

policy on biological warfare in the 1960s and 1970s, points out that the secrecy surrounding the tests was not only due to obvious security reasons, but also to fear of potential political embarrassment.

Such evidence of the perceived moral ambiguity of human experimentation could have been supported by paying more attention to the historical debates on the subject or to the development of ethical guidelines on human research after the Nuremberg Code of 1947. While Henry Beecher's whistle-blowing article of 1966 on the ethics of clinical research is repeatedly mentioned in this volume, there is no sustained discussion of his efforts, nor of the similar criticisms voiced about the same time by Maurice Pappworth in Britain. Also, there is no detailed discussion of the Helsinki Declaration of 1964, or, for example, of the guidelines of the British Medical Association and the Medical Research Council of 1963.

However, the strength of this collection consists in discussing the forces that legitimated human trials in various contexts: potential therapeutic improvements (for example, in malaria and venereal disease treatment), development of new medical technologies and specialties (such as radiation therapy and medical physics), the contribution to the war effort and national security (Second World War and Cold War), occupational and public health. The underlying utilitarianism of human research transformed human subjects into "useful bodies", so that risks, information and consent appeared less important. Therefore, this volume can be recommended to anyone interested in the dynamics and motivations of human research in the twentieth century.

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Vincent J Cirillo, *Bullets and bacilli: the Spanish-American war and military medicine*, New Brunswick, Rutgers University Press, 2004, pp. xiv, 241, illus., US\$55.00 (hardback 0-8135-3339-2).

The Spanish-American war of 1898 broke out after a period of deteriorating relations

between the United States and Spain, following the brutal suppression of a nationalist insurgency in the Spanish colony of Cuba. The conflict, which lasted from April to August, ranged from the Caribbean to the Pacific, with US forces deployed as far afield as the Philippines. By the end of the war, the United States had sustained 385 combat deaths and 2,061 from disease, in addition to considerable financial costs. But as the victorious power, the USA annexed Puerto Rico, Guam and the Philippines, and Cuba became nominally independent.

As Vincent J Cirillo shows in *Bullets and bacilli*, the medical significance of this "splendid little war", as it was sometimes called in the USA, has been largely overlooked. The war may have been small but it had an impact on military medicine that belied its proportions, resulting in significant reforms in military hygiene and medicine, as well as improved training in these areas for combatant officers.

For much of the nineteenth century, the status of medicine in the US army had been low. Most line officers had little confidence in their medical counterparts because they had little success in preventing and treating disease. The Civil War, which saw major losses from disease and widespread infection of wounds, was a case in point. Over thirty years later, this "Civil-War mind-set" was still dominant among American officers, and many were indifferent or hostile to medical recommendations. As medical officers were permitted only to advise (as in the armed forces of most other countries), this gulf between medical and combatant officers could have disastrous consequences. In 1898 there were 1,590 deaths in the US army from typhoid alone, most occurring when soldiers were concentrated prior to deployment overseas. Typhoid was also a problem during the campaign in Cuba, in addition to malaria, dysentery, and yellow fever. The entire 5th Corps had to be withdrawn from combat owing to sickness after just forty days in the field.

The public outcry caused by what many perceived as "unnecessary" or "preventable" deaths culminated in some important reforms which included the establishment of the US

Book Reviews

army's Yellow Fever Board, which subsequently became famous for its work in Cuba, a Typhoid Board, and a Tropical Diseases Board. The Typhoid Board highlighted the need to educate combatant officers in the rudiments of hygiene, concluding that their lax approach to sanitary discipline had been the main reason for the outbreaks afflicting the army during the war. Indeed, many saw sanitation as beneath their dignity. As a result, medical education became part of the training of officers at the military academy at West Point.

Other important reforms took place in the fields of army nursing, allowing the admission of qualified female nurses into the Army Hospital Corps. There were also improvements in rations following scandals over the prevalence of canned or refrigerated, as opposed to fresh, meat.

The one real success of the war, from a medical viewpoint, was surgery. The use of the recently invented X-ray to locate projectiles, together with antiseptic and aseptic surgery, kept wound infection to remarkably low levels. As in the South African War, fought by Britain and the Boer Republics during 1899–1902, these innovations permitted methods of surgery far more conservative than in previous conflicts such as the US Civil War or the Crimean War, which became notorious for the number of amputations. However, there were problems with the use of early X-ray equipment, and some soldiers suffered and died from severe radiation burns.

Cirillo has provided a very good account of this war and its significance for medicine. His book is well researched and considers military operations in the light of public opinion, which turned out to have a significant role in producing reforms of American military medicine. Also welcome is the extended comparison with Britain's experience in the near contemporaneous South African War, where similar scandals over typhoid and the breakdown of medical provisions led to important reforms. Rather more consideration of the public reaction to the losses from yellow fever would have been welcome, as would some more comparative material on the Spanish

forces, but overall this is a very useful volume, and nicely produced.

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Anna Rogers, *While you're away: New Zealand nurses at war 1899–1948*, Auckland University Press, 2003, pp. x, 352, illus., NZ\$39.99 (paperback 1-86940-301-0).

In 1899 Britain's army nursing service had fewer than eighty staff but when the Anglo-Boer War ended in 1902 there were around 1,700 British, Australian and New Zealand nurses in South Africa. New Zealand contributed approximately thirty nurses to this endeavour, a number small enough to permit Anna Rogers to profile each individual. This attention to detail is one of the strengths of *While you're away*.

Following the outbreak of the First World War, the recently constituted Dominion sent six nurses to the former German colony of Samoa as a prelude to the formation of the New Zealand Army Nursing Service. In April 1915 the first dozen nurses sailed for Egypt; others served on hospital ships, at the Western Front and in New Zealand's war hospitals in England. Each of these spheres is allocated a separate chapter, as is the work of the 100 or so New Zealand girls who served the Red Cross or other British and French organizations.

One recurring theme in the sections dealing with conflicts to 1918 is the struggle of the more relaxed and informal New Zealand and Australian nurses to come to terms with British class distinctions, anti-colonial prejudice, and "hide-bound British military tradition" (p. 151). This discomfort also affected the colonial soldier patients, many of whom were delighted to be under the care of their own countrywomen.

Two chapters are devoted to the interwar years. The first explores the problems faced by these military nurses in the aftermath of the the First World War and the second summarizes the efforts of the handful of New Zealanders who nursed in the Spanish Civil War. The last seven chapters are devoted to New Zealand nurses during the Second World War, arranged