

the international dimensions of research ventures, with the politics of health campaigns, and with the relationship between universal principles and historical contingencies, as well as with another exemplary tale of the interaction between bugs, people, science, the state, and yet other social actors, will find compelling reflections, insights and formulations in Löwy's account. Löwy's approach to yellow fever in Brazil combines layers of understanding and lines of enquiry that are usually separated, like science studies and the social history of medicine. Moreover, the author uses a variety of sources that include the extensive Brazilian historiography on tropical medicine—one that, because it is mostly published in Portuguese, is less widely known (unfortunately, there are a number of spelling mistakes in the quotations). By studying how these fields interlink and overlap, the author creates an original perspective on the subject. In her words, "campaigns against yellow fever in Brazil were fashioned by the complex interactions between the knowledge and practices produced in laboratories by bacteriologists and virologists and those developed in the field by epidemiologists and public health experts, as well as by multiple interactions with the social, cultural and political environment of those practices" (p. 42). In other words there is no single "yellow fever" entity throughout time and place, nor is it appropriate to build a history of medicine based on stable scientific revelations regarding the etiology of the disease, its morbid forms, modes of transmission, therapeutics or public health strategies. Instead, the author notes, there are several entities and meanings involved in the perception and action upon yellow fever in Brazil, as there are several "Brazils" at once and through time.

Accounting for that complexity is no simple task. If juggling with multiple realities and multiple meanings is a familiar procedure in science studies, it is less so in the history of medicine—whether in conventional histories of diseases, or in works that look into the links between tropical medicine and colonialism. Löwy's affinity with both approaches allows her some degree of success in a work that accounts

for the interactions between international and local actors—which are not, in Brazil's case, about colonialism as we know it, nor just about centres and peripheries—and between health policies, biomedical developments and sanitation—which are not just about regulating the social body. Rather than associated with colonialism, the developments of tropical medicine in Brazil are at the core of nation-building; however, as in colonial settings, the body of the nation is fractured and asymmetries are displayed, perceived and approached in a singular way, one that deserves the dense description Löwy provides. We come to know the missions of the Pasteur Institute to Rio and the discussions on the role of the mosquito; the urban sanitation campaigns led by Pasteur Institute-trained Oswaldo Cruz; the missions of the Rockefeller foundation in Brazil and their role in the anti-mosquito campaigns; the accounts of yellow fever, particularly those concerning the higher incidence among European migrants; the impact of those accounts on further biomedical developments; the involvement of the sanitary association in a project of eradication; the interweaving between medical development, national politics and ideologies of modernity.

Though hard to surpass, this work provides inspiration for further research into the connections between science, culture, politics, history, structure and agency.

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*Biomedical platforms: realigning the normal and the pathological in late-twentieth-century medicine*, Cambridge, MA, and London, MIT Press, 2003, pp. xiv, 544, illus., £35.95 (hardback 0-262-11276-0).

To convey even something of the flavour of this book requires rather more space than a review will allow; a reader's guide is perhaps necessary. The study is, at the minimum, technical, philosophical, historical, architectural

and sociological, and isolating any of these elements is to do an injustice to the way they are entwined both in the volume and in the world it represents. The fulsome endorsements by the widely respected historians whose praise adorns the dust jacket of this work are well deserved. The descriptions: “theoretically sophisticated”, “highly innovative”, a “richly circumstantial analysis” and “imaginatively presented” are all merited. None the less, the book’s importance may be lost in a literary style that moves from the familiar, intimate even, to dense narrative and very thick description of scientific and other matters. The authors’ overall ambition, in which they undoubtedly succeed, is to transcend the reductionist models (technological, professional, etc.) that are widely used, often unwittingly, to explain the modern complex hospital world where clinic and laboratory meet. “Meet” is actually quite the wrong word. The much overused “mutually constitute each other” is far more apt for once. The authors construe a biomedical platform to be, simultaneously, a concrete (literally to some extent) place, a set of activities, a seat of diagnosis and research, an occasion for work, a site for the use of pathological, biological and clinical theories and an organizing theme in the historian’s armoury. A platform “is more than an instrument or device, but is a specific configuration of instruments and individuals that share common routines and activities, held together by standard reagents” (p. 23). To make the point that platforms are to be understood in many related ways they also take in the “tower-on-podium scheme” of hospital architecture in which the podium is the structure where integration of action, theory and work takes place. It would be interesting, incidentally, to compare this architectural style with the schemes that architects used when they attempted to materialize the ideas of clinical holists between the wars. The obvious example is George Canby Robinson’s involvement in the planning of the Vanderbilt Medical Centre opened in 1925.

The platform the writers of this volume have chosen to study is that of “immunophenotyping” (IPT). IPT enables recognition of abnormal

antigens on cancer cells and has been tremendously, but not wholly, successful as part of the clinical investigation and management of lymphomas. IPT has brought together (or forced together) immunologists, clinicians and morphological pathologists all with different perspectives on cancer. The authors investigate the constitutive elements of IPT platforms in a variety of locations: hospitals, laboratories, industry, at scientific conferences. This is not a book purely about theory, technology and work. There are patients here too. In a way they are the most important part of the volume since a recurrent theme is the integration of (and sometimes conflict between) older histological classifications of cancer and newer immunological ones and their relative use as a guide to therapy.

One of the book’s structuring themes is the modern reconstitution of the mutual relations of the clinic and pathology as biomedicine—that is biology in everyday medical work as well as theory. Although the authors dwell much on the former (and for historians of the late twentieth century there is much substantive material here) it is in the latter area—theory—that the historian whose work does not usually stray much after 1900 will find a great deal to ponder. A philosophical issue that was crucial to nineteenth-century theories of pathology is presented here as having taken an unexpected twist with the rise of IPT. This issue—are the normal and the pathological qualitatively distinct or only quantitatively different?—they address through Georges Canguilhem’s *The normal and the pathological*. In this text Claude Bernard’s quantitative distinction between these domains was dismissed and the qualitative nature of the pathological and the primacy of the clinical asserted. This problem is addressed historically in the present work through the specific case of attempts to automate readings of Papanicolaou smears. This approach was premised on the predictive power of possible quantitative differences between the biological properties of normal and cancer cells. It was shown in the 1960s that “measurements of the amount of ultraviolet light absorbed by cells . . . showed that ‘some’ cancer cells absorbed more light than

normal cells” (p. 65). In other words measurement of light absorption promised routine distinctions between the normal and the pathological. Such work promised to affirm Bernard’s view and unite pathology and physiology through biology. The attempt, however, was subverted by the “false negative” problem. In the real clinical world the qualitative judgement of the pathologist was final.

Biomedicine, the authors say, has reaffirmed the qualitative distinction but by the creation of “new entities and events” such as cell surface markers described in Chapter 4. Although, to iterate the point, it is on the platform in which cell surface markers are used by biologists, pathologists and clinicians in their everyday work that the distinction is transcended. This is dense stuff and occasionally I lost the thread, notably when told “the twentieth-century . . . separated the entities that accompany pathological processes from the pathological event itself” (p. 76). The separation of entities and processes was well explained but the “pathological event itself” had the ring of a Kantian, unknowable, *Ding an sich* about it. It had the same flavour later in the volume when the authors make the judgement: “Despite the continuing redescription of pathological processes in biological terms, the notion of a pathological event resulting in a lesion remains central to the understanding of disease” (p. 331). No doubt other readers will find their own puzzles for although the book spans over 500 pages, the dust jacket might also have proclaimed *multem in parvo*.

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**Aya Takahashi,** *The development of the Japanese nursing profession: adopting and adapting western influences*, Routledge Curzon Studies in the Modern History of Asia, 15, London and New York, Routledge Curzon, 2004, pp. xiii, 209, £60 (hardback ISBN 0-415-30579-9).

This book is the outcome of Dr Takahashi’s groundbreaking PhD thesis in which she explores the emergence of the exclusively female profession of nursing in Japan including the concept she terms: “Nightingalism”. Japanese nursing historiography has, until recently, fallen very much to the periphery of popular Japanese medical historiography. However, this particular work has been written from an international perspective, and therefore makes a valuable contribution to the trans-national social history both of nursing and medicine. In particular I would recommend readers new to Japanese medical history not to omit the excellent introductory chapter which provides a broad historical overview to the period covered by the book (c.1868–c.1939). Takahashi explains that until the beginning of this period, nursing was an alien concept to the traditional Japanese culture and its introduction was brought about mainly through Japanese doctors who had received a western medical training, i.e. it was introduced as a largely female profession supporting the modernization of medicine rather than one being pioneered by or for Japanese women. This had the effect of inadvertently placing a group of Japanese women, living within the constraints of a highly paternalistic society, within the organized international nursing community of the early twentieth century.

The book is divided into three parts: the three chapters that form Part 1, ‘An imported profession’, trace the decline in Japanese traditional medicine and the simultaneous modernization of medical regulation, training and practice from the mid-nineteenth century showing how this was directly linked with the “importation” of nurse training and practice from the West. Part 2, ‘The development of a Japanese model’, explores the significance of the wars with China and Russia, c.1894 to c.1905. In these two chapters the author looks at the Japanese mode of Red Cross patriotism and its influence on the West, post-1900. It was this, Takahashi argues, that was largely responsible for successfully bridging the cultural divide between western ideas and traditional Japanese values of respectability in women, by concentrating on aspects of nursing as patriotic