

Keith Wailoo, *Drawing blood: technology and disease identity in twentieth-century America*, The Henry E Sigerist Series in the History of Medicine, Baltimore and London, Johns Hopkins University Press, 1997, pp. xii, 288, £33.00 (0-8018-5474-1).

Is the play the thing? The answer, it seems, would depend upon the nature of the conscience one sought to catch—and, relatedly, on the nature of the play itself.

Wailoo's provocatively entitled *Drawing blood* presents the history of anaemias in twentieth-century America; one can argue, much in the style of a traditional five-act play. Though the author himself never uses the term, an overview of the book quickly convinces that the dramatic metaphor is apt. The text is concise rather than epic; its main story is told over five brief chapters, each of which focuses on a particular anaemia. The "hero", however, is not anaemia, but technology. Wailoo's central question is, what was technology's role in "negotiating" the shifting "identities" of the anaemias. Key supporting roles are played by medics ("moralizing" physicians; "conquering" abdominal surgeons; "managerial" laboratory workers), institutions (hospitals; factories; pharmaceutical companies) and cultural biases (racism; classism; paternalism). The stage itself is set with obligatory post-modern furnishings: women's blood, Negro blood and workers' blood. Within this framework, Wailoo casts technology as almost wholly the product of surrounding actors and scenes. Within the play, our hero, technology, manages to define disease only because the alignment of institutions, ideas and ideologies permitted it to do so. And so, the question remains: does Wailoo's presentation of his story within this format effectively, and persuasively, illuminate the complex interactions of technology and disease definition?

To answer this question, a summary of the argument itself is necessary. Wailoo opens by asserting that "the anemias . . . earned a collective identity with the advent of new tools of blood analysis in the nineteenth century" (p. 5). Following this relatively strong

statement about technology's role in creating the very frame in which anaemia was defined, he changes course. His study itself focuses on particular anaemias, and the very limited role technology played in determining their identities. The American history of one of five main anaemias serves as subject for each of his main chapters. (A sixth chapter acts as a kind of epilogue, treating several types of anaemia in the post-war US.) Others have told these histories. What Wailoo has done is gather them together within a particular interpretive structure. For, within each chapter, Wailoo looks to the medical practitioners who used blood technology to trace the ways in which their socio-cultural biases were reified in their conceptions of their patients' very blood (sickle cell and Negro blood; aplastic anaemia and workers' blood; chlorosis and women's blood). He argues that practitioners primarily used technologies to support the disease identities that sustained these biases—and, additionally, that contributed to the practitioners' personal and disciplinary interests within shifting institutional alliances.

With chlorosis, for example, Wailoo claims that "new technologies of blood analysis do not explain" why the disease's identity changed—rather, one must look to a "changing medical culture" for explanations (p. 30). Here, nineteenth-century moralistic physicians, wielding blood technologies to dictate women's proper place in society (as "determined" by their blood), give way to twentieth-century hospital doctors in whose hands chlorosis disappears. In the case of splenic anaemia, technology acts as a kind of flag with which surgeons mark their disciplinary territory; resultant disease definitions again disappear as surgical autonomy diminishes within the growing web of hospital bureaucracy. Only when we reach the very end of the excellent chapter on sickle cell anaemia, do we find post-war diagnosis by electrophoresis and its big-government support taking a leading role in defining disease. Wailoo's book challenges any simple notions of technological determinism.

The argument is in itself sound, resting on a kind of reasoning now quite familiar to

historians of science, medicine and technology. Social constructionism no longer shocks; its vocabulary has become the standard stuff of historical inquiry. Yet, if Wailoo's intention is to convert unbelievers (which he tells us is his goal on p. 200), he would have to demonstrate, not merely state, his claims. Here, however, he often falls short, providing mere assertions, generalizations and even jargon where he should have given detailed evidence. For example, in considering the use of liver pills for the treatment of pernicious anaemia, Wailoo points to "medical ambivalence about the pharmaceutical definition" of the disease—and attributes it to "deep-seated concerns about commercialism in medicine" (p. 126). Yet, beyond the statements of a few doctors and secondary-source evidence for such medical concerns in other contexts, he offers only an article by a Seattle journalist in support of this claim. Further, in the chapter on splenic anaemia, Wailoo argues that "masculine, rugged, and individualistic" (p. 51) abdominal surgeons shared a vision of certain diseases: splenic anaemia and appendicitis "represented, *they knew*, not unambiguous biological realities, but a defensible surgical claim staked on a particular body part" (p. 57, emphasis mine). Nowhere, however, does he substantiate his attribution of such a sweeping and unified view to a whole group of practitioners. Indeed, he has gathered the majority of his evidence about "their" ideas and motives by sampling journal articles and textbook entries, often penned by the surgical elite. It is one thing to say that William Osler and William Mayo and (in England) Berkeley Moynihan had particular views about splenic anaemia and abdominal surgery; it is quite another to use their voice to speak for all practitioners of splenectomy—particularly when any close examination of the splenectomy's performance is lacking. This problem, which is endemic to the book as a whole, might well be a function of its play-like structure: Wailoo is attempting to review a great deal of history in a concise format. Yet, as a result, medical practitioners are frequently lumped together with little supporting justification, effectively essentializing them,

turning them into something closer to characters in a play than a diverse collection of individuals.

There are further problems with Wailoo's condensed format. Returning to contextual explanations for the liver-pill treatment of pernicious anaemia, we find no consideration of the parallel medical concern with specific cures and magic bullets, from vaccines to Salvarsan, then current. Wailoo's is a context that, like the backdrop of a play, provides broad strokes rather than fine detail. He takes a similar approach to his presentation of technology itself. Certainly, Wailoo is correct to stress the ambiguity, the malleability, of technology. Yet, in order to make substantive claims about what technology has *not* done, one must examine its evolution and application in more than cursory terms. Here, haemoglobinometers, haemocytometers and even the Emmel's test for sickle cell are described as monolithic entities in a few sentences, and then disappear from the text as anything more than screens on which various interest groups project their desires, aspirations, and power struggles. The book lacks even a single figure or diagram. Wailoo's case would have been strengthened by a substantive synthetic summary. Having sprinkled his text with allusions to the constraining powers of growing hospital bureaucratization and ideas about blood, he never brings together examples from his various chapters into a coherent and persuasive statement.

In the end, *Drawing blood* provides a provocative overview of the historical "drawing" of anaemia. Its claims that disease pictures depended on broader concerns of medical culture and society are certain to add to an already lively scholarly debate. Yet, the argument remains unconvincing: it rests on a highly selective use of evidence that ignores the complex and dynamic nature of historical actors, their institutions, and their technologies.

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