

sanitary science, and personal hygiene to the common soldiers. He appointed medical inspectors who, in the process of gathering information, would also serve as exponents of sanitation. The Union Army was woefully unprepared for hostilities, and the Medical Corps, under an octogenarian surgeon-general who had seen service in the War of 1812, was in a deplorable condition. Realizing that the limited funds and supplies of the Sanitary Commission could not possibly compensate for the inadequacies of the Medical Corps, Olmstead and his cohorts lobbied Congress for a medical corps reform bill. Their efforts were successful, and in April 1862, one year after the start of hostilities, an able surgeon-general was appointed.

The Medical Corps was not alone in being unprepared; the Olmstead papers reveal general confusion and disorganization in the first years of the war. They also show an equally unbelievable amount of callousness and lack of concern for the welfare of the soldiers on the parts of both officers and surgeons. Like earlier intelligent men, Olmstead recognized the correlation between the health of troops and their fighting qualities. With this in mind, the Commission worked to improve the calibre of army surgeons, distributed large amounts of fresh food, medical supplies, and blankets, inspected hospitals, aided sick and discharged soldiers, and gathered statistical information. By the time he resigned in 1863, Olmstead had created an effective administrative organization, contributed significantly to reforming the Medical Corps, and helped make the Sanitary Commission an important force for sanitary reform both in the armed services and in post-war America as a whole.

The editor has written an excellent introduction and provided a series of biographical sketches of the leading figures. Detailed footnotes make the correspondence and papers clear to even the most uninformed reader. For medical historians, the papers shed new light on the clashes between the Sanitary Commission and the many other voluntary civilian aid groups. In addition to providing insights into many areas of American history, this volume is essential reading for any student of Civil War medicine.

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JOHN P. SWANN, *Academic scientists and the pharmaceutical industry: cooperative research in twentieth-century America*, Baltimore and London, Johns Hopkins University Press, 1988, pp. xi, 249, illus., £22.50.

Systematic information about the relations between academic scientists and industry is hard to find. Many senior scientists act as consultants to many firms, but the terms under which they serve are seldom known and it is uncertain how far industry profits from their help. One may assume that industry would not make such arrangements without benefit to itself, but the extent to which universities profit from such contacts or suffer from the diversion of their most expert staff is more questionable.

At a time when governments are withdrawing some of the support to which universities became accustomed in the 1950s and 1960s, a well prepared account of one facet of such relationships is most welcome. By drawing on the papers of several important institutions and businesses in the United States, Swann has provided much previously unpublished knowledge and a wealth of illustration of the relationships involved. They began when the industry had such a reputation for unethical practices that the American Society for Pharmacology and Experimental Therapeutics refused membership to scientists employed by industry, and required its members to resign if they accepted such a post. It was difficult, however, to prevent respected members of the Society from acting as consultants to industry or to limit their involvement, and ultimately less sterile attitudes prevailed.

Consultancy took place at many levels. The most general is illustrated by the work of the formidable organic chemist Roger Adams in Illinois with Abbott Laboratories, and that of the great physiologist and pharmacologist A. N. Richards in Pennsylvania with the rapidly expanding American firm of Merck, which became independent of its German originators at the time of the First World War. Both men became directors on the main board of the companies

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they served. At an intermediate level, pharmacologists at the University of Wisconsin did good by contributing to new products for the many firms which they advised, and by bringing money and technical resources from the industry to their university. At the most specific level, the harrowing tale is recounted of the difficulties between Eli Lilly and the University of Toronto about insulin, and the lesser difficulties which the same firm experienced in working with the Universities of Harvard and Rochester in developing liver extracts for the treatment of anaemia.

The recent surge of agreements between universities and industry, resembling that in Germany a century ago, is treated in some detail, and the dangers to academic freedom of thought and action are considered dispassionately. Commercial ambitions all too readily lead to the suppression of truth and the fettering of enquiry, and in the long run to the destruction of commercial enterprise itself. The problems are not solved, but at a time when haughty isolation has given place to a sometimes undignified gallop after all the funds which can be obtained, it is vital that a history of past successes and mistakes is available, and that there is writing on the wall for all to read. This history is a valuable contribution to the subject.

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ANNE SUMMERS, *Angels and citizens: British women as military nurses 1854–1914*, London and New York, Routledge & Kegan Paul, 1988, pp. xii, 371, illus. £9.95 (paperback).

This book is neatly titled. Dr Summers meticulously examines female nursing practice and politics within the context of upper-class feminist aspirations. Thereby she enlarges women's history and offers much that is new to medical history.

Her study of the Nightingale and Stanley parties at Scutari and the Crimea extends recent revisions. These warring chiefs were less practised nurses than their waged underlings: they successfully defended their presumption by libelling their nurses and orderlies. Dr Summers suggests that the intoxication charges upon which several were dismissed can reasonably be taken as ill-founded. She follows the "ladies" in classing the nurses with domestic servants, but does not pursue the speculation that many might have been experienced private domestic nurses, trusted, self-employed people far from Gamp caricatures.

This class struggle, Dr Summers proves, vitiated women's attempts to win power in the hospitals. Idly seraphic ladies gate-crashed wards to exercise "spiritual" authority over coarse male patients (not officers, about whom there is a fascinating appendix), medical officers of humble origins, and the unspiritual women who did the work. The split persists, if we substitute "credentialed" for "seraphic". Throughout the period the division helped keep nurses' pay low and their conditions austere; it also reinforced War Office suspicions of women and the resolve to define their work as ancillary to men's.

Dr Summers is very good on the spread of volunteer nursing from the 1870s, propelled by the gradual militarization of otherwise under-employed upper-class women. New opportunities for virtuosity in bandaging and disinfection must have developed with asepsis, although Dr Summers does not enlarge on this. Female military nursing finally became the norm in 1914 with the mobilization of the nation.

Women's patriotism and usefulness was said to have been rewarded in 1918 with the parliamentary enfranchisement of propertied women over 30. Dr Summers scouts this view, together with the claim that enfranchisement was a belated concession to pre-war suffrage agitations. Her opinion remains implicit perhaps in the remark that "women's patriotism . . . could be taken for granted": the chosen voters (unlikely to have included many nurses?) might have been empowered as a counter to the Labour Party. The citizens, like the angels, remained ancillary.

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