

Assumptions Underlying Health Policy

Health Policies, Health Politics. The British and American Experience, 1911–1965. DANIEL M. FOX. Princeton University Press, Princeton, NJ, 1986. xii, 235 pp. \$25.

The 20th century has witnessed remarkable advances in our understanding of the molecular and biochemical mechanisms of disease as well as corresponding achievements in diagnosis and therapy. Yet all is not well in American medicine. Costs have skyrocketed; medical care remains inaccessible to certain portions of the population; the economic viability of many of our teaching hospitals has been undermined; and disturbing changes have occurred in the structure of medical practice, the most conspicuous of which has been the recent rise to prominence of the investor-owned for-profit hospital chains.

The problems of America's health-care system have received the attention of a vast number of scholars over the past three decades. Building on the works of those who have preceded him and offering new insights of his own, Daniel M. Fox, a historian and health-care administrator, has in *Health Policies, Health Politics* given us one of the clearest and most persuasive interpretations to date of how these problems came into being.

The starting point in Fox's analysis is the late 1800's, a time when the achievements of scientific medicine profoundly changed the attitudes of the medical profession and the public toward the nature of medical knowledge. In both the United States and Great Britain, this point in time represented a profound discontinuity with the past. A new optimism—indeed, a utopianism—began to permeate the attitudes of health planners in both countries. Disease could be understood through laboratory investigation, and it was felt that cures for many important conditions would inevitably follow, also through laboratory approaches. Developments in medical science began to be described in such terms as "progress" and the "march of knowledge."

By World War I this faith in the progress of medical knowledge provided the logic of a new health policy in both countries. This policy, which Fox terms "hierarchical regionalism," incorporated three assumptions: that the causes of and cures for diseases are discovered in the laboratories of medical

schools and teaching hospitals; that these discoveries are then disseminated down hierarchies of investigators, institutions, and practitioners that serve particular geographic areas; and that health policy should have as its goal the creation of hierarchies in regions that lack them and the improvement of hierarchies that already exist. By World War I, hierarchical regionalism was the assumption that underlay the health-care policy of both countries. As a result, the emphasis in public health in each nation changed from regulating or improving the environment to expanding access to medical services.

Fox proceeds to trace the development and consequences of hierarchical regionalism in both countries. In the United States, this policy led to the Hill-Burton Act of 1946, which provided federal support for hospital construction, and the enactment of Medicare and Medicaid during the Johnson administration. In Great Britain, hierarchical regionalism culminated with the establishment of the National Health Service in 1946. Fox's interpretation differs from that of most writers on these subjects, for he demonstrates that the health-care system in both countries was not fundamentally transformed but merely reorganized by these laws. Both Hill-Burton and Medicare-Medicaid in the United States and the National Health Service in Great Britain were continuous with the past; they represented the culmination of certain attitudes toward health that had been present since the early 20th century.

Hierarchical regionalism has been a very successful policy, but in a provocative epilogue Fox relates it to many of the present problems in America's health system. From the early 1900's, concern with growth has diverted attention from the distribution of health services—hence many of the problems of inaccessibility today. The same concern with growth has resulted in soaring costs, based on the belief that the more money to health the healthier the people. A policy designed to increase the number of physicians and hospital beds has ironically eroded the traditional strength of the teaching centers. Medical services once available only in tertiary teaching centers are now available in many community hospitals as well. Today patients can be treated for most conditions in suburban hospitals, and the

financial vitality of many teaching centers has been threatened by the loss of patients, at least paying patients, to other hospitals. Finally, hierarchical regionalism, in Fox's view, has facilitated the rise of the investor-owned hospital.

Throughout the study, Fox is aware of the many differences between the United States and Great Britain, and one of the strengths of the book is how well it integrates the history of health-care policy with the particular cultural, social, and economic milieu of each nation. Fox skillfully describes the complex factors that led Great Britain but not the United States to adopt a policy of compulsory national health insurance. However, more important to him is that both countries implemented a consensus that had been present since the turn of the century. Fox is the first to stress the similarities rather than the differences in health-care policy between the two countries, and this approach illuminates much about the medical systems of both nations.

The book is based on extensive research, including archival research, in a vast array of sources. Fox has identified new resources—popular literature, movies, television drama—as important sources of information about perceptions of health and disease. This is one of the few books that consider attitudes toward medical knowledge, not just social and economic factors, as important in determining health-care policy.

I have a few disagreements with Fox's interpretation. First, I believe that the concept of hierarchical regionalism is much more applicable to medical practice than to academic medicine. Medical scientists in America for a century have belonged to a national and international network through their journals, societies, and meetings; academic physicians have never seen themselves as part of a strictly regional culture. Second, I believe the book would have benefited from greater attention to the record of medical science. Fox describes attitudes toward medical science much more than he does the science itself. Certainly, faith in medical science has increased, but Fox does not consider to what degree this has been justified. Has medical science fulfilled its promises, or have the expectations been unrealistically high? Finally, I found hierarchical regionalism an incomplete and possibly incorrect explanation for the rise of the hospital corporation. Much more, I believe, is necessary to understand that phenomenon.

These reservations are minor, and I believe *Health Policies, Health Politics* will come to be regarded as a landmark study. For the general reader interested in an introduction to the problem, it is a good place to begin.

For the scholar endeavoring to understand the evolution of our health-care system more fully, it provides a solid foundation upon which to build.

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A Military Technology

The Poisonous Cloud. Chemical Warfare in the First World War. L. F. HABER. Clarendon (Oxford University Press), New York, 1986. xiv, 415 pp., illus. \$59.

L. F. Haber, an economic historian interested in the development of the chemical industry, has in *The Poisonous Cloud* provided an excellent scholarly history of gas warfare in the First World War. Haber undertook this study not just for scholarly reasons but for intensely personal ones. His father, Fritz Haber, who directed the Kaiser-Wilhelm Institute for Physical Chemistry in Berlin, was the key figure in German chemical warfare during the conflict. Harold Hartley, a physical chemistry professor at Oxford who played a crucial role in wartime and postwar British chemical warfare, often lamented the absence of both a definitive history of chemical warfare and a biography of the elder Haber and persistently encouraged the son to write this work. Yet despite these personal motives for the study, this book is not a biography or defense of the author's father or one in which personal bias determines or intrudes upon the interpretations. It is a dispassionate and critical history of chemical warfare in the Great War.

Haber used significant newly available information, particularly Hartley's papers and documents from the British Ministry of Munitions. He supplemented the fragmentary German material in the federal archives with files from the archives of the German states, particularly Bavaria. With an array of these "new" and old sources, he has written a penetrating, analytical study of gas warfare on the western front between the Germans and the British and French, with comparative references to the United States. He devotes little space to gas warfare between other countries on other fronts, primarily because of the absence of documentation and the insignificant nature of chemical warfare elsewhere.

The author does not concentrate narrowly on the military and the front. Instead, in sophisticated fashion he links the chemical war at the front to the development of

science and industry in the rear and probes the complex industrial-scientific-military relationship behind chemical warfare that previous writers have neglected. Thus his study of the only genuinely new weapon that was used in combat in the first World War but not in the second emphasizes the relationships between chemists and soldiers in the development and use of the weapon and of defenses against it and the impact of gas on the combatants.

Haber explains clearly the background of chemical warfare, ranging from the development of the capacity to mass-produce such gases as chlorine and phosgene to the science fiction fantasies that exaggerated the effect of gas warfare. A crucial point that he reiterates throughout the book is that gas as a weapon remained underdeveloped in comparison to the defenses against it. During the war the military perceived gas defense as essential to morale and gas offense as merely an adjunct to more fundamental operations. Furthermore, the defense could concentrate on clearly defined objectives such as the development of respirators, while on the offensive side inadequate communication between scientists and soldiers impeded the development of a successful chemical weapon.

Haber emphasizes that the exaggerations of the threat of gas before, during, and after the war stemmed from ignorance of the actual circumstances of gas warfare, which gave rise to and was compounded by science fiction fantasies and journalistic license. In fact, as his accounts of gas operations during the war make amply clear, gas was not that effective or reliable a weapon. Concentrations of a gas in the field were usually below the levels necessary to kill the enemy in great numbers; the inability of meteorologists to forecast wind speed and direction accurately made gas clouds as likely to incapacitate one's own troops as the enemy; and the issuance of adequate respirators enabled trained and disciplined troops to withstand the onslaught of the new weapon.

The author describes and analyzes knowledgeably such disparate topics as the development, introduction, and efficacy of the various gases, weapons, and respirators used by the combatants. He compares the state of the chemical industry and the approaches to chemical warfare in the major powers, and he does not hesitate to praise or condemn their respective achievements and failures. In general he is quite critical of the powers' approach to chemical warfare. Though he acknowledges the complexity and newness of gas warfare, the reluctance of soldiers to accept technological innovation, and the difficulties of communication between scientists and soldiers, he finds that significant

avoidable human errors exacerbated these already difficult conditions. Haber characterizes developmental programs as "adaptive improvisation rather than purposive research" (p. 108). The absence of logic behind the piecemeal approach to chemical warfare pursued by all powers resulted in a lack of systematic progress in research during the war.

Haber concludes that gas was ultimately a failure, because the military lacked commitment to it, the organization of chemical warfare was unduly amateurish, and defense sufficed to contain the threat. Even in 1918 chemical warfare was relatively unimportant, its casualties usually overstated. He further asserts that in practice poison gas posed no serious military threat to soldiers or civilians after 1918—a circumstance that explains why it was not used in combat in the Second World War. Yet artists and writers transformed gas into a far greater threat than it actually posed, and the fantasy outweighed the facts in the public mind during the interwar period.

This exemplary monograph approaches its subject the way scholarly histories of military topics should. Any study of 20th-century weapons that have been scientific, technological, and industrial in inception and development must investigate these aspects of their history in order to be complete. As this monograph amply demonstrates, it is simply impossible to comprehend front-line military developments without knowledge of those in the rear. This thought-provoking study also has broader implications for understanding the role of science in modern warfare and the impact of war on scientific and technological progress. And its value is not the less because it deals with a development that the author himself concludes was a failure and relatively unimportant. The explanation of that failure and unimportance is as enlightening and instructive as studies of success.

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Migrationism Exemplified

Migrations in Prehistory. Inferring Population Movement from Cultural Remains. IRVING ROUSE. Yale University Press, New Haven, CT, 1986. xiv, 202 pp., illus. \$20.

Thor Heyerdahl and his Kon-Tiki voyagers notwithstanding, the Polynesians peopled the vast triangle in the Pacific from the west, moving out of small islands off New