it. His dead hand held the purse since the offer was to lapse after five years.9 Government's interest in the scheme, initially aroused, was blown away two years later by the guns of the '98. Presbyterians therefore had to go it alone. They responded by building a non-denominational 'academical institution' in Belfast (incorporated by Act of Parliament in 1810) to be part boys' school ('the primary department'), part a composite further education college and university college ('the College department'); broadly a Scottish university in embryo with an extra-mural department and a school tacked on.10,11 The 'College department', through a faculty of arts, awarded a three-year general certificate and also ran classes (for part-time and occasional students) of popular lectures upon those subjects which are most conducive to the improvement of the Agriculture, Arts, and Manufactures of this country'.12 A faculty of medicine was also planned, with the intention that its certificate would be recognised by the main licensing bodies for acceptance to sit their final ('licensing') examinations. The founders, naively optimistic, supposed that a university charter would follow and Inst be enabled to award its own degrees. Their hopes were to be dashed; like the similarly rebuffed Newman's College (or 'Catholic University') in Dublin 40 years later, Inst was not in government favour, and it acted out its entire collegiate existence as a mere 'preparatory' (i.e. non-degree-giving) body. It remained staunchly non-denominational: Thomas O'Hagan, first Catholic Lord Chancellor of Ireland, was schooled at Inst; John Gavan Duffy attended lectures in the College department; and Bishop Crolly, Catholic Bishop of Down and Connor, was a proprietor and subscribed over £100 to found it. Many Anglicans also subscribed and enrolled. But most students, proprietors, and Inst's ethos were Presbyterian, viz. secular education taken in common; religious instruction taken separately; self-
improvement, diligence, providence and self-control the cardinal virtues; and an 
evangelical assumption that attaining goods in this world and salvation in the next 
would be the rewards of virtue! The uncompromising slogan on prize medals was 
'work is everything'; the motto was (and is) 'seek the truth'. Dr William Drennan 
MD, the veteran United Irishman, gave the opening address on 1st February 
1814 which encapsulated the educational and vocational intentions of the 
founders — 'It is intended to diffuse as widely as possible through the province 
and population of Ulster the benefits of Education both useful and liberal'; and 
also their pragmatic objective of retaining their sons in Ulster — 'The Academical 
Institution will prevent the hard and disgraceful necessity . . . of parents 
sending their children to seek in other countries, with much risk to their health 
and morals, for that instruction . . . which might be equally well attained at 
home with evident advantage to the public interest as well as to that of 
individuals'\textsuperscript{13}. Medicine was to start at 
one by creating two pre-clinical chairs 
— botany, and anatomy and medical 
physiology. But at once disaster struck: 
staff and proprietors were reported 
drinking seditious toasts at a St 
Patrick's Day banquet in Gillet's Tavern 
in 1816 ('to Marshal Ney' and 'to an 
early reform of the franchise' are fair 
examples). Government now sought 
assurances on loyal behaviour and 
greater proprietorial control to enforce 
them. It failed to get these and 
withdrew its grant of £1,500 p.a. 
Medical school plans were now shelved, 
but an unsung hero, James Lawson 
Drummond MD, took the ill-paid (£50 
p.a.) chair of anatomy and medical 
physiology in 1819 and also that of 
botany in 1822, teaching these subjects 
to arts and theology students mainly to 
keep the pre-clinical nucleus of a 
future medical school alive. He had a 
long 15 years to wait. (Fig 1). 
Meanwhile back at the Belfast Fever Hospital things looked brighter. The hospital 
itself was a legacy to a remarkable group of men — principally James McDonnell 
MD. McDonnell bestrode contemporary Belfast: patriot and polymath, member 
of a cadet branch of the McDonnells of the Glens, the hereditary earls of Antrim; 
the man who revived in Belfast the ideals of the Granard Harp Festivals, who 
prodded Edward Bunting to compile his musical anthologies, who helped found 
the Belfast Literary Society and the Belfast Reading Society, who revived the 
Belfast (now the Ulster) Medical Society; the confidante and patron of Thomas 
Russell, though ultimately one of his self-confessed betrayers; the friend and 
host of Wolfe Tone, whom Tone linked in his Diary with Russell, Whitley 
Stokes, Simms, Nelison, Napper Tandy and others of his inner circle, giving 
McDonnell one of his rare and treasured sobriquets— 'the hypocrite' (not, I should

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say, literally, but presumably after Hippocrates); and the driving force behind the foundation of the Belfast Fever Hospital and Dispensary in 1792 which after small beginnings and fluctuating fortunes re-opened in Frederick Street in 1817 with over 100 beds. (Fig 2). ‘The Nobility, Ladies and Gentlemen of Belfast and its Vicinity’ showed their appreciation in a gift of a magnificent ten-piece silver service in 1828 costing the then great sum of £700.5, 14, 15

The hospital staff supported the newly-founded Inst; many were in fact proprietors. Their primary loyalty however was to the hospital and they discussed forming a clinical school on the English hospital pattern, independent of Inst and in which students would ‘walk the wards’ and receive clinical lectures in return for fees. This would give the hospital status and the staff a supply of clerks and dressers and opportunity for patronage. They could leave it to Inst or some other private enterprise to teach the pre-clinical subjects without any formal link. Their autonomy and independence of action would then be ensured. This was a patently narrower view than that held by Inst viz. a formally constituted joint pre-clinical and clinical school which would ultimately award degrees. All agreed the nobility of Inst’s objective, but the hospital staff and committee doubted that it could be reached since Inst was perennially teetering on the brink of bankruptcy and lacked government support. And more than that: Inst with its idealism and high principles was talking of actually advertising posts: this might mean that outsiders would get ‘chairs’ and come looking for beds in the hospital and — worse — would be competing with the hospital staff in their practices! The hospital staff moreover were not repelled by the prevailing practice of patronage and nepotism and would have none of Inst’s ideas: they wanted it the other way around, viz. to appoint their own staff as professors in any joint school. Furthermore, Inst contracts were for five years, the hospital appointments de jure were annual, and anyhow a connection with Inst might jeopardise the Grand Jury grant (for fever patients) — the hospital’s main source of income. Inst could join them, they had after all Belfast’s interests at heart, but only on terms advantageous to the hospital (and themselves), their objects of primary loyalty! And so it was that on 21 December 1821 they went down their own path and enrolled their first student, Mr Walter Bingham, to ‘walk the wards’ at a one guinea fee.17 Others followed and on 3 June 1826 McDonnell gave the first formal hospital clinical lecture in what became an identifiable if somewhat limited and irregular series.1, 2

Neither Inst nor the hospital saw this as final: indeed it was partly a diplomatic pressure ploy by the latter. Negotiations continued and the next ten years saw

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intricate manoeuvring between them: often hard and skilled it was always honest and often altruistic. I have detailed this elsewhere.\textsuperscript{1, 2} In the end the joint school idea survived. Compromises were made all round but the thorny principle of open advertisement to professorships and selection by Inst (who would pay them) was preserved, as was Inst's insistence on control of student enrolments and examinations, while the disruptive question of a right to hospital beds was shelved and was to be a source of controversy into living memory! With harmony restored, the Inst visionaries raised money for buildings, drafted a scheme for the joint school and a four-year syllabus which was positively enlightened, and in 1835 — 20 years after Inst opened and exactly 150 years ago — the Faculty of Medicine was established with five of the planned twelve professors in post, and with J.L. Drummond as dean ("President of the Board of Faculty of the Medical Department"). The Faculty held its first meeting on 8 October 1835, 14 years before the Queen's Colleges in Cork and Galway (and Belfast) opened. Moreover, this was no brainchild of unschooled provincials in some remote hamlet: it was devised by high-minded and liberal men and was by far the most 'modern' of the dozen or so provincial schools in the kingdom, while Belfast itself was now a thriving industrial port of 65,000 with a prosperous hinterland. The joint school was free from hospital staff control — unlike provincial schools in England. It was free from town council control — unlike Edinburgh. It was free from control of professional bodies — unlike Glasgow. It was a true partnership between an incorporated autonomous college and a voluntary hospital — a structural prototype (barring some constitutional niceties) of the modern medical school. (Fig 3).

\textit{Progress}

The school was on the whole successful. Most of the major licensing bodies soon approved its course. Enrolments were buoyant — some 400-500 enrolled in its 14 years making it one of the bigger provincial schools. The curriculum was quickly consolidated and only the ambitious but misconceived episode of the purchase of the Old Cavalry Barracks in Barrack Street and its attempted conversion into a 100·bed 'teaching hospital' — the College Hospital — marred progress.\textsuperscript{1, 2} The early 1840s were the zenith. Thereafter lack of capital prevented expansion; the government grant (restored in 1829) was miserly and precluded adequate maintenance and creation of further chairs; even cadavers fell into short supply; and, crucially, the Faculty of Arts crumbled in 1841 with the deep schism in the Ulster Presbyterian Church which Inst, as a main source of ordinands and

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rather extravagantly suspect as a centre of ‘new light’ ideas, could not avoid. The death knell sounded in November 1845 when government decided that the ‘northern college’ of the (three-college) Queen’s University in Ireland would be housed in a new building to the south of the town and not at Inst which the commissioners considered to be too small, too unhealthy because of factory pollution and nearby marshland, too cramped to allow expansion (seven acres), and structurally insecure with sinking foundations. Ironically the bell tolled just as events were moving in the school’s favour. In 1847-49 the new 600-bed fever hospital was opened at the Union Workhouse, which meant that more general patients— that is, better clinical material— were admitted to the General Hospital. The Dispensary was reconstituted. And above all Andrew Malcolm joined the hospital staff in 1845 and revitalised the curriculum and teaching methods just as Graves had done on his return to the Meath in 1820 — meticulous case-notes, emphasis on clinical signs and clinical diagnosis, the relating of autopsy findings to the clinical disease, emphasis on the physical over the symptomatic, and instruction in surgical techniques.18 Malcolm was to die in Dublin ten years later of congestive heart failure at the early age of 38 but into those ten short years he crammed several life-times’ activities as writer, teacher, clinician, factory health reformer, philanthropic worker, founder of the Belfast Working Classes Association, editor of the Belfast Peoples’ Magazine, secretary of the Belfast Amelioration Society, and much more besides.19 But it was all too late for Inst; it was Queen’s College, Belfast (QCB), which reaped the benefit.

The pioneer work of the joint Inst/hospital school was to give QCB a head-start over its sister colleges in Cork (QCC) and Galway (QCG). In 1849 the Inst students transferred to QCB without loss of credit, and three of the medical professors joined them (William Burden — obstetrics; Alexander Gordon — surgery; John Frederick Hodges — professor of chemistry at Inst, but professor of agriculture at QCB). But this was not quite the end of medical Inst. The Queen’s Colleges were not designed initially to house a medical school and so medical students at QCB continued to dissect at Inst until 1863 — one reason why Belfast could take as many as 150 medical students by 1859 while only some ten initially enrolled at QCG. Many of the battles which lay ahead for QCC, QCG, and the Cecilia Street school in Dublin, had already been fought and largely won in Belfast by 1849 and the school was well placed to exploit its new opportunities.

Opinion

What influence did this early school have on Irish medicine? Structurally and educationally it showed that such a college/hospital partnership was not only possible but desirable and, furthermore, feasible. Medically it had little: in 14 years little could be expected. A medical school may achieve influence through the export of its graduates, the promulgation of its teaching methods, distinction in research, or by its becoming a Mecca for students and graduates from other schools. Belfast at this time was neither a hive of research activity nor an international Mecca but in common with the other Irish schools it did export many of its graduates, possibly 50 per cent. Some did well, then and later; the necessary research to quantify the emigration and identify individuals has yet to be done. There is, however, an old lecture room desk stored at Queen’s with the names of 32 undergraduates carved on the top. Eight were of medical men who graduated between 1894 and 1913 — a later period. Of these, three went into practice in
England (Samuel Acheson, Edward Samuel Gorman and James Graham). A fourth entered the RAMC, finishing as a major-general (Samuel Wasson Kyle). A fifth became chief medical officer to the Egyptian State Railway (Campbell Galway Robb). A sixth was medical officer in chief to the Atlantic Fleet (Robert Hunter McGiffen). One is untraced (John Johnston). Only one of the eight practised in Ulster and he with distinction — Sir Robert Johnstone, later professor of gynaecology at Queen’s. Earlier experience may not have been dissimilar. But Andrews, and to some extent Drummond, MacCormac and Gordon, were also known through their writings. Thomas Andrews (professor of chemistry) was the leading physical chemist of his day: Fellow and gold medallist of the Royal Society he published his first learned article at the age of 15. He had also studied medicine under Robert Graves at the Meath and imported Graves’s clinical methods to Belfast. James Lawson Drummond (professor of anatomy and medical physiology, and of botany) wrote well-used texts. Gordon had work on fractures to his credit. Henry MacCormac (professor of medicine) was a prolific writer over a catholic range and a translator of note. His numerous works, unorganised, ill-based, and often erratic, were nevertheless published for the main part by leading London houses and were well-known. A fresh-air fanatic, he broke the windows of his patients with his cane. His eldest son, Sir William, Bart., was the first Irishman to be president of the Royal College of Surgeons of England. Malcolm was a brilliant systematist and teacher and potentially the most acute observer of them all: his article on flax byssinosis is still a classic. John McDonnell (first professor of surgery), James McDonnell’s younger son, has a secure place in Irish surgery. Appointed to Inst in 1835 he resigned after three months on appointment to the Richmond in Dublin and is now remembered as the first surgeon in Ireland to operate using ether anaesthesia — he amputated Mary Kane’s arm for septic arthritis of the elbow on New Year’s Day, 1847. Robert Little (first professor of midwifery) is an enigma: an active if heterodox and completely uninfluential author in the mid-1830s and an aggressively entrepreneurial if seemingly sound clinician, he emigrated to England in 1840 and relative obscurity returning later to Ireland via a remote cattle station in Australia and lived out the rest of his life in Belfast largely neglected by his colleagues. Most of the rest of the Inst staff (Burden, Coffey, Mateer and Marshall) and Drummond’s assistant (1835-7) James Saunders MD, were local worthies who wrote little. (Figs 4 and 5).

They were without exception Irishmen, all except Coffey Ulstermen, but in a unified Ireland they naturally looked to Dublin and its brilliant luminaries for medical leadership and as the fountainhead of ideas. They published mainly in the Dublin journals; many studied in Dublin and/or took the Dublin licences; most respected the Royal Irish Academy and coveted its membership. But they were not dead moons reflecting light from a fiery Dublin sun. They were a discrete and coherent group, even sub-culture, building their own school within their own cultural and scientific milieu and their own ethic, character, and standards — a school staffed by regional compatriots, mainly Presbyterian and Anglican of an evangelical cast, and endowed with students enrolled almost exclusively from the fields and streets of Ulster. They cohered early: the Belfast (now Ulster) Medical Society dates from 1806 — one of the original provincial medical societies in these islands — and the Belfast Clinical and Pathological Society was nearly as old. These were practical, hardworking, intensely independent yet compassionate men, serious-minded and with high respect for education and knowledge, often of small rural background and many from the manse.

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having a deep pride — even conceit — in their own and their society’s success. The skills they developed and prized were practical, even frontier ones — they were strong in clinical and observational acumen; stronger still in instructional commitment and ability; weaker on experimental, methodological, or theoretical skills. Intellectually they expressed themselves in theology, law, history, science and medicine; seldom in novels, drama or poetry (a noted exception is William Drennan MD); and their leaders were no exception. The London and Oxbridge physicians and many of the Dublin coterie, with their philosophical and discursive approach, literary pretensions and often success, and their metropolitan pursuits, were far from their world. They were no doubt ‘provincial’, but, unqualified, this would reflect only part of the whole. In all this they set a pattern for Ulster medicine for the rest of the century, arguably to the present day.

THE SECOND PERIOD: 1849-1908

Progress

The move to QCB in 1849 ensured the future of the medical school. Inst’s precarious finances were now replaced by the assured if modest funding of QCB; government’s lukewarm and fickle support for independently conceived Inst (despite the ‘Royal’ accolade given in 1831) gave way to its unambiguous backing for its own creation, QCB. Furthermore, the three Queen’s Colleges constituted a university: students could by right sit the degree examinations of
The distinctiveness of Belfast medicine

The Queen's University in Ireland (QUI) instead of hawking their Inst certificate around the licensing bodies of Britain and Ireland for approval and then only as a ticket of admission to the licensing exam. This gave a stability and a platform for growth which was timely: Belfast was growing rapidly — the 75,000 of 1841 became 100,000 in 1851 and was to reach over 200,000 in 1881 and no less than 350,000 in 1901, a staggering growth even for a nineteenth century industrial city. The 55 medical students of 1849 became 327 in 1879. Numbers declined somewhat after that, due partly to the unpopularity of the Dublin-based Royal University of Ireland (RUI) — which replaced QUI in 1881 and was merely an examining body — partly to an increasing exodus of students as steam made travel easier and cheaper and as parents' prosperity increased, and partly no doubt for other reasons as yet unresearched.26

The student mix of QCB was largely unchanged from that in Inst. Over the century at least 90 per cent were from Ulster, mostly Belfast, Antrim and Down. Some 65 per cent were Presbyterian; 17 per cent Anglican; 6 per cent Catholic; and 13 per cent 'others'.26 (Religious affiliation was no longer recorded after 1908 when Queen's University replaced QCB, being prohibited by the QUB charter). This probably represented the religious mix of applicants: there are no grounds to suspect denominational discrimination if for no better reason than that fees were needed and the college was never full! Moreover it was against the QCB ethos. The students carried this geographic and cultural homogeneity into their professional lives giving a cohesion and corporate consciousness to the Belfast medical fraternity and Ulster profession which still exists though with subtleties due to the ever-changing emphases as the religious mix has altered over the years.

Three of the seven Inst medical professors were taken onto the QCB staff (Burden, Gordon and Hodges — see above), thus ensuring a smooth transition: moreover Thomas Andrews had been appointed vice-president in 1845 and so the Inst medical influence at QCB was strong. But, importantly, the replacement of moribund 'collegiate' Inst by the exciting QCB with university college status and wide attraction to potential job applicants introduced a degree of cosmopolitanism into what had been a de facto parochial system of staff selection; more precisely, introduced this into the pre-clinical subjects (where problems of hospital beds for outside appointees didn't arise) while perpetuating a virtually closed system in the clinical departments — indeed even more 'closed' than liberal Inst had tolerated. Seven men held the chairs of pathology, anatomy, and physiology in the 60 years of QCB's existence. Two of these were English (Peter Redfern and Johnson Symington); three were Scots (T.H. Milroy, James Smith and William Symmers); one (Hugh Carlile) though an Ulsterman was an émigré, having graduated at Trinity College and worked all his life in Dublin; while the seventh (William Thompson) was from Longford and QCG and held the Belfast chair for only nine years before becoming professor of medicine at Trinity. He went down with the torpedoed Leinster on 10 October 1918. This cosmopolitanism is in contrast to the tight oligarchical hold on the clinical professorships. Between 1849 and 1947 — 98 years — only two appointments to clinical chairs at QCB and QUB (including materia medica) were made from outside the tight circle of the hospital staff, and each was a special case. John Creery Ferguson was the first: he held the foundation chair of medicine though without a hospital appointment for his first four years (1849-1853). (Fig 6). But he was no exotic import but an Ulsterman from Armagh and considered to be a rare catch for the fledgling QCB since he was professor of medicine at Trinity and formerly professor at

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Robert Foster Dill, professor of midwifery, QCB (1868-1893), was the other. (Fig 7). Dill belonged to an influential Presbyterian Ulster family of wide and clannish ramifications and used the influence of his cousin, Dr John Dill of Brighton, to press his claim to the chair, successfully, as 'the only conservative candidate' in preference to Dr John M. Pirrie (the QCB president's choice), the then leading Belfast obstetrician and a member of the hospital staff, but a man of well-known liberal associations. Such canvassing was not unusual; indeed it was the custom as the elaborate 'testimonials' for jobs and contemporary reports testify. Professors in the Queen's Colleges were no exception. They were appointed at this time by the Queen (by warrant under the Sign Manual) on the advice of the lord lieutenant — effectively by the chief secretary — on the basis of a priority list prepared by the college president and vice-president who had, however, to justify the ranking. The QCB presidents combined wisdom with pragmatism and always recommended a member of the hospital staff, and this reversal of the president's choice was unique in the history of the QCB medical school in Belfast. But Dill had no beds; he had resigned from the Lying-in Hospital some years before. He solved this by taking his students with him on domiciliary confinements and held lectures in his large house in 3 Fisherwick Place. Hospital and college made sure that such mistakes were not repeated!

But though Ferguson and Dill were not, on appointment to chairs, members of the hospital staff, they were still Ulstermen through and through. And Ulsterman meant Ulsterman irrespective of creed. The Catholic Sir Dominic Corrigan found
advancement difficult in a Dublin profession dominated by Protestants.\textsuperscript{30} The Catholic James Cuming from Armagh found no such difficulty in a Belfast profession also dominated by Protestants. (Fig 8). He was physician at the hospital for 34 years, professor of medicine at QCB also for 34 years having previously been deputy-professor to Ferguson, not once but twice president of the Ulster Medical Society (1868 and 1881), president of the BMA (1884), and for good measure chairman of the first regular staff committee in the Belfast Royal Hospital.\textsuperscript{6} His religion was no bar to his advancement or success: indeed he became the unchallenged doyen of the profession, respected by all; in Andrews's words 'there are few medical men to be found anywhere more highly cultivated or better fitted to fill a chair'.\textsuperscript{31}

\textbf{Opinion}

This oligarchical control of clinical chairs ensured amicable co-operation between the QCB authorities, the professors, and the hospital staff greatly to the benefit of the school which was cohesive and avoided the disruptive problems of some British schools and the sorry fragmentation of late 19th century Dublin medicine. But there was a price to pay. Generally the professors, though in the main of high clinical skill and probity, were inevitably somewhat provincial in outlook and parochial in experience. Being part-time, they could boast only modest publication lists; their opportunities for foreign study were limited though some made the postgraduate 'grand tour' including Paris, Vienna, Berlin and London. Few undertook lines of systematic research or became ranking authors. There were exceptions, notably Sir William Whitla. Whitla wrote three great books—\textit{Elements of pharmacy, materia medica, and therapeutics} (first published in 1882), \textit{Dictionary of medical treatment} (first published in 1892), and \textit{Manual of practice and theory of medicine} (first published in 1908): the first went through 13 editions up to World War II and the second achieved nine up to 1957 and was translated widely, even into Chinese. These books and successful investments brought him wealth which through his beneficence Queen's enjoys to this day including, I am happy to say, the Vice-Chancellor and his family who live in his substantial house! This parochialism weakened later in the century as circulation of journals, ease of travel, and inclination and the means for foreign study and visits increased: Whitla for one was an inveterate traveller; Lindsay and W.W.D. Thomson were not alone in studying on the continent; and Thomas Sinclair (professor of surgery from 1886 to 1923) was appointed professor at the early age of 28 in preference to the redoubtable Sir John Walton Browne largely because of his several years of study in London, Vienna and Berlin and his holding of what was then unusual in Ulster, the English Fellowship.\textsuperscript{6}

Intellectual hybrid vigour also came from another source — expatriates returning from often unusual experiences abroad. Joseph Nelson MD, who became

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\caption{James Cuming (1833-1899), professor of medicine, QCB (1865-1899) and attending physician at the Belfast General Hospital (1865-1899). The only Catholic in the early QCB medical school professoriate.}
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Belfast's leading ophthalmic surgeon in the 1880s and 1890s, left Queen's in 1860 to join Garibaldi's 'Thousand' at Genoa. Commissioned lieutenant in the *Regimento Inglese* he received a rare Sword of Honour from the great man and two medals from King Victor Emmanuel. (Fig 9). He graduated in 1863 (QUL), became for 14 years a tea-planter in India (where he picked up another campaign medal in a punitive expedition against the Muniparis), re-adopted his profession in 1877 by studying ophthalmology in Dublin and Vienna, and returned to Belfast in 1880, joining the hospital staff in 1882 and founding the eye, ear and throat department at the Royal Belfast Hospital for Sick Children. He was inevitably known as 'Garibaldi' Nelson. He was not alone: other *emigrés* returned, or newcomers immigrated, to Belfast lured by its rapidly growing prosperity and the growing status of QCB, and brought welcome cosmopolitan views with them to balance the heavy graduate emigration often of established staff — such as William (later Sir William) MacCormac, Henry's son, who was appointed attending surgeon to the General Hospital in 1865 but made his career in London after serving in the Franco-Prussian War.

But, as the gaze of the profession looked increasingly to London and abroad, just as the gaze of Belfast citizens looked increasingly to Britain and the world, it inevitably swung away from Dublin; indeed it was probably only held there at all by the Dublin-sited RUI which examined Queen's College students for RUI degrees. Socio-economic and political changes were in any event now distancing Belfast from the rest of Ireland and the decline of medical Dublin only hastened an inevitable estrangement. The English licences became more in evidence; publications once mainly in Irish journals now dotted the pages of English ones. (Of the 65 publications listed to Professor Andrew Fullerton between 1891 and 1933, four appeared in *Irish Journal of Medical Science*, five in Ulster journals or through Ulster publishers, one in a Canadian journal and the rest in British ones. Several were in *Medical Press and Circular*, originally published in Dublin but from 1869 in London. Some of the 'shift' is no doubt due to the decline of Dublin as a medical publishing centre). And with all this was a growing self-confidence as the school became a leading one in the British Isles, the equal — even (they would have argued) the superior — of sadly fragmented and politically embroiled Dublin and far ahead of QCC and QCG which lacked what QCB so spectacularly did not, local support and confidence. In 1850 only the 100 beds in the General Hospital were available to Queen's, but in the next 50 years the Union Hospital, the Mater Infirmorum, and the growing number of specialist hospitals for diseases of the

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eye, ear, skin, for children, midwifery, and mental diseases, gave to QCB a supply of clinical beds hardly equalled elsewhere. Whitla in his presidential address to the BMA in 1909 could list some 1800 beds in general hospitals and nearly 200 in specialist non-mental hospitals in Belfast alone 'which were', in his words, 'from time to time in late years utilised by the students attending our Medical School'.

Belfast in fact was booming and was becoming locked into the Union, and Ulster was growing increasingly remote from the rest of Ireland. Few Belfastmen now went south to practise, if they ever did, though some joined Irish government service centred in Dublin — like the surgeon John (later Sir John) Fagan, chief surgeon at the hospital who left in 1897 to become Inspector of Reformatory and Industrial Schools in Ireland but only under the stimulus of what R.S. Allison calls 'an unfortunate and sad mistake in operating' and which the late Charles Dickson always told me was an amputation of a wrong (and healthy) leg. The first practising Ulster surgeon to be president of RCSI was Andrew Fullerton in 1926-28 and 1929-30; and the first practising Ulster physician to be president of RCPI was Dr Alan Grant in 1979. The entire nineteenth century saw no Belfast-based Irish College presidents, but I doubt whether the fraternity in Belfast after about 1860 cared much about that. They were by now very much their own men and Dublin no longer their unarguable Mecca or metropolis.

THE THIRD AND FOURTH PERIODS: 1908-1948, AND 1948 TO THE PRESENT

Progress

In 1908 the Irish universities were again reorganised into a form which has lasted to the present day. QCB now became a university, the unchallenged intellectual centre of Ulster with status appropriate to Edwardian Belfast, the Kingdom's eighth city now of equal size and wealth to Dublin. From hardly more than a fortified fishing port to over 400,000 souls in a century and a half with the largest weaving and tobacco factories, ropeworks, and output of shipping in the world, was a near miracle by the 'self-made men in the self-made city'. This success showed, rather too obviously at times, in the supreme confidence of its citizens in the future of the city and of self, verging all too often on arrogance and complacency. But the most obvious change in QUB during the present century is in size. The modest 620 students in 1909 doubled in a decade and reached nearly 3,000 in 1950. They are now 7,500. The medical school had 282 pupils in 1909 but nearly 800 in 1950 and only government restriction and lack of resources has prevented growth to 1,000 or more. The medical school was strengthened through increase in the number of chairs, and made even more cohesive by the appointment of full-time university lecturers and part-time clinical lecturers and examiners drawn from the staff of the teaching hospitals and backed by extension of the clinical teacher system whereby consultants taught students in ward and out-patients as they had always done, reimbursed (increasingly nominally!) from student fees which from 1957 were channelled through QUB. The partition of Ireland widened the pre-existing gap between Belfast and the other Irish medical centres and this became a yawning chasm after the introduction of the National Health Service (NHS) in 1948 (which at first the Mater Infirmorum Hospital 'disclaimed' though it remained a teaching hospital and an integral and important cog in the comprehensive health care wheel) when full-time professorial clinical units were established, medical and paramedical infra-structures were

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expanded, and the Province's hospitals were improved and updated and new ones built. In hospital standards, in level of staffing, in quality of professoriate, in research now burgeoning with the appointment of full-time academic staff, and in international standing, the Belfast school was in the 1950s at its zenith, a zenith thrown into more vivid relief as the doldrums into which the southern Irish schools of the pre-World War I period had drifted positively becalmed them under the social and political circumstances of the 1920s, '30s and '40s.

Up to 1948, QUB and its teaching hospitals have continued to practise that enlightened pragmatism in clinical professorial appointments which had ensured mutual institutional peace, the profession's cohesion, and perhaps even the school's survival over the previous century, but the advent of the new NHS now gave responsibility for hospital management (and bed allocation) and staff appointments to government agencies, and it was possible for QUB to contemplate appointing non-Belfast clinical professors for the first time in the school's existence. Most of the chairs in pre- and para-clinical subjects continued to be filled by non-Irishmen: 12 of the 14 professors appointed in these subjects between 1920 and 1950 were from outside Ulster, evidence of a growing internationalism and an intensification of previous practice where hospital facilities were not an issue. In 1947 this openness was extended to clinical chairs with the appointment of the Englishman Harold Rodgers to the chair of surgery. This underscored the British orientation of the school which had been growing since the mid-19th century. The diplomas of the Irish Royal Colleges yielded almost completely to those of London and Edinburgh as primary postgraduate objectives; indeed frequently they were never even sought and their possession often bestowed no career advantage. Few senior staff supported the Royal Academy of Medicine, appeared on Dublin platforms, sought advancement in the Irish Royal Colleges or published in Dublin journals — though there were notable exceptions like QUB pre-clinical scientists publishing extensively in the *Irish Journal of Medical Science*, and Sir Ian Fraser who was president of the RCSI in 1954-56 and a lifelong advocate of involvement by Ulster doctors in Irish professional affairs. When I joined QUB some 30 years ago the gulf between the Belfast and Dublin professions was nearly unbridged except through the activities of some individuals and perhaps through examining in the medical schools and the Royal Colleges. Indeed this mutual disinterest did little credit to either fraternity and those who tried to build bridges often got scant encouragement from their colleagues.

Since the 1950s, however, there has been a radical and welcome change. The appointment to clinical chairs from outside the Province has continued, even quickened: of the 29 clinical and laboratory professorial department heads appointed 1948-82, 11 have been non-Ulstermen and women and most of the remaining 18 received much of their postgraduate experience outside Ireland in stark contrast to the period 1835-1947. Harold Rodgers's (1947) and (Sir) Graham Bull's (1951) appointments had been the start of a trend, not isolated phenomena. And concomitant with this has been a growing détente between the Belfast and Dublin professions. The great advance in hospital provision and the creation of full-time clinical professorial units in the Republic (though these are not exactly equivalent to the 'full-time' units in the UK model) have narrowed the gap in academic standards which was previously all too wide: indeed in some subjects the gap may no longer exist. Social and economic disparities are disappearing, at least so far as the eastern regions of the two parts of Ireland are concerned and recent hospital building plans and amalgamations will further
enhance clinical standards. In 1972 the Mater Infirmorum accepted terms which allowed it to join the NHS thereby ensuring cohesiveness and removing an ongoing unsatisfactory situation which the good sense and professional probity of its staff had kept from becoming other than an exaggerated issue. In the political context of the time it was widely seen as a conciliatory gesture all round. The work of pioneers to bring the northern and southern fraternities into closer association has started to bear fruit: the Corrigan Club, now over 20 years old, is only one of many such initiatives. European politics has helped: the rejuvenation of the Irish Royal Colleges, due in part to opportunities afforded by the European Community, has reawoken the interest of Belfast doctors in the Colleges' position and affairs and we have recently seen an Ulster president in Kildare Street (Dr Alan Grant), one to succeed Mr Victor Lane in St Stephen's Green (Mr Reggie Magee), and for good measure another to preside over the Royal Academy of Medicine in Ireland (Professor Ian Roddie). Medical education has helped also: the formation of national faculties and 'new' professional colleges has widened the scope for national involvement and the Ulster doctors have responded wholeheartedly and in the main with success and unflagging encouragement. Furthermore, for the last decade the ad eundem fellowships of the Irish Royal Colleges have been sought and respected by Ulstermen, as have the periodic visits to Belfast of RCSI — its first, incidentally, was in 1977, 193 years after its foundation, so perhaps growing estrangement up to 1950 was not all our fault! I believe southern doctors, certainly from the medical schools and teaching hospitals, have reciprocated wholeheartedly to reawakened Ulster interest and are as keen as any to cultivate these relationships. Communications have played a part: the motor car has reduced the 100 miles from Belfast to Dublin to two hours of convenience from the nearly two days of discomfort of 150 years ago. Politics however have not helped. Inevitably the tensions of the past 15 years have taken their toll among some of the rank and file and even a leader or two, but in the main the northern and southern professions have a greater sense of common purpose and objective and are on better mutual terms than at any time since the rise of Ulster unionism and of the southern 'Repeal' and Home Rule movements over a century ago. No longer would a knighthood be denied to any Ulster president of the Royal College of Surgeons in Ireland for seeming to question the wisdom of 'the border', as allegedly it was denied to Andy Fullerton for having his presidential words 'in the field of surgery there should be no border' misreported in the Belfast newspapers as 'Famous Belfast surgeon says there should be no border'! 35 I like to think that both in the scientific and professional fields the successive Belfast schools of medicine have played a role in Irish and world medicine disproportionate to their size and that of the Province, and that their structure, standards and regulation have set a high example for any school in these islands and beyond.

Opinion

Drawing on this scenario, how can we describe the distinctive features of Ulster medicine?

Firstly, in its practice, Ulster medicine is the heir to a pragmatic and clinically orientated tradition, an inevitable and wholly laudable ethos whose genesis lies in the sense of values of the Ulster society which spawned it. (This society, though unquestionably Irish, is in Estyn Evans's words a 'strong regional variant in habitat, heritage and history' 36 — a description which F.S.L. Lyons considered 'the most balanced view available to us'.37). Such a society required and applauded practical, even artisan, abilities, and provided the robust, puritan, and

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unsophisticated milieu of a rural, even frontier, composition with its accompanying social structure, demands on character, and political perceptions. Certainly at its grassroots and even in its educated classes, such a society had also little time for philosophising or for effecting the metropolitan graces and mores of territorial grandees, establishment placemen, or a sophisticated urban bourgeoisie, and its medical sons mostly reacted likewise. Clinical and ethical standards have always been high as has educative commitment; investigative enthusiasm (and accompanying research success) less so. There have of course been exceptions — Andrews, Redfern, MacCormac, Whitla, Fullerton, Walmsley, and others enjoyed wide and deserved reputations through their writings, and some contemporaries are particularly successful and prolific though this article is not their story — but clinical skills remained the centre piece certainly up to 1948 and arguably still to-day as judged by the local fraternity's ranking of professional values and its continuing heavy emphasis on clinical instruction. Few external examiners leave without commenting on the clinical abilities and awareness of the students, and until the syllabus was shortened our four undergraduate clinical years were, almost alone in the UK, considered essential. The remarkable achievements of the Belfast hospitals and practitioners in the recent civil emergencies, widely regarded and rightly so to evidence their depth of clinical skill and commitment, in turn have enabled them to withstand unusual pressures in a way which is the envy of colleagues elsewhere.

Research, while perhaps not the brightest jewel in our diadem, is certainly not wanting, at least not since the creation of the full-time clinical academic units. We have many distinguished primary researchers and university centres of excellence, but existing evidence, such as it is, indicates a lower general reputation in published research than in other facets of the art. I can hear the pack of lecturers and professors, myself included, baying at my heels, but evidence is accumulating that this statement is correct, or perhaps perceived to be correct, which is equally damaging! One aspect of our research activity, however, is significant if not unique: our full-time clinical colleagues have contributed to the total research effort of the school to a degree I think unequalled in these islands. It is in fact one of the more remarkable aspects of contemporary Ulster medicine. It would be invidious though tempting to single out stars from what is a galaxy but the fact that Belfast's distinguished acute coronary care, renal transplant, endocrine, surgical gastro-enterological, dermatological, neonatal pathological, and neurological and neuro-surgical units have reached pre-eminence mainly (though certainly not exclusively) without formal university connection — and if these are the best units they are not the only ones — emphasises both the remarkable skills the Ulster profession deploys and our historic emphasis on clinical-led research which has enabled these and other specialties to develop from observations in the clinical situation and at the bedside. In baldly saying this I am not setting up an adversarial university versus NHS comparison: much of the research appetite and skills among NHS staff were developed by precept and example from their (usually QUB) teachers, and many were and are stimulated and assisted by university staff.

Second, in its high-minded adherence to the tradition of our profession as teachers. Imparting and seeking knowledge were characteristics of particularly Presbyterianism in the earlier days of the school and were powerful facets of the new awakening in the early 19th century which was perhaps one of the most exciting periods in Belfast's history. Inst and the hospital were founded at the very
height of this great burst of enthusiasm for enquiry, enquiry into anything and everything from national culture and heritage, through indigenous fauna and flora, to the wonders of the new factory machines, and all blended with a puritan austerity to produce a disciplined intellectual vigour which ensured that many leading medical men were also prominent in the general scientific and cultural life of Belfast — of the pioneers, McDonnell, Drummond, Marshall, MacCormac, Andrews, Drennan, spring at once to mind. Most of our learned and cultural societies date from this period including the Ulster (then Belfast) Medical Society in 1806. Indeed Belfast came close to generating a modest cadre of Renaissance men: close to it but not quite there; social structures, priorities, and geography got in the way and our medical school became filled with the sons of Ulster's small farmers and tradesmen to whom the practicalities not the abstractions of life were all-important and whose Victorian evangelicalism inspired in them a belief in the virtues of application in this world to obtain salvation in the next! Some were innovative researchers and creative thinkers, but they were few; and early Belfast medicine had in retrospect probably only Andrews (and largely for chemistry), McDonnell, and Malcolm of undoubted questioning genius to rival Stokes, Graves, Corrigan and the other major luminaries of the contemporary Dublin school. This emphasis on instruction as a professional duty and vocational ethic is still strong in Belfast — Biggart, Thomson, Rodgers, Walmsley, Pritchard, Macafee, Graham Bull, and many others, will be remembered as teachers after their contributions to the literature, however worthy, have faded. And in none is this vocational ethic more strongly developed than in the corps of clinical teachers and the activities of the postgraduate medical education council.

Third, in the compassion and commitment of its practitioners. Good and bad doctors abound in all societies and we have our share of both, but in Ulster there is an added dimension of a common cultural and historical identity between doctors and those among whom they practise. Ulster's doctors were never Oxbridge or Pall Mall gentlemen, younger sons of noble or patrician families who owed their physician's rank to high birth or their surgical advancement to the cruder excesses of patronage and nepotism, and there was no great social or cultural gulf between themselves and those they tended. Nor were they the exclusive oligarchy of the Dublin Anglo-Irish minority, albeit a brilliant one. No; they and their patients were of the fields and streets of Ulster, of common culture and heritage, and they saw themselves as equals divided only by the skills they possessed. If such cultural identity has led to patients seeking as their practitioners co-religionists it has merely fortified the historic cohesion but this is no place to develop wider aspects of this debate.

Fourth, in the coherence and cohesion of the profession. In our whole history the great majority of students have been from Ulster and until the last 40 years nearly all our clinical staff in university and hospitals have been from Ulster also and moreover have been our own graduates, and this persists noticeably in general practice up to to-day. In-breeding can be vitiating and harmful, but I believe that up to at least 15 years ago the amount of hybrid vigour from imports was adequate compensation. Imports have declined recently for obvious reasons and if I detect a potential source of weakness for the future it is in this very factor of excessive self-perpetuation especially in our university research activities where, I have already noted, effects are even now being felt.38

Yet the in-breeding and self-fertilisation, while not necessarily of themselves desirable, testify to a remarkable basic strength. For 150 years the profession in

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Ulster has been largely replenished from its own stock and outside non-clinical *academe* from its own medical school and I would question whether many regions or provinces could do so over so long a period without serious detriment to standards. By any criteria of assessment the school and the Ulster profession thrive, a great credit to all since they are largely taught by and base themselves on compatriots and graduates. The local profession has in fact generation after generation thrown up those capable of high professional and academic office both at home and abroad. This must be the litmus test of the secure basis on which the Ulster profession is founded.

In fact it is this very cohesion that made for the success of our medical school and, as a by-product, made the joint appointment system possible. In Britain, academic clinical staff would often be considered outsiders by the hospital patients — and even staff! They tend the sick as honorary consultants and inevitably friction can result between them and the NHS consultant staff who are employees of the Health Board. Not so likely in Northern Ireland, where academic staff are jointly employed by university and Health Board, and in 1948 it seemed the most natural thing in the world to cement school and hospital relations further through this joint appointment system. Though national developments are placing it under some strain, the system should survive if for no other reason than that here in Belfast it merely formalises a relationship which has existed for 150 years. John Henry Biggart in his wisdom, to which the president referred in his address which opened the session,39 saw this as an axiom, and I feel sure that most agree with this judgement, and that most Ulster doctors conscious of their heritage would have agreed with Sir John’s decision to develop a system in keeping with our history and tradition in preference to one devised for the culturally, historically, and structurally very different jurisdictions across the Irish Sea. The system has withstood special studies chaired by distinguished outsiders including the late Lord Cohen of Birkenhead and, if it should pass, something of our traditional cohesion will be lost, and whatever replaces it will have to be very good indeed.

My thanks go to Dr John Weaver who invited me to contribute to the 1984-85 programme. My clerical and secretarial staff again tolerated my eccentricities and unreasonable demands. Mr Watson maintained his customary standard in preparing the illustrations. But my greatest debt is to those whose writings have provided me with both invaluable information and stimulating example. Regrettably, only a few appear in the limited list of references accompanying this paper.

**ILLUSTRATIONS**

Faced with an *embarras de choix* I have selected likenesses, which are rarely published, of some of those doctors who played an important part in the development of the early school. A comprehensive catalogue of known portraits of late Ulster doctors of standing is given in reference no. 6, pp. 287-8, and many are reproduced in my chapter in that book (pp. 183-213). Material concerning the early Faculty, curriculum, buildings, Old Barrack Hospital, and cognate matters relating to the early school are in my articles referenced opposite (nos. 1-5, 7, 14, 15).

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