And so to the bedside

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Becoming a Physician: Medical Education in Britain, France, Germany and the United States 1750–1945. By Thomas Neville Bonner. Oxford University Press: 1995. Pp. 412. £30. \$35.

THOMAS Bonner has a complex story to tell. This is partly because, as the German physician Johann Heinroth observed at the beginning of the nineteenth century, "the Italian loves the old, the Frenchman the new, the English solid ground under their feet, and the German all of this". And alongside different national traditions, medical education had to cater for all sorts, from future royal physicians to country doctors, midwives and bath-keepers. Small wonder, therefore, that it assumed many different forms, from humble apprenticeship to illustrious universities.

And the diversity in emergent medical schools was increased by two further factors. On the one hand, social rank and pretension most tellingly reflected in whether instruction was to be in Latin or the vernacular. And on the other, variations in national political climate — laissez-faire England adopted private schools, Prussia pursued authoritarian centralism, pre-Revolutionary France empowered faculties and corporations. One great strength of Bonner's superb book is its grasp of the many and distinct strands

that have gone into the skein of medical education.

Another virtue of this rarity, a genuinely comparative study, is Bonner's eye for change. Innovation was in the air during the late Enlightenment. In many teaching centres, chemistry, physiology and botany became more prominent, while burgeoning anatomy schools taught practical dissection and guided the knife of pathology. Hospitals assumed new importance as sites of medical instruction with the invention of clinical lectures. Not least, the training of physicians and surgeons drew together.

Such piecemeal and informal innovation was given a new cohesion by striking reforms brought in by the French Revolution. Radical reorganization turned public hospitals (for the poor, of course) into giant arenas of clinical teaching. For the next half century it was easier for a student to gain access to a patient's bedside (or later to cut up his corpse) in Paris than anywhere else in the world; and that is why students from the Old and New Worlds alike flocked there, eager to learn what was called "practical medicine",

above all gaining diagnostic expertise based on pathological anatomy. But the resulting crush of student numbers proved counterproductive, which partly explains the growing attraction in later decades of the smaller German policlinic, attached to a university, where everything was more intimate, hands-on and supervised.

Assessing such changes, Bonner suggests that student 'demand' played a large

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Sir James Young Simpson invigilating the MD examination at Edinburgh in 1855.

part in provoking them. And certainly numbers were sufficient to exert real consumer pressure: there were well over a thousand medical students in Paris around 1800 and all could shop around. Nor were medical students slow to voice their grumbles, here against lack of cadavers to dissect, there about the hodgepodge of courses that passed for an education. Not least, the nineteenth-century medical student was extraordinarily mobile, free and eager to travel to wherever the best (or most renowed) instruction was on offer. In the 1820s, morbid anatomy in Paris was the great draw; by 1880 that had been supplanted by histology in Heidelberg or bacteriology in Berlin. And why had Germany taken over? Bonner suggests that the tremendous success of medical training on German campuses after 1850 was due to inter-regional competitiveness combined with government policies of pedagogic paternalism that viewed generous funding of higher education as a national investment.

No less powerful a factor than 'demand' in promoting nineteenth-century reforms, however, was the desire of the authorities

in London, Berlin or Dublin for 'order': rowdy and ribald medical students were notoriously disruptive, catcalling their lecturers and engaging in pranks and orgies of public drunkenness. The systematization of state-regulated licensing and the invention of the formal medical school, with its deans and dinners, rowing and rugby, were in large measure an attempt to curb and channel the disruptive student culture, feared in Germany in particular as a hotbed of radicalism. Tighter regulation of medical licensing was also a response of governments, in increasingly democratic times, to the need to allay public anxieties through bolstering professional legitimacy.

Bonner also offers a convincing explanation for what was probably the most important transformation in twentiethcentury medical education, that following

the 1910 Flexner report, which condemned so many medical schools in the United States as lamentably wanting. There is no doubt that students and professors alike welcomed the new accent on basic science that the Flexner reforms brought. But the report's author and champions were no less motivated by the wish to outlaw the proliferation of colleges catering for fringe sects, for women and for blacks. The Flexner reforms were a triumph for science, but they were no less a prop for the regular profession.

Much else is considered in this book besides, including the struggle of women for entry into the profession. And, looking bottomup as well as top-down, Bonner has an ear well-tuned to the

perennial whinges of the medical student: no money, cold digs, bad food, indigestible lectures and "half of the time we never get near a bedside".

Considering its importance, the history of medical training has been oddly neglected, or studied mainly as institutional biography. Bonner's account is far richer, embracing supply and demand (lots here on what medical students actually wanted), curricula and experience. Taking the long and broad view, he achieves proper historical distance from those pedagogic nostrums that, over two centuries, have successively been advocated as panaceas for the maladies of medical education: a structured curriculum, formal examinations, bedside work, basic science, more bodies, more laboratory work, more casework, and so on up to the present. His verdict is that there seems no royal road to 'becoming a physician'. Clear, concise and comprehensive, this study will long remain definitive.

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