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<em xmlns:m="http://www.w3.org/1998/Math/MathML" xmlns:mml="http://www.w3.org/1999/xlink">Beriberi in Modern Japan: The Making of a National Disease by Alexander R. Bay (review)

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understanding the links between the environment and human health. It also was the site of yet another struggle between localist and extralocalist politics. Philadelphia responded to yellow fever by increasing the rigor of its ship inspection and quarantine procedures, while its neighbors (and economic rivals) were more lax. Interestingly, Philadelphians generally opposed efforts to shift responsibility for quarantines to the federal level, arguing for a vision in which the public was best protected by a vigorous, locally controlled government.

One original thread in Finger's account is his attention to populationist concerns, such as Penn's heirs' focus on population numbers as crucial to defense and prosperity, the Pennsylvania Hospital's preferential focus on returning laborers to productivity, and the Revolution's role in getting physicians to think in terms of the health of populations, instead merely of individuals. While this was the explicit concern of only a handful of people, it was a particularly vivid component of the way in which political and public health concerns were mutually constitutive.

The Contagious City is logically organized, is grounded in solid research, and offers well-told stories. While readers of this journal will not find much that is innovative here, they may find it a good choice for their undergraduate courses.

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Alexander R. Bay. *Beriberi in Modern Japan: The Making of a National Disease*. Rochester, N.Y.: University of Rochester Press, 2012. x + 230 pp. Ill. \$95.00 (978-1-58046-427-7).

What, in Japanese eyes, made beriberi “an enemy greater than Russia” (p. 74)? Although by 1905 the disease had become widespread across Monsoon Asia, beriberi had such exceptional and exemplary importance that some commentators regarded it as being “peculiar” to Japan. Few diseases, tuberculosis apart, held such national and imperial significance for Japan; few stood so centrally for the demands and dilemmas of its modernity. Once confined to urban elites, during the Meiji period, as consumption of milled rice grew, beriberi became “a disease of war and imperial expansion” (p. 53): while other armies were preoccupied with the ravages of syphilis, for Japan's armed forces beriberi was the great enemy to be destroyed. Beriberi incidence rates among the peacetime military stood at 30 percent, but in the wars of the 1890s and 1900s against China and Russia they soared to a staggering 90 percent: in the Russo-Japanese War alone there were 250,000 cases of beriberi and 27,000 deaths. Beriberi afflicted the student population and caused the loss of an estimated 6 to 10 million working days a year, a hemorrhaging of intellectual talent and labor power no self-consciously modern nation could afford.

As Alexander Bay shows in this historically nuanced and theoretically engaged monograph, the forty-year struggle (from the 1880s to the 1920s) to contain beriberi and uncover its etiology illuminates the changing character of medical authority in Japan, its reciprocal relationship with political power, and the “colonizing” nature of modern science. In the nineteenth century beriberi was not a new disease, and there existed within traditional (*kanpō*) medicine an ability to treat it by supplementing rice diets with barley and beans. Until the 1880s, traditional medicine and the new medicine of the West coexisted in a state of medical pluralism. When the naval surgeon Takaki Kanehiro moved to protect sailors’ health through the prophylactic use of barley diets, this practice suggested “a hybrid between traditional-medicine-based dietary regimens and modern military medicine” (p. 27). But, Bay argues, because barley was associated with unmodern diets and old-fashioned medicine, Takaki’s clinical and statistical approach to the beriberi problem drew the ire of critics who, following German precedent rather than British social medicine, believed that the etiology of beriberi could be scientifically established only in the laboratory. The subject of Japan’s first foray into bacteriological research, the hunt for beriberi’s causative mechanism promised to prove the scientific credibility of the modern nation. Despite the overwhelming evidence of two imperial wars in which the army, with its white-rice culture, suffered crushing losses from beriberi while the barley-fed navy experienced very few, the diet-deficiency explanation was fiercely contested in favor of a contagionist quest for an elusive beriberi bacillus. Institutional and political support for this came from the Army Medical Bureau and the Faculty of Medicine at Tokyo Imperial University, where doctors were “wedded intellectually and institutionally to the idea that the laboratory should be the center for the study of beriberi” (p. 36). Despite this, evidence for the diet-deficiency explanation mounted, and research in the 1920s, led by Omori Kenta of Keiō University, demonstrated that beriberi could be induced by white rice diets just as effectively as it could be cured by rice bran and vitamin supplements. In 1926 Imperial University finally capitulated, though even that was not the end of the story. Debate still raged as to what degree of milling would protect the nation’s health, a dispute finally resolved only in 1939 through state power and the exigencies of war.

While the broad outlines of Japan’s beriberi story are well known, Bay carries the study of this “national disease” to impressive new lengths. He deftly exploits the diversity of opinion within the Japanese medical establishment to demonstrate the intensity of the beriberi debates, and he shows the centrality of the disease in the conceptualization of Japan as a modern nation and science as a “colonizing” presence. A significant contribution to the history of medicine and of medical modernity in Japan, this is a book that also opens up fascinating comparative perspectives elsewhere in Asia and beyond.

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